新航道 NEW CHANNEL

9分达人 雅思阅读真题还原及解析2

王毅◎编著

2012年-2006年7套最新阅读真题

◎ 与最新题库原文一字不差！
◎ 与雅思真题题目一模一样！！
◎ 与官方标准答案完全一致！！！

2012.1.7
Health in the Wild

2012.5.10
Bird Migration

2011.11.26
California's Age of Megafires

2011.4.30
Alfred Nobel

2010.7.31
The Ingenuity Gap

2011.11.5
The Conquest of Malaria in Italy, 1900–1962

2010.12.16
Man or Machine?

2011.2.12
Going Nowhere Fast
Assessing the Risk

2011.7.30
Sunset for the Oil Business?

2010.9.4
The Origins of Laughter
The Lost City
Designed to Last: Could Better Design Cure Our Throwaway Culture?

9分达人温馨提示：
如果你在考试中恰好遇到本书收录的某篇文章，按捺住内心的激动，静心把题答完。

最新真题

商务印书馆国际有限公司

图书在版编目（CIP）数据

9分达人雅思阅读真题还原及解析. 2/ 王毅编著. —
北京：商务印书馆国际有限公司，2012. 6
ISBN 978-7-80103-871-5

Ⅰ. ①9… Ⅱ. ①王… Ⅲ. ①IELTS —阅读教学—题解
Ⅳ. ①H319.4-44

中国版本图书馆CIP数据核字（2012）第121834号

9分达人雅思阅读真题还原及解析2

商务印书馆国际有限公司出版发行
（北京市东城区史家胡同甲24号　邮编100010
电子邮箱：*cpinter@public3.bta.net.cn*）

特约编辑：吴　蓉
责任编辑：李　强　唐峰雁
封面设计：金　莎
全国新华书店经销
发行热线：（010）84921043
传真：（010）62117166
编辑部电话：（010）84921043
北京合众伟业印刷有限公司印刷
字数：358千字
开本：787×1092mm　1/16　12.25印张
2012年7月第1版第2次印刷
定价：42.00元

代 序

雅思满分之路

很多人经常问我雅思是怎样考到满分的，其实这个问题就像如何把英语学好一样难以回答。把雅思考到满分，正如英国剑桥大学雅思考试委员会官方所描述的那样，必须具备专家级也就是 Native Speaker 的英语实力。所以这里我还是谈谈我是如何学好英语的，并和大家分享一些准备雅思考试的小经验、小技巧。

第一阶段：建立标准的英语发音体系

其实最初我的英语基础非常差，因为我高中学习的是日语。进入大学以后，由于受到日语发音的影响，我的英语发音很不标准，语法也是错误百出，这让我非常焦急。为了能学好英文，我积极参加了大量英语活动，其中获益最大的是参加了学校的英语演讲比赛。经过层层筛选，最终全校两万多名学生中只有 8 名晋级决赛，我便是其中之一。为了准备这场比赛，我对自己进行了为期两个月的集训。因为英语演讲对语音的要求颇高，所以语音训练当然是最重要的。每天早上 8 点我便开始语音训练，从口腔嘴形训练到段落连读训练，一直持续到晚上 10 点结束。两个月的集中训练下来，我的英语发音有了长足的进步，基本上可以堪称 Native Speaker 的发音水平了。

现在回想起来，这段经历为我的英语学习打下了坚实的基础，同时也培养了我学习英语的信心和兴趣。在这个阶段，有两点经验是很受用的：一是要有持续的练习时间，1 个月、2 个月都可以，在这期间一定要精力集中、专项突破；二是最好要有志同道合的伙伴，一个好的 partner 不仅能帮你发现错误，还能帮你把如此高强度的训练坚持下去。

第二阶段：扩充词汇量

如果发音是建筑一座大厦的地基，那么词汇就是建筑材料。大学二年级的时候，我因为准备考 GRE 和托福而背了大量词汇。当时我买了十几本不同的词汇书，有 A—Z 编排的、词根词缀的、分类词汇的等等，只要有时间就会拿出一本来翻看。词汇积累是漫漫英语学习路中最枯燥的一段，走好这段路既需要毅力，也需要苦中求乐的积极心态，同时还要根据自身特点寻找记忆技巧。这十几本词汇书的内容其实相差不多，对我个人而言，不同的排版设计、不同的词汇顺序给了我不同的记忆刺激。到了后期，寻找不同词汇书中词汇解释的差别也成了我的小乐趣。

除了词汇书，我还专程跑到北京王府井外文书店购置了大量的外文原版小说，以及韦氏红、黄、黑、蓝等多本字典。注意是原版图书！这并不是说我只认国外的牌子，而是只有原版书籍才能保证学习材料的正确性，这一点很重要。通过阅读这些书籍，我积累了大量英文素材，巩固了相对生疏的词汇，还渐渐学会了欣赏这种语言的妙词佳句之美。

第三阶段：提高英语听说能力

大三那年考完 GRE 之后，我开始在一个培训学校教授 GRE 逻辑分析，也因此积累了人生第一桶金，用自己的钱买了一台 DVD 机和海量的 DVD 电影。不久非典来袭，大多数高校处于隔离与被隔离的恐慌之中，培训学校也纷纷歇业，此时的我无所适从，只能以看电影学英语消磨时间。也就是在这个时候，我吸收消化了大量优秀的英文电影和电视剧，例如《老友记》、《急诊室的故事》等等。DVD 电影有个好处，就是可以调字幕。我在看电影的时候必定调出英文字幕，边看字幕边听，一旦遇到不认识的单词，就立刻暂停查单词，久而久之便积累了大量口语词汇，也习惯了英语口语表达的方式，同时还提高了听力。在这期间有一点很重要，对于想说地道英语的同学来说更是不可忽视，那就是“模仿”。看《老友记》时，经常是里面的人物说一句话，我就默默地或小声地重复一遍。现在总结起来，我认为学习英语的天赋无外乎两个基本能力：好的记忆力和模仿能力。

以上这三个阶段是我学习英语过程中最为重要的阶段，之后的出国留学无非是锦上添花。当时我出国考的是GRE和托福，因此回国重新投入英语教育之后，我决定亲自考一下雅思。2007年3月31日，我第一次参加雅思考试，得到了总分9分（听力9分，阅读9分，写作8分，口语9分）的分数。

要想考到9分，首先在听力考试中就要全神贯注，认真听懂每一句话，然后回答每一个问题。雅思听力其实很简单，只要能听懂，题目一般能做对，唯一的障碍可能就是分神没听清或是拼写错误。雅思听力中混杂了英音和美音，有时还可能带点儿澳洲口音，某些连读和发音习惯需要我们仔细辨别。但雅思听力文章有个显著特点，那就是生活化。因此，针对相应的生活场景，我们有机会就要进行生活化语言的听力训练。

阅读部分对中国考生来说从来都不是最困难的，毕竟数年的英语教育都是基于阅读理解、完形填空而进行的。我在考试时也没有使用任何技巧，就是先花时间看懂文章，然后按照顺序逐个攻破每一道题，需要的时候再回到文章中去寻找相关信息来确认答案。雅思阅读的终极境界不是使用各种答题技巧去做题，而是能够做到真正的阅读并理解。

当时口语考到9分的经验可以跟大家进行独家分享。当时，第一部分的基本情况回答一切顺利，第二部分口语卡片要求谈论一个音乐或艺术作品。我选择了讲音乐，因为对艺术作品知之甚少，如果讲艺术作品就是给自己找麻烦。但是讲音乐的话，中国考生又都讲得太相似，如果和大多数人讲得一样就很难得到理想的分数，于是我当时决定要讲得独特一点，打算“think outside the box”。当时我讲道，“Speaking of music, I really enjoy listening to religious music...（我喜欢的是宗教音乐……）”，而且还运用了非常好的句式，例如“Whenever I listen to music, I feel like lifted up to heaven and drawn close to God. It gives peace to my mind and joy to my soul.”讲完之后我非常高兴，自认为讲得不错。但是进入到第三部分我就崩溃了，因为考官根据我的表述开始问一些具有思考性的问题。天啊！有些问题用中文我都不知道该怎么回答。当时第一个问题是“Who do you think contribute more to the society, musicians

or professionals?”这是个社会性议题，如果两个辩论队对此展开辩论，估计一个钟头之后也未必能给出结论，我一介草民又该如何作答？此时只好跟考官大打太极拳：“That's a very good question. But I've never thought about this question before. And I know that if you look at this question from different perspectives, you may have different answers. Well, I'm not really sure. Thank you.”考官意犹未尽继续追问，越问越深入，我当时没有办法，只好坦白交代：我不是这方面的专家，我不知道，我真的不知道……考试结束离开考场之后，我懊悔郁闷不已，以为这次肯定考砸了，估计最多也就是个7分。但是成绩下来之后却是9分。之后通过和许多同事探讨以及后来又陆续参加了大量雅思考试，我发现雅思口语考试更重要的是考查考生的英语表达能力，而非此人社会知识的多少深浅，所以只要语言本身出色就能得到理想的分数，这就像我经常说的：“What you say doesn't really matter. What really matters is how and how well you say that.”

讲了这么多，其实无外乎在给广大考生传达这样一个信息，英语实力的造就绝非一朝一夕之事，但是也不乏事半功倍的好方法。虽说Practice makes perfect，但是practice并不是唯一的key，就像武林之中的高手分为两种：一为天资聪颖，勤学苦练者；二为资质欠佳，却得高人指点或偶获武林秘笈者。希望广大考生都能找到自己的“武林秘笈”并勤以研习，实现自己的理想和目标。

王毅

2012年6月于北京

9分达人系列 PK 剑1—剑8

要攻克雅思考试，首先要了解雅思考试的机制。雅思考生可能都知道，雅思考试极为频繁，平均每月四场。这就意味着剑桥雅思考试委员会的出题速度远远跟不上考试场次的步伐，因此不可能每次考试都使用与之前毫无重复的新题。事实上，雅思考试有着一个庞大的题库，每场考试的题目都是从题库中随机抽取组合而成。若能对这个题库有个一知半解，肯定会受益匪浅。

然而，剑桥雅思考试委员会从来就没有打算将这个强大的题库公布于众，只是选取了较有代表性的老题编纂而成了剑1—剑8，以此勉强平复广大考生对真题的渴望之情。自1996年出版以来，剑1—剑8以其权威性已经成为整个雅思界的经典教材，《9分达人系列》又如何与之PK呢？

·高手过招之一：时新性

剑8于2011年3月31日全球首发，也许这够新了。但是剑8收录的题目却远远不及它的首发日期那么新。其实无论是最早的剑1，还是最新的剑8，书中所收录的真题均为剑桥雅思考试委员会早已弃之不用的老题、旧题。而《9分达人》和《9分达人2》则是作者根据自身考试经验所编写，其中《9分达人》涵盖了2011年—2007年最新8套雅思阅读真题，《9分达人2》则收入了2012年—2006年最新7套雅思阅读真题，两本书所收入的真题均不重合。9分达人系列与剑1—剑8，孰新孰旧显而易见。

·高手过招之二：命中率

我们必须要明白的一个事实是：凡是剑1—剑8收录的题目，雅思考试委员会便会立即将其从现行题库中剔除。也就是说，剑1—剑8收录的题目绝不可能在真实考试中再次出现，其命中率为零。而《9分达人系列》所收录的阅读真题仍在现行题库之中，况且自出版以来已屡次在考试中再现（具体请参见“本书所收集文章及对应考试日期一览”），其命中率可以说是无限大。

两招过后，我们可以清晰地看到：《9分达人系列》在时新性、命中率这两方面占有绝对优势，它不仅是“烤鸭”们了解雅思阅读前沿信息的主渠道，也是广大考生预测、

押题的好帮手。此外，相比体系较为完整的剑1—剑8，作为后起之秀的《9分达人系列》虽目前只有阅读单行本，却极力做到尽善尽美。书中除包含最新真题外，还提供每套题目的详细解析及参考译文。作为一名多年从事雅思教育的一线名师，作者透彻地分析了每一道题目的解题思路和方法，故《9分达人系列》在“授人以鱼”的同时更是“授人以渔”。

事实上，《9分达人系列》与剑1—剑8的PK结果并不重要，重要的是考生如何利用好这两套图书成功攻克雅思考试。作为雅思界的权威用书，剑1—剑8以官方的角度展示了雅思考试，考生若想全面了解雅思考试的题型、难度，认真学习这一系列的书籍十分必要。而《9分达人系列》则更像是一招便可致命的武林秘笈，考生若想一窥雅思考试的现行题库，或想在短期内迅速提高分数，那么《9分达人系列》无疑是最佳选择！

前 言

《9分达人雅思阅读真题还原》的出版绝非偶然。现今市面上不乏雅思阅读经典系列教材，其种类繁多，且均面临着同一个问题，即书中所收录的题目大多已过时，多数已被剑桥雅思考试委员会弃之不用，在今后的考试中也基本上不会再出现，因而这些图书远远无法满足广大考生对雅思考试最前沿信息的需求。基于上述情况，作者在对最新雅思真题精心研究和反复推敲后，结合自身经验，提笔创作了第一本《9分达人雅思阅读真题还原》。该书出版后不久便获得了广大考生的认可。不过，由于缺乏解析，该书没能为广大考生进一步解惑。众多读者在使用该教材时，纵使知道自己解答有误，却仍旧只知其然而不知其所以然。因此，作者在考生和出版方的提议下为该书续写了一本解析，以满足考生对参考材料的需求，这就是现在为广大雅思考生所熟知的该书升级版——《9分达人雅思阅读真题还原及解析》。真题与解析的理想结合更加贴合了雅思考生的需求，并受到广大考生读者的一致好评和热情推荐。

与时俱进、推陈出新不仅适用于社会发展，也同样适用于我们的图书编辑。跟不上雅思考试的时代步伐，解决不了广大考生的最新难题，就无法真正实现服务于读者、服务于考生的终极目标和承诺。为此，作者再次投入大量精力，细心筛选经典试题、精心编著解析，最终创作出了最新一代《9分达人雅思阅读真题还原及解析2》。本书经过作者的多番努力现已正式出版，其中收录了最新的7套雅思阅读真题。《9分达人雅思阅读真题还原及解析2》不仅是作者的心血之作，更是考生进行考前冲刺复习、寻找考场体验、保持做题手感、训练解题方法和技巧、押中现场考题的宝典。

首先，作者在设计初始便考虑到考生的时间安排问题。为了让考生在考前一周

调整好心态，又不失适当的训练，本书收录了7套完整的阅读真题加解析。考生每天可做一套，然后再对照解析查漏补缺，巩固已有的知识和经验，加深对雅思考试考点的印象和理解。如此，考生既不会有太大的压力，又能持续保持考试状态和解题手感，让自己在第一时间把握主动权。其次，本书经过作者的反复思量和推敲，总结了作者多年的雅思考试经验、汇聚了最有效的解题思路、方法和技巧。此外，本书的解析清晰明确、讲解到位，是考生总结经验的最佳材料。相信考生在掌握好这些内容后会对考试的题型有一个更明确的概念，从而能够更好地应对现场考试。最后，也是本书最大的亮点所在，那就是押题！在考场中，幸运的考生或许会惊喜地发现：眼前的雅思阅读题竟然与《9分达人雅思阅读真题还原及解析2》中的题目一模一样啊！若果真如此，那么作者和出版方可要道声：恭喜了！

作者和出版方在此衷心祝愿考生取得优异的成绩！为广大考生提供优质的服务和图书是作者和出版方最真诚的愿望，考生和读者对我们的支持、鼓励和意见也将进一步促进和推动我们的进步与提高。为了时刻跟进考生的需求和对图书的反映，我们开通了新航道官方微博（网址：http://weibo.com/newchannel），并成立了新航道雅思读者互动QQ群（群号见封底），诚邀广大雅思考生和英语爱好者的加盟。此外，为更好地服务于读者，我们在微博中会不定期地发布英语考试的最新动态，QQ群内也会不时地分享图书的赠品。如果您想提高自己，那就不要犹豫了，加入我们的大家庭，与志同道合者一起交流畅谈吧！如果您对我们有任何意见或建议，也请不要忘记通过QQ群告诉我们哦！我们会悉心对待每一位读者的意见和提议，力求在不断进步的同时，为广大考生和读者编织美好的明天！

编者

2012年6月

本书所收集文章及对应考试日期一览

Text 1

Going Bananas	2006年5月27日	2006年8月26日	2007年6月9日
	2008年5月22日	2011年1月8日	
Coastal Archaeology of Britain	2007年12月1日	2008年11月29日	2011年1月8日
Travel Books	2011年1月8日		

Text 2

Ambergris	2006年6月17日	2007年8月18日	2010年7月10日
Tackling Hunger in Msekeni	2010年7月10日		
Placebo Effect — The Power of Nothing		2010年7月10日	

Text 3

Going Nowhere Fast	2008年3月29日	2011年2月12日	
The Seedhunters	2008年2月2日	2008年10月11日	2011年5月7日
Assessing the Risk	2007年8月25日	2010年1月19日	2011年2月12日

Text 4

The Origins of Laughter	2008年7月12日	2010年9月4日	
The Lost City	2007年7月7日	2008年11月15日	2010年9月4日
Designed to Last: Could Better Design Cure Our Throwaway Culture?			2010年9月4日

Text 5

Alfred Nobel	2011年4月30日		
Bird Migration	2010年7月31日	2012年5月10日	
The Ingenuity Gap	2010年7月31日		

Text 6

Man or Machine?	2008年6月21日	2010年12月16日	
California's Age of Megafires	2011年11月26日		
The Rainmaker	2006年9月23日	2010年12月18日	

Text 7

Health in the Wild	2009年9月12日	2011年1月15日	2012年1月7日
The Conquest of Malaria in Italy, 1900–1962		2009年9月5日	2011年11月5日
Sunset for the Oil Business?	2010年3月20日	2011年7月30日	

目 录

TEST 1

READING PASSAGE 1

*You should spend about 20 minutes on **Questions 1-13** which are based on Reading Passage 1 below.*

Going Bananas

The world's favourite fruit could disappear forever in 10 years' time.

The banana is among the world's oldest crops. Agricultural scientists believe that the first edible banana was discovered around ten thousand years ago. It has been at an evolutionary standstill ever since it was first propagated in the jungles of South-East Asia at the end of the last ice age. Normally the wild banana, a giant jungle herb called Musa acuminata, contains a mass of hard seeds that make the fruit virtually inedible. But now and then, hunter-gatherers must have discovered rare mutant plants that produced seedless, edible fruits. Geneticists now know that the vast majority of these soft-fruited plants resulted from genetic accidents that gave their cells three copies of each chromosome instead of the usual two. This imbalance prevents seeds and pollen from developing normally, rendering the mutant plants sterile. And that is why some scientists believe the world's most popular fruit could be doomed. It lacks the genetic diversity to fight off pests and diseases that are invading the banana plantations of Central America and the smallholdings of Africa and Asia alike.

In some ways, the banana today resembles the potato before blight brought famine to Ireland a century and a half ago. But it holds a lesson for other crops, too, says Emile Frison, top banana at the International Network for the Improvement of Banana and Plantain in Montpellier, France. The state of the banana, Frison warns, can teach a broader lesson: the increasing standardisation of food crops round the world is threatening their ability to adapt and survive.

The first Stone Age plant breeders cultivated these sterile freaks by replanting cuttings from their stems. And the descendants of those original cuttings are the bananas we still eat today. Each is a virtual clone, almost devoid of genetic diversity. And that uniformity makes it ripe for disease like no other crop on Earth. Traditional varieties of sexually reproducing crops have always had a much broader genetic

base, and the genes will recombine in new arrangements in each generation. This gives them much greater flexibility in evolving responses to disease – and far more genetic resources to draw on in the face of an attack. But that advantage is fading fast, as growers increasingly plant the same few, high-yielding varieties. Plant breeders work feverishly to maintain resistance in these standardised crops. Should these efforts falter, yields of even the most productive crop could swiftly crash. "When some pest or disease comes along, severe epidemics can occur," says Geoff Hawtin, director of the Rome-based International Plant Genetic Resources Institute.

The banana is an excellent case in point. Until the 1950s, one variety, the Gros Michel, dominated the world's commercial banana business. Found by French botanists in Asia in the 1820s, the Gros Michel was by all accounts a fine banana, richer and sweeter than today's standard banana and without the latter's bitter aftertaste when green. But it was vulnerable to a soil fungus that produced a wilt known as Panama disease. "Once the fungus gets into the soil it remains there for many years. There is nothing farmers can do. Even chemical spraying won't get rid of it," says Rodomiro Ortiz, director of the International Institute for Tropical Agriculture in Ibadan, Nigeria. So plantation owners played a running game, abandoning infested fields and moving to "clean" land – until they ran out of clean land in the 1950s and had to abandon the Gros Michel. Its successor, and still the reigning commercial king, is the Cavendish banana, a 19th-century British discovery from southern China. The Cavendish is resistant to Panama disease and, as a result, it literally saved the international banana industry. During the 1960s, it replaced the Gros Michel on supermarket shelves. If you buy a banana today, it is almost certainly a Cavendish. But even so, it is a minority in the world's banana crop.

Half a billion people in Asia and Africa depend on bananas. Bananas provide the largest source of calories and are eaten daily. Its name is synonymous with food. But the day of reckoning may be coming for the Cavendish and its indigenous kin. Another fungal disease, black Sigatoka, has become a global epidemic since its first appearance in Fiji in 1963. Left to itself, black Sigatoka – which causes brown wounds on leaves and premature fruit ripening – cuts fruit yields by 50 to 70 per cent and reduces the productive lifetime of banana plants from 30 years to as little as 2 or 3. Commercial growers keep Sigatoka at bay by a massive chemical assault. Forty sprayings of fungicide a year is typical. But even so, diseases such as black Sigatoka are getting more and more difficult to control. "As soon as you bring in a new fungicide, they develop resistance," says Frison. "One thing we can be sure of is that the Sigatoka won't lose in this battle." Poor farmers, who cannot afford chemicals, have it even worse. They can do little more than watch their plants die. "Most of the banana fields in Amazonia have already been destroyed by the disease," says Luadir Gasparotto, Brazil's leading banana pathologist with the government research agency EMBRAPA. Production is likely to fall by 70 per cent as the disease spreads, he predicts. The only option will be to find a new variety.

But how? Almost all edible varieties are susceptible to the diseases, so growers cannot simply change to a different banana. With most crops, such a threat would unleash an army of breeders, scouring the world for resistant relatives whose traits they can breed into commercial varieties. Not so with the banana. Because all edible varieties are sterile, bringing in new genetic traits to help cope with pests and diseases is nearly impossible. Nearly, but not totally. Very rarely, a sterile banana will experience a genetic accident that allows an almost normal seed to develop, giving breeders a tiny window for improvement. Breeders at the Honduran Foundation of Agricultural Research have tried to exploit this to create disease-resistant varieties. Further backcrossing with wild bananas yielded a new seedless banana resistant to both black Sigatoka and Panama disease.

Neither Western supermarket consumers nor peasant growers like the new hybrid. Some accuse it of tasting more like an apple than a banana. Not surprisingly, the majority of plant breeders have until now turned their backs on the banana and got to work on easier plants. And commercial banana companies are now washing their hands of the whole breeding effort, preferring to fund a search for new fungicides instead. "We supported a breeding programme for 40 years, but it wasn't able to develop an alternative to Cavendish. It was very expensive and we got nothing back," says Ronald Romero, head of research at Chiquita, one of the Big Three companies that dominate the international banana trade.

Last year, a global consortium of scientists led by Frison announced plans to sequence the banana genome within five years. It would be the first edible fruit to be sequenced. Well, almost edible. The group will actually be sequencing inedible wild bananas from East Asia because many of these are resistant to black Sigatoka. If they can pinpoint the genes that help these wild varieties to resist black Sigatoka, the protective genes could be introduced into laboratory tissue cultures of cells from edible varieties. These could then be propagated into new, resistant plants and passed on to farmers.

It sounds promising, but the big banana companies have, until now, refused to get involved in GM research for fear of alienating their customers. "Biotechnology is extremely expensive and there are serious questions about consumer acceptance," says David McLaughlin, Chiquita's senior director for environmental affairs. With scant funding from the companies, the banana genome researchers are focusing on the other end of the spectrum. Even if they can identify the crucial genes, they will be a long way from developing new varieties that smallholders will find suitable and affordable. But whatever biotechnology's academic interest, it is the only hope for the banana. Without it, banana production worldwide will head into a tailspin. We may even see the extinction of the banana as both a lifesaver for hungry and impoverished Africans and as the most popular product on the world's supermarket shelves.

Questions 1-3

*Complete the sentences below with **NO MORE THAN THREE WORDS** from the passage.*

Write your answers in boxes 1-3 on your answer sheet.

1 The banana was first eaten as a fruit by humans almost _____ years ago.

2 Bananas were first planted in _____.

3 The taste of wild bananas is adversely affected by its _____.

Questions 4-10

Look at the following statements (Questions 4-10) and the list of people below.

*Match each statement with the correct person, **A-F**.*

*Write the correct letter, **A-F**, in boxes 4-10 on your answer sheet.*

***NB** You may use any letter more than once.*

4 A pest invasion may seriously damage the banana industry.

5 The effect of fungal infection in soil is often long-lasting.

6 A commercial manufacturer gave up on breeding bananas for disease resistant species.

7 Banana disease may develop resistance to chemical sprays.

8 A banana disease has destroyed a large number of banana plantations.

9 Consumers would not accept genetically altered crop.

10 Lessons can be learned from bananas for other crops.

List of people

A Rodomiro Oritz
B David McLaughlin
C Emile Frison
D Ronald Romero
E Luadir Gasparotto
F Geoff Hawtin

Questions 11-13

Do the following statements agree with the information given in Reading Passage 1?

In boxes 11-13 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

11 The banana is the oldest known fruit.

12 The Gros Michel is still being used as a commercial product.

13 Banana is the main food in some countries.

READING PASSAGE 2

*You should spend about 20 minutes on **Questions 14-26** which are based on Reading Passage 2 below.*

Coastal Archaeology of Britain

The recognition of the wealth and diversity of England's coastal archaeology has been one of the most important developments of recent years. Some elements of this enormous resource have long been known. The so-called 'submerged forests' off the coasts of England, sometimes with clear evidence of human activity, had attracted the interest of antiquarians since at least the eighteenth century, but serious and systematic attention has been given to the archaeological potential of the coast only since the early 1980s.

It is possible to trace a variety of causes for this concentration of effort and interest. In the 1980s and 1990s scientific research into climate change and its environmental impact spilled over into a much broader public debate as awareness of these issues grew; the prospect of rising sea levels over the next century, and their impact on current coastal environments, has been a particular focus for concern. At the same time archaeologists were beginning to recognise that the destruction caused by natural processes of coastal erosion and by human activity was having an increasing impact on the archaeological resource of the coast.

The dominant process affecting the physical form of England in the post-glacial period has been the rise in the altitude of sea level relative to the land, as the glaciers melted and the landmass readjusted. The encroachment of the sea, the loss of huge areas of land now under the North Sea and the English Channel, and especially the loss of the land bridge between England and France, which finally made Britain an island, must have been immensely significant factors in the lives of our prehistoric ancestors. Yet the way in which prehistoric communities adjusted to these environmental changes has seldom been a major theme in discussions of the period. One factor contributing to this has been that, although the rise in relative sea level is comparatively well documented, we know little about the constant reconfiguration of the coastline. This was affected by many processes, mostly quite localised, which have not yet been adequately researched. The detailed reconstruction of coastline histories and the changing environments available for human use will be an important theme for future research.

So great has been the rise in sea level and the consequent regression of the coast that much of the archaeological evidence now exposed in the coastal zone, whether being eroded or exposed as a buried land surface, is derived from what was originally terrestrial occupation. Its current location in the coastal zone is the product of later unrelated processes, and it can tell us little about past adaptation to the sea. Estimates of its significance will need to be made in the context of other related evidence from dry land sites. Nevertheless, its physical environment means that preservation is often excellent, for example in the case of the Neolithic structure excavated at the Stumble in Essex.

In some cases these buried land surfaces do contain evidence for human exploitation of what was a coastal environment, and elsewhere along the modern coast there is similar evidence. Where the evidence does relate to past human exploitation of the resources and the opportunities offered by the sea and the coast, it is both diverse and as yet little understood. We are not yet in a position to make even preliminary estimates of answers to such fundamental questions as the extent to which the sea and the coast affected human life in the past, what percentage of the population at any time lived within reach of the sea, or whether human settlements in coastal environments showed a distinct character from those inland.

The most striking evidence for use of the sea is in the form of boats, yet we still have much to learn about their production and use. Most of the known wrecks around our coast are not unexpectedly of post-medieval date, and offer an unparalleled opportunity for research which has as yet been little used. The prehistoric sewn-plank boats such as those from the Humber estuary and Dover all seem to belong to the second millennium BC; after this there is a gap in the record of a millennium, which cannot yet be explained, before boats reappear, but built using a very different technology. Boatbuilding must have been an extremely important activity around much of our coast, yet we know almost nothing about it. Boats were some of the most complex artefacts produced by premodern societies, and further research on their production and use make an important contribution to our understanding of past attitudes to technology and technological change.

Boats needed landing places, yet here again our knowledge is very patchy. In many cases the natural shores and beaches would have sufficed, leaving little or no archaeological trace, but especially in later periods, many ports and harbours, as well as smaller facilities such as quays, wharves, and jetties, were built. Despite a growth of interest in the waterfront archaeology of some of our more important Roman and medieval towns, very little attention has been paid to the multitude of smaller landing places. Redevelopment of harbour sites and other development and natural pressures along the coast are subjecting these important locations to unprecedented threats, yet few

surveys of such sites have been undertaken.

One of the most important revelations of recent research has been the extent of industrial activity along the coast. Fishing and salt production are among the better documented activities, but even here our knowledge is patchy. Many forms of fishing will leave little archaeological trace, and one of the surprises of recent survey has been the extent of past investment in facilities for procuring fish and shellfish. Elaborate wooden fish weirs, often of considerable extent and responsive to aerial photography in shallow water, have been identified in areas such as Essex and the Severn estuary. The production of salt, especially in the late Iron Age and early Roman periods, has been recognised for some time, especially in the Thames estuary and around the Solent and Poole Harbour, but the reasons for the decline of that industry and the nature of later coastal salt working are much less well understood. Other industries were also located along the coast, either because the raw materials outcropped there or for ease of working and transport: mineral resources such as sand, gravel, stone, coal, ironstone, and alum were all exploited. These industries are poorly documented, but their remains are sometimes extensive and striking.

Some appreciation of the variety and importance of the archaeological remains preserved in the coastal zone, albeit only in preliminary form, can thus be gained from recent work, but the complexity of the problem of managing that resource is also being realised. The problem arises not only from the scale and variety of the archaeological remains, but also from two other sources: the very varied natural and human threats to the resource, and the complex web of organisations with authority over, or interests in, the coastal zone. Human threats include the redevelopment of historic towns and old dockland areas, and the increased importance of the coast for the leisure and tourism industries, resulting in pressure for the increased provision of facilities such as marinas. The larger size of ferries has also caused an increase in the damage caused by their wash to fragile deposits in the intertidal zone. The most significant natural threat is the predicted rise in sea level over the next century, especially in the south and east of England. Its impact on archaeology is not easy to predict, and though it is likely to be highly localised, it will be at a scale much larger than that of most archaeological sites. Thus protecting one site may simply result in transposing the threat to a point further along the coast. The management of the archaeological remains will have to be considered in a much longer time scale and a much wider geographical scale than is common in the case of dry land sites, and this will pose a serious challenge for archaeologists.

Questions 14-16

*Choose the correct letter, **A**, **B**, **C** or **D**.*

Write your answers in boxes 14-16 on your answer sheet.

14 What has caused public interest in coastal archaeology in recent years?

A The rapid development of England's coastal archaeology

B The rising awareness of climate change

C The discovery of an underwater forest

D The systematic research conducted on coastal archaeological findings

15 What does the passage say about the evidence of boats?

A There's enough knowledge of the boatbuilding technology of the pre-historic people.

B Many of the boats discovered were found in harbours.

C The use of boats had not been recorded for a thousand years.

D Boats were first used for fishing.

16 What can be discovered from the air?

A Salt mines

B Roman towns

C Harbours

D Fisheries

QUESTIONS 17-23

Do the following statements agree with the information given in Reading Passage 2?

In boxes 17-23 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

17 England lost much of its land after the Ice Age due to the rising sea level.
18 The coastline of England has changed periodically.
19 Coastal archaeological evidence may be well-protected by sea water.
20 The design of boats used by pre-modern people was very simple.
21 Similar boats were also discovered in many other European countries.
22 There are few documents relating to mineral exploitation.
23 Large passenger boats are causing increasing damage to the seashore.

Questions 24-26

*Choose **THREE** letters from **A-G**.*

Write your answer in boxes 24-26 on your answer sheet.

Which **THREE** of the following statements are mentioned in the passage?

A How coastal archaeology was originally discovered.
B It is difficult to understand how many people lived close to the sea.
C How much the prehistoric communities understand the climate change.
D Our knowledge of boat evidence is limited.
E Some fishing grounds were converted to ports.
F Human development threatens the archaeological remains.
G Coastal archaeology will become more important in the future.

READING PASSAGE 3

*You should spend about 20 minutes on **Questions 27-40** which are based on Reading Passage 3 below.*

Travel Books

There are many reasons why individuals have traveled beyond their own societies. Some travelers may have simply desired to satisfy curiosity about the larger world. Until recent times, however, did travelers start their journey for reasons other than mere curiosity. While the travelers' accounts give much valuable information on these foreign lands and provide a window for the understanding of the local cultures and histories, they are also a mirror to the travelers themselves, for these accounts help them to have a better understanding of themselves.

Records of foreign travel appeared soon after the invention of writing, and fragmentary travel accounts appeared in both Mesopotamia and Egypt in ancient times. After the formation of large, imperial states in the classical world, travel accounts emerged as a prominent literary genre in many lands, and they held especially strong appeal for rulers desiring useful knowledge about their realms. The Greek historian Herodotus reported on his travels in Egypt and Anatolia in researching the history of the Persian wars. The Chinese envoy Zhang Qian described much of central Asia as far west as Bactria (modern-day Afghanistan) on the basis of travels undertaken in the first century BCE while searching for allies for the Han dynasty. Hellenistic and Roman geographers such as Ptolemy, Strabo, and Pliny the Elder relied on their own travels through much of the Mediterranean world as well as reports of other travelers to compile vast compendia of geographical knowledge.

During the postclassical era (about 500 to 1500 CE), trade and pilgrimage emerged as major incentives for travel to foreign lands. Muslim merchants sought trading opportunities throughout much of the eastern hemisphere. They described lands, peoples, and commercial products of the Indian Ocean basin from east Africa to Indonesia, and they supplied the first written accounts of

societies in Sub-Saharan West Africa. While merchants set out in search of trade and profit, devout Muslims traveled as pilgrims to Mecca to make their hajj and visit the holy sites of Islam. Since the prophet Muhammad's original pilgrimage to Mecca, untold millions of Muslims have followed his example, and thousands of hajj accounts have related their experiences. East Asian travelers were not quite so prominent as Muslims during the postclassical era, but they too followed many of the highways and sea lanes of the eastern hemisphere. Chinese merchants frequently visited southeast Asia and India, occasionally venturing even to east Africa, and devout East Asian Buddhists undertook distant pilgrimages. Between the 5th and 9th centuries CE, hundreds and possibly even thousands of Chinese Buddhists traveled to India to study with Buddhist teachers, collect sacred texts, and visit holy sites. Written accounts recorded the experiences of many pilgrims, such as Faxian, Xuanzang, and Yijing. Though not so numerous as the Chinese pilgrims, Buddhists from Japan, Korea, and other lands also ventured abroad in the interests of spiritual enlightenment.

Medieval Europeans did not hit the roads in such large numbers as their Muslim and East Asian counterparts during the early part of the postclassical era, although gradually increasing crowds of Christian pilgrims flowed to Jerusalem, Rome, Santiago de Compostela (in northern Spain), and other sites. After the 12th century, however, merchants, pilgrims, and missionaries from medieval Europe traveled widely and left numerous travel accounts, of which Marco Polo's description of his travels and sojourn in China is the best known. As they became familiar with the larger world of the eastern hemisphere—and the profitable commercial opportunities that it offered—European peoples worked to find new and more direct routes to Asian and African markets. Their efforts took them not only to all parts of the eastern hemisphere, but eventually to the Americas and Oceania as well.

If Muslim and Chinese peoples dominated travel and travel writing in postclassical times, European explorers, conquerors, merchants, and missionaries took center stage during the early modern era (about 1500 to 1800 CE). By no means did Muslim and Chinese travel come to a halt in early modern times. But European peoples ventured to the distant corners of the globe, and European printing presses churned out thousands of travel accounts that described foreign lands and peoples for a reading public with an apparently insatiable appetite for

news about the larger world. The volume of travel literature was so great that several editors, including Giambattista Ramusio, Richard Hakluyt, Theodore de Bry, and Samuel Purchas, assembled numerous travel accounts and made them available in enormous published collections.

During the 19th century, European travelers made their way to the interior regions of Africa and the Americas, generating a fresh round of travel writing as they did so. Meanwhile, European colonial administrators devoted numerous writings to the societies of their colonial subjects, particularly in Asian and African colonies they established. By midcentury, attention was flowing also in the other direction. Painfully aware of the military and technological prowess of European and Euro-American societies, Asian travelers in particular visited Europe and the United States in hopes of discovering principles useful for the reorganisation of their own societies. Among the most prominent of these travelers who made extensive use of their overseas observations and experiences in their own writings were the Japanese reformer Fukuzawa Yukichi and the Chinese revolutionary Sun Yat-sen.

With the development of inexpensive and reliable means of mass transport, the 20th century witnessed explosions both in the frequency of long-distance travel and in the volume of travel writing. While a great deal of travel took place for reasons of business, administration, diplomacy, pilgrimage, and missionary work, as in ages past, increasingly effective modes of mass transport made it possible for new kinds of travel to flourish. The most distinctive of them was mass tourism, which emerged as a major form of consumption for individuals living in the world's wealthy societies. Tourism enabled consumers to get away from home to see the sights in Rome, take a cruise through the Caribbean, walk the Great Wall of China, visit some wineries in Bordeaux, or go on safari in Kenya. A peculiar variant of the travel account arose to meet the needs of these tourists: the guidebook, which offered advice on food, lodging, shopping, local customs, and all the sights that visitors should not miss seeing. Tourism has had a massive economic impact throughout the world, but other new forms of travel have also had considerable influence in contemporary times.

Questions 27-28

*Choose the correct letter, **A**, **B**, **C** or **D**.*

Write your answers in boxes 27-28 on your answer sheet.

27 What were most people traveling for in the early days?

A Studying their own cultures

B Business

C Knowing other people and places better

D Writing travel books

28 Why did the author say writing travel books is also "a mirror" for travelers themselves?

A Because travelers record their own experiences.

B Because travelers reflect upon their own society and life.

C Because it increases knowledge of foreign cultures.

D Because it is related to the development of human society.

Questions 29-36

Complete the table below.

*Write **NO MORE THAN TWO WORDS** from Reading Passage 3 for each answer.*

Write your answer in boxes 29-36 on your answer sheet.

TIME	TRAVELER	DESTINATION	PURPOSE OF TRAVEL
Classical Greece	Herodotus	Egypt and Anatolia	To gather information for the study of **29** _____
Han Dynasty	Zhang Qian	Central Asia	To seek **30** _____
Roman Empire	Ptolemy, Strabo, Pliny the Elder	Mediterranean	To acquire **31** _____ _____
Post-classical Era (about 500 to 1500 CE)	Muslims	From east Africa to Indonesia Mecca	Trading and **32** _____
5th to 9th centuries CE	Chinese Buddhists	**33** _____	To collect Buddhist texts and for spiritual enlightenment
Early modern era (about 1500 to 1800 CE)	European explorers	New World	To satisfy public curiosity for the New World
During 19th century	Colonial administrator	Asia, Africa	To provide information for the **34** _____ _____ they set up
By the mid-century of the 1900s	Sun Yat-sen Fukuzawa Yukichi	Europe and United States	To study the **35** _____ _____ for the reorganisation of their societies
20th century	People from **36** _____ countries	Mass tourism	Entertainment and pleasure

Questions 37-40

*Choose the correct letter, **A**, **B**, **C** or **D**.*

Write your answers in boxes 37-40 on your answer sheet.

37 Why were the imperial rulers especially interested in these travel stories?

A Reading travel stories was a popular pastime.

B The accounts are often truthful rather than fictional.

C Travel books played an important role in literature.

D They desired knowledge of their empire.

38 Who were the largest group to record their spiritual trip during the postclassical era?

A Muslim traders

B Muslim pilgrims

C Chinese Buddhists

D Indian Buddhist teachers

39 During the early modern era, a large number of travel books were published to

A meet the public's interest.

B explore new business opportunities.

C encourage trips to the new world.

D record the larger world.

40 What's the main theme of the passage?

A The production of travel books

B The literary status of travel books

C The historical significance of travel books

D The development of travel books

TEST 2

READING PASSAGE 1

*You should spend about 20 minutes on **Questions 1-13** which are based on Reading Passage 1 below.*

Ambergris

What is it and where does it come from?

Ambergris was used to perfume cosmetics in the days of ancient Mesopotamia and almost every civilization on the earth has a brush with Ambergris. Before 1,000 AD, the Chinese names ambergris as *lung sien hiang*, "dragon's spittle perfume," as they think that it was produced from the drooling of dragons sleeping on rocks at the edge of a sea. The Arabs knew ambergris as *anbar* who believed that it is produced from springs near seas. It also gets its name from here. For centuries, this substance has also been used as a flavouring for food.

During the Middle Ages, Europeans used ambergris as a remedy for headaches, colds, epilepsy, and other ailments. In the 1851 whaling novel *Moby-Dick*, Herman Melville claimed that ambergris was "largely used in perfumery." But nobody ever knew where it really came from. Experts were still guessing its origin thousands of years later, until the long ages of guesswork ended in the 1720's, when Nantucket whalers found gobs of the costly material inside the stomachs of sperm whales. Industrial whaling quickly burgeoned. By 20th century ambergris is mainly recovered from inside the carcasses of sperm whales.

Through countless ages, people have found pieces of ambergris on sandy beaches. It was named *grey amber* to distinguish it from golden amber, another rare treasure. Both of them were among the most sought-after substances in the world, almost as valuable as gold. (Ambergris sells for roughly $20 a gram, slightly less than gold at $30 a gram.) Amber floats in salt water, and in old times the origin of both these substances was mysterious. But it turned out that amber and ambergris have little in common. Amber is a fossilized resin from trees that was quite familiar to Europeans long before the discovery of the New World, and prized for jewelry. Although considered a gem, amber is a hard, transparent, wholly-organic material derived from the resin of extinct species of trees, mainly pines.

To the earliest Western chroniclers, ambergris was variously thought to come from the same bituminous sea founts as amber, from the sperm of fishes or whales, from the droppings of strange sea birds (probably because of confusion over the included beaks of squid) or from the large hives of bees living near the sea. Marco Polo was the first Western chronicler who correctly attributed ambergris to sperm whales and its vomit.

As sperm whales navigate in the oceans, they often dive down to 2 km or more below the sea level to prey on squid, most famously the Giant Squid. It's commonly accepted that ambergris forms in the whale's gut or intestines as the creature attempts to "deal" with squid beaks. Sperm whales are rather partial to squid, but seemingly struggle to digest the hard, sharp, parrot-like beaks. It is thought their stomach juices become hyper-active trying to process the irritants, and eventually hard, resinous lumps are formed around the beaks, and then expelled from their innards by vomiting. When a whale initially vomits up ambergris, it is soft and has a terrible smell. Some marine biologists compare it to the unpleasant smell of cow dung. But after floating on the salty ocean for about a decade, the substance hardens with air and sun into a smooth, waxy, usually rounded piece of nostril heaven. The dung smell is gone, replaced by a sweet, smooth, musky and pleasant earthy aroma.

Since ambergris is derived from animals, naturally a question of ethics arises, and in the case of ambergris, it is very important to consider. Sperm whales are an endangered species, whose populations started to decline as far back as the 19th century due to the high demand for their highly emollient oil, and today their stocks still have not recovered. During the 1970's, the *Save the Whales* movement brought the plight of whales to international recognition. Many people now believe that whales are "saved". This couldn't be further from the truth. All around the world, whaling still exists. Many countries continue to hunt whales, in spite of international treaties to protect them. Many marine researchers are concerned that even the trade in naturally found ambergris can be harmful by creating further incentives to hunt whales for this valuable substance.

One of the forms ambergris is used today is as a valuable fixative in perfumes to enhance and prolong the scent. But nowadays, since ambergris is rare and expensive, and big fragrance suppliers that make most of the fragrances on the market today do not deal in it for reasons of cost, availability and murky legal issues, most perfumeries prefer to add a chemical derivative which mimics the properties of ambergris. As a fragrance consumer, you can assume that there is no natural ambergris in your perfume bottle, unless the company advertises this fact and unless you own vintage fragrances created before the 1980s. If you are wondering if you have been wearing a perfume with this legendary ingredient, you may want to review your scent collection. Here are a few of some of the top ambergris containing perfumes: Givenchy Amarige, Chanel No. 5, and Gucci Guilty.

Questions 1-6

Classify the following information as referring to

A ambergris only
B amber only
C both ambergris and amber
D neither ambergris nor amber

*Write the correct letter, **A, B, C,** or **D** in boxes 1-6 on your answer sheet.*

1 being expensive
2 adds flavor to food
3 used as currency
4 being see-through
5 referred to by Herman Melville
6 produces sweet smell

Questions 7-9

*Complete the sentences below with **NO MORE THAN ONE WORD** from the passage.*

Write your answers in boxes 7-9 on your answer sheet.

7 Sperm whales can't digest the ____ of the squids.
8 Sperm whales drive the irritants out of their intestines by ____.
9 The vomit of sperm whale gradually____ on contact of air before having pleasant smell.

Questions 10-13

Do the following statements agree with the information given in Reading Passage 1?

In boxes 10-13 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

10 Most ambergris comes from the dead whales today.

11 Ambergris is becoming more expensive than before.

12 Ambergris is still a popular ingredient in perfume production today.

13 New uses of ambergris have been discovered recently.

READING PASSAGE 2

*You should spend about 20 minutes on **Questions 14-26** which are based on Reading Passage 2 below.*

Questions 14-20

Reading passage 2 has seven paragraphs, **A-G**.

Choose the correct heading for each paragraph from the list of headings below.

*Write the correct number, **i-xi**, in boxes 14-20 on your answer sheet.*

	List of Headings
i	Why better food helps students' learning
ii	Becoming the headmaster of Msekeni
iii	Surprising use of school premises
iv	Global perspective
v	Why students were undernourished
vi	Surprising academic outcome
vii	An innovative program to help girls
viii	How food program is operated
ix	How food program affects school attendance
x	None of the usual reasons
xi	How to maintain academic standard

14 Paragraph **A**

15 Paragraph **B**

16 Paragraph **C**

17 Paragraph **D**

18 Paragraph **E**

19 Paragraph **F**

20 Paragraph **G**

Tackling Hunger in Msekeni

A There are not enough classrooms at the Msekeni primary school, so half the lessons take place in the shade of yellow-blossomed acacia trees. Given this shortage, it might seem odd that one of the school's purpose-built classrooms has been emptied of pupils and turned into a storeroom for sacks of grain. But it makes sense. Food matters more than shelter.

B Msekeni is in one of the poorer parts of Malawi, a landlocked southern African country of exceptional beauty and great poverty. No war lays waste Malawi, nor is the land unusually crowded or infertile, but Malawians still have trouble finding enough to eat. Half of the children under five are underfed to the point of stunting. Hunger blights most aspects of Malawian life, so the country is as good a place as any to investigate how nutrition affects development, and vice versa.

C The headmaster at Msekeni, Bernard Kumanda, has strong views on the subject. He thinks food is a priceless teaching aid. Since 1999, his pupils have received free school lunches. Donors such as the World Food Programme (WFP) provide the food: those sacks of grain (mostly mixed maize and soyabean flour, enriched with vitamin A) in that converted classroom. Local volunteers do the cooking—turning the dry ingredients into a bland but nutritious slop, and spooning it out on to plastic plates. The children line up in large crowds, cheerfully singing a song called "We are getting porridge".

D When the school's feeding programme was introduced, enrolment at Msekeni doubled. Some of the new pupils had switched from nearby schools that did not give out free porridge, but most were children whose families had previously kept them at home to work. These families were so poor that the long-term benefits of education seemed unattractive when set against the short-term gain of sending children out to gather firewood or help in the fields. One plate of porridge a day completely altered the calculation. A child fed at school will not howl so plaintively for food at home. Girls, who are more likely than boys to be kept out of school, are given extra snacks to take home.

E When a school takes in a horde of extra students from the poorest homes,

you would expect standards to drop. Anywhere in the world, poor kids tend to perform worse than their better-off classmates. When the influx of new pupils is not accompanied by any increase in the number of teachers, as was the case at Msekeni, you would expect standards to fall even further. But they have not. Pass rates at Msekeni improved dramatically, from 30% to 85%. Although this was an exceptional example, the nationwide results of school feeding programmes were still pretty good. On average, after a Malawian school started handing out free food it attracted 38% more girls and 24% more boys. The pass rate for boys stayed about the same, while for girls it improved by 9.5%.

F Better nutrition makes for brighter children. Most immediately, well-fed children find it easier to concentrate. It is hard to focus the mind on long division when your stomach is screaming for food. Mr Kumanda says that it used to be easy to spot the kids who were really undernourished. "They were the ones who stared into space and didn't respond when you asked them questions," he says. More crucially, though, more and better food helps brains grow and develop. Like any other organ in the body, the brain needs nutrition and exercise. But if it is starved of the necessary calories, proteins and micronutrients, it is stunted, perhaps not as severely as a muscle would be, but stunted nonetheless. That is why feeding children at schools works so well. And the fact that the effect of feeding was more pronounced on girls than on boys gives a clue to who eats first in rural Malawian households. It isn't the girls.

G On a global scale, the good news is that people are eating better than ever before. Homo sapiens has grown 50% bigger since the industrial revolution. Three centuries ago, chronic malnutrition was more or less universal. Now, it is extremely rare in rich countries. In developing countries, where most people live, plates and rice bowls are also fuller than ever before. The proportion of children under five in the developing world who are malnourished to the point of stunting fell from 39% in 1990 to 30% in 2000, says the World Health Organisation (WHO). In other places, the battle against hunger is steadily being won. Better nutrition is making people cleverer and more energetic, which will help them grow more prosperous. And when they eventually join the ranks of the well-off, they can start fretting about growing too fat.

Questions 21-24

*Complete the sentences below using **NO MORE THAN TWO WORDS / OR A NUMBER** from the passage.*

Write your answers in boxes 21-24 on your answer sheet.

21 In Kumanda's school _____ are given to girls after the end of the school day.

22 Many children from poor families were sent to collect _____ from the field.

23 Thanks to the free food program, _____ of students passed the test.

24 The modern human is _____ bigger than before after the industrial revolution.

Questions 25-26

*Choose **TWO** letters, **A-F.***

Write the correct letters in boxes 25 and 26 on your answer sheet.

Which **TWO** of the following statements are true?

A Some children are taught in the open air.

B Bernard Kumanda became the headmaster in 1991.

C No new staffs were recruited when attendance rose.

D Girls are often treated equally with boys in Malawi.

E Scientists have devised ways to detect the most underfed students in school.

F WHO is worried about malnutrition among kids in developing countries.

READING PASSAGE 3

*You should spend about 20 minutes on **Questions 27-40** which are based on Reading Passage 3 below.*

Placebo Effect—The Power of Nothing

Want to devise a new form of alternative medicine? No problem. Here's the recipe. Be warm, sympathetic, reassuring and enthusiastic. Your treatment should involve physical contact, and each session with your patients should last at least half an hour. Encourage your patients to take an active part in their treatment and understand how their disorders relate to the rest of their lives. Tell them that their own bodies possess the true power to heal. Make them pay you out of their own pockets. Describe your treatment in familiar words, but embroidered with a hint of mysticism: energy fields, energy flows, energy blocks, meridians, forces, auras, rhythms and the like. Refer to the knowledge of an earlier age: wisdom carelessly swept aside by the rise and rise of blind, mechanistic science. Oh, come off it, you're saying. Something invented off the top of your head couldn't possibly work, could it?

Well yes, it could—and often well enough to earn you a living. A good living if you are sufficiently convincing or, better still, really believe in your therapy. Many illnesses get better on their own, so if you are lucky and administer your treatment at just the right time you'll get the credit. But that's only part of it. Some of the improvement really would be down to you. Not necessarily because you'd recommended ginseng rather than camomile tea or used this crystal as opposed to that pressure point. Nothing so specific. Your healing power would be the outcome of a paradoxical force that conventional medicine recognises but remains oddly ambivalent about: the placebo effect.

Placebos are treatments that have no direct effect on the body, yet still work because the patient has faith in their power to heal. Most often the term refers to a dummy pill, but it applies just as much to any device or procedure, from a sticking plaster to a crystal to an operation. The existence of the placebo effect implies that even quackery may confer real benefits, which is why any mention of placebo is a touchy subject for many practitioners of complementary and alternative medicine (CAM), who are likely to regard it as tantamount to a charge of charlatanism. In fact, the placebo effect is a powerful part of all medical care, orthodox or otherwise, though its role is often neglected and misunderstood.

One of the great strengths of CAM may be its practioners' skill in deploying the placebo effect to accomplish real healing. "Complementary practitioners are miles better at producing non-specific effects and good therapeutic relationships," says Edzard Ernst, professor of CAM at Exeter University. The question is whether CAM could be integrated into conventional medicine, as some would like, without losing much of this power.

At one level, it should come as no surprise that our state of mind can influence our physiology: anger opens the superficial blood vessels of the face; sadness pumps the tear glands.

But exactly how placebos work their medical magic is still largely unknown. Most of the scant research to date has focused on the control of pain, because it's one of the commonest complaints and lends itself to experimental study. Here, attention has turned to the endorphins, natural counterparts of morphine that are known to help control pain. "Any of the neurochemicals involved in transmitting pain impulses or modulating them might also be involved in generating the placebo response," says Don Price, an oral surgeon at the University of Florida who studies the placebo effect in dental pain.

"But endorphins are still out in front." That case has been strengthened by the recent work of Fabrizio Benedetti of the University of Turin, who showed that the placebo effect can be abolished by a drug, naloxone, which blocks the effects of endorphins. Benedetti induced pain in human volunteers by inflating a blood-pressure cuff on the forearm. He did this several times a day for several days, using morphine each time to control the pain. On the final day, without saying anything, he replaced the morphine with a saline solution. This still relieved the subjects' pain: a placebo effect. But when he added naloxone to the saline the pain relief disappeared. Here was direct proof that placebo analgesia is mediated, at least in part, by these natural opiates.

Still, no one knows how belief triggers endorphin release, or why most people can't achieve placebo pain relief simply by willing it. Though scientists don't know exactly how placebos work, they have accumulated a fair bit of knowledge about how to trigger the effect. A London rheumatologist found, for example, that red dummy capsules made more effective painkillers than blue, green or yellow ones. Research on American students revealed that blue pills make better sedatives than pink, a colour more suitable for stimulants. Even branding can make a difference: if Aspro or Tylenol are what you like to take for a headache, their chemically identical generic equivalents may be less effective.

It matters, too, how the treatment is delivered. Decades ago, when the major tranquilliser chlorpromazine was being introduced, a doctor in Kansas categorised his colleagues according to whether they were keen on it, openly sceptical of its benefits, or took a "let's try and see" attitude. His conclusion: the more enthusiastic the doctor, the better the drug performed. And this year Ernst surveyed published studies that compared doctors' bedside manners. The studies turned up one consistent finding: "Physicians who adopt a warm, friendly and reassuring manner," he reported, "are more effective than those whose consultations are formal and do not offer reassurance."

Warm, friendly and reassuring are precisely CAM's strong suits, of course. Many of the ingredients of that opening recipe—the physical contact, the generous swathes of time, the strong hints of supernormal healing power—are just the kind of thing likely to impress patients. It's hardly surprising, then, that complementary practitioners are generally best at mobilising the placebo effect, says Arthur Kleinman, professor of social anthropology at Harvard University.

Questions 27-32

*Complete the following sentences with the correct ending. Choose the correct letter, **A-H**, for each sentence below.*

Write your answers in boxes 27-32 on your answer sheet.

27 Appointments with alternative practitioner

28 An alternative practitioner's description of treatment

29 An alternative practitioner who has faith in what he does

30 The illness of patients convinced of alternative practice

31 Improvements of patients receiving alternative practice

32 Conventional medical doctors

A	should be easy to understand.
B	ought to improve by itself.
C	should not involve any mysticism.
D	ought to last a minimum length of time.
E	needs to be treated at the right time.
F	should give more recognition.
G	can earn high income.
H	do not rely on any specific treatment.

Questions 33-35

*Choose the correct letter, **A, B, C** or **D**.*

Write your answers in boxes 33-35 on your answer sheet.

33 In the fifth paragraph, the writer uses the example of anger and sadness to illustrate that

A people's feelings could affect their physical behavior.

B how placebo achieves its effect is yet to be understood.

C scientists don't understand how the mind influences the body.

D research on the placebo effect is very limited.

34 Research on pain control attracts most of the attention because

A only a limited number of researches have been conducted so far.

B scientists have discovered that endorphins can help to reduce pain.

C pain reducing agents might also be involved in placebo effect.

D patients often experience pain and like to complain about it.

35 Fabrizio Benedetti's research on endorphins indicates that

A they are widely used to regulate pain.

B they can be produced by willful thoughts.

C they can be neutralized by introducing naloxone.

D their pain-relieving effects do not last long enough.

Questions 36-40

Do the following statements agree with the information given in Reading Passage 3?

In boxes 36-40 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

36 There is enough information for scientists to fully understand the placebo effect.

37 A London based researcher discovered that red pills should be taken off the market.

38 People's preference on brands would also have effect on their healing.

39 Medical doctors have a range of views of the newly introduced drug of chlorpromazine.

40 Alternative practitioners are seldom known for applying placebo effect.

TEST 3

READING PASSAGE 1

*You should spend about 20 minutes on **Questions 1-13** which are based on Reading Passage 1 below.*

Going Nowhere Fast

THIS is ludicrous! We can talk to people anywhere in the world or fly to meet them in a few hours. We can even send probes to other planets. But when it comes to getting around our cities, we depend on systems that have scarcely changed since the days of Gottlieb Daimler.

In recent years, the pollution belched out by millions of vehicles has dominated the debate about transport. The problem has even persuaded California—that home of car culture—to curb traffic growth. But no matter how green they become, cars are unlikely to get us around crowded cities any faster. And persuading people to use trains and buses will always be an uphill struggle. Cars, after all, are popular for very good reasons, as anyone with small children or heavy shopping knows.

So politicians should be trying to lure people out of their cars, not forcing them out. There's certainly no shortage of alternatives. Perhaps the most attractive is the concept known as personal rapid transit (PRT), independently invented in the US and Europe in the 1950s.

The idea is to go to one of many stations and hop into a computer-controlled car which can whisk you to your destination along a network of guideways. You wouldn't have to share your space with strangers, and with no traffic lights, pedestrians or parked cars to slow things down, PRT guideways can carry far more traffic, nonstop, than any inner city road.

It's a wonderful vision, but the odds are stacked against PRT for a number of reasons. The first cars ran on existing roads, and it was only after they became popular—and

after governments started earning revenue from them—that a road network designed specifically for motor vehicles was built. With PRT, the infrastructure would have to come first—and that would cost megabucks. What's more, any transport system that threatened the car's dominance would be up against all those with a stake in maintaining the status quo, from private car owners to manufacturers and oil multinationals. Even if PRTs were spectacularly successful in trials, it might not make much difference. Superior technology doesn't always triumph, as the VHS versus Betamax and Windows versus Apple Mac battles showed.

But "dual-mode" systems might just succeed where PRT seems doomed to fail. The Danish RUF system envisaged by Palle Jensen, for example, resembles PRT but with one key difference: vehicles have wheels as well as a slot allowing them to travel on a monorail, so they can drive off the rail onto a normal road. Once on a road, the occupant would take over from the computer, and the RUF vehicle—the term comes from a Danish saying meaning to "go fast"—would become an electric car.

Build a fast network of guideways in a busy city centre and people would have a strong incentive not just to use public RUF vehicles, but also to buy their own dual-mode vehicle. Commuters could drive onto the guideway, sit back and read as they are chauffeured into the city. At work, they would jump out, leaving their vehicles to park themselves. Unlike PRT, such a system could grow organically, as each network would serve a large area around it and people nearby could buy into it. And a dual-mode system might even win the support of car manufacturers, who could easily switch to producing dual-mode vehicles.

Of course, creating a new transport system will not be cheap or easy. But unlike adding a dedicated bus lane here or extending the underground railway there, an innovative system such as Jensen's could transform cities.

And it's not just a matter of saving a few minutes a day. According to the Red Cross, more than 30 million people have died in road accidents in the past century—three times the number killed in the First World War—and the annual death toll is rising. And what's more, the Red Cross believes road accidents will become the third biggest cause of death and disability by 2020, ahead of diseases such as AIDS and tuberculosis. Surely we can find a better way to get around?

Questions 1-6

Do the following statements agree with the information given in Reading Passage 1?

In boxes 1-6 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

1 City transport developed slower than other means of communication.
2 The pollution caused by city transport has been largely ignored.
3 Most states in America have taken actions to reduce vehicle growth.
4 Public transport is particularly difficult to use on steep hills.
5 Private cars are much more convenient for those who tend to buy a lot of things during shopping.
6 Government should impose compulsory restrictions on car use.

Questions 7-12

Classify the following descriptions as referring to

A PRT only
B RUF only
C both PRT and RUF

*Write the correct letter, **A, B,** or **C** in boxes 7-12 on your answer sheet.*

7 It is likely to be resisted by both individuals and manufacturers.
8 It can run at high speed in cities.
9 It is not necessary to share with the general public.
10 It is always controlled by a computer.
11 It can run on existing roads.
12 It can be bought by private buyers.

Question 13

*Choose **THREE** letters, **A-G**.*

Write the correct letters in box 13 on your answer sheet.

Which **THREE** of the following are advantages of the new transport system?

A economy
B space
C low pollution
D suitability for families
E speed
F safety
G suitability for children

READING PASSAGE 2

*You should spend about 20 minutes on **Questions 14-26** which are based on Reading Passage 2 below.*

THE SEEDHUNTERS

With quarter of the world's plants set to vanish within the next 50 years, Dough Alexander reports on the scientists working against the clock to preserve the Earth's botanical heritage.

They travel the four corners of the globe, scouring jungles, forests and savannas. But they're not looking for ancient artefacts, lost treasure or undiscovered tombs. Just pods. It may lack the romantic allure of archaeology, or the whiff of danger that accompanies going after big game, but seed hunting is an increasingly serious business. Some seek seeds for profit — hunters in the employ of biotechnology firms, pharmaceutical companies and private corporations on the lookout for species that will yield the drugs or crops of the future. Others collect to conserve, working to halt the sad slide into extinction facing so many plant species.

Among the pioneers of this botanical treasure hunt was John Tradescant, an English royal gardener who brought back plants and seeds from his journeys abroad in the early 1600s. Later, the English botanist Sir Joseph Banks — who was the first director of the Royal Botanic Gardens at Kew and travelled with Captain James Cook on his voyages near the end of the 18th century — was so driven to expand his collections that he sent botanists around the world at his own expense.

Those heady days of exploration and discovery may be over, but they have been replaced by a pressing need to preserve our natural history for the future. This modern mission drives hunters such as Dr Michiel van Slageren, a good-natured Dutchman who often sports a wide-brimmed hat in the field — he could easily be mistaken for the cinematic hero Indiana Jones. He and three other seed hunters work at the Millennium Seed Bank, an £80million international conservation project that aims to protect the world's most endangered wild plant species.

The group's headquarters are in a modern glass-and-concrete structure on a 200-hectare estate at Wakehurst Place in the West Sussex countryside. Within its underground vaults are 260 million dried seeds from 122 countries, all stored at -20 Celsius to survive for centuries. Among the 5,100 species represented are virtually all of Britain's 1,400 native seed-bearing plants, the most complete such collection of any country's flora.

Overseen by the Royal Botanic Gardens, the Millennium Seed Bank is the world's largest wild-plant depository. It aims to collect 24,000 species by 2010. The reason is simple: thanks to

humanity's efforts, an estimated 25 per cent of the world's plants are on the verge of extinction and may vanish within 50 years. We're currently responsible for habitat destruction on an unprecedented scale, and during the past 400 years, plant species extinction rates have been about 70 times greater than those indicated by the geological record as being 'normal'. Experts predict that during the next 50 years a further one billion hectares of wilderness will be converted to farmland in developing countries alone.

The implications of this loss are enormous. Besides providing staple food crops, plants are a source of many medicines and the principal supply of fuel and building materials in many parts of the world. They also protect soil and help regulate the climate. Yet, across the globe, plant species are being driven to extinction before their potential benefits are discovered.

The World Conservation Union has listed 5,714 threatened plant species worldwide, but it admits this is only scratching the surface. With only four per cent of the world's described plants having been evaluated, the true number of threatened species is sure to be much higher. In the UK alone, 300 wild plant species are classified as endangered. The Millennium Seed Bank aims to ensure that even if a plant becomes extinct in the wild, it won't be lost forever. Stored seeds can be used to help restore damaged or destroyed environments or in scientific research to find new benefits for society — in medicine, agriculture or local industry — that would otherwise be lost.

Seed banks are an 'insurance policy' to protect the world's plant heritage for the future, explains Dr Paul Smith, another Kew seed hunter. "Seed conservation techniques were originally developed by farmers," he says. "Storage is the basis of what we do, conserving seeds until you can use them — just as in farming." Smith says there's no reason why any plant species should become extinct, given today's technology. But he admits that the biggest challenge is finding, naming and categorising all the world's plants. And someone has to gather these seeds before it's too late. "There aren't a lot of people out there doing this," he says. "The key is to know the flora from a particular area, and that knowledge takes years to acquire."

There are about 1,470 seed banks scattered around the globe, with a combined total of 5.4 million samples, of which perhaps two million are distinct non-duplicates. Most preserve genetic material for agricultural use in order to ensure crop diversity; others aim to conserve wild species, although only 15 per cent of all banked plants are wild.

Many seed banks are themselves under threat due to a lack of funds. Last year, Imperial College, London, examined crop collections from 151 countries and found that while the number of plant samples had increased in two thirds of the countries, budgets had been cut in a quarter and remained static in another 35 per cent. The UN's Food and Agriculture Organisation and the Consultative Group on International Agricultural Research has since set up the Global Conservation Trust, which aims to raise US$260 million (£156 million) to protect seed banks in perpetuity.

Questions 14-18

*Complete the summary below using **NO MORE THAN TWO WORDS** from the passage.*

Write your answers in boxes 14-18 on your answer sheet.

People collect seeds for different purposes: some collect to protect certain species from **14** _____; others collect seeds for their potential to produce **15** _____. They are called the seed hunters. The **16** _____ of them included both gardeners and botanists, such as **17** _____, who sponsored collectors out of his own pocket. The seeds collected are often stored in seed banks. The most famous among them is known as the Millennium Seed Bank, where seeds are all stored in the **18** _____ at low temperature.

Questions 19-24

Do the following statements agree with the information given in Reading Passage 2?

In boxes 19-24 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

19 The reason to collect seeds is different from the past.

20 The Millennium Seed Bank is one of the earliest seed banks.

21 A major reason for plant species extinction is farmland expansion.

22 The method scientists use to store seeds is similar to that used by farmers.

23 Technological development is the only hope to save plant species.

24 The works of seed conservation are often limited by insufficient financial resources.

Questions 25-26

*Choose **TWO** letters, **A-E**.*

Write the correct letters in boxes 25 and 26 on your answer sheet.

Which **TWO** of the following are provided by plants to the human world?

A food
B artefact
C treasure
D energy
E clothes

READING PASSAGE 3

*You should spend about 20 minutes on **Questions 27-40** which are based on Reading Passage 3 below.*

Assessing the Risk

How do we judge whether it is right to go ahead with a new technology? Apply the precautionary principle properly and you won't go far wrong, says Colin Tudge.

Section 1

As a title for a supposedly unprejudiced debate on scientific progress, "Panic attack: interrogating our obsession with risk" did not bode well. Held last week at the Royal Institution in London, the event brought together scientists from across the world to ask why society is so obsessed with risk and to call for a "more rational" approach. "We seem to be organising society around the grandmotherly maxim of 'better safe than sorry'," exclaimed *Spiked*, the online publication that organised the event. "What are the consequences of this overbearing concern with risks?"

The debate was preceded by a survey of 40 scientists who were invited to describe how awful our lives would be if the "precautionary principle" had been allowed to prevail in the past. Their response was: no heart surgery or antibiotics, and hardly any drugs at all; no aeroplanes, bicycles or high-voltage power grids; no pasteurisation, pesticides or biotechnology; no quantum mechanics; no wheel; no "discovery" of America. In short, their message was: no risk, no gain.

They have absolutely missed the point. The precautionary principle is a subtle idea. It has various forms, but all of them generally include some notion of cost-effectiveness. Thus the point is not simply to ban things that are not known to be absolutely safe. Rather, it says: "Of course you can make no progress without risk. But if there is no obvious gain from taking the risk, then don't take it."

Clearly, all the technologies listed by the 40 well-chosen savants were innately risky at their inception, as all technologies are. But all of them would have received the green light under the precautionary principle because they all had the potential to offer tremendous benefits — the solutions to very big problems — if only the snags could be overcome.

If the precautionary principle had been in place, the scientists tell us, we would not have antibiotics. But of course we would — if the version of the principle that sensible people now understand had been applied. When penicillin was discovered in the 1920s, infec-

tive bacteria were laying waste to the world. Children died from diphtheria and whooping cough, every open drain brought the threat of typhoid, and any wound could lead to septicaemia and even gangrene.

Penicillin was turned into a practical drug during the Second World War, when the many pestilences that result from war threatened to kill more people than the bombs. Of course antibiotics were a priority. Of course the risks, such as they could be perceived, were worth taking.

And so with the other items on the scientists' list: electric light bulbs, blood transfusions, CAT scans, knives, the measles vaccine — the precautionary principle would have prevented all of them, they tell us. But this is just plain wrong. If the precautionary principle had been applied properly, all these creations would have passed muster, because all offered incomparable advantages compared to the risks perceived at the time.

Section 2

Another issue is at stake here. Statistics are not the only concept people use when weighing up risk. Human beings, subtle and evolved creatures that we are, do not survive to threescore years and ten simply by thinking like pocket calculators. A crucial issue is consumer's choice. In deciding whether to pursue the development of a new technology, the consumer's right to choose should be considered alongside considerations of risk and benefit. Clearly, skiing is more dangerous than genetically modified tomatoes. But people who ski choose to do so; they do not have skiing thrust upon them by portentous experts of the kind who now feel they have the right to reconstruct our crops. Even with skiing, there is the matter of cost effectiveness to consider: skiing, I am told, is exhilarating. Where is the exhilaration in GM soya?

Indeed, in contrast to all the other items on *Spiked*'s list, GM crops stand out as an example of a technology whose benefits are far from clear. Some of the risks can at least be defined. But in the present economic climate, the benefits that might accrue from them seem dubious. Promoters of GM crops believe that the future population of the world cannot be fed without them. That is untrue. The crops that really matter are wheat and rice, and there is no GM research in the pipeline that will seriously affect the yield of either. GM is used to make production cheaper and hence more profitable, which is an extremely questionable ambition.

The precautionary principle provides the world with a very important safeguard. If it had been in place in the past, it might, for example, have prevented insouciant miners from polluting major rivers with mercury. We have come to a sorry pass when scientists, who should above all be dispassionate scholars, feel they should misrepresent such a principle for the purposes of commercial and political propaganda. People at large continue to mistrust science and the high technologies it produces, partly because they doubt the wisdom of scientists. On such evidence as this, these doubts are fully justified.

Questions 27-32

Do the following statements agree with the information given in Reading Passage 3?

In boxes 27-32 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

27 The title of the debate is not unbiased.

28 All the scientists invited to the debate were from the field of medicine.

29 The message those scientists who conducted the survey were sending was people shouldn't take risks.

30 All the listed technologies are riskier than other technologies.

31 It is worth taking the risks to invent antibiotics.

32 All the other inventions on the list were also judged by the precautionary principle.

Questions 33-39

*Complete the summary below using **NO MORE THAN THREE WORDS** from the passage.*

Write your answers in boxes 33-39 on your answer sheet.

When applying precautionary principle to decide whether to invent a new technology, people should also take into consideration of the **33** _____, along with the usual consideration of **34** _____. For example, though risky and dangerous enough, people still enjoy **35** _____ for the excitement it provides. On the other hand, experts believe the future population desperately needs **36** _____ in spite of their undefined risks. However, the researches conducted so far have not been directed towards increasing the yield of **37** _____, but to reduce the cost of **38** _____ and to bring more profit out of it. In the end, such selfish use of precau-

tionary principle for business and political gain has often led people to **39** _____ science for they believe scientists are not to be trusted.

Question 40

*Choose the correct letter, **A, B, C** or **D**.*

Write your answer in box 40 on your answer sheet.

What is the main theme of the passage?

A People have the right to doubt science and technologies.

B The precautionary principle could have prevented the development of science and technology.

C There are not enough people who truly understand the precautionary principle.

D The precautionary principle bids us to take risks at all costs.

TEST 4

READING PASSAGE 1

*You should spend about 20 minutes on **Questions 1-13** which are based on Reading Passage 1 below.*

The Origins of Laughter

While joking and wit are uniquely human inventions, laughter certainly is not. Other creatures, including chimpanzees, gorillas and even rats, laugh. The fact that they laugh suggests that laughter has been around for a lot longer than we have.

There is no doubt that laughing typically involves groups of people. "Laughter evolved as a signal to others — it almost disappears when we are alone," says Robert Provine, a neuroscientist at the University of Maryland. Provine found that most laughter comes as a polite reaction to everyday remarks such as "see you later", rather than anything particularly funny. And the way we laugh depends on the company we're keeping. Men tend to laugh longer and harder when they are with other men, perhaps as a way of bonding. Women tend to laugh more and at a higher pitch when men are present, possibly indicating flirtation or even submission.

To find the origins of laughter, Provine believes we need to look at play. He points out that the masters of laughing are children, and nowhere is their talent more obvious than in the boisterous antics, and the original context is play. Well-known primate watchers, including Dian Fossey and Jane Goodall, have long argued that chimps laugh while at play. The sound they produce is known as a pant laugh. It seems obvious when you watch their behavior — they even have the same ticklish spots as we do. But after removing the context, the parallel between human laughter and a chimp's characteristic pant laugh is not so clear. When Provine played a tape of the pant laughs to 119 of his students, for example, only two guessed correctly what it was.

These findings underline how chimp and human laughter vary. When we laugh the sound is usually produced by chopping up a single exhalation into a series of shorter with one sound produced on each inward and outward breath. The question is: does this pant laughter have the same source as our own laughter? New

research lends weight to the idea that it does. The findings come from Elke Zimmerman, head of the Institute for Zoology in Germany, who compared the sounds made by babies and chimpanzees in response to tickling during the first year of their life. Using sound spectrographs to reveal the pitch and intensity of vocalizations, she discovered that chimp and human baby laughter follow broadly the same pattern. Zimmerman believes the closeness of baby laughter to chimp laughter supports the idea that laughter was around long before humans arrived on the scene. What started simply as a modification of breathing associated with enjoyable and playful interactions has acquired a symbolic meaning as an indicator of pleasure.

Pinpointing when laughter developed is another matter. Humans and chimps share a common ancestor that lived perhaps 8 million years ago, but animals might have been laughing long before that. More distantly related primates, including gorillas, laugh, and anecdotal evidence suggests that other social mammals can do too. Scientists are currently testing such stories with a comparative analysis of just how common laughter is among animals. So far, though, the most compelling evidence for laughter beyond primates comes from research done by Jaak Panksepp from Bowling Green State University, Ohio, into the ultrasonic chirps produced by rats during play and in response to tickling.

All this still doesn't answer the question of why we laugh at all. One idea is that laughter and tickling originated as a way of sealing the relationship between mother and child. Another is that the reflex response to tickling is protective, alerting us to the presence of crawling creatures that might harm us or compelling us to defend the parts of our bodies that are most vulnerable in hand-to-hand combat. But the idea that has gained the most popularity in recent years is that laughter in response to tickling is a way for two individuals to signal and test their trust in one another. This hypothesis starts from the observation that although a little tickle can be enjoyable, if it goes on too long it can be torture. By engaging in a bout of tickling, we put ourselves at the mercy of another individual, and laughing is what makes it a reliable signal of trust, according to Tom Flamson, a laughter researcher at the University of California, Los Angels. "Even in rats, laughter, tickle, play and trust are linked. Rats chirp a lot when they play," says Flamson. "These chirps can be aroused by tickling. And they get bonded to us as a result, which certainly seems like a show of trust."

We'll never know which animal laughed the first laugh, or why. But we can be sure it wasn't in response to a prehistoric joke. The funny thing is that while the origins of laughter are probably quite serious, we owe human laughter and our language-based humor to the same unique skill. While other animals pant, we alone can control our breath well enough to produce the sound of laughter. Without that control there would also be no speech — and no jokes to endure.

Questions 1-6

Look at the following research findings (Questions 1-6) and the list of people below.

*Match each finding with the correct person, **A, B, C** or **D**.*

*Write the correct letter, **A, B, C or D**, in boxes 1-6 on your answer sheet.*

NB *You may use any letter more than once.*

1 Babies and some animals produce laughter which sounds similar.

2 Primates are not the only animals who produce laughter.

3 Laughter can be used to show that we feel safe and secure with others.

4 Most human laughter is not a response to a humorous situation.

5 Animal laughter evolved before human laughter.

6 Laughter is a social activity.

List of People
A Provine
B Zimmerman
C Panksepp
D Flamson

Questions 7-10

*Complete the summary using the list of words, **A-K**, below.*

*Write the correct letter, **A-K**, in boxes 7-10 on your answer sheet.*

Some scientists believe that laughter first developed out of **7**_____. Research has revealed that human and chimp laughter may have the same **8**_____. Scientists have long been aware that **9**_____ laugh, but it now appears that laughter might be more widespread than once thought. Although the reasons why humans started to laugh are still unknown, it seems that laughter may result from the**10**_____ we feel with another person.

A	combat	**B**	chirps	**C**	pitch
D	origins	**E**	play	**F**	rats
G	primates	**H**	confidence	**I**	fear
J	babies	**K**	tickling		

Questions 11-13

Do the following statements agree with the information given in Reading Passage 1?

In boxes 11-13 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

11 Both men and women laugh more when they are with members of the same sex.

12 Primates lack sufficient breath control to be able to produce laughs the way humans do.

13 Chimpanzees produce laughter in a wider range of situations than rats do.

READING PASSAGE 2

*You should spend about 20 minutes on **Questions 14-26** which are based on Reading Passage 2 below.*

THE LOST CITY

Thanks to modern remote-sensing techniques, a ruined city in Turkey is slowly revealing itself as one of the greatest and most mysterious cities of the ancient world. Sally Palmer uncovers more.

A The low granite mountain, known as Kerkenes Dag, juts from the northern edge of the Cappadocian plain in Turkey. Sprawled over the mountainside are the ruins of an enormous city, contained by crumbling defensive walls seven kilometers long. Many respected archaeologists believe these are the remains of the fabled city of Pteria, the sixth-century BC stronghold of the Medes that the Greek historian Herodotus described in his famous work *The Histories*. The short-lived city came under Median control and only fifty years later was sacked, burned and its strong stone walls destroyed.

B British archaeologist Dr Geoffrey Summers has spent ten years studying the site. Excavating the ruins is a challenge because of the vast area they cover. The 7 km perimeter walls run around a site covering 271 hectares. Dr Summers quickly realised it would take far too long to excavate the site using traditional techniques alone. So he decided to use modern technology as well to map the entire site, both above and beneath the surface, to locate the most interesting areas and priorities to start digging.

C In 1993, Dr Summers hired a special hand-held balloon with a remote-controlled camera attached. He walked over the entire site holding the balloon and taking photos. Then one afternoon, he rented a hot-air balloon and floated over the site, taking yet more pictures. By the end of the 1994 season, Dr Summers and his team had a jigsaw of aerial photographs of the whole site. The next stage was to use remote sensing, which would let them work out what lay below the intriguing outlines and ruined walls. "Archaeology is a discipline that lends itself very well to remote sensing because it revolves around space," says Scott Branting, an associated director of the project. He started working with Dr Summers in 1995.

D The project used two main remote-sensing techniques. The first is magnetometry, which works on the principle that magnetic fields at the surface of the Earth are influenced by what is buried beneath. It measures localised variations in the direc-

tion and intensity of this magnetic field. "The Earth's magnetic field can vary from place to place, depending on what happened there in the past," says Branting. "If something containing iron oxide was heavily burnt, by natural or human actions, the iron particles in it can be permanently reoriented, like a compass needle, to align with the Earth's magnetic field present at that point in time and space." The magnetometer detects differences in the orientations and intensities of these iron particles from the present-day magnetic field and uses them to produce an image of what lies below ground.

E Kerkenes Dag lends itself particularly well to magnetometry because it was all burnt once in a savage fire. In places the heat was sufficient to turn sandstone to glass and to melt granite. The fire was so hot that there were strong magnetic signatures set to the Earth's magnetic field from the time — around 547 BC — resulting in extremely clear pictures. Furthermore, the city was never rebuilt. "If you have multiple layers, it can confuse pictures, because you have different walls from different periods giving signatures that all go in different directions," says Branting. "We only have one going down about 1.5 meters, so we can get a good picture of this fairly short-lived city."

F The other main sub-surface mapping technique, which is still being used at the site, is resistivity. This technique measures the way electrical pulses are conducted through sub-surface soil. It's done by shooting pulses into the ground through a thin metal probe. Different materials have different electrical conductivity. For example, stone and mudbrick are poor conductors, but looser, damp soil conducts very well. By walking around the site and taking about four readings per metre, it is possible to get a detailed idea of what is where beneath the surface. The teams then build up pictures of walls, hearths and other remains. "It helps a lot if it has rained, because the electrical pulse can get through more easily," says Branting. "Then if something is more resistant, it really shows up." This is one of the reasons that the project has a spring season, when most of the resistivity work is done. Unfortunately, testing resistivity is a lot slower than magnetometry. "If we did resistivity over the whole site it would take about 100 years," says Branting. Consequently, the team is concentrating on areas where they want to clarify pictures from the magnetometry.

G Remote sensing does not reveal everything about Kerkenes Dag, but it shows the most interesting sub-surface areas of the site. The archaeologists can then excavate these using traditional techniques. One surprise came when they dug out one of the fates in the defensive walls. "Our observations in early seasons led us to assume that we were looking at a stone base from a mudbrick city wall, such as would be found at most other cities in the Ancient Near East," says Dr Summers. "When we started to excavate we were staggered to discover that the walls were made entirely from stone and that the gate would have stood at least ten metres high. After ten years of study, Pteria is gradually giving up its secrets."

Questions 14-17

Reading Passage 2 has seven paragraphs, **A-G**.

Which paragraph contains the following information?

*Write the correct letter, **A-G**, in boxes 14-17 on your answer sheet.*

14 The reason for the deployment of a variety of investigative methods

15 An example of an unexpected find

16 How the surface of the site was surveyed from above

17 The reason why experts are interested in the site

Questions 18-25

Complete the summary below.

*Choose **NO MORE THAN THREE WORDS** from the passage for each answer.*

Write your answers in boxes 18-25 on your answer sheet.

Exploring the ancient city of Pteria

Archaeologists began working ten years ago. They started by taking photographs of the site from the ground and then from a distance in a **18**_____. They focused on what lay below the surface using a magnetometer, which identifies variations in the magnetic field. These variations occur when the **19**_____ in buried structures have changed direction as a result of great heat. They line up with the surrounding magnetic field just as a **20**_____ would do.

The other remote-sensing technique employed was resistivity. This uses a **21**_____ to fire electrical pulses into the earth. The principle is that building materials like **22**_____ and stone do not conduct electricity well, while **23**_____ does this much more effectively. This technique is mainly employed during the **24**_____, when conditions are more favourable. Resistivity is mainly being used to **25**_____ some images generated by the magnetometer.

Question 26

Choose the correct letter, ***A, B, C*** *or* ***D.***

Write the correct letter in box 26 on your answer sheet.

How do modern remote-sensing techniques help at the Pteria site?

A They detect minute buried objects for the archaeologists to dig up.

B They pinpoint key areas which would be worth investigating closely.

C They remove the need for archaeologists to excavate any part of the site.

D They extend the research period as they can be used at any time of year.

READING PASSAGE 3

*You should spend about 20 minutes on **Questions 27-40** which are based on Reading Passage 3 below.*

Designed to Last: Could Better Design Cure Our Throwaway Culture?

Jonathan Chapman, a senior lecturer at the University of Brighton, UK, is one of a new breed of 'sustainable designers'. Like many of us, they are concerned about the huge waste associated with Western consumer culture and the damage this does to the environment. Some, like Chapman, aim to create objects we will want to keep rather than discard. Others are working to create more efficient or durable consumer goods, or goods designed with recycling in mind. The waste entailed in our fleeting relationships with consumer durables is colossal.

Domestic power tools, such as electric drills, are a typical example of such waste. However much DIY the purchaser plans to do, the truth is that these things are thrown away having been used, on average, for just ten minutes. Most will serve 'conscience time', gathering dust on a shelf in the garage; people are reluctant to admit that they have wasted their money. However, the end is inevitable: thousands of years in landfill waste sites. In its design, manufacture, packaging, transportation and disposal, a power tool consumes many times its own weight of resources, all for a shorter active lifespan than that of the average small insect.

To understand why we have become so wasteful, we should look to the underlying motivation of consumers. "People own things to give expression to who they are, and to show what group of people they feel they belong to," Chapman says. In a world of mass production, however, that symbolism has lost much of its potency. For most of human history, people had an intimate relationship with objects they used or treasured. Often they made the objects themselves, or family members passed them on. For more specialised objects, people relied on expert manufacturers living close by, whom they probably knew personally. Chapman points out that all these factors gave objects a history — a narrative — and an emotional connection that today's mass-produced goods cannot possibly match. Without these personal connections, consumerist culture idolizes novelty instead. People know that they cannot buy happiness, but the chance to remake themselves with glossy, box-fresh products seems irresistible. When the novelty fades, they simply renew the excitement by buying more.

Chapman's solution is what he calls 'emotionally durable design'. He says the challenge for designers is to create things we want to keep. This may sound like a tall

order, but it can be surprisingly straightforward. A favorite pair of old jeans, for example, just do not have the right feel until they have been worn and washed a hundred times. It is as if they are sharing the wearer's life story. The look can be faked, but it is simply not the same. Walter Stahel, visiting professor at the University of Surrey, UK, calls this 'the teddy bear factor'. No matter how ragged and worn a favorite teddy becomes, we don't rush out and buy another one. As adults, our teddy bear connects us to our childhood and this protects it from obsolescence. Stahel argues that this is what sustainable design needs to do with more products.

The information age was supposed to lighten our economies and reduce our impact on the environment, but, in fact, the reverse seems to be happening. We have simply added information technology to the industrial era and speeded up the developed world's metabolism. The cure is hardly rocket science: minimise waste, stop moving things around so much and use people more. So what will post-throwaway consumerism look like? It might be as simple as installing energy-saving light bulbs, more efficient washing machines or choosing locally produced groceries with less packaging. In general, we will spend less on goods and more on services. Instead of buying a second car, for example, we might buy into a car-sharing network. Rather than following our current wasteful practices, we will buy less and rent a lot more; why own things such as tools that you use infrequently, especially things are likely to be updated all the time?

Consumer durables will increasingly be sold with plans for their disposal. Electronic goods such as mobile phones will be designed to be recyclable, with the extra cost added into the retail price. Following Chapman's notion of emotionally durable design, there will be a move away from mass production and towards tailor-made articles and products designed and manufactured with greater craftsmanship, products which will be repaired rather than replaced, in the same way as was done in our grandparents' time. Companies will replace profit from bulk sales by servicing and repairing products chosen because we want them to last.

Chapman acknowledges that it will be a challenge to persuade people to buy fewer goods, and ones that they intend to keep. At the moment, price competition between retailers makes it cheaper for consumers to replace rather than repair.

Products designed to be durable and emotionally satisfying are likely to be more expensive, so how will we be persuaded to choose sustainability? Tim Cooper, from Sheffield Hallam University in the UK, points out that many people are already happy to pay a premium for quality, and that they also tend to value and care more for expensive goods. Chapman is also positive: "People are ready to keep things for longer," he says, "The problem is that a lot of industries don't know how to do that." Chapman believes that sustainable design is here to stay. "The days when large corporations were in a position to choose whether to jump on the sustainability bandwagon or not are coming to an end," he says. Whether this is also the beginning of the end of the throwaway society remains to be seen.

Questions 27-31

*Choose the correct letter, **A, B, C** or **D**.*

Write the correct letter in boxes 27-31 on your answer sheet.

27 In the second paragraph, the expression 'conscience time' refers to the fact that the owners

A wish they had not bought the power tool.

B want to make sure the tool is stored safely.

C feel that the tool will increase in value in the future.

D would feel guilty if they threw the tool away immediately.

28 Jonathan Chapman uses the word 'narrative' in the third paragraph to refer to the fact that the owner

A told a story about how the item was bought.

B was aware of how the item had come into being.

C felt that the item became more useful over time.

D was told that the item had been used for a long time.

29 In the third paragraph, the writer suggests that mass-produced goods are

A inferior in quality.

B less likely to be kept for a long time.

C attractive because of their lower prices.

D less tempting than goods which are traditionally produced.

30 Lack of personal connection to goods is described as producing

A a belief that older goods are superior.

B an attraction to well-designed packaging.

C a desire to demonstrate status through belongings.

D a desire to purchase a constant stream of new items.

31 Jeans and teddy bears are given as examples of goods which

A have been very well designed.

B take a long time to show wear.

C are valued more as they grow older.

D are used by the majority of the population.

Questions 32-35

Do the following statements agree with the views of the writer in reading Passage 3?

In boxes 32-35 on your answer sheet, write

TRUE	*if the statement agrees with the views of the writer*
FALSE	*if the statement contradicts the views of the writer*
NOT GIVEN	*if it is impossible to say what the writer thinks about this*

32 People often buy goods that they make little use of.

33 Understanding the reasons for buying goods will help to explain why waste occurs.

34 People already rent more goods than they buy.

35 Companies will charge less to repair goods in the future.

Questions 36-40

*Complete the summary using the list of words, **A-I**, below*

*Write the correct letter, **A-I**, in boxes 36-40 on your answer sheet.*

A cure for our wasteful habits

The writer believes that the recipe for reducing our impact on the environment is a simple one. He states that we should use less energy for things such as lighting or **36**____, and buy **37**____ that will not need to be moved across long distances. Some expensive items such as **38**____ could be shared, and others which may be less expensive but which are not needed often, such as **39**____, could be rented instead of being purchased. He believes that manufacturers will need to design high-technology items such as **40**____ so that they can be recycled more easily.

A mobile phones	**B** clothing	**C** tools
D laundry	**E** computers	**F** food
G heating	**H** cars	**I** teddy bears

TEST 5

READING PASSAGE 1

*You should spend about 20 minutes on **Questions 1-13** which are based on Reading Passage 1 below.*

Alfred Nobel

The man behind the Nobel Prize

Since 1901, the Nobel Prize has been honoring men and women from all corners of the globe for outstanding achievements in physics, chemistry, medicine, literature, and for work in peace. The foundations for the prize were laid in 1895 when Alfred Nobel wrote his last will, leaving much of his wealth to the establishment of the Nobel Prize.

Alfred Nobel was born in Stockholm on October 21, 1833. His father Immanuel Nobel was an engineer and inventor who built bridges and buildings in Stockholm. In connection with his construction work Immanuel Nobel also experimented with different techniques for blasting rocks. Successful in his industrial and business ventures, Immanuel Nobel was able, in 1842, to bring his family to St. Petersburg. There, his sons were given a first class education by private teachers. The training included natural sciences, languages and literature. By the age of 17 Alfred Nobel was fluent in Swedish, Russian, French, English and German. His primary interests were in English literature and poetry as well as in chemistry and physics. Alfred's father, who wanted his sons to join his enterprise as engineers, disliked Alfred's interest in poetry and found his son rather introverted.

In order to widen Alfred's horizons his father sent him abroad for further training in chemical engineering. During a two year period Alfred Nobel visited Sweden, Germany, France and the United States. In Paris, the city he came to like best, he worked in the private laboratory of Professor T. J. Pelouze, a famous chemist. There he met the young Italian chemist Ascanio Sobrero who, three years earlier, had invented nitroglycerine, a highly explosive liquid. But it was considered too dangerous to be of any practical use. Although its explosive power greatly exceeded that of gunpowder, the liquid would explode in a very unpredictable manner if subjected to heat and pressure. Alfred Nobel became very interested in nitroglycerine and how it could be put to practical use in construction work. He also realized that the safety problems had to be solved and a method had to be developed for the controlled detonation of nitroglycerine.

After his return to Sweden in 1863, Alfred Nobel concentrated on developing nitroglycerine as an explosive. Several explosions, including one (1864) in which his brother Emil and several other

persons were killed, convinced the authorities that nitroglycerine production was exceedingly dangerous. They forbade further experimentation with nitroglycerine within the Stockholm city limits and Alfred Nobel had to move his experimentation to a barge anchored on Lake Mälaren. Alfred was not discouraged and in 1864 he was able to start mass production of nitroglycerine. To make the handling of nitroglycerine safer Alfred Nobel experimented with different additives. He soon found that mixing nitroglycerine with kieselguhr would turn the liquid into a paste which could be shaped into rods of a size and form suitable for insertion into drilling holes. In 1867 he patented this material under the name of dynamite. To be able to detonate the dynamite rods he also invented a detonator (blasting cap) which could be ignited by lighting a fuse. These inventions were made at the same time as the pneumatic drill came into general use. Together these inventions drastically reduced the cost of blasting rock, drilling tunnels, building canals and many other forms of construction work.

The market for dynamite and detonating caps grew very rapidly and Alfred Nobel also proved himself to be a very skillful entrepreneur and businessman. Over the years he founded factories and laboratories in some 90 different places in more than 20 countries. Although he lived in Paris much of his life he was constantly traveling. When he was not traveling or engaging in business activities Nobel himself worked intensively in his various laboratories, first in Stockholm and later in other places. He focused on the development of explosives technology as well as other chemical inventions, including such materials as synthetic rubber and leather, artificial silk, etc. By the time of his death in 1896 he had 355 patents.

Intensive work and travel did not leave much time for a private life. At the age of 43 he was feeling like an old man. At this time he advertised in a newspaper "Wealthy, highly-educated elderly gentleman seeks lady of mature age, versed in languages, as secretary and supervisor of household." The most qualified applicant turned out to be an Austrian woman, Countess Bertha Kinsky. After working a very short time for Nobel she decided to return to Austria to marry Count Arthur von Suttner. In spite of this Alfred Nobel and Bertha von Suttner remained friends and kept writing letters to each other for decades. Over the years Bertha von Suttner became increasingly critical of the arms race. She wrote a famous book, *Lay Down Your Arms* and became a prominent figure in the peace movement. No doubt this influenced Alfred Nobel when he wrote his final will which was to include a Prize for persons or organizations who promoted peace. Several years after the death of Alfred Nobel, the Norwegian Storting (Parliament) decided to award the 1905 Nobel Peace Prize to Bertha von Suttner.

Alfred Nobel died in San Remo, Italy, on December 10, 1896. When his will was opened it came as a surprise that his fortune was to be used for Prizes in Physics, Chemistry, Physiology or Medicine, Literature and Peace. The executors of his will were two young engineers, Ragnar Sohlman and Rudolf Lilljequist. They set about forming the Nobel Foundation as an organization to take care of the financial assets left by Nobel for this purpose and to coordinate the work of the Prize-Awarding Institutions. This was not without its difficulties since the will was contested by relatives and questioned by authorities in various countries.

Alfred Nobel's greatness lay in his ability to combine the penetrating mind of the scientist and inventor with the forward-looking dynamism of the industrialist. Nobel was very interested in social and peace-related issues and held what were considered radical views in his era. He had a great interest in literature and wrote his own poetry and dramatic works. The Nobel Prizes became an extension and a fulfillment of his lifetime interests.

Questions 1-6

Do the following statements agree with the information given in Reading Passage 1?

In boxes 1-6 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

1 The first Nobel Prize was awarded in 1895.

2 Nobel's father wanted his son to have better education than what he had had.

3 Nobel was an unsuccessful businessman.

4 Bertha von Suttner was selected by Nobel himself for the first peace prize.

5 The Nobel Foundation was established after the death of Nobel

6 Nobel's social involvement was uncommon in the 1800's.

Questions 7-13

*Complete the notes below using **NO MORE THAN TWO WORDS** from the passage.*

Write your answers in boxes 7-13 on your answer sheet.

Education:

Having accumulated a great fortune in his business, Nobel's father determined to give his son the best education and sent him abroad to be trained in **7** _____. During Nobel's study in Paris, he worked in a private laboratory, where he came in contact with a young engineer **8** _____ and his invention nitroglycerine, a more powerful explosive than **9** _____.

Benefits in construction works:

Nobel became really interested in this new explosive and experimented on it. But nitroglycerine was too dangerous and was banned for experiments within the city of **10** _____. So Nobel had to move his experiments to a lake. To make nitroglycerine easily usable, Nobel invented dynamite along with **11** _____ while in the meantime **12** _____ became popular, all of which dramatically lowered the **13** _____ of construction works.

READING PASSAGE 2

*You should spend about 20 minutes on **Questions 14-26** which are based on Reading Passage 2 below.*

Questions 14-20

Reading passage 2 has seven paragraphs, **A-G**.

Choose the correct heading for each paragraph from the list of headings below.

*Write the correct number, **i-x**, in boxes 14-20 on your answer sheet.*

List of headings	
i	The best moment to migrate
ii	The unexplained rejection of closer feeding ground
iii	The influence of weather on the migration route
iv	Physical characteristics that allow birds to migrate
v	The main reason why birds migrate
vi	The best wintering grounds for birds
vii	Research findings on how birds migrate
viii	Successful migration despite trouble of wind
ix	Contrast between long-distance migration and short-distance migration
x	Mysterious migration despite lack of teaching

14 Paragraph **A**

15 Paragraph **B**

16 Paragraph **C**

17 Paragraph **D**

18 Paragraph **E**

19 Paragraph **F**

20 Paragraph **G**

BIRD MIGRATION

A Birds have many unique design features that enable them to perform such amazing feats of endurance. They are equipped with lightweight, hollow bones, intricately designed feathers providing both lift and thrust for rapid flight, navigation systems superior to any that man has developed, and an ingenious heat conserving design that, among other things, concentrates all blood circulation beneath layers of warm, waterproof plumage, leaving them fit to face life in the harshest of climates. Their respiratory systems have to perform efficiently during sustained flights at altitude, so they have a system of extracting oxygen from their lungs that far exceeds that of any other animal. During the later stages of the summer breeding season, when food is plentiful, their bodies are able to accumulate considerable layers of fat, in order to provide sufficient energy for their long migratory flights.

B The fundamental reason that birds migrate is to find adequate food during the winter months when it is in short supply. This particularly applies to birds that breed in the temperate and Arctic regions of the Northern Hemisphere, where food is abundant during the short growing season. Many species can tolerate cold temperatures if food is plentiful, but when food is not available they must migrate. However, intriguing questions remain.

C One puzzling fact is that many birds journey much further than would be necessary just to find food and good weather. Nobody knows, for instance, why British swallows, which could presumably survive equally well if they spent the winter in equatorial Africa, instead fly several thousands of miles further to their preferred winter home in South Africa's Cape Province. Another mystery involves the huge migrations performed by arctic terns and mudflat-feeding shorebirds that breed close to Polar Regions. In general, the further north a migrant species breeds, the further south it spends the winter. For arctic terns this necessitates an annual round trip of 25,000 miles. Yet, en route to their final destination in far-flung southern latitudes, all these individuals overfly other areas of seemingly suitable habitat spanning two hemispheres. While we may not fully understand birds' reasons for going to particular places, we can marvel at their feats.

D One of the greatest mysteries is how young birds know how to find the traditional wintering areas without parental guidance. Very few adults migrate with juveniles in tow, and youngsters may even have little or no inkling of their parents' appearance. A familiar example is that of the cuckoo, which lays its eggs in another species' nest and never encounters its young again. It is mind boggling to consider that, once raised by its host species, the young cuckoo makes it own way to ancestral wintering grounds in the tropics before returning single-handedly to northern Europe the next season to seek out a mate among its own kind. The obvious implication is that it inherits from its parents an

inbuilt route map and direction-finding capability, as well as a mental image of what another cuckoo looks like. Yet nobody has the slightest idea as to how this is possible.

E Mounting evidence has confirmed that birds use the positions of the sun and stars to obtain compass directions. They seem also to be able to detect the earth's magnetic field, probably due to having minute crystals of magnetite in the region of their brains. However, true navigation also requires an awareness of position and time, especially when lost. Experiments have shown that after being taken thousands of miles over an unfamiliar landmass, birds are still capable of returning rapidly to nest sites. Such phenomenal powers are the product of computing a number of sophisticated cues, including an inborn map of the night sky and the pull of the earth's magnetic field. How the birds use their 'instruments' remains unknown, but one thing is clear: they see the world with a superior sensory perception to ours. Most small birds migrate at night and take their direction from the position of the setting sun. However, as well as seeing the sun go down, they also seem to see the plane of polarized light caused by it, which calibrates their compass. Traveling at night provides other benefits. Daytime predators are avoided and the danger of dehydration due to flying for long periods in warm, sunlit skies is reduced. Furthermore, at night the air is generally cool and less turbulent and so conducive to sustained, stable flight.

F Nevertheless, all journeys involve considerable risk, and part of the skill in arriving safely is setting off at the right time. This means accurate weather forecasting, and utilizing favorable winds. Birds are adept at both, and, in laboratory tests, some have been shown to detect the minute difference in barometric pressure between the floor and ceiling of a room. Often birds react to weather changes before there is any visible sign of them. Lapwings, which feed on grassland, flee west from the Netherlands to the British Isles, France and Spain at the onset of a cold snap. When the ground surface freezes the birds could starve. Yet they return to Holland ahead of a thaw, their arrival linked to a pressure change presaging an improvement in the weather.

G In one instance a Welsh Manx shearwater carried to America and released was back in its burrow on Skokholm Island, off the Pembrokeshire coast, one day before a letter announcing its release! Conversely, each autumn a small number of North American birds are blown across the Atlantic by fast-moving westerly tail winds. Not only do they arrive safely in Europe, but, based on ringing evidence, some make it back to North America the following spring, after probably spending the winter with European migrants in sunny African climes.

Questions 21-22

*Choose **TWO** letters, **A-E**.*

Write the correct letters in boxes 21 and 22 on your answer sheet.

Which **TWO** of the following statements are true of bird migration?

A Birds often fly further than they need to.
B Birds traveling in family groups are safe.
C Brds flying at night need less water.
D Birds have much sharper eye-sight than humans.
E Only shorebirds are resistant to strong winds.

Question 23-26

*Complete the sentences below using **NO MORE THAN ONE WORD OR NUMBER** from the passage.*

Write your answers in boxes 23-26 on your answer sheet.

23 It is a great mystery that young birds like cuckoos can find their wintering grounds without _____.

24 Evidence shows birds can tell directions like a _____ by observing the sun and the stars.

25 One advantage for birds flying at night is that they can avoid contact with _____.

26 Laboratory tests show that birds can detect weather without _____signs.

READING PASSAGE 3

*You should spend about 20 minutes on **Questions 27-40** which are based on Reading Passage 3 below.*

THE INGENUITY GAP

Ingenuity, as I define it here, consists not only of ideas for new technologies like computers or drought-resistant crops but, more fundamentally, of ideas for better institutions and social arrangements, like efficient markets and competent governments.

How much and what kinds of ingenuity a society requires depends on a range of factors, including the society's goals and the circumstances within which it must achieve those goals—whether it has a young population or an aging one, an abundance of natural resources or a scarcity of them, an easy climate or a punishing one, whatever the case may be.

How much and what kinds of ingenuity a society supplies also depends on many factors, such as the nature of human inventiveness and understanding, the rewards an economy gives to the producers of useful knowledge, and the strength of political opposition to social and institutional reforms.

A good supply of the right kind of ingenuity is essential, but it isn't, of course, enough by itself. We know that the creation of wealth, for example, depends not only on an adequate supply of useful ideas but also on the availability of other, more conventional factors of production, like capital and labor. Similarly, prosperity, stability and justice usually depend on the resolution, or at least the containment, of major political struggles over wealth and power. Yet within our economies ingenuity often supplants labor, and growth in the stock of physical plant is usually accompanied by growth in the stock of ingenuity. And in our political systems, we need great ingenuity to set up institutions that successfully manage struggles over wealth and power. Clearly, our economic and political processes are intimately entangled with the production and use of ingenuity.

The past century's countless incremental changes in our societies around the planet, in our technologies and our interactions with our surrounding natural environments, have accumulated to create a qualitatively new world. Because these changes have accumulated slowly, it's often hard for us to recognize how profound and sweeping they've been. They include far larger and denser populations; much higher per capita consumption of natural resources; and far better and more widely available technologies for the movement of people, materials, and especially information.

In combination, these changes have sharply increased the density, intensity, and pace of our interactions with each other; they have greatly increased the burden we place on our natural environment; and they have helped shift power from national and international institutions to individuals and subgroups, such as political special interests and ethnic factions.

As a result, people in all walks of life—from our political and business leaders to all of us in our day-to-day—must cope with much more complex, urgent, and often unpredictable circumstances.

The management of our relationship with this new world requires immense and ever-increasing amounts of social and technical ingenuity. As we strive to maintain or increase our prosperity and improve the quality of our lives, we must make far more sophisticated decisions, and in less time, than ever before.

When we enhance the performance of any system, from our cars to the planet's network of financial institutions, we tend to make it more complex. Many of the natural systems critical to our well-being, like the global climate and the oceans, are extraordinarily complex to begin with. We often can't predict or manage the behavior of complex systems with much precision, because they are often very sensitive to the smallest of changes and perturbations, and their behavior can flip from one mode to another suddenly and dramatically. In general, as the human-made and natural systems we depend upon become more complex, and as our demands on them increase, the institutions and technologies we use to manage them must become more complex too, which further boosts our need for ingenuity.

The good news, though, is that the last century's stunning changes in our societies and technologies have not just increased our need for ingenuity; they have also produced a huge increase in its supply. The growth and urbanization of human populations have combined with astonishing new communication and transportation technologies to expand interactions among people and produce larger, more integrated, and more efficient markets. These changes have, in turn, vastly accelerated the generation and delivery of useful ideas.

But—and this is the critical "but"—we should not jump to the conclusion that the supply of ingenuity always increases in lockstep with our ingenuity requirement: while it's true that necessity is often the mother of invention, we can't always rely on the right kind of ingenuity appearing when and where we need it. In many cases, the complexity and speed of operation of today's vital economic, social, and ecological systems exceed the human brain's grasp. Very few of us have more than a rudimentary understanding of how these systems work. They remain fraught with countless "unknown unknowns," which makes it hard to supply the ingenuity we need to solve problems associated with these systems.

In this book, I explore a wide range of other factors that will limit our ability to supply the ingenuity required in the coming century. For example, many people believe that new communication technologies strengthen democracy and will make it easier to find solutions to our societies' collective problems, but the story is less clear than it seems. The crush of information in our everyday lives is shortening our attention span, limiting the time we have to reflect on critical matters of public policy, and making policy arguments more superficial.

Modern markets and science are an important part of the story of how we supply ingenuity. Markets are critically important, because they give entrepreneurs an incentive to produce knowledge. As for science, although it seems to face no theoretical limits, at least in the foreseeable future, practical constraints often slow its progress. The cost of scientific research tends to increase as it delves deeper into nature. And science's rate of advance depends on the characteristic of the natural phenomena it investigates, simply because some phenomena are intrinsically harder to understand than others, so the production of useful new knowledge in these areas can be very slow. Consequently, there is often a critical time lag between the recognition between a problem and the delivery of sufficient ingenuity, in the form of technologies, to solve that problem. Progress in the social sciences is especially slow, for reasons we don't yet understand; but we desperately need better social scientific knowledge to build the sophisticated institutions today's world demands.

Questions 27-30

*Complete each sentence with the appropriate answer, **A, B, C,** or **D**.*

Write the correct answer in boxes 27-30 on your answer sheet.

27 The definition of ingenuity

28 The requirement for ingenuity

29 The creation of social wealth

30 The stability of society

A	depends on many factors including climate.
B	depends on the management and solution of disputes.
C	is not only of technological advance, but more of institutional renovation.
D	also depends on the availability of some traditional resources.

Questions 31-33

*Choose the correct letter, **A, B, C** or **D**.*

Write your answers in boxes 31-33 on your answer sheet.

31 What does the author say about the incremental change of the last 100 years?

A It has become a hot scholastic discussion among environmentalists.

B Its significance is often not noticed.

C It has reshaped the natural environments we live in.

D It benefited a much larger population than ever.

32 The combination of changes has made life:

A easier

B faster

C slower

D less sophisticated

33 What does the author say about the natural systems?

A New technologies are being developed to predict change with precision.

B Natural systems are often more sophisticated than other systems.

C Minor alterations may cause natural systems to change dramatically.

D Technological developments have rendered human being more independent of natural systems.

Questions 34-40

Do the following statements agree with the information given in Reading Passage 3?

In boxes 34-40 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

34 The demand for ingenuity has been growing during the past 100 years.

35 The ingenuity we have may be inappropriate for solving problems at hand.

36 There are very few who can understand the complex systems of the present world.

37 More information will help us to make better decisions.

38 The next generation will blame the current government for their conduct.

39 Science tends to develop faster in certain areas than others.

40 Social science develops especially slowly because it is not as important as natural science.

TEST 6

READING PASSAGE 1

*You should spend about 20 minutes on **Questions 1-13** which are based on Reading Passage 1 below.*

Man or Machine?

MIT's humanoid robots showcase both human creativity and contemporary pessimism.

Humanoid robots were once the stuff of political and science fiction. Today, scientists working in Japan and the USA have been turning fiction into a physical reality.

A During July 2003, the Museum of Science in Cambridge, Massachusetts exhibited what Honda calls 'the world's most advanced humanoid robot', ASIMO (the Advanced Step in Innovative Mobility). Honda's brainchild is on tour in North America and delighting audiences wherever it goes. After 17 years in the making, ASIMO stands at four feet tall, weighs around 115 pounds and looks like a child in an astronaut's suit. Though it is difficult to see ASIMO's face at a distance, on closer inspection it has a smile and two large 'eyes' that conceal cameras. The robot cannot work autonomously — its actions are 'remote controlled' by scientists through the computer in its backpack. Yet watching ASMIO perform at a show in Massachusetts it seemed uncannily human. The audience cheered as ASIMO walked forwards and backwards, side to side and up and downstairs. It can even dance to the Hawaiian Hula.

B While the Japanese have made huge strides in solving some of the engineering problems of human kinetics and bipedal movements, for the past 10 years scientists at MIT's former Artificial Intelligence (AI) lab (recently renamed the Computer Science and Artificial Intelligence Laboratory, CSAIL) have been making robots that can behave like humans and interact with humans. One of MIT's robots, Kismet, is an anthropomorphic head and has two eyes (complete with eyelids), ears, a mouth, and eyebrows. It has several facial expressions, including happy, sad, frightened and disgusted. Human interlocutors are able to read some of the robot's facial expressions, and often change their behaviour towards the machine as a result - for example, playing with it when it appears 'sad'. Kismet is now in MIT's museum, but the ideas developed here continue to be explored in new robots.

C Cog (short for Cognition) is another pioneering project from MIT's former AI lab. Cog

has a head, eyes, two arms, hands and a torso — and its proportions were originally measured from the body of a researcher in the lab. The work on Cog has been used to test theories of embodiment and developmental robotics, particularly getting a robot to develop intelligence by responding to its environment via sensors, and to learn through these types of interactions. This approach to AI was thought up and developed by a team of students and researchers led by the head of MIT's former AI lab, Rodney Brooks (now head of CSAIL), and represented a completely new development.

D This work at MIT is getting furthest down the road to creating human-like and interactive robots. Some scientists argue that ASIMO is a great engineering feat but not an intelligent machine — because it is unable to interact autonomously with unpredictabilities in its environment in meaningful ways, and learn from experience. Robots like Cog and Kismet and new robots at MIT's CSAIL and media lab, however, are beginning to do this.

E These are exciting developments. Creating a machine that can walk, make gestures and learn from its environment is an amazing achievement. And watch this space: these achievements are likely rapidly to be improved upon. Humanoid robots could have a plethora of uses in society, helping to free people from everyday tasks. In Japan, for example, there is an aim to create robots that can do the tasks similar to an average human, and also act in more sophisticated situations as firefighters, astronauts or medical assistants to the elderly in the workplace and in homes — partly in order to counterbalance the effects of an ageing population.

F So in addition to these potentially creative plans there lies a certain dehumanisation. The idea that companions can be replaced with machines, for example, suggests a mechanical and degraded notion of human relationships. On one hand, these developments express human creativity — our ability to invent, experiment, and to extend our control over the world. On the other hand, the aim to create a robot like a human being is spurred on by dehumanised ideas — by the sense that human companionship can be substituted by machines; that humans lose their humanity when they interact with technology; or that we are little more than surface and ritual behaviours, that can be simulated with metal and electrical circuits.

G The tension between the dehumanised and creative aspects of robots has long been explored in culture. In Karel Capek's *Rossum's Universal Robots*, a 1921 play in which the term 'robot' was first coined, although Capek's robots had human-like appearance and behaviour, the dramatist never thought these robots were human. For Capek, being human was about much more than appearing to be human. In part, it was about challenging a dehumanising system, and struggling to become recognised and given the dignity of more than a machine. A similar spirit would guide us well through twenty-first century experiments in robotics.

Questions 1-7

Reading Passage 1 has seven paragraphs, **A-G**.

Which paragraph contains the following information?

*Write the correct letter, **A-G**, in boxes 1-7 on your answer sheet.*

1 The different uses of robots in society
2 How robot is used in the artistic work
3 A robot that was modelled on an adult
4 A comparison between two different types of robots
5 A criticism of the negative effects of humanoid robots on the society
6 A reference to the first use of the word "robot"
7 People feel humanity may be replaced by robots

Questions 8-13

*Complete the summary below using **NO MORE THAN TWO WORDS** from the passage.*

Write your answers in boxes 8-13 on your answer sheet.

It took Honda **8** ____ years to make ASIMO, a human-looking robot that attracted broad interests from audiences. Unlike ASIMO, which has to be controlled through a computer installed in the **9** ____, MIT's scientists aimed to make robots that can imitate human behavior and **10** ____with humans. One of such particular inventions can express its own feelings through **11** ____. Another innovative project is a robot called **12** ____, which is expected to learn from its environment to gain some **13** ____.

READING PASSAGE 2

*You should spend about 20 minutes on **Questions 14-26** which are based on Reading Passage 2 below.*

California's Age of Megafires

Drought, housing expansion, and oversupply of tinder make for bigger, hotter fires.

There's a reason fire squads now battling more than a dozen blazes in southern California are having such difficulty containing the flames, despite better preparedness than ever and decades of experience fighting fires fanned by the notorious Santa Ana winds. The wildfires themselves, experts say, generally are hotter, move faster, and spread more erratically than in the past.

Megafires, also called "siege fires," are the increasingly frequent blazes that burn 500,000 acres or more — 10 times the size of the average forest fire of 20 years ago. One of the current wildfires is the sixth biggest in California ever, in terms of acreage burned, according to state figures and news reports.

The short-term explanation is that the region, which usually has dry summers, has had nine inches less rainfall than normal this year. Longer term, climate change across the West is leading to hotter days on average and longer fire seasons. The trend to more superhot fires, experts say, has been driven by a century-long policy of the US Forest Service to stop wildfires as quickly as possible. The unintentional consequence was to halt the natural eradication of underbrush, now the primary fuel for megafires.

Three other factors contribute to the trend, they add. First is climate change marked by a 1-degree F rise in average yearly temperature across the West. Second is a fire season that on average is 78 days longer than in the late 1980s. Third is increased building of homes and other structures in wooded areas. "We are increasingly building our homes ... in fire-prone ecosystems," says Dominik Kulakowski, adjunct professor of biology at Clark University Graduate School of Geography in Worcester, Mass. Doing that "in many of the forests of the Western US ... is like building homes on the side of an active volcano."

In California, where population growth has averaged more than 600,000 a year for at least a decade, housing has pushed into such areas. "What once was open space is now residential homes providing fuel to make fires burn with greater intensity," says Terry McHale of the California Department of Forestry firefighters union. "With so much dryness, so many communities to catch fire, so many fronts to fight, it becomes an almost incredible job."

That said, many experts give California high marks for making progress on preparedness since 2003, when the largest fires in state history scorched 750,000 acres, burned 3,640

homes, and killed 22 people. Stung then by criticism of bungling that allowed fires to spread when they might have been contained, personnel are meeting the peculiar challenges of neighborhood- and canyon-hopping fires better than in recent years, observers say.

State promises to provide newer engines, planes, and helicopters have been fulfilled. Firefighters unions that then complained of dilapidated equipment, old fire engines, and insufficient blueprints for fire safety are now praising the state's commitment, noting that funding for firefighting has increased despite huge cuts in many other programs. "We are pleased that the Schwarzenegger administration has been very proactive in its support of us and come through with budgetary support of the infrastructure needs we have long sought," says Mr. McHale with the firefighters union.

Besides providing money to upgrade the fire engines that must traverse the mammoth state and wind along serpentine canyon roads, the state has invested in better command-and-control facilities as well as the strategies to run them. "In the fire sieges of earlier years, we found out that we had the willingness of mutual-aid help from other jurisdictions and states, but we were not able to communicate adequately with them," says Kim Zagaris, chief of the state's Office of Emergency Services, fire and rescue branch. After a 2004 blue-ribbon commission examined and revamped those procedures, the statewide response "has become far more professional and responsive," he says.

Besides ordering the California National Guard on Monday to make 1,500 guardsmen available for firefighting efforts, Gov. Arnold Schwarzenegger asked the Pentagon to send all available Modular Airborne Fighting Systems to the area. The military Lockheed C-130 cargo/utility aircraft carry a pressurized 3,000-gallon tank that can eject fire retardant or water in fewer than five seconds through two tubes at the rear of the plane. This load can cover an area 1/4-mile long and 60 feet wide to create a fire barrier. Governor Schwarzenegger also directed 2,300 inmate firefighters and 170 custody staff from the California Department of Corrections and Rehabilitation to work hand in hand with state and local firefighters.

Residents and government officials alike are noting the improvements with gratitude, even amid the loss of homes, churches, businesses, and farms. Despite such losses, there is a sense that the speed, dedication, and coordination of firefighters from several states and jurisdictions are resulting in greater efficiency than in past "siege fire" situations.

"I am extraordinarily impressed by the improvements we have witnessed between the last big fire and this," says Ross Simmons, a San Diego-based lawyer who had to evacuate both his home and business on Monday, taking up residence at a Hampton Inn 30 miles south of his home in Rancho Bernardo. After fires consumed 172,000 acres there in 2003, the San Diego region turned communitywide soul-searching into improved building codes, evacuation procedures, and procurement of new technology. Mr. Simmons and neighbors began receiving automated phone calls at 3:30 a.m. Monday morning telling them to evacuate. "Notwithstanding all the damage that will be caused by this, we will not come close to the loss of life because of what we have ... put in place since then," he says.

Questions 14-18

*Complete the summary below using **NO MORE THAN TWO WORDS** from the passage.*

Write your answers in boxes 14-18 on your answer sheet.

Fighting Californian wildfires is still not an easy task because the fires the fire-fighters now face **14** _____ in more unpredictable manner in addition to the raging heat and faster speed than ever. Megafires, as they are called, are often **15** ____ bigger than average forest fire. The reasons for this include **16**____ below the average and the extended **17**____ due to climate change. And according to experts, the government policy has also contributed to this by accidentally making the underbrush the **18**____ for megafires.

Questions 19-23

Do the following statements agree with the information given in Reading Passage 2?

In boxes 19-23 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

19 Open space has been disappearing in the past 10 years.

20 The equipment firefighters use today is better than before.

21 The state recruited new firefighters.

22 In the early years, no other states wished to help California to fight the fire.

23 The 2004 blue-ribbon commission did not make any achievements.

Questions 24-26

*Choose the correct letter, **A, B, C** or **D**.*

Write your answers in boxes 24-26 on your answer sheet.

24 Why does the author mention Governor Schwarzenegger, California National Guard, Pentagon and the California Department of Corrections and Rehabilitation?

A To show the active involvement of the Schwarzenegger's administration

B To illustrate the cross-state and cross-jurisdiction cooperation in fire-fighting

C To demonstrate how the military is more effective at fighting fire than others

D To give an example of how resources should be mobilised to fight fires

25 How do the locals feel about the improvements made by the state government?

A glad

B unsatisfied

C unconcerned

D bitter

26 According to Ross Simmons, which of the following statements is true?

A It's harder to evacuate people in daytime.

B People refuse to improve their house in fire resisting ability.

C People can hardly believe the magnitude of damage today.

D People are less likely to die in fires now.

READING PASSAGE 3

*You should spend about 20 minutes on **Questions 27-40** which are based on Reading Passage 3 below.*

The Rainmaker

Sometimes ideas just pop up out of the blue. Or in Charlie Paton's case, out of the rain. "I was in a bus in Morocco travelling through the desert," he remembers. "It had been raining and the bus was full of hot, wet people. The windows steamed up and I went to sleep with a towel against the glass. When I woke, the thing was soaking wet. I had to wring it out. And it set me thinking. Why was it so wet?"

The answer, of course, was condensation. Back home in London, a physicist friend, Philip Davies, explained that the glass, chilled by the rain outside, had cooled the hot humid air inside the bus below its dew point, causing droplets of water to form on the inside of the window. Intrigued, Paton — a lighting engineer by profession — started rigging up his own equipment. "I made my own solar stills. It occurred to me that you might be able to produce water in this way in the desert, simply by cooling the air. I wondered whether you could make enough to irrigate fields and grow crops."

Today, a decade on, his dream has taken shape as a giant greenhouse on a desert island off Abu Dhabi in the Persian Gulf — the first commercially viable version of his "seawater greenhouse". Local scientists, working with Paton under a licence from his company Light Works, are watering the desert and growing vegetables in what is basically a giant dew-making machine that produces fresh water and cool air from sun and seawater. In awarding Paton first prize in a design competition two years ago, Marco Goldschmied, president of the Royal Institute of British Architects, called it "a truly original idea which has the potential to impact on the lives of millions of people living in coastal water-starved areas around the world".

The design has three main parts (see Graphic). The greenhouse faces into the prevailing wind so that hot, dry desert air blows in through the front wall of perforated cardboard, kept wet and cool by a constant trickle of seawater pumped up from the nearby shoreline. The evaporating seawater cools and moistens the air. Last June, for example, when the temperature outside the Abu Dhabi greenhouse was 46 °C, it was in the low 30s inside. While the air outside was dry, the humidity in the greenhouse was 90 per cent. The cool, moist air allows the plants to grow faster, and because much less water evaporates from the leaves their demand for moisture drops dramatically. Paton's crops thrived on a single litre of water per square metre per day, compared to 8 litres if they were growing outside.

The second feature also cools the air for the plants. Paton has constructed a double-layered roof with an outer layer of clear polythene and an inner, coated layer that reflects infrared light. Visible light can stream through to maximise photosynthesis, while heat from the infrared radiation is trapped in the space between the layers, away from the plants.

At the back of the greenhouse sits the third element, the main water-production unit. Just before entering this unit, the humid air of the greenhouse mixes with the hot, dry air from between the two layers of the roof. This means the air can absorb more moisture as it passes through a second moist cardboard wall. Finally, the hot saturated air hits a condenser. This is a metal surface kept cool by still more seawater — the equivalent of the window on Paton's Moroccan bus. Drops of pure distilled water form on the condenser and flow into a tank for irrigating the crops.

The greenhouse more or less runs itself. Sensors switch everything on when the sun rises and alter flows of air and seawater through the day in response to changes in temperature, humidity and sunlight. On windless days, fans ensure a constant flow of air through the greenhouse. "Once it is tuned to the local environment, you don't need anyone there for it to work," says Paton. "We can run the entire operation off one 13-amp plug, and in future we could make it entirely independent of the grid, powered from a few solar panels."

The net effect is to evaporate seawater into hot desert air, then recondense the moisture as fresh water. At the same time, cool moist air flows through the greenhouse to provide ideal conditions for the crops. The key to the seawater greenhouse's potential is its unique combination of desalination and air conditioning. By tapping the power of the sun it can cool as efficiently as a 500-kilowatt air conditioner while using less than 3 kilowatts of electricity. In practice, it evaporates 3000 litres of seawater a day and turns it into about 800 litres of fresh water — just enough to irrigate the plants. The rest is lost as water vapour.

Critics point out that construction costs of £25 per square metre mean the water is twice as expensive as water from a conventional desalination plant. But the comparison is misleading, says Paton. The natural air conditioning in the greenhouse massively increases the value of that water. Because the plants need only an eighth of the water used by those grown conventionally, the effective cost is only a quarter that of water from a standard desalinator. And costs should plummet when mass production begins, he adds.

Best of all, the greenhouses should be environmentally friendly. "I suppose there might be aesthetic objections to large structures on coastal sites," says Harris, "but it is a clean technology and doesn't produce pollution or even large quantities of hot water."

Questions 27-31

Do the following statements agree with the information given in Reading Passage 3?

In boxes 27-31 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

27 Paton came up with the idea of making water in desert by pure accident.

28 The bus Paton rode in had poor ventilation because of broken fans.

29 Paton woke up from sleep to discover that his towel was wet.

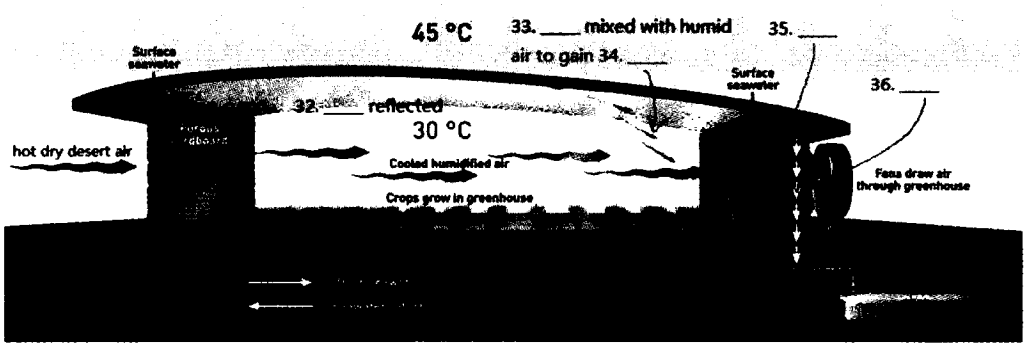
30 Paton started his greenhouse project immediately after meeting up with his friend.

31 Paton later opened his own business in the Persian Gulf.

Questions 32-36

*Complete the diagramy below using **NO MORE THAN TWO WORDS** from the passage.*

Write your answers in boxes 32-36 on your answer sheet.



Questions 37-40

*Complete the summary below using **NO MORE THAN TWO WORDS** from the passage.*

Write your answers in boxes 37-40 on your answer sheet.

The greenhouse Paton built is installed with **37**____ to keep the air flowing if the wind stands still, and it is expected in the future to rely on electricity provided solely by **38**____. Despite the high construction costs compared to desalination plant, the plants grown in Paton's greenhouse need much less water, and if produced in large quantities the **39**____could be reduced remarkably. In addition to all these advantages, it is also **40**____, because it is clean and pollution free.

TEST 7

READING PASSAGE 1

*You should spend about 20 minutes on **Questions 1-13** which are based on Reading Passage 1 below.*

Health in the Wild

Many animals seem able to treat their illnesses themselves. Humans may have a thing or two to learn from them.

For the past decade Dr Engel, a lecturer in environmental sciences at Britain's Open University, has been collating examples of self-medicating behaviour in wild animals. She recently published a book on the subject. In a talk at the Edinburgh Science Festival earlier this month, she explained that the idea that animals can treat themselves has been regarded with some scepticism by her colleagues in the past. But a growing number of animal behaviourists now think that wild animals can and do deal with their own medical needs.

One example of self-medication was discovered in 1987. Michael Huffman and Mohamedi Seifu, working in the Mahale Mountains National Park in Tanzania, noticed that local chimpanzees suffering from intestinal worms would dose themselves with the pith of a plant called *Veronia*. This plant produces poisonous chemicals called terpenes. Its pith contains a strong enough concentration to kill gut parasites, but not so strong as to kill chimps (nor people, for that matter; locals use the pith for the same purpose). Given that the plant is known locally as "goat-killer", however, it seems that not all animals are as smart as chimps and humans. Some consume it indiscriminately, and succumb.

Since the *Veronia*-eating chimps were discovered, more evidence has emerged suggesting that animals often eat things for medical rather than nutritional reasons. Many species, for example, consume dirt—a behaviour known as geophagy. Historically, the preferred explanation was that soil supplies minerals such as salt. But geophagy occurs in areas where the earth is not a useful source of minerals, and also in places where minerals can be more easily obtained from certain plants that are known to be rich in them. Clearly, the animals must be getting something else out of eating earth.

The current belief is that soil—and particularly the clay in it—helps to detoxify the defensive poisons that some plants produce in an attempt to prevent themselves from being eaten. Evidence for the detoxifying nature of clay came in 1999, from an experiment carried out on macaws by James Gilardi and his colleagues at the University of California, Davis. Macaws eat seeds containing alkaloids, a group of chemicals that has some notoriously toxic members, such as strychnine. In the wild, the birds are frequently seen

perched on eroding riverbanks eating clay. Dr Gilardi fed one group of macaws a mixture of a harmless alkaloid and clay, and a second group just the alkaloid. Several hours later, the macaws that had eaten the clay had 60% less alkaloid in their bloodstreams than those that had not, suggesting that the hypothesis is correct.

Other observations also support the idea that clay is detoxifying. Towards the tropics the amount of toxic compounds in plants increases—and so does the amount of earth eaten by herbivores. Elephants lick clay from mud holes all year round, except in September when they are bingeing on fruit which, because it has evolved to be eaten, is not toxic. And the addition of clay to the diets of domestic cattle increases the amount of nutrients that they can absorb from their food by 10-20%.

A third instance of animal self-medication is the use of mechanical scours to get rid of gut parasites. In 1972 Richard Wrangham, a researcher at the Gombe Stream Reserve in Tanzania, noticed that chimpanzees were eating the leaves of a tree called Aspilia. The chimps chose the leaves carefully by testing them in their mouths. Having chosen a leaf, a chimp would fold it into a fan and swallow it. Some of the chimps were noticed wrinkling their noses as they swallowed these leaves, suggesting the experience was unpleasant. Later, undigested leaves were found on the forest floor.

Dr Wrangham rightly guessed that the leaves had a medicinal purpose—this was, indeed, one of the earliest interpretations of a behaviour pattern as self-medication. However, he guessed wrong about what the mechanism was. His (and everybody else's) assumption was that *Aspilia* contained a drug, and this sparked more than two decades of phytochemical research to try to find out what chemical the chimps were after. But by the 1990s, chimps across Africa had been seen swallowing the leaves of 19 different species that seemed to have few suitable chemicals in common. The drug hypothesis was looking more and more dubious.

It was Dr Huffman who got to the bottom of the problem. He did so by watching what came out of the chimps, rather than concentrating on what went in. He found that the egested leaves were full of intestinal worms. The factor common to all 19 species of leaves swallowed by the chimps was that they were covered with microscopic hooks. These caught the worms and dragged them from their lodgings.

Following that observation, Dr Engel is now particularly excited about how knowledge of the way that animals look after themselves could be used to improve the health of livestock. People might also be able to learn a thing or two—and may, indeed, already have done so. Geophagy, for example, is a common behaviour in many parts of the world. The medical stalls in African markets frequently sell tablets made of different sorts of clays, appropriate to different medical conditions.

Africans brought to the Americas as slaves continued this tradition, which gave their owners one more excuse to affect to despise them. Yet, as Dr Engel points out, Rwandan mountain gorillas eat a type of clay rather similar to kaolinite—the main ingredient of many patent medicines sold over the counter in the West for digestive complaints. Dirt can sometimes be good for you, and to be "as sick as a parrot" may, after all, be a state to be desired.

Questions 1-4

Do the following statements agree with the information given in Reading Passage 1?
In boxes 1-4 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

1 Dr. Engel has been working on animal self-medication research for 10 years.
2 Animals often walk a considerable distance to find plants for medication.
3 Birds, like Macaw, often eat clay because it is part of their natural diet.
4 According to Dr. Engel, research into animal self-medication can help to invent new painkillers.

Questions 5-9

*Complete the notes below using **NO MORE THAN ONE WORD OR NUMBER** from the passage.*

Write your answers in boxes 5-9 on your answer sheet.

Date	Name	Animal	Food	Mechanism
1987	Michael Huffman and Mohamedi Seifu	Chimpan-zee	**5**____ of *Veronia*	Contained chemicals, **6**_____, that can kill parasites
1999	James Gilardi and his colleagues	Macaw	Seeds (contain **7**_____) and clay	Clay can **8**_____ the poisonous contents in food
1972	Richard Wrang-ham	Chimpan-zee	Leaves with tiny **9**_____ on surface	Such leaves can catch and expel worms from intestines

Questions 10-13

Complete the summary below using words from the box.

*Write your answers, **A-H**, in boxes 10-13 on your answer sheet.*

Though often doubted, the self-medicating behavior of animals has been supported by an increasing amount of evidence. One piece of evidence particularly deals with **10**____, a soil-consuming behavior commonly found across animals species, because earth, often clay, can neutralize the **11**____ content of their diet. Such behavior can also be found among humans in Africa, where people purchase **12**____ at market stalls as a kind of medication to their illnesses. Another example of this is found in chimps eating leaves of often **13**____ taste but with no apparent medicinal value until its unique structure came into light.

A	mineral	**B**	plants	**C**	unpleasant	**D**	toxic
E	clay tablets	**F**	nutritional	**G**	geophagy	**H**	harmless

READING PASSAGE 2

*You should spend about 20 minutes on **Questions 14-26** which are based on Reading Passage 2 below.*

The Conquest of Malaria in Italy, 1900-1962

Mal-aria. Bad air. Even the word is Italian, and this horrible disease marked the life of those in the peninsula for thousands of years. Yet by 1962, Italy was officially declared malaria-free, and it has remained so ever since. Frank Snowden's study of this success story takes us to areas historians have rarely visited before.

A Everybody now knows that malaria is carried by mosquitoes. But in the 19th century, most experts believed that the disease was produced by "miasma" or "poisoning of the air". Others made a link between swamps, water and malaria, but did not make the further leap towards insects. The consequences of these theories were that little was done to combat the disease before the end of the century. Things became so bad that 11m Italians (from a total population of 25m) were "permanently at risk". In malarial zones the life expectancy of land workers was a terrifying 22.5 years. Those who escaped death were weakened or suffered from splenomegaly — a "painful enlargement of the spleen" and "a lifeless stare". The economic impact of the disease was immense. Epidemics were blamed on southern Italians, given the widespread belief that malaria was hereditary. In the 1880s, such theories began to collapse as the dreaded mosquito was identified as the real culprit.

B Italian scientists, drawing on the pioneering work of French doctor Alphonse Laveran, were able to predict the cycles of fever but it was in Rome that further key discoveries were made. Giovanni Battista Grassi, a naturalist, found that a particular type of mosquito was the carrier of malaria. By experimenting on healthy volunteers (mosquitoes were released into rooms where they drank the blood of the human guinea pigs), Grassi was able to make the direct link between the insects (all females of a certain kind) and the disease. Soon, doctors and scientists made another startling discovery: the mosquitoes themselves were also infected and not mere carriers. Every year, during the mosquito season, malarial blood was moved around the population by the insects. Definitive proof of these new theories was obtained after an extraordinary series of experiments in Italy, where healthy people were introduced into malarial zones but kept free of mosquito bites — and remained well. The new Italian state had the necessary information to tackle the disease.

C A complicated approach was adopted, which made use of quinine - a drug obtained from tree bark which had long been used to combat fever, but was now seen as a crucial part of the war on malaria. Italy introduced a quinine law and a quinine tax in 1904, and the drug was administered to large numbers of rural workers. Despite its often terrible side-effects (the headaches produced were known as the "quinine-buzz") the drug was successful in limiting the spread of the disease, and in breaking cycles of infection. In addition, Italy set up rural health centres and

invested heavily in education programmes. Malaria, as Snowden shows, was not just a medical problem, but a social and regional issue, and could only be defeated through multi-layered strategies. Politics was itself transformed by the anti-malarial campaigns. It was originally decided to give quinine to all those in certain regions — even healthy people; peasants were often suspicious of medicine being forced upon them. Doctors were sometimes met with hostility and refusal, and many were dubbed "poisoners".

D Despite these problems, the strategy was hugely successful. Deaths from malaria fell by some 80% in the first decade of the 20th century and some areas escaped altogether from the scourge of the disease. War, from 1915-18, delayed the campaign. Funds were diverted to the battlefields and the fight against malaria became a military issue, laying the way for the fascist approach to the problem. Mussolini's policies in the 20s and 30s are subjected to a serious cross-examination by Snowden. He shows how much of the regime's claims to have "eradicated" malaria through massive land reclamation, forced population removals and authoritarian clean-ups were pure propaganda. Mass draining was instituted — often at a great cost as Mussolini waged war not on the disease itself, but on the mosquitoes that carried it. The cleansing of Italy was also ethnic, as "carefully selected" Italians were chosen to inhabit the gleaming new towns of the former marshlands around Rome. The "successes" under fascism were extremely vulnerable, based as they were on a top-down concept of eradication. As war swept through the drained lands in the 40s, the disease returned with a vengeance.

E In the most shocking part of the book, Snowden describes — passionately, but with the skill of a great historian — how the retreating Nazi armies in Italy in 1943-44 deliberately caused a massive malaria epidemic in Lazio. It was "the only known example of biological warfare in 20th-century Europe". Shamefully, the Italian malaria expert Alberto Missiroli had a role to play in the disaster: he did not distribute quinine, despite being well aware of the epidemic to come. Snowden claims that Missiroli was already preparing a new strategy — with the support of the US Rockefeller Foundation — using a new pesticide, DDT. Missiroli allowed the epidemic to spread, in order to create the ideal conditions for a massive, and lucrative, human experiment. Fifty-five thousand cases of malaria were recorded in the province of Littoria alone in 1944. It is estimated that more than a third of those in the affected area contracted the disease. Thousands, nobody knows how many, died. With the war over, the US government and the Rockefeller Foundation were free to experiment. DDT was sprayed from the air and 3m Italians had their bodies covered with the chemical. The effects were dramatic, and nobody really cared about the toxic effects of the chemical.

F By 1962, malaria was more or less gone from the whole peninsula. The last cases were noted in a poor region of Sicily. One of the final victims to die of the disease in Italy was the popular cyclist, Fausto Coppi. He had contracted malaria in Africa in 1960, and the failure of doctors in the north of Italy to spot the disease was a sign of the times. A few decades earlier, they would have immediately noticed the tell-tale signs; it was later claimed that a small dose of quinine would have saved his life. As there are still more than 1m deaths every year from malaria worldwide, Snowden's book also has contemporary relevance. This is a disease that affects every level of the societies where it is rampant. It also provides us with "a message of hope for a world struggling with the great present-day medical emergency".

Questions 14-18

*Complete the summary below using **NO MORE THAN TWO WORDS** from the passage.*

Write your answers in boxes 14-18 on your answer sheet.

Before the link between malaria and **14**____ was established, there were many popular theories circulating among the public, one of which points to **15**____, the unclean air. The lack of proper treatment affected the country so badly that rural people in malaria infested places had extremely short **16**____. The disease spread so quickly, especially in the south of Italy, thus giving rise to the idea that the disease was **17** ____. People believed in these theories until mosquito was found to be the **18** ____ in the 1880s.

Questions 19-21

Do the following statements agree with the information given in Reading Passage 2?

In boxes 19-21 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

19 The volunteers of the Italian experiments that provided assuring evidence were from all over Italy.

20 It's possible to come out of malarial zones alive.

21 The government successfully managed to give all people quinine medication.

Questions 22-26

Reading Passage 2 has six paragraphs, **A-F**.

Which paragraph contains the following information?

*Write the correct letter, **A-F**, in boxes 22-26 on your answer sheet.*

22 A breakthrough in the theory of the cause of malaria

23 A story for today's readers

24 A description of an expert who didn't do anything to restrict the spread of disease

25 A setback in the battle against malaria due to government policies

26 A description of how malaria affects the human body

READING PASSAGE 3

*You should spend about 20 minutes on **Questions 27-40** which are based on Reading Passage 3 below.*

Sunset for the Oil Business?

The world is about to run out of oil. Or perhaps not. It depends whom you believe...

Members of Oil Depletion Analysis Centre (ODAC) recently met in London and presented technical data that support their grim forecast that the world is perilously close to running out of oil. Leading lights of this movement, including Colin Campbell, rejected rival views presented by American Geological Survey and the International Energy Agency (IEA) that contradicted their views. Dr Campbell even decried the "amazing display of ignorance, deliberate ignorance, denial and obfuscation" by governments, industry and academics on this topic.

So is the oil really running out? The answer is easy: Yes. Nobody seriously disputes the notion that oil is, for all practical purposes, a non-renewable resource that will run out some day, be that years or decades away. The harder question is determining when precisely oil will begin to get scarce. And answering that question involves scaling Hubbert's peak.

M. King Hubbert, a Shell geologist of legendary status among depletion experts, forecast in 1956 that oil production in the United States would peak in the early 1970s and then slowly decline, in something resembling a bell-shaped curve. At the time, his forecast was controversial, and many rubbished it. After 1970, however, empirical evidence proved him correct: oil production in America did indeed peak and has been in decline ever since.

Dr Hubbert's analysis drew on the observation that oil production in a new area typically rises quickly at first, as the easiest and cheapest reserves are tapped. Over time, reservoirs age and go into decline, and so lifting oil becomes more expensive. Oil from that area then becomes less competitive in relation to other sources of fuel. As a result, production slows down and usually tapers off and declines. That, he argued, made for a bell-shaped curve.

His successful prediction has emboldened a new generation of geologists to apply his methodology on a global scale. Chief among them are the experts at ODAC, who worry that the global peak in production will come in the next decade. Dr Campbell used to argue that the peak should have come already; he now thinks it is just round the corner. A heavyweight has now joined this gloomy chorus. Kenneth Deffeyes of Princeton University argues in a lively new book that global oil production could peak within the next few years.

That sharply contradicts mainstream thinking. America's Geological Survey prepared an

exhaustive study of oil depletion last year that put the peak of production some decades off. The IEA has just weighed in with its new "World Energy Outlook", which foresees enough oil to comfortably meet demand to 2020 from remaining reserves. René Dahan, one of ExxonMobil's top managers, goes further: with an assurance characteristic of the world's largest energy company, he insists that the world will be awash in oil for another 70 years. Who is right? In making sense of these wildly opposing views, it is useful to look back at the pitiful history of oil forecasting. Doomsters have been predicting dry wells since the 1970s, but so far the oil is still gushing. Nearly all the predictions for 2000 made after the 1970s oil shocks were far too pessimistic.

Michael Lynch of DRI-WEFA, an economic consultancy, is one of the few oil forecasters who has got things generally right. In a new paper, Dr Lynch analyses those historical forecasts. He finds evidence of both bias and recurring errors, which suggests that methodological mistakes (rather than just poor data) were the problem. In particular, he criticized forecasters who used Hubbert-style analysis for relying on fixed estimates of how much "ultimately recoverable" oil there really is below ground. That figure, he insists, is actually a dynamic one, as improvements in infrastructure, knowledge and technology raise the amount of oil which is recoverable.

That points to what will probably determine whether the pessimists or the optimists are right: technological innovation. The first camp tends to be dismissive of claims of forthcoming technological revolutions in such areas as deep-water drilling and enhanced recovery. Dr Deffeyes captures this end-of-technology mindset well. He argues that because the industry has already spent billions on technology development, it makes it difficult to ask today for new technology, as most of the wheels have already been invented.

Yet techno-optimists argue that the technological revolution in oil has only just begun. Average recovery rates (how much of the known oil in a reservoir can actually be brought to the surface) are still only around 30-35%. Industry optimists believe that new techniques on the drawing board today could lift that figure to 50-60% within a decade.

Given the industry's astonishing track record of innovation, it may be foolish to bet against it. That is the result of adversity: the oil crisis of the 1970s forced Big Oil to develop reserves in expensive, inaccessible places such as the North Sea and Alaska, undermining Dr Hubbert's assumption that cheap reserves are developed first. The resulting upstream investments have driven down the cost of finding and developing wells over the last two decades from over $20 a barrel to around $6 a barrel. The cost of producing oil has fallen by half, to under $4 a barrel.

Such miracles will not come cheap, however, since much of the world's oil is now produced in ageing fields that are rapidly declining. The IEA concludes that global oil production need not peak in the next two decades if the necessary investments are made. So how much is necessary? If oil companies are to replace the output lost at those ageing fields and meet the world's ever-rising demand for oil, the agency reckons they must invest $1 trillion in non-OPEC countries over the next decade alone. Ouch.

Questions 27-31

Do the following statements agree with the information given in Reading Passage 3?

In boxes 27-31 on your answer sheet, write

YES	*if the statement agrees with the information*
NO	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

27 Hubbert has a high-profile reputation amongst ODAC members.

28 Oil is likely to last longer than some other energy sources.

29 The majority of geologists believe that oil will start to run out some time this decade.

30 Over 50 percent of the oil we know about is currently being recovered.

31 History has shown that some of Hubbert's principles were mistaken.

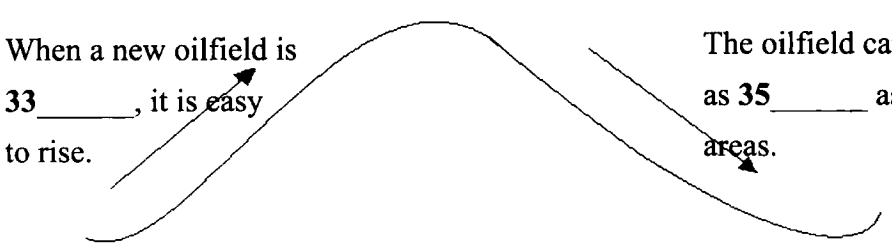
Questions 32-35

*Complete the sentences below using **NO MORE THAN ONE WORD OR NUMBER** from the passage.*

Write your answers in boxes 32-35 on your answer sheet.

Many people believed Hubbert's theory was **32**_____ when it was originally presented.

The recovery of the oil gets more **34**_____ as the reservoir gets older.



Questions 36-40

Look at the following statements (Questions 36-40) and the list of people below.

*Match each statement with the correct person, **A-E**.*

*Write the correct letter, **A-E**, in boxes 36-40 on your answer sheet.*

36 has found fault in geological research procedure.

37 has provided the longest-range forecast regarding oil supply.

38 has convinced others that oil production will follow a particular model.

39 has accused fellow scientists of refusing to see the truth.

40 has expressed doubt over whether improved methods of extracting oil are possible.

A Colin Campbell

B M. King Hubbert

C Kenneth Deffeyes

D Rene Dahan

E Michael Lynch

真题解析

Test

Reading Passage 1. Going Bananas

题目详解

Questions 1-3

解答

1. 题目答案一定为数字信息，同时根据顺序原则，答案应该出现在文章开头，于是定位于原文第一段第二句话“Agricultural scientists believe that the first edible banana was discovered around ten thousand years ago”，题目信息“eaten”对应原文中的“edible”，所以答案为 ten thousand。
2. 题目答案应该为一个地名，同时根据顺序原则，定位于第一段第三行中部“it was first propagated in the jungles of South-East Asia…”，题目信息“planted”对应原文中的“propagated”，所以答案为 South-East Asia。
3. 利用细节信息“The taste of wild bananas”和顺序原则定位于第一段第四行“Normally the wild banana… contains a mass of hard seeds that make the fruit virtually inedible”，题目信息“adversely affected”对应原文中的“virtually inedible”，所以答案为 hard seeds 或 seeds。

Questions 4-10

解答

4. 利用细节信息“pest invasion”定位于第三段倒数第二行 Geoff Hawtin 的观点“When some pest or disease comes along, severe epidemics can occur”，原文中的“severe epidemics can occur”对应题目信息“seriously damage the banana industry”，所以答案为 F。
5. 利用细节信息“fungal infection in soil”定位于原文第四段第六行 Rodomiro Ortiz 的观点“Once the fungus gets into the soil it remains there for many years”，原文中的“many years”对应题目信息“long-lasting”，所以答案为 A。
6. 利用细节信息“A commercial manufacturer”定位于原文倒数第三段倒数第四行 Ronald Romero 的观点“We supported a breeding programme for 40 years...”，题目信息“a commercial manufacturer”对应原文观点后面的“head of research at Chiquita, one of the Big Three companies that dominate the international banana trade”，所以答案为 D。
7. 利用细节信息“chemical sprays”定位于原文第五段倒数第七行 Emile Frison 的观点“As soon as you bring in a new fungicide, they develop resistance...”，原文中的“fungicide”对应题目信息“chemical sprays”，所以答案为 C。
8. 利用细节信息“destroyed a large number of banana plantations”定位于原文第五段倒数第四行 Luadir Gasparotto 的观点“Most of the banana fields in Amazonia have already been destroyed by the disease”，所以答案为 E。
9. 利用细节信息“consumers would not accept”定位于原文最后一段第三行 David McLaughlin 的观点“there are serious questions about consumer acceptance”，题目中的“genetically altered crop”对应本段第一句中的 GM（genetic modification 的缩写），所以答案为 B。
10. 利用细节信息“lessons for other crops”定位于原文第二段第二行 Emile Frison 的观点“it holds a lesson for other crops, too”，所以答案为 C。

Questions 11-13

解答

11. 利用细节信息“oldest known fruit”定位于原文第一段第一句话“The banana is among the world's oldest crops”。根据原文这个信息来判断，题目可能为 True，也可能为 False，所以答案为 Not Given。
12. 利用细节信息“Gros Michel”定位于原文第四段倒数第二、三句话“During the 1960s, it replaced the Gros Michel on supermarket shelves. If you buy a banana today, it is almost certainly a Cavendish”。题目信息“still being used as a commercial product”与

原文中的“it replaced the Gros Michel on supermarket shelves”以及“almost certainly a Cavendish”恰恰相反，所以答案为 False。

13. 利用细节信息“main food”定位于原文第五段开头几句话“Half a billion people in Asia and Africa depend on bananas... Its name is synonymous with food”。题目信息与原文是同义表达，所以答案为 True。

参考译文

走向消失的香蕉

世界上最受人们喜爱的水果可能会在未来十年消失。

香蕉是世界上最古老的水果之一。农业科学家认为，最早可食用的香蕉大约是在一万年前发现的。自从在最后一个冰川期末期在东南亚首次进行繁殖后，香蕉便一直处于进化停滞期。通常，野生香蕉，也就是一种名叫小果野蕉（Musa acuminata）的巨型丛林草本植物，它包含大量坚硬的籽，这些籽导致该品种不可食用。但狩猎采集者偶尔也会发现基因突变的稀有植物，它们可以结出无籽的、可食用的水果。基因学家目前了解到绝大部分结出软的水果的植物品种都是由基因突变造成的，这种突变会使植物细胞里出现三个被复制的染色体而不是通常的两个。这种不平衡阻止了种子和花粉的正常生长，使突变的植物不结果。这就是为什么一些科学家认为世界上最受欢迎的水果注定要消失。它缺乏基因多样性，这使得它难以抵抗那些入侵中美洲香蕉种植场和亚非小型农场的害虫和疾病。

法国蒙彼利埃的国际香蕉和大蕉改进联盟首席官艾米丽·福瑞森认为，在某种程度上，今天的香蕉很像一个半世纪前的土豆，那时，枯萎病还未引发爱尔兰饥荒。它给其他农作物提供了一些借鉴。福瑞森还告诫道，香蕉的现状能让我们更清楚地认识到：全世界农作物的不断标准化正威胁着它们自身的适应和生存能力。

第一个石器时代的种植者通过重新栽培植物茎干上的切割部分种植了这些不结果的畸形植物。那些原本的切割部分的后代就是我们至今仍在吃的香蕉。每一个实际上都是克隆的，几乎没有基因多样性。那种一致性使得香蕉比任何其他作物都更容易受到疾病的危害。传统的有性生殖作物一直都有更宽阔的基因基础，这些基因在每一代都会以新的排列方式进行组合。这赋予了它们更大的灵活性来应对疾病，从而使它们在疾病来袭时，有更多的基因资源可以利用。但是随着种植者不断加大种植那些高产品种，这点优势正在急速减退。为了维持那些标准化作物的抵抗力，植物种植者便狂热地工作。如果这些努力失败了，那么，即使是最多产的作物，其产量也会迅速下降。罗马国际植物基因资源协会主任杰夫·霍庭说，“当某种害虫或疾病来袭时，则可能会引发严重的流行疾病。”

香蕉就是一个极好的例子。直至 20 世纪 50 年代，大米歇尔（Gros Michel）这个品

种一直是世界香蕉市场的领头军。该品种是19世纪20年代时由法国植物学家在亚洲发现的，曾一致被认为是一个良好的香蕉品种，比今天的普通香蕉要甜且醇厚。而且，即使食用了尚未成熟的大米歇尔，人们也不会尝到普通香蕉的那种苦涩。但它容易受到一种土壤真菌的侵害，这种土壤真菌会引发一种叫做巴拿马疾病的萎蔫病。尼日利亚伊巴丹的国际热带农业研究所主任罗得密罗·欧提斯说，“一旦真菌渗入土壤，就会存留很多年。农民对此束手无策。即使喷洒药剂也无法将其去除。”所以种植园主们玩了一场追逐游戏，他们不停地舍弃被感染的土地，迁移到“干净的”土地上去——直到20世纪50年代干净的土地被用尽了，不得不舍弃大米歇尔这个品种。它的接任者，也就是始终占领当前香蕉市场主导地位的卡文迪什(Cavendish)香蕉，是19世纪时由英国人在中国南部发现的。该品种对巴拿马病有很强抵抗力，所以它确实解救了国际香蕉产业。20世纪60年代期间，它替代了大米歇尔香蕉，被摆到了超市的货架上。现在，如果你去买香蕉，那你几乎可以肯定会买到卡文迪什这个品种。但即便如此，在所有的世界香蕉品种中，它也只不过是个小类而已。

亚洲和非洲有5亿人靠香蕉养活。香蕉可以提供最多的能量，人们每天都会吃。它的名字就是食物的同义词。但卡文迪什及其本土类似品种的末日可能快要来了。另外一种真菌疾病叫做黑叶斑病，自1963年它第一次在斐济露面之后，就已经发展成为世界流行病。如果不做处理的话，这种可以造成树叶棕斑和水果早熟的黑叶斑病会使香蕉减产50%-70%，还会使香蕉作物的生产寿命由30年减至2-3年。商业种植者会采用大量化学手段牵制叶斑病。一年喷40次杀真菌剂是非常典型的。但即便如此，像叶斑病这样的疾病正变得越来越难控制。福瑞森说，“一旦你引进一种新的杀真菌剂，它们就会产生抗体。我们可以确定的一点是，叶斑病将不会在此战中败北。”可怜的农民们买不起化学药剂，他们的处境会更糟，只能眼睁睁地看着他们的作物死去。政府调查机构EMBRAPA和巴西香蕉病理学学者卢瓦迪·高斯帕罗托说道，“亚马孙流域的大部分香蕉田地已经被疾病摧毁了。”他预测，当疾病传播开来，产量可能会下降70%。寻求一个新品种将会是唯一的选择。

但是怎么寻找？几乎所有可食用的品种都抵御不了疾病，所以种植者不能只是换一种不同种类的香蕉。对大多数作物来说，这种威胁会激发一大批种植者，在世界范围内搜寻有抗体的相关作物，这种作物的遗传特征能使之被培育成为商业品种。对香蕉来说却不是这样的。因为所有可食用的品种都是不结果的，引进新的基因遗传特性来帮助抵抗害虫和疾病几乎是不可能的。几乎，但不是绝对。在罕见的情况下，不结果的香蕉会经历一次基因突变，然后结出一个几乎正常的种子，从而给种植者带来了一点改进空间。洪都拉斯农业研究机构的种植者充分利用了这一点来创造一个对疾病有抵抗力的品种。另外，和野生香蕉的逆代杂交收获了一种能同时抵抗黑叶斑病和巴拿马萎蔫病的无籽香蕉。

西方国家中，超市的顾客和农作物种植者都不喜欢这个新的杂交品种。一些人指责

说它的味道更像苹果。并不意外的是，如今，大部分种植者已经不再种这个品种而是去种其他更容易种植的品种了。商业香蕉公司也放下了所有的培植努力而不干了，他们更倾向于去探究新的杀真菌剂。在国际香蕉贸易中占支配地位的前三大公司之一的彻姬塔公司调查主任罗纳尔多·罗梅罗说，“我们支持了一项培育计划长达40年，但该项目却没能研制出卡文迪什的替代品。项目费用十分昂贵，但最终我们却一无所获。”

去年，一个由福瑞森领导的世界科学家协会宣布了在5年内确定香蕉基因组顺序的计划。这将会是第一个被确定基因组顺序的可食用水果。好吧，应该说是几乎可食用。这个协会小组事实上会确定不能食用的东亚野生香蕉的基因顺序，因为这当中有很多对黑叶斑病有抵抗力。如果他们可以精确地找出能够帮助这些野生品种抵抗黑叶斑病的基因，那么就可以将这些有保护性的基因带进实验室，用于可食用品种的细胞组织培养。之后，这些研究成果便可以增殖成为新的、具有抵抗力的植物，然后就可以给农民种植了。

这听起来很有希望，但是直到现在，那些大型香蕉公司都拒绝参与GM研究，他们担心因此疏远了客户。彻姬塔环境事务高级业务主任戴维·麦克劳林说，“生物工学是非常昂贵的，取得客户的肯定也面临很多严峻的问题。”凭借着公司提供的少量资金，香蕉基因组研究员们把关注点放在了问题的另一端。即使他们可以辨认出关键性基因，但要研发出小农业主们认为合适的且能负担得起的新品种，他们依旧任重而道远。但不管生物工学的学术兴趣是什么，它是香蕉的唯一希望。如果没有它，世界上的香蕉生产会越来越不景气。我们甚至会看到作为贫困饥饿的非洲人的救命稻草以及世界超市货架上最受欢迎的产品——香蕉的消失。

Reading Passage 2. Coastal Archaeology of Britain

题目详解

Questions 14-16

解答

14. 利用细节信息“public interest in coastal archaeology”和顺序原则定位于原文第一段第四行“... had attracted the interest of antiquarians since at least the eighteenth century, but serious and systematic attention has been given...”。但是这种现象的原因并不位于第一段，而在第二段“It is possible to trace a variety of causes for this concentration of effort and interest”后面的信息。后面主要讲到人们开始关注“coastal archaeology”是因为“climate change and its environmental impact”，因为“sea levels”上涨影响了“coastal environments”，于是更多的人意识到“coastal erosion”和“human activ-

ity”对“archaeological resource of the coast”有破坏作用，这些信息都与选项B“the rising awareness of climate change”相关，所以答案为B。

15. 利用细节信息“boats”定位于原文第六段，这里提及了大量“boats”方面的考古发现。选项A“There's enough knowledge of the boatbuilding technology of the pre-historic people”应该排除，因为其与原文内容“we still have much to learn about their production and use”正好相反。选项B“Many of the boats discovered were found in harbours”也可以排除，因为“harbours”在第七段才出现，而且也没有提及是否在“harbours”发现了大量的船。选项D“Boats were first used for fishing”也应该排除，因为“fishing”在第八段才提到，讲的是沿海人类的经济活动，并没提及船最初都是用作打渔的。所以答案为C。“The use of boats had not been recorded for a thousand years”对应原文第六段第五行“after this there is a gap in the record of a millennium...”。

16. 利用细节信息“from the air”定位于原文第八段第四句“Elaborate wooden fish weirs, often of considerable extent and responsive to aerial photography in shallow water...”，原文中的“aerial photography”对应题目信息“discovered from the air”。原文信息“Elaborate wooden fish weirs”与选项D“fisheries”直接对应，所以答案为D。

Questions 17-23

解答

17. 利用细节信息“after the Ice Age”和“rising sea level”定位于原文第三段前两句话“... in the post-glacial period... the rise in the altitude of sea level... The encroachment of the sea, the loss of huge areas of land now under the North Sea and the English Channel...”，题目信息“after the Ice Age”对应原文中的“post-glacial period”，题目内容是原文的简单归纳，所以答案为True。

18. 利用细节信息“the coastline of England”和顺序原则定位于原文第三段倒数第四行“the constant reconfiguration of the coastline”，题目信息“changed periodically”与原文中的“constant reconfiguration”不相符，所以答案为False。

19. 利用细节信息“well-protected by sea-water”定位于原文第四段倒数第三行“its physical environment means that preservation is often excellent”，题目信息“well-protected by sea-water”对应原文中的“preservation is often excellent”。题目信息与原文是同义表达，所以答案为True。

20. 利用细节信息“the design of boats”和“pre-modern people”定位于原文第六段倒数第三行“Boats were some of the most complex artefacts produced by pre-modern societies”，题目信息“very simple”与原文中的“the most complex artefacts”正好相反，所以答案为False。

21. 原文没有找到“other European countries”和在其他欧洲国家发现类似船只的信息，所以答案为 Not Given。

22. 利用细节信息“mineral exploitation”定位于原文第八段倒数第三行“mineral resources such as sand, gravel, stone, coal, ironstone, and alum were all exploited. These industries are poorly documented...”，题目信息“few documents”对应原文中的“poorly documented”，所以答案为 True。

23. 利用细节信息“large passenger boats”和顺序原则定位于原文最后一段倒数第八行“The larger size of ferries has also caused an increase in the damage caused by their wash to fragile deposits in the intertidal zone”，题目信息“passenger boats”对应原文中的“ferries”，题目信息“intertidal zone”对应原文中的“seashore”。题目与原文是同义表达，所以答案为 True。

Questions 24-26

解答

选项 A “How coastal archaeology was originally discovered”应该排除，因为原文并没有提到这方面的内容。

选项 B “It is difficult to understand how many people lived close to the sea”是正确选项。该选项对应原文第五段第四行“We are not yet in a position to make even preliminary estimates of answers to such fundamental questions as the extent to which the sea and the coast affected human life in the past, what percentage of the population at any time lived within reach of the sea...”。题目信息“It is difficult to understand”对应原文中的“not yet in a position to make even preliminary estimates”，题目信息“how many people”对应原文中的“what percentage of the population”，题目“lived close to the sea”对应原文中的“within reach of the sea”。

选项 C “How much the prehistoric communities understand the climate change”应该排除，虽然原文开头提及“climate change”并多处提到“prehistoric communities”，但是却没有提及他们对气候变化的认识。

选项 D “Our knowledge of boat evidence is limited”是正确选项。该选项对应原文第六段第一句“... yet we still have much to learn about their production and use”，以及该段倒数第三行“...yet we know almost nothing about it”。

选项 E “Some fishing grounds were converted to ports”是错误选项，因为原文第七段提及“ports”，第八段提及“fishing”，但是却并没有“fishing grounds”转变成“ports”的信息。

选项 F “Human development threatens the archaeological remains”是正确选项。该选项对应原文最后一段，该段整体都在讲人类活动和自然对“archaeological remains”的影响。

选项G "Coastal archaeology will become more important in the future" 是错误选项，因为原文并没有提到这方面的内容。

所以24 - 26题的正确答案为B、D、F。

参考译文

英国的海岸考古学

认识到英国海岸考古学的丰富内容和多样性是近几年的重要进步之一。这个庞大的资源中有一部分长久以来便为人们所知晓。英国沿海所谓的"淹没的森林"至少从18世纪就已经开始吸引古文物研究者的兴趣了，其中常常有人类活动的明显证据。但是，直到20世纪80年代初，才有人开始对沿岸有潜在价值的考古物投注认真、系统化的注意力。

我们可以追溯引起该程度的努力和兴趣的各种原因。20世纪80和90年代，关于天气变化和它带来的环境影响的科学研究随着对这些问题认识的加深而成为一个更广泛的公众讨论话题。下一个世纪，海平面升高的前景和它对现在海岸环境的影响已经成为特别关注的焦点。同时，海岸考古学家开始认识到，由海岸侵蚀的自然过程和人类活动造成的破坏对海岸考古资源有越来越大的影响。

在冰川后期，随着冰川融化和板块调整，影响英国海岸线的最主要的因素就是海平面的上升。海洋的入侵、北海和英吉利海峡海底大面积地域的丢失，特别是最终使英国成为一个岛屿的英法之间陆地桥梁的消失，一定曾是我们史前祖先生活的极其重要的因素。但史前人们适应这些环境变化的方式几乎不是这个时期讨论的主要主题。造成这一状况的原因是，虽然相对来说海平面上升有很好的证明，但我们几乎不知道海岸线是如何不断重组的。这一点受很多过程的影响，而这些过程又大部分发生在小范围内，对它们的研究也是不够的。海岸线历史的细节再现和适宜人类的环境变化将会是未来研究的一个重要主题。

海平面上升和随后发生的海岸退化极其严重，以至于目前多数暴露在海岸区的海岸考古学证据——无论是被侵蚀了或者是被当做被掩埋的陆地表层而曝光的证据——都源自于陆地。它现在在海岸区域的位置是之后的无关过程的产物，它可以告诉我们一点点关于海岸线对海洋的适应过程。对其意义的估算将会在干燥陆地上得来的别的相关证据的基础上进行。然而，它的物理环境意味着它通常被保护得很好，比如在埃塞克斯郡挖掘的新石器时代的构造这一例子。

在某些情况下，那些被埋葬的陆地表面确实含有人类对曾经的海岸环境进行开发的证据，现代海岸的其他地方也有一些类似的证据。那些和早期人类对资源和海洋及海岸

提供的机会的开发利用有关的证据是多种多样的，但人们迄今难以理解。我们还没有能力对如此重要的问题（如海洋和海岸在过去对人类生活的影响程度、任何时候海洋附近的人口百分比以及人类在海岸环境的定居是否与内陆定居有不同的特征）的答案进行哪怕是初步的估计。

人们利用海洋的最显著的证据就是船，然而，关于它们的生产和使用，我们仍有很多地方需要去了解。海岸周围大部分被发现的残骸不出意料的都是中世纪后期的，它们为还未派上用场的研究提供了史无前例的机会。史前的例如亨伯河港湾和多佛尔的独木舟似乎全都属于公元前一千多年前；这之后，在船只重现之前的一千年中，记录有一次中断，至今没人能解释这一现象，重现之后的船只则是运用了一种完全不同的建造技术。造船一定曾是我们大部分沿海地区的一项极其重要的活动，但我们对它几乎一无所知。船是近代社会最复杂的人工制品之一，对船的制造和使用的更深入研究对于我们理解过去人们对技术和技术变革的态度有很大帮助。

船需要停泊之处，但在这方面，我们的知识又有所欠缺。在很多情况下，天然海滨和海滩本应足够了，留下一点或者不留下任何可供海岸考古的痕迹，但是，尤其在后期，很多海港和港口，以及码头、防波堤等小型设施也被建造起来了。尽管人们对一些更重要的罗马和中世纪城镇的海滨考古的兴趣有所增长，但对那些大量的小型停泊点的关注却极少。港口的重建和其他发展以及沿海的自然压力正使这些重要的遗址遭遇史无前例的威胁，然而，很少有人对这些遗址开展调查。

最近的调查揭示的最重要的一点就是沿海工业活动的程度。关于渔业和制盐的文字记载相对较好，但即使是对它们，我们也并不是完全了解。很多渔业形式是没有海岸考古踪迹可循的，最近的调查中有一个惊奇的发现，那就是过去人们对捕鱼和贝类的设备的投资力度。精心制作的木制鱼梁，一般遍布在大范围区域，可以对浅水域的空中摄影作出快速的反应，这些鱼梁在埃塞克斯郡和塞文河口都有所发现。盐的生产，尤其是铁器时代晚期和罗马时代早期在泰晤士河口和索伦特及普尔港附近的盐的生产已经被确认有一段时间了。但是，盐工业衰退的原因和后来海岸盐业工作的本质却并不被人们所了解。海岸沿线也有其他工业，有的是为了那里裸露在外的原材料，有的是为了便于工作和运输——沙子、砾石、石块、煤炭、铁矿石、明矾等矿物资源都被开采出来。有关这些工业的记载非常少，但它们留下的遗迹却常常丰富而且醒目。

对沿海区域保存下来的考古遗迹的多样性和重要性的评价（尽管只是初步的评价）是可以通过最近的研究工作获得的，但是人们也认识到了管理该资源的复杂性。问题不仅仅在于考古遗迹的规模和多样性，还在于另外两个方面，那就是：自然和人类对资源的各种各样的威胁，以及错综复杂的组织网在海岸地带的权力和利益。人类的威胁包括对历史悠久的小镇和老旧港区的重建以及由于休闲旅游业的发展而造成的对越来越重要的海岸地区的压力，该压力体现在人们需要建设更多的小港、码头等设施。体积庞大的

渡船由于为潮间带区域带来沉积物，也导致了破坏的加剧。最大的自然威胁是预料中的下一世纪海平面的上升，特别是在英国南部和东部。它对海岸考古学带来的影响很难预测，虽然很有可能是局部地区的，但它的影响范围会比大多数海岸考古遗址更大。所以，保护一个遗址可能只会把威胁转移到海岸沿线的另一处更远的地方。管理海岸考古遗迹比管理平常的陆地遗迹需要更长的时间，覆盖的地域范围也要更广，这对海岸考古学家来说将是一个巨大的挑战。

Reading Passage 3. Travel Books

题目详解

Questions 27-28

解答

27. 利用顺序原则定位于原文第一段第二、三句话“Some travelers may have simply desired to satisfy curiosity about the larger world. Until recent times, however, did travelers start their journey for reasons other than mere curiosity”，该信息直接对应选项C“Knowing other people and places better”，为“curiosity”的同义替换，所以答案为C。

28. 利用细节信息“mirror”和顺序原则定位于原文第一段最后一句话“they are also a mirror to the travelers themselves, for these accounts help them to have a better understanding of themselves”，该信息直接对应选项B“Because travelers reflect upon their own society and life”。

Questions 29-36

解答

29. 利用细节信息“Classical Greece”，“Herodotus”，“Egypt and Anatolia”定位于原文第二段第六行“The Greek historian Herodotus reported on his travels in Egypt and Anatolia in researching the history of the Persian wars”，所以答案为Persian wars。

30. 利用细节信息“Han Dynasty”，“Zhang Qian”，“Central Asia”定位于原文第二段倒数第四行“... searching for allies for the Han dynasty”，所以答案为allies。

31. 利用细节信息“Roman Empire”，“Ptolemy, Strabo, Pliny the Elder”，“Mediterranean”定位于原文第二段最后一句话“... to compile vast compendia of geographical knowl-

edge"，所以答案为 geographical knowledge。

32. 利用细节信息"500 to 1500 CE"，"Muslims"，"From east Africa to Indonesia"，"Mecca"定位于原文第三段第一句话"... trade and pilgrimage emerged as major incentives for travel to foreign lands"，所以答案为 pilgrimage。

33. 利用细节信息"5th to 9th centuries CE"和"Chinese Buddhists"定位于原文第三段倒数第三句话"... thousands of Chinese Buddhists traveled to India to study with..."，所以答案为 India。

34. 利用细节信息"19th century"，"Colonial administrator"，"Asia, Africa"定位于原文第六段第二句话"European colonial administrators devoted numerous writings to the societies of their colonial subjects, particularly in Asian and African colonies they established"，所以答案为 colonies。

35. 利用细节信息"1900s"，"Sun Yat-sen"，"Fukuzawa Yukichi"，"Europe and United States"定位于原文倒数第二段倒数第二句话"...in hopes of discovering principles useful for the reorganisation of their own societies"，所以答案为 principles。

36. 利用细节信息"20th century"，"Mass tourism"定位于原文最后一段第六行"The most distinctive of them was mass tourism, which emerged as a major form of consumption for individuals living in the world's wealthy societies"，所以答案为 wealthy。

Questions 37-40

解答

37. 利用细节信息"imperial rulers"定位于原文第二段第五行"they held especially strong appeal for rulers desiring useful knowledge about their realms"，该信息直接对应选项 D"They desired knowledge of their empire"，所以答案为 D。

38. 利用细节信息"postclassical era"定位于原文第三段第五、六句"... millions of Muslims have followed his example, and thousands of hajj accounts have related their experiences. East Asian travelers were not quite so prominent..."，该信息直接对应选项 B"Muslim pilgrims"，所以答案为 B。

39. 利用细节信息"early modern era"定位于原文第五段第五行"... and European printing presses churned out thousands of travel accounts that described foreign lands and peoples for a reading public with an apparently insatiable appetite for news about the larger world"。B 选项"explore new business opportunities"应该排除，因为这里并没有提及"商机"的信息。C 选项"encourage trips to the new world"也应该排除，因为"trips to the new world"原文中并没有提及。D 选项"record the larger world"也应该排除，因为"record the larger world"是书的内容而非出版的目的。所以答案为 A"meet

the public's interest", 对应原文中的 "for a reading public with an apparently insatiable appetite"。

40. 选项 A "The production of travel books" 是错误选项，因为文章并没有讲到书的制作过程。选项 B "The literary status of travel books" 也是错误选项，因为原文并没有讲到旅游书的文学地位这一方面的内容。选项 C "The historical significance of travel books" 也是错误选项，因为原文并没有讲到 travel books 在历史上的巨大作用。选项 D "The development of travel books" 是正确选项，因为文章就是讲 travel books 的发展，从 ancient times 到 modern era。所以答案为 D。

参考译文

旅行游记

人们远离故土去旅行的原因有很多。一些旅行者也许只是简单地希望满足自己对于外面更大的世界的好奇心。然而，直到最近，旅行者们才不仅仅是为了满足好奇心而开始他们的旅程。旅行者们的游记不仅能提供有关异国他乡的宝贵信息，开启了解当地文化和历史的一扇窗，同时也是旅行者自身的写照，因为这些游记有助于他们更好地认识自我。

文字发明后不久，就出现了关于异国旅游的记录，而且在古代两河流域和古埃及还出现了有关旅行的零碎记述。古典社会中大帝国形成后，旅行游记便在很多地方以一种杰出的文学形式出现了，这些游记对那些渴望获得有关自己领土的有用知识的统治者有着极大的吸引力。希腊历史学家希罗多德在他的埃及和安纳托利亚之旅中记录了有关波斯战争史的调查。公元前 1 世纪，中国信使张骞为了汉朝去寻找盟国，以此次旅行为基础，他描述了中亚的诸多地区乃至更西的大夏国（今天的阿富汗）。希腊和罗马的地理学家，如托勒密、斯特拉博和老普林尼等，依靠他们自己在地中海区域的旅行以及其他旅行者的记录，汇编了大量的地理知识概要。

后古典主义时期（大约公元 500-1500 年），贸易和朝圣成为人们去异国旅行的主要诱因。穆斯林商人在东半球寻找贸易机会。他们从东非写到印度尼西亚，描述了印度洋流域的土地、民族、商品，他们还完成了第一份关于撒哈拉以南非洲西部社会的书面记录。当商人们出发寻找贸易和利益时，虔诚的穆斯林教徒则踏上了前往麦加的朝圣之旅，去朝觐伊斯兰教的圣地。自从先知穆罕默德首次去麦加朝圣之后，不计其数的穆斯林教徒追随他的脚步，并留下了成千上万的有关他们麦加朝圣经历的游记。与穆斯林相比，后古典主义时期东亚各国的旅行者则没有那么突出，但他们也走了东半球的很多大道和海上航线。中国商人频繁地造访东南亚和印度，时不时地也去东非冒险，而虔诚的东亚佛教徒则开启了遥远的朝圣之旅。公元 5—9 世纪期间，数以百计甚至数以千计的中国佛教

徒前往印度，向佛教高僧大德求学、收集佛教经文以及拜访佛教圣地。书面游记记载了很多朝圣者的经历，例如法显、玄奘和义净。日本、韩国和其他国家的佛教朝圣者虽然不像中国那么多，但他们也出国朝圣，寻求精神上的启蒙。

在后古典主义时期早期，尽管前往耶路撒冷、罗马、圣地亚哥孔波斯特拉古城（位于西班牙北部）和其他圣地的基督教朝圣者逐渐增多，但中世纪的欧洲人并没有像穆斯林和东亚佛教徒那样，有如此大量的旅行者。但在12世纪之后，中世纪的欧洲商人、朝圣者和传教士开始大规模地旅行，他们留下了很多旅行游记，这当中要数马可·波罗描述旅居中国的游记最为著名了。当欧洲人熟悉了东半球更广阔的世界和它所能提供的有利可图的商业机会之后，他们便着手寻找通往亚洲和非洲市场的更直接的路线。他们的努力不仅把他们带到了东半球的所有国家，而且最终还把他们带到了美洲和大洋洲。

如果说在后古典主义时期是穆斯林和中国人主导了旅行和旅行游记，那么在近现代初期（大约公元1500-1800年）则是欧洲的探险者、征服者、商人和传教士占据了舞台中心。穆斯林和中国人的旅行在近现代初期并没有停止。但欧洲人前往地球上更远的角落探险，欧洲的印刷机印制了成千上万的旅行游记，为对外面的世界有着强烈求知欲的广大读者描述了异国的土地和人民。旅行文学的数量是如此庞大，以至于包括詹巴蒂斯塔·拉莫西奥、理查德·哈克卢特、西奥多·德·布里和塞缪尔·珀切斯在内的一些编者收集了大量的旅行游记，并将它们大量出版。

19世纪，欧洲旅行者走进了非洲和美洲的内陆地区，并在这一过程中书写了新一轮的旅行游记作品。与此同时，欧洲殖民主义者向其建立的殖民属国发放了大量的游记，特别是他们在亚非地区建立的殖民地。19世纪中叶，人们的注意力也开始反转过来。当痛苦地意识到欧洲和欧美社会的军事和科技实力时，亚洲旅行者特别造访了欧洲和美国，希望发现对他们自己的社会整顿有用的准则。这些在游记中广泛应用自己在国外的观察和经历的旅行者中，最有名的是日本的改革家福泽谕吉和中国革命家孙中山。

20世纪随着便宜可靠的交通方式的发展，长途旅行变得越来越频繁，旅行游记的数量也不断激增。在人们仍像过去一样，在为了商业、行政管理、外交、朝圣和传教工作进行大量旅行的同时，越来越高效的公共交通模式也使得新的旅行种类的繁荣成为可能。其中，最特别的就是大众旅游，它已成为世界上富裕人士的主要消费形式。旅游可以使消费者离开故土，到罗马进行观光、乘坐邮轮穿越加勒比海、攀登中国的长城、参观波尔多的酿酒厂，或者去肯尼亚旅行。为了满足这些旅游者的需要，一种独特版本的旅行游记兴起了：那就是旅游指南书，它提供了有关美食、旅店、购物、当地风俗和旅行者不能错过的景点的建议。在世界范围内，旅游业对经济都产生了巨大的影响，但其他一些新形式的旅行在当代也有重要影响。

Reading Passage 1. Ambergris

题目详解

Questions 1-6

解答

1. 该题目信息对应文章第三段第三句话“Both of them were the most sought-after substances in the world, almost as valuable as gold”，这里“as valuable as gold”对应题目信息“expensive”，所以正确答案为C。
2. 该题目信息对应文章第一段最后一句话“For centuries, this substance has also been used as a flavouring for food”，原文只提及“ambergris”是可以为食物增味的，但是“amber”是否有此功能未提及。所以正确答案为A。
3. 虽然原文提到“ambergris”和“amber”价格都很昂贵，但是它们是否曾经作为通货使用，原文并未提及，所以该题目正确答案为D。
4. 该题目信息对应文章第三段最后一句话“Although considered a gem, amber is a hard, transparent, wholly-organic material derived from the resin of extinct species of trees, mainly pines”，这里“transparent”对应题目信息“see-through”，而原文却未提及“ambergris”是否透明，所以正确答案为B。
5. 该题目信息对应原文第二段第二句话“In the 1851 whaling novel *Moby-Dick*, Herman Melville claimed that ambergris was ‘largely used in perfumery’”，原文这里明显只提及了“ambergris”，所以正确答案为A。
6. 该题目信息也对应原文第二段第二句话，文章提及“ambergris was ‘largely used in perfumery’”，所以“ambergris”可以创造芳香的味道，而原文却未提及“amber”也具有此功能，所以正确答案为A。

Questions 7-9

解答

7. 利用细节信息“squid”定位于原文第五段第二、三句话“It's commonly accepted that ambergris forms in the whale's gut or intestines as the creature attempts to 'deal' with squid beaks. Sperm whales are rather partial to squid, but seemingly struggle to digest the hard, sharp, parrot-like beaks”，这里原文明显提及乌贼的“beaks”硬且锋利，因而导致“sperm whales”无法消化，所以正确答案为 beaks。
8. 利用细节信息“irritants”和顺序原则定位于原文第五段第四句话“It is thought their stomach juices become hyper-active trying to process the irritants, and eventually hard, resinous lumps are formed around the beaks, and then expelled from their innards by vomiting”，这里“expelled”对应题目信息“drive out”，“innards”对应题目信息“intestines”，所以正确答案为 vomiting。
9. 利用细节信息“air”和“pleasant smell”定位于原文第五段倒数第二句话“But after floating on the salty ocean for about a decade, the substance hardens with air and sun into a smooth, waxy, usually rounded piece of nostril heaven”，这里“hardens with air”对应题目信息“on contact of air”，“nostril heaven”对应题目信息“pleasant smell”，所以正确答案为 hardens。

Questions 10-13

解答

10. 利用细节信息“dead whales”定位于原文第二段最后一句话“By 20th century ambergris is mainly recovered from inside the carcasses of sperm whales”，这里“carcasses”对应题目信息“dead whales”，“20th century”对应题目信息“today”。题目与原文是同意表达，所以答案为 True。
11. 利用细节信息“expensive”定位于原文第三段第三句话“Both of them were the most sought-after substances in the world, almost as valuable as gold”，但是至于是否现在比过去“more expensive”原文并未提及。题目信息在原文信息的基础上无法判断，所以答案为 Not Given。
12. 利用细节信息“perfume production today”定位于原文最后一段第二句话“big fragrance suppliers that make most of the fragrances on the market today do not deal in it for reasons of cost, availability and murky legal issues, most perfumeries prefer to add a chemical derivative which mimics the properties of ambergris”，原文明显提及现在香水制造商都开始使用“ambergris”的替代品，而非“ambergris”了。题目信息与原文信息正好相反，所以答案为 False。

13. 原文中找不到与该题目对应的信息，所以答案为 Not Given。

参考译文

龙涎香

它是何物？又是从何而来呢？

在古代，两河流域的人把龙涎香作为香水的定香剂使用，而且，历史上几乎每个文明社会都与龙涎香打过交道。公元 1000 年以前，古代中国人把这种东西叫做“龙涎香”，意为“龙的涎沫香”，因为他们认为龙涎香来自龙在海边岩石休息时所流的口水。阿拉伯人把龙涎香叫做“阿末香”，认为它产自大海附近的泉水。其名字也正是来源于此。千百年来，龙涎香这种物质也被当做食物的调味料来使用。

在中世纪，欧洲人用龙涎香治疗头痛、感冒、癫痫及其他疾病。在 1851 年的捕鲸小说《白鲸》里，作者赫尔曼·梅尔维尔声称龙涎香“被广泛应用于香料制作”，然而当时无人知晓龙涎香真正源自哪里。此后数千年，专家仍解不开龙涎香的来源之谜，直到 18 世纪 20 年代，这个萦绕多年的谜底才解开。当时，美国东岸楠塔基特的捕鲸者在抹香鲸的胃内发现了大量昂贵的龙涎香。随后，工业捕鲸很快兴起。到 20 世纪，龙涎香主要取自抹香鲸的尸体。

无数年来，人们在沙滩上发现了一块块的龙涎香。有人把它唤作“灰琥珀”，用以区分另一种稀世珍宝——金色琥珀。这两种都是世人最想拥有的物质，价格可媲美黄金（龙涎香每克约 20 美元，价格略微低于每克 30 美元的黄金）。此外，琥珀也能漂浮在海水中。在古代，琥珀和龙涎香这两种物质的来源是神秘的。不过事实证明，龙涎香和琥珀基本没有共同之处。琥珀是一种树的树脂化石，在欧洲人发现新大陆之前，就为人所熟悉，并被视若珍宝。尽管被人视作宝石，但琥珀其实源自灭绝的树木品种（主要是松树）的树脂，它坚硬、透明，是一种全有机物。

最早的西方编年史家们对龙涎香的来源产生了各种各样的猜想。有人认为龙涎香来自沥青泉，就如琥珀那样，亦或来自鱼类或鲸的精液，也有人认为它来自奇怪的海鸟鸟粪（可能是和乌贼口喙混淆了），又或者是来自大海附近的大蜜蜂巢。马可·波罗是最早正确认为龙涎香来自抹香鲸及其呕吐物的西方编年史学者。

当抹香鲸在海洋游行时，它们常常深潜至海底两千米或更深的地方去捕食乌贼，尤其是大乌贼。人们普遍认为，当抹香鲸要消化乌贼的角质口喙时，龙涎香这种物质就会在其肠道内形成。鲸偏爱吃乌贼，但是其胃肠似乎难以消化乌贼那又硬又尖的类似鹦鹉的嘴的口喙。于是，乌贼的口喙刺激了鲸的胃分泌胃液，并最终形成硬的凝脂状的物质将口喙包裹起来，再被抹香鲸通过呕吐排出体外。刚从鲸体内排出的龙涎香是柔软的，

而且有一股难闻的味道。一些海洋学家把这种味道与牛粪的气味相提并论。不过，在海上漂浮了大概十年后，龙涎香在空气和阳光的作用下会变硬，并形成平滑的、蜡状的，而且通常是圆块状的物质。那股臭气消失掉了，取而代之的是一股芳香的、幽雅的、如麝香般的让人愉悦的异香。

由于龙涎香取自动物，自然就引出一个有关道德的问题。对于龙涎香，考虑这个问题很重要。抹香鲸是濒危物种，自19世纪人类大量需要鲸脑油提炼高级润滑油以来，抹香鲸的数量就一直在减少，直到今天，抹香鲸的剩余数量仍不乐观。20世纪70年代的拯救鲸鱼运动使得国际社会认识到了鲸鱼所面临的困境。现在，许多人以为鲸鱼已经“获救”了，其实不然。在全世界，捕鲸现象仍然存在。尽管国际公约是要保护鲸，但仍有不少国家继续捕鲸。许多海洋学家担心对自然发现的龙涎香的交易会进一步刺激人们出于利益考虑而捕鲸，从而获取龙涎香这种昂贵的物质。

如今龙涎香的其中一个用途就是作为珍贵的定香剂，以增强和延续香气。但由于如今龙涎香稀罕且昂贵，大部分香水制作商考虑到成本、实用性以及可能面临的法律问题，更愿意用人造的化学合成物取代天然的龙涎香。作为香水消费者，你可以想当然地认为你的香水没有天然的龙涎香，除非香水公司的广告说明了有或者你收藏的香水产自20世纪80年代以前。如果你想知道你是否曾喷了含有这种神奇成分的香水，你可以查看你的香水收藏。以下是几款含有龙涎香的高级香水品牌：纪梵希爱慕香水、香奈儿五号香水和古琦罪爱香水。

Reading Passage 2. Tackling Hunger in Msekeni

题目详解

Questions 14-20

思路

这种题型忌讳寻找主题句或中心句，因为每个人对段落中心思想的判断通常不同，而且每个段落的首尾句也不一定是主题句或中心句，所以最好的解答方法应该是通过对每位考生都能读懂的标题进行反向思维，然后和段落内容进行比较，排除作答。

i. Why better food helps students' learning

反向思维词：better food

如果某段选这个标题，则该段落一定要提到关于食物方面的信息，而且一定是食物和学习之间的关系，还可能是具体的食物和具体的案例。

ii. Becoming the headmaster of Msekeni

反向思维词：headmaster of Msekeni

如果某段选这个标题，则该段落一定会提及 headmaster of Msekeni，也就是 Msekeni 的校长，并且应该讲述其成为校长的过程及作出的成就，或别人对其功过成就的评价等等。

iii. *Surprising use of school premises*

反向思维词：school premises

首先，可能很多学生对 premises 的意思不太了解。premises 指的是建筑及其所附属的土地，当然这里 school premises 指的是校舍。校舍正常情况下当然是教学使用，如果某段选这个标题，则该段落应该会讲到校舍的使用出乎预料，例如：作为汽车 4S 店，改建成宾馆等等。

iv. *Global perspective*

反向思维词：global

如果某段选这个标题，则该段落应该讲到全球范围的情况如何，甚至可能出现具体的其他国家的名称或内容。

v. *Why students were undernourished*

反向思维词：undernourished

如果某段选这个标题，则该段落应该讲到大量营养不良方面的内容，并着重讲述原因。

vi. *Surprising academic outcome*

反向思维词：academic outcome

如果某段选这个标题，则该段落应该提及学生们成绩出奇的差或出奇的好。

vii. *An innovative program to help girls*

反向思维词：an innovative program, girls

如果某段选这个标题，则该段落应该提及一个具体的“innovative program”，并且详细阐述它是如何帮助女孩子的。

viii. *How food program is operated*

反向思维词：food program

如果某段选这个标题，则该段落应该讲述 food program 的运行方式，例如：食物的来源、食物的种类、分配方式等等。

ix. *How food program affects school attendance*

反向思维词：school attendance

如果某段选这个标题，则该段落一定会讲到出勤或出勤率方面的内容（可能会用百分比表示），并且提及 food program 与出勤之间的关系，比如说导致出勤上升或下降。

x. *None of the usual reasons*

反向思维词：usual reasons

如果某段选这个标题，则该段落应该会提到多个具体的原因，并否定。

xi. *How to maintain academic standard*

反向思维词：academic standard

如果某段选这个标题，则该段落应该提及学生的学习表现，例如：成绩、考试等等，并可能提出具体方案。

解答

14. ***Paragraph A.*** 该段落大量提及关于教室的内容（对应标题 iii 中的 school premises），并主要讲到一间教室被腾空用作谷物的储藏（原文说到 odd，对应标题 iii 的 surprising）。虽然该段落也提及食物，但是标题 i (why better food helps students learning)，viii (how food program is operated)，ix (how food program affects school attendance) 的信息很明显没有提及，所以正确答案为 iii。

15. ***Paragraph B.*** 该段落主要讲述 Malawi 地区的贫困并非一般原因所导致（对应标题 x. none of the usual reasons），同时也出现了“half of the children under five are underfed to the point of stunting”（对应标题 v 的 undernourished），但是却并没有讲述原因，应该排除。所以正确答案为 x。

16. ***Paragraph C.*** 虽然该段落一开头提及 Msekeni 的 headmaster（对应标题 ii. becoming the headmaster of Msekeni），但是全段并未提及成为 headmaster 的奋斗过程或成就等等，故排除。该段落主要提及了一个 food program “WFP”，而且讲述了食物的来源，谁来做，以及如何分配等，对应标题 viii (how food program is operated)，所以正确答案为 viii。

17. ***Paragraph D.*** 该段落再次提及 food program，并且说明该 food program 的引入对学生的出勤有影响（原文 “enrolment at Msekeni doubled”），对应标题 ix (how food program affects school attendance)，且其他标题信息都未提及，所以正确答案为 ix。

18. ***Paragraph E.*** 该段落第一句话提到教学标准 “you would expect standards to drop”，对应标题 xi (how to maintain academic standard)，也提到学生的学习表现，例如 “pass rates” 的变化，但是并未提到该如何 maintain，所以应该排除。相反，该段开头却说人们预期 standard 会下降，甚至会下降得很厉害，但是 “But they have not. Pass rates at Msekeni improved dramatically, from 30% to 85%”，也就是说学生成绩反而上升了，这对应标题 vi (surprising academic outcome)，且其他标题信息并未提及，所以正确答案为 vi。

19. ***Paragraph F.*** 该段落虽然提及 nutrition 和 undernourished，但是标题 v (why students are undernourished) 对应的原因并未在段落中出现，所以应该排除。该段落实际是在讲食物对身体和学习的影响，例如 “well-fed children find it easier to concentrate”，“more and better food helps brains grow and develop” 等等，对应标题 i (why better food helps students learning)，所以正确答案为 i。

20. ***Paragraph G.*** 该段落非常明显地在开头提及了 “on a global scale”，讲述在全球范围食物的现状，对应标题 iv (global perspective)。虽然该段落也提及 “children under five in the developing world who are malnourished”，但是并未提及导致这种现象的原因，而且讲的也不是学生，所以标题 v (why students are undernourished) 应该排除。所以正确答案为 iv。

Questions 21-24

解答

21. 因为全文讲述的基本上都是 Kumanda 在 Msekeni 学校的事情，所以“Kumanda”不可以作为细节词使用。按照顺序原则和“girls”，“after the end of the school day”定位于原文段落 D 最后一句话“Girls, who are more likely than boys to be kept out of school, are given extra snacks to take home”，所以正确答案为 extra snacks。

22. 利用细节词“poor families”和“from the field”定位于原文 D 段落中间一句话“These families were so poor that the long-term benefits of education seemed unattractive when set against the short-term gain of sending children out to gather firewood or help in the fields”，所以正确答案为 firewood。

23. 利用细节信息“free food program”和“passed the test”定位于原文 E 段落中间“Pass rates at Msekeni improved dramatically, from 30% to 85%.”所以正确答案为 85%。

24. 利用细节词“modern human”和“industrial revolution”定位于原文 G 段落第二句话“Homo sapiens has grown 50% bigger since the industrial revolution”，其中“homo sapiens”对应“modern human”。所以正确答案是 50%。

Questions 25-26

思路

这种多选多的选择题具有信息分散的特点，且通常具有归纳总结的特征，在雅思阅读中属于难题，所以应该放在做题顺序的最后，在其余细节题做完之后再来解答，此时则更容易定位。做题过程中，只能分别针对每一个选项进行原文定位，根据原文信息进行判断。

解答

选项 A“taught in the open air”对应原文段落 A 第一句话“half the lessons take place in the shade of yellow-blossomed acacia trees”，所以为正确选项。

选项 B 利用细节词“Bernard Kumanda”和“headmaster”定位于原文段落 C，但是这里并没有提及 Bernard Kumanda 是何时成为校长的，更没有出现选项中的时间“1991”，所以应该排除。

选项 C 利用细节词“attendance”和“no new staffs were recruited”定位于原文 E 段落第三行。“when the influx of new pupils”对应“when attendance rose”，“is not accompanied by any increase in the number of teachers”对应“no new staffs were recruited”。选项信息与原文内容完美对应，所以为正确选项。

选项 D 利用 girls 和 boys 的比较定位于原文段落 F 最后两句话“And the fact that the effect of feeding was more pronounced on girls than on boys gives a clue to who eats first in rural

Malawian households. It isn't the girls", 这里明显可以看出女孩子地位低下，不如男孩子，所以为错误选项，应该排除。

选项 E 利用 detect underfed students 定位于原文段落 F，但是这里提及的方法并非是科学家专门发明或设计的方法，所以为错误选项，应该排除。

选项 F 利用细节词 "WHO" 很容易定位到原文段落 G，但是选项信息 "worried" 明显与原文内容相反，因为原文提及 "The proportion of children under five in the developing world who are malnourished to the point of stunting fell from 39% in 1990 to 30% in 2000"，营养不良的比率在下降，并且 "In other places, the battle against hunger is steadily being won"，所以该选项错误，应该排除。

综上所述，Questions 25-26 的正确答案为 A 和 C。

参考译文

应对马斯克尼的饥荒

A 马斯克尼的小学校舍并不充足，有一半的课程都是在开着黄色花朵的槐树下进行的。让人奇怪的是，在这样的短缺情况之下，这所学校有一间教室却不是让学生使用的，而变成了储存成袋谷物的粮仓。不过这也说得通，毕竟食物比教室更重要。

B 马拉维是一个十分漂亮却也极度贫穷的南非内陆国家，马斯克尼就位于马拉维相对贫穷的一个地区。马拉维既没有战争，也不是人口拥挤或者土地贫瘠的国家，但马拉维人仍然没有足够的食物。五岁以下的儿童有一半都营养不良。饥饿损害了马拉维人生活的方方面面，因此这个国家非常适合我们去调查研究营养问题是怎样影响发展的，反之亦然。

C 马斯克尼的校长 Bernard Kumanda 对这个课题的观点很明确。他认为食物是无价的教具。自 1999 年以来，他的学生们都可以领取免费的学校午餐。世界粮食计划署（WFP）等捐助组织提供了食物：也就是被放在改建后教室里的那些成袋的粮食（大部分是玉米和大豆混合的面粉，含有丰富的维生素 A）。当地的志愿者进行烹饪——他们把这些材料做成简单却富含营养的粥，并且一勺勺舀在塑料盘子里。成群的孩子们排着队，高兴地唱着《我们要喝到粥了》。

D 学校的供餐方案一推出，马斯克尼的入学率便提高了一倍。部分新生是从附近没有提供免费粥的学校转过来的，更多的则是那些原本留在家中做工的孩子。这些家庭都太穷了，以至于教育的长远利益对他们来讲，还不如让孩子出去拾柴火或在田里帮忙带来的短期收益更有吸引力。而每天一盘粥则彻底改变了他们的想法。孩子在学校吃饭就不会在家里哭嚎着要吃的了。那些比男生更容易被排除在校门外的女生

们，则被分给更多的食物带回家。

E 当一所学校接受了大量来自于最贫穷家庭的学生时，你肯定会认为标准会下降。在世界各地，穷人的孩子往往比他们同班的家境好的学生表现要差。当涌入了大量新生，但教师却没有增加时，就象在马斯克尼这里一样，你会以为学校的情况会更加糟糕。但在这里，他们却没有这样。马斯克尼学生的合格率由30%大幅提高至85%。虽然这只是一个特例，但全国范围内的学校供餐效果普遍不错。平均而言，马拉维的学校在派发免费食物后，多吸引了38%的女孩和24%的男孩入学。男生的合格率和以前差不多，而女孩则提高了9.5%。

F 营养越好，孩子越聪明。最重要的是，吃得饱的儿童更易集中精神。当肚子一直闹着想吃东西时，你很难长时间集中思想。Kumanda先生指出，过去很容易发现哪些是营养不良的孩子。“他们瞪大了眼睛盯着虚空，当你问他们问题时，他们却没有任何回应”，他这样说道。可是，更为重要的是，更多更好的食物有助于大脑发育。像身体其他器官一样，大脑需要营养和运动。如果缺乏必要的热量、蛋白质和微量元素，大脑就会发育迟缓，尽管可能不会像肌肉那么明显，但还是有所阻碍的。这就是为什么学校供餐的效果会如此之好。事实上，给女孩提供食物的效果比给男孩更明显，这也说明了在马拉维农村家庭里是谁先吃到食物。那不是女孩子们。

G 好消息是，在全球范围内，人们吃得比以往更好了。自工业革命后，人类已经增长了50%。三个世纪前，长期营养不良是或多或少普遍存在的。现在，在发达国家里，这是极为少见的。在大多数人口生活的发展中国家，人们的盘子与饭碗也比以往更满。据世界卫生组织（WHO）报道，发展中国家5岁以下营养不良的孩子的比例已经从1990年的39%下降到2000年的30%。在其他一些地区，与饥饿之间的斗争已经逐渐取得胜利。更好的营养使得人们更加聪明、更加精力充沛，而这种聪明才智也会进一步使他们的生活更加富足。而当他们终于步入小康行列之后，他们将开始为过度肥胖而发愁了。

Reading Passage 3. Placebo Effect—The Power of Nothing

题目详解

Questions 27-32

解答

27. 利用顺序原则（第一道题目应该对应文章开头）及细节词“Appointments”定位于原

文第一段第三行“each session with your patients should last at least half an hour”，这里“each session with your patients”对应题目中的“Appointments”，“minimum length of time”对应原文“at least half an hour”，所以正确答案为 D。

28. 利用细节词“description of treatment”定位于原文第一段中间“Describe your treatment in familiar words”，“easy to understand”对应原文的“familiar words”，所以正确答案为 A。

29. 利用细节信息“has faith in what he does”定位于原文第二段第二句话“A good living if you are sufficiently convincing or, better still, really believe in your therapy”。这里“believe in your therapy”对应题目中“has faith in what he does”，“A good living”对应题目中“earn high income”，所以正确答案为 G。

30. 利用细节词“illness”及顺序原则定位于原文第二段第三句话“Many illnesses get better on their own”，这里“Many illnesses”对应题目中“The illness”，“get better on their own”对应题目中“improve by itself”，所以正确答案为 B。

31. 利用细节词“improvements”和顺序原则定位于原文第二段中间几句话“Some of the improvement... Nothing so specific”。这里明确说明，病人病况的改善并非源于什么人参、菊花茶等等之类的秘方，实际上并没有什么秘方，也不需要什么秘方（原文“Nothing so specific”），一切的改善全来自于安慰剂效应。所以正确答案为 H。

32. 利用细节词“Conventional medical doctors”定位于原文第二段最后一句话“Your healing power would be the outcome of a paradoxical force that conventional medicine recognises but remains oddly ambivalent about: the placebo effect”，这里“conventional medicine”对应题目中的“conventional medical doctors”。这里明显提及传统医生承认安慰剂效应，但是却对其三缄其口，模棱两可。唯一与其对应的选项为 F，而其余选项都与原文信息不相关，所以正确答案为 F。

Questions 33-35

解答

33. 本题目定位很明显，利用细节词“anger”和“sadness”可以很容易定位到第五段第一句话。“our state of mind can influence our physiology: anger opens the superficial blood vessels of the face; sadness pumps the tear glands”，这里的冒号很明显地说明了“anger”和“sadness”的例子是为了解释说明“our state of mind can influence our physiology”，思想能够影响生理，所以正确答案为 A。

34. 利用细节信息“research on pain control”及顺序原则定位于原文第五段中间“Most of the scant research to date has focused on the control of pain, because it's one of the commonest complaints and lends itself to experimental study”（原文“most of the scant

research”对应题目的“attracts most of the attention”），而且原因就在于疼痛是“one of the commonest complaints”，于是人们就倾向于对它进行较多的研究，所以答案为D。

35. 利用细节信息人名“Fabrizio Benedetti”和“endorphins”定位于原文第六段开头。原文讲到，Fabrizio Benedetti的研究“showed that the placebo effect can be abolished by a drug, naloxone, which blocks the effects of endorphins”，该信息与选项C对应（“blocks”对应“neutralized”），所以正确答案为C。

Questions 36-40

36. 该题目细节信息不明显，不好定位，只能利用顺序原则（同一组题目内，前一道题目在原文中对应信息，一般情况下应出现在后一道题对应信息之前）定位于原文第七段第二句话“Though scientists don't know exactly how placebos work, they have accumulated a fair bit of knowledge about how to trigger the effect”。尽管科学还不清楚安慰剂效应的具体工作机制和原理，但他们已经积累了一定的有关如何触发安慰剂效应的知识。此信息与题目的“fully understand the placebo effect”正好相反，所以答案为False。

37. 利用细节词“London”和“red pills”定位于原文第七段“A London rheumatologist found, for example, that red dummy capsules made more effective painkillers than blue, green or yellow ones”，但是他的研究只说明不同的颜色会有不同的效果，并没有说明“red pills should be taken off the market”。题目信息在原文信息的基础上无法判断，所以答案为Not Given。

38. 利用细节信息“preference on brands”定位于原文第七段最后一句话“Even branding can make a difference”，且详细提及了“Aspro”及“Tylenol”的例子。题目信息与原文信息是同意表达，所以答案为True。

39. 利用细节词“chlorpromazine”定位于原文倒数第二段第二句话“when the major tranquilliser chlorpromazine was being introduced, a doctor in Kansas categorised his colleagues according to whether they were keen on it, openly sceptical of its benefits, or took a 'let's try and see' attitude”。原文讲到该医生的同事对该药的态度可以分为三类：乐观的、怀疑的和试试看的，对应题目信息“have a range of views”。题目信息与原文信息是同意表达，所以答案为True。

40. 利用顺序原则定位于原文最后一段最后一句话“complementary practitioners are generally best at mobilising the placebo effect”。此处“complementary practitioners”就等同于题目中的“alternative practitioners”，且原文明显提及他们善于运用安慰剂效应，而题目却说他们是“are seldom known for applying placebo effect”。题目信息与原文信息正好相反，所以答案为False。

参考译文

安慰剂效应——非药物的效果

想研发一种新型替代疗法么？没问题，这里就有一个秘方。那就是要温和待人、要富有同情心、要令人感到安心以及要充满激情。你的治疗中应当包含肢体接触，而且每次为病人诊疗至少要持续半个小时。鼓励你的病人在治疗中扮演更主动的角色，让他们了解身体的紊乱和自己的生活有着何种关系。告诉他们，身体拥有自我治愈的真正力量。让他们自愿从口袋里掏钱给你。用生活化但充满神秘色彩的语言描述你的疗程：例如能量场、能量流、能量区、顶盛点、外在力、氛围、节律等词汇。可以参考古老的知识：即那些被盲目、机械的理论所取代的智慧。你会说，哦，这些太不靠谱了。那些从头顶虚构出来的东西怎么可能奏效呢？

是的，它能奏效——甚至效果好到足以让你以此谋生。如果你是一个有说服力的人，最好是真心相信你的疗法，那么你赚的钱就足以让你过上优渥的生活了。许多疾病都是自己康复的，因此如果你很幸运，并且在正确的时间实施你的治疗，你就可以收钱了。这只是其中一部分。有些治疗效果的确取决于你。但这不是因为你在疗程中给病人开了西洋参类的补药而不是普通的菊花茶，也不是因为你使用晶体治疗。没什么特别的。你的治愈力量来自传统医学认知中颇显矛盾的一种力量：安慰剂疗法。

安慰疗法是一类不直接作用于身体的治疗方式，但它依然有效，这是因为病人对这种治愈效果有信心。通常安慰剂指代的是一个没有实际任何作用的安抚药片，但它也可以指那些相似的设备或方法，不管是橡皮膏还是水晶球。安慰疗法意味着即使是庸医，也能治疗好患者，这使得安慰心理学对许多辅助替代疗法（CAM）医生来说，是一项非常棘手的课题，他们很容易将安慰疗法看作是江湖骗术。尽管它的功能总会被忽略并误解，但事实上，安慰疗法却是所有医药治疗中非常有效的组成部分，不管这个医药治疗传统与否。

CAM最强有力的部分应该是医生在实施安慰剂疗法达到真正痊愈时所用的技巧。“辅助医生在完成非特异性效果和培养良好的治疗关系方面更为出色，”埃克塞特大学CAM教授埃德萨德·恩斯特这样说道。问题是，CAM能否像有些人所想的那样被整合进传统医学之中，同时不丢失它应有的效力。

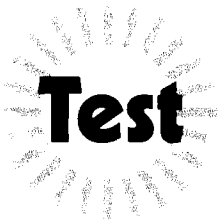
从某个层面上说，心理状态会影响生理并没什么奇怪的：愤怒会扩张面部表层的血管；悲伤会刺激泪腺让人流泪。但是安慰剂疗效的医学效应究竟是怎样产生作用的，我们还不清楚。仅有的研究大多都集中在对痛苦的控制的研究上。因为痛苦是一种最常见的抱怨，这使得它适合拿来做试验研究。在这里，人们的注意力被转移到了内啡肽上，这是一种能够帮助缓解疼痛的天然吗啡。“任何用于传递或缓解疼痛的神经化学药物都可能会激发安慰剂效应，”佛罗里达大学的口腔外科医生唐·普赖斯这样说道，他正在研究安慰剂疗法在治疗牙科疼痛中的作用。

“内啡肽仍然是首当其冲的。”这一点被都灵大学法布里齐奥·贝内代蒂的近期研究所强化。他的研究显示，安慰剂效应可以被纳洛酮药物破坏，这种药物能阻碍内啡肽发挥作用。贝内代蒂通过对志愿者前臂的血压袖带施加压力来引发疼痛感。在几天内，每人每天都被施压数次，每次都使用吗啡来控制痛感。最后一天，在不告诉志愿者的情况下，他将吗啡换作了食盐水。食盐水同样缓解了志愿者的疼痛：这就是一种安慰剂效应。但是，当他把纳洛酮加入到盐水中时，疼痛缓解效果消失了。这直接证实了，安慰剂镇痛是由一些天然麻醉剂来施展效用的，至少部分如此。

但是，到目前为止，人们还不知道信念是如何触发内啡肽释放的，也不知道为什么大部分人无法按自己的意愿实现安慰剂止痛。尽管科学家们还不确定安慰剂效应的具体工作原理，但他们已经积累了一定的知识，知道如何去触发这种效应。例如，伦敦一名风湿病学家发现，红假胶囊比蓝色、绿色或黄色的有更好的止痛效果。一项针对美国学生的研究显示，蓝色药片比粉色药片更容易使人镇定，粉色则更适合用于兴奋剂。甚至商标也会影响药效：阿司匹林和羟苯基乙酰胺可能是你头痛时最常服用的药物，于是对你而言，和它们药性相同的替代物则可能没有那么明显的效果了。

这种治疗是如何实现的也很重要。数十年前，当氯丙嗪这种主要的镇定剂被引入治疗时，堪萨斯的一名医生就根据是否热衷于使用此类药物、是否公开质疑它的疗效，或者是否持有“让我们试试看”的态度来划分他的同事。他的结论是：医生越热衷，药物的疗效就越好。今年，恩斯特查看了已发布的有关医生临床态度的研究报告。他指出，这些研究都有一个一致的发现：“热情、友善、令人安心的医生比那些刻板、让人不放心的医生的医治效果要好得多。”

当然，热情、友善、令人安心正是CAM的强项。这个公开处方中的许多成分，如身体的接触、充足的时间、具有超常治愈能力的强烈暗示，恰好是可以给病人以深刻印象的内容。如此一来，辅助医生通常都很擅长激发这种安慰剂效应就没什么好让人吃惊的了，哈佛大学社会人类学教授阿瑟·克雷曼这样说道。



Reading Passage 1. Going Nowhere Fast

题目详解

Questions 1-6

解答

1. 利用顺序性原则很容易定位到原文开头第一段。作者这里提到各种交流方式都进步了，但是“when it comes to getting around our cities, we depend on systems that have scarcely changed since the days of Gottlieb Daimler”，也就是说我们的“city transport”“scarcely changed”。题目信息与原文是同意表达，所以答案为 True。
2. 利用细节词“pollution”和顺序性原则定位于原文第二段第一句话“In recent years, the pollution belched out by millions of vehicles has dominated the debate about transport”。既然污染问题已经占据了人们对交通方式讨论的主要方面，那么就不可能“has been largely ignored”。题目信息与原文正好相反，所以答案为 False。
3. 利用顺序性原则定位于原文第二段第二句话“The problem has even persuaded California—that home of car culture—to curb traffic growth”。虽然美国加利福尼亚州采取了措施限制交通的增长，但是“most states in America”是否也采取了相同措施却不得而知，因为原文根本没有提及。题目信息无法在原文基础上进行判断，所以答案为 Not Given。
4. 利用细节词“steep hills”定位于原文第二段倒数第二句话“And persuading people to use trains and buses will always be an uphill struggle”。原文虽然提及“uphill”但是表达的意思并非是公众交通在陡峭山地难以使用，而是说劝服人们改用公众交通就像上山一样困难。题目信息无法在原文基础上进行判断，所以答案为 Not Given。
5. 利用细节词“shopping”定位于原文第二段最后一句话“Cars, after all, are popular for very good reasons, as anyone with small children or heavy shopping knows”。意思也就是说对于有家庭和经常要采购大量东西的人来说，“private car”是必要且“convenient”的。

题目信息与原文是同意表达，所以答案为 True。

6. 利用顺序性原则和细节词“government”定位于原文第三段第一句话“So politicians should be trying to lure people out of their cars, not forcing them out”。作者在这里明确提到“politicians”（对应题目“government”）应该“lure”（引诱）人们放弃使用私人交通工具，而非“forcing them”，但是题目却说政府应该强制性地限制（“compulsory restrictions”）私车的使用。题目信息与原文正好相反，所以答案为 False。

Questions 7-12

7. 该题目信息对应原文第五段中间“any transport system that threatened the car's dominance would be up against all those with a stake in maintaining the status quo, from private car owners to manufacturers and oil multinationals”。这里明确提到，“private car owners”（对应题目“individuals”）和“manufacturers”都会反对。而且这里明显是提及 PRT 交通系统，并且在原文倒数第三段最后提及“Unlike PRT...(RUF) might even win the support of car manufacturers”，所以只有 PRT 遭到了反对，正确答案为 A。
8. 原文当中明显提及了 PRT 和 RUF 都具有快速的特点，例如原文第四段“(PRT) with no traffic lights, pedestrians or parked cars to slow things down, PRT guideways can carry far more traffic, nonstop, than any inner city road”和原文倒数第四段和倒数第三段内容“the RUF vehicle—the term comes from a Danish saying meaning to 'go fast'”和“Build a fast network of guideways in a busy city centre...”。所以正确答案为 C。
9. 首先 PRT 肯定具有这个特征，因为原文第四段第二句话明显提及“You wouldn't have to share your space with strangers”，并且原文倒数第四段第二句话“The Danish RUF system envisaged by Palle Jensen, for example, resembles PRT”说明 RUF 在这点上和 PRT 相似，所以正确答案为 C。
10. 原文第四段第一句话“明显提及 PRT 是有电脑控制的（“hop into a computer-controlled car”），而 RUF 根据原文倒数第四段最后一句话“Once on a road, the occupant would take over from the computer...”明显是可以在电脑控制和手动之间切换，所以“always controlled by a computer”只有 PRT，所以正确答案为 A。
11. 原文明显提到只有 RUF 可以在现有道路上运行（倒数第四段中间“so they can drive off the rail onto a normal road”），而 PRT 却不具备这个特征（第五段中间“With PRT, the infrastructure would have to come first”），所以正确答案为 B。
12. 原文没有任何地方提及 PRT 可以购买，但是却在倒数第三段倒数第二句话“Unlike PRT, ...people nearby could buy into it”提及 RUF 是可以购买的，所以正确答案为 B。

Question 13

思路

这种多选多的选择题具有信息分散的特点，且通常具有归纳总结性特征，在雅思阅读中属于难题，所以应该放在做题顺序的最后，在其余细节题做完之后再来解答，此时更容易定位。做题过程中，只能对每一个选项进行原文定位，阅读原文信息并判断。

解答

该题要求选出 the new transport system 的三个优点，并且全部选对才能得分，让我们对下面所有选项一一进行分析，排除作答。

选项 A economy 根据原文第五段中间“With PRT, the infrastructure would have to come first—and that would cost megabucks” PRT 或 RUF 绝对不便宜，倒数第二段首句“creating a new transport system will not be cheap or easy” 也证明新的交通系并不便宜，所以经济性绝对不可能是优点，所以排除。

选项 B space 虽然对于 PRT 和 RUF“You wouldn't have to share your space with strangers”（第四段第二句话），但是空间大小和传统私家车并没有任何比较，所以不能算优点，排除。

选项 C low pollution 原文第二段第一句话明显提及传统交通方式污染严重，而且交通不便，于是在第三段中提及“There's certainly no shortage of alternatives. Perhaps the most attractive is the concept known as personal rapid transit (PRT)”，言外之意就是说 PRT 效率高且污染低（RUF 与 PRT 相似），算是对原文信息的简单总结及推理，所以 C 为正确答案。

选项 D suitability for families 原文明显在第二段最后提及普通的车辆就适合家庭使用，但是 PRT 和 RUF 是否更适合家庭没有提到，所以排除。

选项 E speed 根据原文第四段最后，明显可以看出 PRT 具有速度快的优势（RUF 和 PRT 相似），所以是正确答案。

选项 F safety 根据原文最后一个段落，可以推测普通交通方式导致大量的事故与伤亡，而 PRT 或 RUF 不是简单的“just a matter of saving a few minutes a day”，言外之意就是讲它们也可以帮助降低事故的发生，具有更安全的特点，所以也是正确答案。

选项 G suitability for children 分析同选项 D，所以排除。

综上所述，该题正确答案应该为 C、E、F。

参考译文

到哪里都快不了

太荒谬了！我们可以与世界上任何一个地方的人交谈，或者在几小时之内飞去见他们。我们甚至可以将探测器送到其他星球去。但是，当涉及到城市交通时，我们的体系从戈特利布·戴姆勒时期开始，就几乎没有变化过了。

近年来，数以百万计的交通工具的污染排放已经成为交通领域的主要问题。这一问题甚至已经使加利福尼亚州——汽车文化的家乡——开始限制交通量的增长。但是，无论汽车变得多么环保，它们都很难让我们避开拥堵的城市。而且，说服人们乘坐火车和巴士一直都收效甚微。毕竟，任何一个带着小孩或沉重购物袋的人都倾向于选择汽车。

所以，政治家们应该尝试诱使人们走出汽车，而不是强迫他们放弃。我们当然不乏替代物。最吸引人的或许就是个人快速交通（PRT）这一概念了，美国和欧洲在20世纪50年代都独立开发出了这样的系统。

这个概念所表达的意思就是，你去往其中一个车站，登上一辆由电脑控制的车，然后它就能沿着导轨网络将你飞速地送到目的地。你不用和陌生人共享你的空间，也不用因为等待红绿灯、行人或者停在路边的车辆而降低速度，PRT轨道与其他任何市内的道路相比，所承载的交通量要更多，并且没有停顿。

这一憧憬非常美妙，但是却被一堆理由所阻挠。最开始的时候，车辆是行驶在已有的道路上的，而直到它们变得非常流行，政府也开始从中盈利后，为汽车专门设计的道路网络才得以建成。对于PRT来说，首要解决的就是基础建设，而这可能会耗费大量资金。另外，任何威胁到汽车主导地位的交通体系，都会受到私家车主、制造商、跨国石油公司等现有体系支持者的反对。即便PRT在试验阶段非常成功，也不会给现状带来改变。高新技术并不总是能取得胜利的，就像家用录像系统与Beta制大尺寸磁带录像系统、视窗系统与苹果系统之间的战斗一样。

但是，在PRT看起来注定要失败的地方，“双模式”交通体系却有可能成功。例如，丹麦人帕列·延森所设想的RUF系统与PRT非常相似，但两者之间又存在一个关键性的差异：这些车辆不但有轮子，同时还有一个可以使它们在单轨上运行的沟槽，这样一来，它们就可以从轨道上下来，在普通道路上行驶了。一旦到了路面上，驾驶员就会接替电脑，同时RUF车辆本身——这个术语来自于丹麦的一个俗语，意即“跑得快”——就会变成一辆电动车。

在繁忙的都市中心建设一个快速的导轨网络吧，人们不仅会乐意使用公共RUF车辆，也会乐意拥有一辆自己的双模式车辆。上下班的人们只需要驶上导轨，轻松地靠在座椅上，边阅读边享受自己的“私人司机”把自己载进城里。到工作地点的时候，他们也只

需跳出车辆，车辆就会自己停好。与 PRT 不同的是，这样一个系统会有机地增长，因为每一个网络都可以服务于周围的一大片地区，附近的人们也可以买入这个网络。另外，双模式系统甚至可能会赢得汽车制造商的支持，因为他们能够轻易地转向制造双模式汽车。

当然，一个新的交通体系的诞生不会那么简单或廉价。但是与增加公交专用车道或延长地铁路线相比，一个类似延森的具有创新性的系统却可以使城市改头换面。

况且，这也并不仅仅是一天中节省几分钟的事。据国际红十字会统计，在过去一个世纪里，有超过三千万的人死于道路交通事故，该死亡人数是第一次世界大战阵亡人数的三倍，并且，每年的死亡人数还在上升。此外，国际红十字会还认为，到了 2020 年，道路交通事故会超过艾滋病和肺结核，成为致死致残的第三大原因。当然，我们会找到更好的出路，对吧?

Reading Passage 2. The Seedhunters

题目详解

Questions 14-18

解答

14 & 15. 利用顺序性原则定位于原文第一段最后两句话 "Some seek seeds for profit...on the lookout for species that will yield the drugs or crops of the future. Others collect to conserve, working to halt the sad slide into extinction facing so many plant species"。原文意思是说有人收集种子是为了牟利，寻找那些具有药用和经济价值的物种，另外一些人是为了保护种子，防止灭绝。所以 14，15 题正确答案分别为 extinction 和 drugs, crops。

16. 利用顺序性原则和细节信息 "gardeners and botanists" 定位于原文第二段前两句话 "Among the pioneers of this botanical treasure hunt was John Tradescant, an English royal gardener who brought back plants and seeds from his journeys abroad in the early 1600s. Later, the English botanist Sir Joseph Banks..."，根据原文这里的信息 gardener John Tradescant 和 botanist Sir Joseph Banks 都是种子收集的 "pioneers"，所以正确答案为 pioneers。

17. 利用细节信息 "sponsored collectors out of his own pocket" 定位于原文第二段第二句话 "Later, the English botanist Sir Joseph Banks...was so driven to expand his collections that he sent botanists around the world at his own expense"，这里 "he sent botanists

around the world at his own expense" 对应题目信息 "sponsored collectors out of his own pocket"，所以正确答案为 Sir Joseph Banks。

18. 利用细节信息 "Millennium Seed Bank" 和 "low temperature" 定位于原文第四段第二句话 "Within its underground vaults are 260 million dried seeds from 122 countries, all stored at -20 Celsius to survive for centuries"。这里 "-20 Celsius" 对应题目信息 "low temperature"，所以正确答案为 underground vaults。

Questions 19-24

解答

19. 该题不容易定位，原文与其对应信息来源于第二段最后一句话中 Sir Joseph Banks 收集种子的行为是为了 "expand his collections" 和原文第三段第一句话 "Those heady days of exploration and discovery may be over, but they have been replaced by a pressing need to preserve our natural history for the future"。这也就是说早期人们收集种子完全是为了探索和发现，而现在是为了保存我们的自然历史（尤其是植物史），所以收集的目的发生了巨大变化。题目信息是原文信息的简单归纳与推理，所以答案为 True。

20. 利用细节信息 "Millennium Seed Bank" 和顺序性原则定位于原文第五段第一句话 "Overseen by the Royal Botanic Gardens, the Millennium Seed Bank is the world's largest wild-plant depository"，在此原文只说 "Millennium Seed Bank" 是最大的，至于是不是最早的并不为人所知。题目信息在原文信息的基础上无法判断，所以答案为 Not Given。

21. 利用细节信息 "farmland" 定位于原文第五段最后两句话 "We're currently responsible for habitat destruction...Experts predict that during the next 50 years a further one billion hectares of wilderness will be converted to farmland in developing countries alone"。原文这里的信息暗指破坏森林等栖息地的目的就是为了 "farmland"，而栖息地的破坏也导致了物种的灭绝。题目信息是原文信息的简单归纳与推理，所以答案为 True。

22. 利用细节信息 "farmers" 和顺序性原则定位原文第八段第二句话 "Seed conservation techniques were originally developed by farmers"。从这里很明显可以看出种子储存的技术最初来自于农民，两者之间自然存在相似性。题目信息和原文信息是同意表达，所以答案为 True。

23. 利用细节信息 "technological development" 和顺序性原则定位于原文第八段中间两句话 "Smith says there's no reason why any plant species should become extinct, given today's technology. But he admits that the biggest challenge is finding, naming and categorising all the world's plants"。这里根据 Smith 所说，从技术层面上，保护物种不再灭绝已根本不是问题，唯一的问题存在于 "finding, naming and categorising all the world's

plants”，而这些都不是技术所能解决的，而且该段落后面继续说道“There aren't a lot of people out there doing this”，而题目却说技术发展是唯一希望。题目信息与原文信息正好相反，所以答案为 False。

24. 利用顺序性原则和细节信息“insufficient financial resources”定位于原文最后一段第一句话“Many seed banks are themselves under threat due to a lack of funds”。原文“lack of funds”对应题目信息“insufficient financial resources”。题目信息与原文信息是同意表达，所以答案为 True。

Questions 25-26

思路

一般来说，这种多选多的选择题具有信息分散的特点，且通常具有归纳总结性特征，在雅思阅读中属于难题，所以应该放在做题顺序的最后，在其余细节题做完之后再来解答，此时更容易定位。做题过程中，只能对每一个选项进行原文定位，阅读原文信息并判断。但是该题目较特殊，其对应信息较集中，均出现在原文第六段第二句话“Besides providing staple food crops, plants are a source of many medicines and the principal supply of fuel and building materials in many parts of the world”。

解答

根据原文的信息，植物为人类提供了固定饮食（“staple food crops”）和燃料（“fuel”）。而其余选项的 artefact，treasure 和 clothes，原文中均未提及。所以正确答案为 A 和 D。

参考译文

种子猎人

未来 50 年内，全球可能会有四分之一的植物物种消失，在这一形势下，道 · 亚历山大报道了科学家们夜以继日地寻找解决办法，保护地球的植物遗产。

他们踏遍世界各地，走遍丛林、森林和草原，仔细地搜寻着。但他们不是在寻找古代文物、失落的宝藏或未被发现的陵墓，而是在寻找种子。搜索种子可能没有考古学的浪漫色彩，也没有狩猎猛兽的那股危险气息，但是搜寻种子正变得越来越迫切。有些人搜索种子是受利益驱使——种子猎人受雇于生物科技公司、制药公司或私人企业，去寻找那些有望在未来产出药物或作物的植物物种。而另一些人搜索种子则是出于保护自然的目的，致力于对抗许多植物物种濒临灭绝的局面。

英国皇家园丁约翰 · 特拉德斯坎特是这些搜寻植物瑰宝的先驱者之一，他于 17 世纪早期从国外旅行中带回了一些植物和种子。在他之后，英国皇家植物园（邱园）的首任

主管约瑟夫·班克斯爵士——曾于18世纪末与詹姆斯·库克船长进行了探险航行——是如此有志于扩大他的收藏，以至于通过自费派了不少植物学家到世界各地搜寻植物物种。

过去那段激动人心的探索岁月可能已经结束了，取而代之的是出于保护我们未来的自然历史这个迫切需求而进行的探索。米希尔·范·史莱根博士正是受这个现代使命驱使的种子猎人。他是个随和的荷兰人，经常在田地里戴着宽边的帽子，别人很容易误以为他是电影《夺宝奇兵》的男主角。他和另外三名种子猎人一起在千年种子银行工作，千年种子银行是一个耗资八千万英镑的国际保护项目，旨在保护全球濒临灭绝的野生植物物种。

千年种子银行的总部位于英国苏塞克斯郡的维克赫斯特庄园，是一栋由玻璃和混凝土建成的现代化建筑，占地200公顷。世界上122个国家的2.6亿粒干种子被存放在其零下20摄氏度的地下种子库里，这些种子能存放好几百年。在5100种代表性物种里，几乎所有都是来自英国本土的1400种种子植物，该植物物种收藏量是世界之最。

千年种子银行由英国皇家植物园管理，它是世界上最大的野生植物种子库，计划于2010年收齐2.4万种野生植物种子。理由很简单：由于人类活动的影响，预计全球有四分之一的植物濒临灭绝，而且可能在未来50年内消失。人类要为大规模地破坏植物栖息地负责。在过去的400年间，植物物种以比地质学记录的“正常的”速度快70倍的速度消失。专家预测，在未来50年里，仅发展中国家就会新增十亿公顷的由荒地开垦出来的耕地。

这样的后果是极其严重的。植物除了能提供粮食作物外，还是许多药物的来源，而且在许多国家中，植物还是燃料及建筑材料的主要来源。此外，植物还可以保护土壤和调节气候。可是，在发现它们的更多好处之前，全球范围内的许多植物物种已濒临灭绝。

世界自然保护联盟已经列出全球5714种濒危植物，但他们也承认这不过是冰山一角。由于只是评估了全球百分之四的植物，所以濒危植物物种的确切数字肯定远远大于此。仅在英国，就有300种野生植物被列为濒危物种。千年种子银行旨在确保，即使一种植物在自然环境中灭绝了，它也不会永远消失。储存的种子可以用来帮助恢复被破坏的环境，或者也可以用于科学研究，来开发植物的新功用——以用于医药、农业或地方工业——若非如此，这些新功用将永远遗失。

邱园的另一位种子猎人保罗·史密斯博士解释说，种子银行是保护全球植物遗产的“保险单”。“种子保存技术是由农民首创的，”他说道，“我们的主要工作就是储存种子，直到需要使用它们的时候，就像在农业中的那样。”史密斯还说，考虑到现今的技术水平，任何植物物种都没有理由会灭绝。同时，他也承认最大的挑战是对全球的植物进行寻找、命名和归类，而且必须要赶在物种灭绝之前收齐这些种子。“从事保护植物物种工作的人并不多，”他说道，“关键是要了解特定地区的植物种类，而获取这些知识需要时间的积累。”

全球大概有1470家种子银行，共储存着大约540万个样本，其中大概有2百万个样本是唯一的。大部分被保护的样本是出于农业使用的目的，即为了保证作物的多样性；其他的则是为了保护野生物种，尽管被储存的所有植物中只有百分之十五是野生物种。

不过，许多种子银行都面临着资金短缺的威胁。去年，伦敦帝国理工学院对151个国家的作物收藏进行研究后发现，尽管有三分之二国家的植物样本数量有所增加，但拨给种子银行的预算却削减了四分之一，另外还有百分之三十五的国家的预算保持不变。自此，联合国粮食及农业组织与国际农业研究咨询集团共同建立了全球保护基金会，旨在筹资2.6亿美元（约合1.56亿英镑）来永久保护种子银行。

Reading Passage 3. Assessing the Risk

题目详解

Questions 27-32

解答

27. 利用顺序性原则和细节信息“the title of the debate”定位于原文第一段第一句话“As a title for a supposedly unprejudiced debate on scientific progress, ‘Panic attack: interrogating our obsession with risk’ did not bode well”，这里明显说到这个本来应该不带任何偏见的辩论（unprejudiced debate）名不副实（did not bode well）。题目说这个辩论的标题带有偏见性（not unbiased）。题目信息与原文信息是同意表达，所以正确答案为True。

28. 利用细节信息“scientists invited”和“medicine”定位于原文第一段第二句话“the event brought together scientists from across the world...”。原文只提及受邀的科学家来自于全世界各地，但是至于是否都来自于医学领域，原文并未提及。题目信息在原文信息的基础上无法判断，所以正确答案为Not Given。

29. 利用顺序原则定位于原文第二段最后一句话“In short, their message was: no risk, no gain”，也就是说“没有风险就没有收获”，而题目信息“people shouldn't take risks”与这里的原文信息正好相反，所以正确答案为False。

30. 利用细节信息“listed technologies”定位于原文第四段第一句话“Clearly, all the technologies listed by the 40 well-chosen savants were innately risky at their inception, as all technologies are”。原文明显是同级比较，说各种技术一样有风险，而题目却说一种比另一种更加有风险。题目在原文信息的基础上无法判断，所以答案为Not Given。

31. 利用细节词“antibiotics”定位于原文第六段最后一句话“Of course the risks, such as

they could be perceived, were worth taking"。原文其实从第五段就开始出现"antibiotics"，但是真正提及它的风险实际是在这里。题目和原文是同意表达，所以正确答案为 True。

32. 利用顺序原则和细节信息"other inventions"定位于原文第七段。原文这里提及，按照一些科学家的说法，其他的发明创造的诞生会因"precautionary principle"而受到阻碍，但是作者认为如果"the precautionary principle had been applied properly"，这些发明创造是可以通过检验的，也就是说它们都会被"precautionary principle"所"judge"。题目与原文是同意表达，所以正确答案为 True。

Questions 33-39

解答

33. 利用细节信息"whether to invent a new technology"定位于原文倒数第四段第五句话和第四句话"A crucial issue is consumer's choice. In deciding whether to pursue the development of a new technology ..."。也就是说是否发展新科技需要考虑消费者的选择（consumer's choice 或 consumer's right to choose），但是因为题目要求答案不超过三个单词，所以正确答案为 consumer's choice。

34. 利用顺序性原则很容易定位于倒数第三段第五句话"...the consumer's right to choose should be considered alongside considerations of risk and benefit"。题目中"along with"对应原文"alongside"，所以正确答案为 risk and benefit。

35. 利用顺序原则和细节信息"dangerous"定位于同段落后面的信息"Clearly, skiing is more dangerous than genetically modified tomatoes...skiing, I am told, is exhilarating"。原文中明显提及 skiing（滑雪）是极其危险的行为，但是人们仍然热爱，因为它使人们感到 exhilarating（极其兴奋），对应题目信息中的"excitement"。所以正确答案为 skiing。

36. 利用细节词"future population"定位于原文倒数第二段第四句话"Promoters of GM crops believe that the future population of the world cannot be fed without them"，且题目中"undefined risks"对应原文前面的"benefits are far from clear"和"the benefits that might accrue from them seem dubious"。所以正确答案为 GM crops。

37. 利用顺序原则和细节信息"increasing the yield"定位于原文倒数第二段倒数第二句话"The crops that really matter are wheat and rice, and there is no GM research in the pipeline that will seriously affect the yield of either"，也就是说转基因作物的研究并没有用来影响小麦和水稻的产量。所以正确答案为 wheat and rice。

38. 利用顺序原则很自然可以定位到同段落最后一句话"GM is used to make production cheaper and hence more profitable, which is an extremely questionable ambition"。这里明

显提及转基因的研究并非是为了提高作物产量，而是为了降低 production 的成本（对应题目中“reduce the cost”）和提高收益（对应题目中“bring more profit”）。所以正确答案为 production。

39. 利用细节信息“selfish use of precautionary principle for business and political gain”以及题目中明显的方位词“in the end”定位于原文最后一段中间部分“...misrepresent such a principle for the purposes of commercial and political propaganda. People at large continue to mistrust science and the high technologies it produces partly because they doubt the wisdom of scientists”。原文中说本应中立的学者们却故意歪解 precautionary principle 来实现商业和政治宣传的目的（for the purpose of commercial and political propaganda），因此所导致的结果（对应题目“led people to”）就是人们不再信任（mistrust）科学技术了。所以正确答案为 mistrust。

Question 40

思路

该题目为典型的主旨题，一般需要把全文通读之后才能解答，所以应该放到最后做。解答时可以多利用反向思维和排除法。

解答

选项 A 全文主要是讲由一个辩论所引起的对风险的讨论，并借此引出了“precautionary principle”。在 section 1 里作者主要讨论了人们对“precautionary principle”的误解，其真正含义和重要性。在 section 2 里作者提及利用“precautionary principle”对一些事物进行评判，例如 skiing 和 GM crops，同时发现了科学技术发展中的一些“黑幕”，最终得出结论，人们应该利用“precautionary principle”来保护自己，“专家”及有些所谓的“科学技术”是不值得信任的。本文的结构就是提出一个重要原则，解释这个原则，以及利用这个原则并获得结论的结构。本选项“人们有权利去质疑各种科学或技术”作为文章最后提出的结论，可以算是全文的主旨，为正确选项，而且最终得出的结论作为文章的主旨也是非常常见的现象，因为前面的所有论述都是在为最后的结论做铺垫。但是，一般来说该选项不容易直接被判断为全文的主旨，需要通过排除确定。

选项 B “风险预防原则有可能会阻止科学技术的发展”明显和全文的内容不符，因为这明显是原文 section 1 中作者所提及的人们对“precautionary principle”的错误的理解。错误内容当然不可能是全文主旨，所以排除。

选项 C “真正理解风险预防原则的人不多”这句话根据原文内容本应是对的，但是这只是原文 section 1 的部分内容，甚至都不能算是 section 1 的主旨，所以排除。

选项 D “风险预防原则要求我们不顾一切风险”这句话与原文内容明显不符，因为原文

第三段最后明显提及“precautionary principle”，如果冒险并不能带来直接的收益，则不要冒险。错误内容当然不可能是全文主旨，所以排除。

综上所述，正确答案为选项A。

参考译文

评估风险

我们该如何判断是否该采用新技术呢？合理地运用风险预防原则，这样你就不会出大错，科林·图哲如是说道。

第一节

针对科学发展的辩论本不应该存有偏见，因此，以“恐惧袭击：质疑我们对风险的迷恋”为题并不是一个好的预兆。上周在伦敦英国科学研究所举行的辩论会汇集了全世界诸多科学家，来质问为什么我们的社会如此迷恋风险，同时呼吁更多的理性。“我们似乎是依据‘宁可无功，但求无过’这句古老格言来建设社会的，”组织此次辩论的在线出版物《Spiked》如是宣称，“如此关注风险，其后果又会是什么呢？”

在此次辩论之前有一项调查，40位科学家受邀来描述如果“风险预防原则”在过去就流行了，那么我们今天的生活会多么糟糕。他们的回答包括：心脏手术或抗生素将不会存在，也不会有任何医药；没有飞机、自行车或者高压电网；没有巴氏杀菌法、杀虫剂或生物技术；没有量子力学；没有车轮；也不会发现美洲大陆。简而言之，他们的意思就是：没有风险，就没有收获。

其实他们都遗漏了一点。风险预防原则实际上是一个微妙的概念。它形式多样，但基本上都含有成本效益的观点。也就是说，这并不是简简单单地禁止那些不一定安全或保险的事物。相反，它的意思是“当然，没有冒险就不会有进步。但是，如果这个冒险并不会带来明显的收益，那就不要冒这个险。”

显然，这40位精心挑选的学者所列出来的所有科技，正如其他所有的科技一样，在初始阶段时，本质上都是充满风险的。但是风险预防原则却会对它们大开绿灯，因为如果一些小障碍能被克服的话，它们都有为人类提供巨大好处，即提供难题的解决方案的潜力。

一些科学家告诉我们，如果风险预防原则一开始就存在的话，那我们今天就不会有抗生素了。但是，如果这个措施在明智的、能够真正明白其中原理的人手里使用的话，我们当然还是会有抗生素的。当青霉素在20世纪20年代被发现时，感染性细菌正在侵蚀世界。大量孩童死于白喉和百日咳，每个露天的污水管道都会带来伤寒的危险，任何

伤口都可能会导致败血病，甚至坏疽。

正当战争带来的诸多瘟疫可能会导致超出战争本身的伤亡时，青霉素在第二次世界大战期间被制成了临床药物。当然，在那个时候，抗生素是最重要的，与之相比，抗生素可能会导致的风险后果就不值一提了。

科学家所列出来的其他发明也是如此：电灯泡、输血、CAT 扫描、刀具、麻疹疫苗——那些科学家告诉我们，风险预防原则的存在完全可能阻止这些事物的诞生。但是，这明显是错误的。如果合理运用了风险预防原则，那这些发明都将通过检验，因为，与可能产生的风险相比，它们都能提供难以比拟的好处。

第二节

另外还有一个关键性的问题。统计数据并不是人们在衡量风险时所唯一考虑的方面。作为微妙、进化的生物，人类能活 70 年并不是因为能像便携计算器一样思考。一个关键的问题在于消费者的选择。在决定是否追求一个新技术的发展时，除了考虑风险和收益外，还应该考虑消费者的选择。显然，滑雪要比转基因番茄更加危险。但是选择滑雪的人却自愿这么做；他们并不受现在那些自命不凡的、认为有权改造我们农作物的专家的强迫。当然，甚至对于滑雪，我们也考虑了成本效益：滑雪，有人告诉我，是能使人感到振奋的。可是，转基因大豆能带来的愉悦又在哪儿呢？

和《Spiked》上列出的其他所有项目相比，转基因作物确实不是一个对人类有明显好处的科技案例。它其中的一些风险至少可以被明确认定。然而，在目前的经济环境下，它可能产生的好处却令人怀疑。提倡转基因作物的人相信，如果没有转基因食品，未来的人类将面临食物不足的危机。这种说法并不准确。对人类来说真正重要的作物是小麦和水稻，但是我们没有进行任何会严重影响这两种作物产量的转基因研究。其实，转基因研究的主要目的是使生产成本更加低廉，从而实现生产利润更大化，当然，这一动机是非常值得质疑的。

风险预防原则可以为整个世界提供一个安全的保障。举个例子来说吧，如果人类在过去就正确地运用了该原则的话，我们就可以避免由于漫不经心的采矿者而造成的对主要河流的汞污染。令人遗憾的是，本应客观冷静的科学家们却因为商业和政治宣传的需要而曲解了这样的一个原则。大部分人仍旧怀疑科学和它所创造的高科技，部分是因为他们质疑这些科学家的智慧。基于以上的证据，这些怀疑是完全有理的。

Test

Reading Passage 1. The Origins of Laughter

题目详解

Questions 1-6

解答

1. 利用细节词“babies”和“some animals”定位于原文第三段中间Elke Zimmerman的观点“she discovered that chimp and human baby laughter follow broadly the same pattern”，其中“follow the same pattern”对应题目的“similar”，所以答案为B。
2. 利用细节词“primates”定位于原文第四段最后一句话Jaak Panksepp的观点“the most compelling evidence for laughter beyond primates comes from research done by Jaak Panksepp from Bowling Green State University, Ohio, into the ultrasonic chirps produced by rats during play and in response to tickling”，这里提及老鼠也是可以发笑的，所以答案为C。
3. 利用细节信息“feel safe and secure with others”定位于原文第五段中间“laughter in response to tickling is a way for two individuals to signal and test their trust in one another”，以及后面Tom Flamson的观点“laughing is what makes it a reliable signal of trust according to Tom Flamson”，这里“trust”对应题目里的“feel safe and secure with others”，所以正确答案为D。
4. 利用细节信息“response to a humorous situation”定位于原文第一段中间Provine的观点“Provine found that most laughter comes as a polite reaction to everyday remarks such as ‘see you later’, rather than anything particularly funny”，原文中“rather than anything particularly funny”对应题目信息“not a response to humorous situation”，所以正确答案为A。
5. 利用细节信息人类的笑与动物的笑的进化方面的比较定位于原文第三段倒数第二句话Zimmerman的观点“Zimmerman believes the closeness of baby laughter to chimp

laughter supports the idea that laughter was around long before humans arrived on the scene", 所以正确答案为 B。

6. 该题目不太容易看出细节词 "social activity" 在原文中的对应信息，因为 "social activity" 是对原文中第一段 Provine 的观点 "laughter evolved as a signal to others", "laughter comes as a polite reaction to everyday remarks such as 'see you later'", "the way we laugh depends on the company we're keeping" 等诸多信息的总结概括，所以正确答案为 A。

Questions 7-10

解答

7. 利用顺序性原则定位于原文第二段前两句话 "To find the origins of laughter, Provine believes we need to look at play. He points out that the masters of laughing are children, and nowhere is their talent more obvious than in the boisterous antics, and the original context is play"。这里 "origins" 对应题目信息 "first developed"，所以正确答案为 E（play）。

8. 利用细节信息 "human and chimp laughter" 的比较及顺序性原则定位于原文第三段前半部分。第一句话提及人类的笑与黑猩猩的笑有所不同 "chimp and human laughter vary"，然后提出问题 "does this pant laughter have the same source as our own laughter"，然后做出回答 "New research lends weight to the idea that it does"，于是根据这里的信息可以判断人类与黑猩猩的笑具有 same origins（origins 对应原文 source），所以正确答案为 D（origins）。

9. 利用细节信息 "long been aware" 及顺序性原则定位于原文第四段开头第二、第三句话 "...animals might have been laughing long before that. More distantly related primates, including gorillas, laugh..."，所以正确答案为 G（primates）。

10. 利用细节信息 "reasons...still unknown" 及顺序性原则定位于原文第五段。第五段第一句话 "All this still doesn't answer the question of why we laugh at all" 对应题目中的 "the reasons why humans started to laugh are still unknown"，同时原文中提及 "laughter in response to tickling is a way for two individuals to signal and test their trust in one another"，笑是人类之间显示相互信任的一种表现，所以正确答案为 H（confidence，对应原文中的 trust）。

Questions 11-13

11. 利用男人与女人比较的细节信息定位于原文第一段 "Men tend to laugh longer and harder when they are with other men, perhaps as a way of bonding. Women tend to laugh more and at a higher pitch when men are present..."。题目信息说男人和女人在和同性

成员一起时会笑得更多，而原文明显只说男性在和其余男性在一起时笑得“longer and harder”，但是否“laugh more”无法判断，同时原文也只说女性和男性在一起时会“laugh more”，但是和其余女性在一起时是否也会“laugh more”也无法判断，所以该题目的答案为 Not Given。

12. 利用细节词“breath control”定位于原文最后一段中间“while other animals pant, we alone can control our breath well enough to produce the sound of laughter”，只有人类才能很好地控制气息来创造独特的笑声。题目与原文是同意表达，所以答案为 True。

13. 利用细节词“rats”定位于原文第四段，但是原文只提到老鼠也会笑，但是并没有说黑猩猩能比老鼠在更多的场合发笑，所以题目信息无法判断，正确答案为 Not Given。

参考译文

笑来自何方

也许玩笑和风趣是人类特有的发明，但是笑一定不是。其他生物，包括黑猩猩、大猩猩，甚至耗子都会发笑。这个事实也就意味着，笑声存在的时间比我们还要久远。

毫无疑问，发笑通常会涉及到一群人。“笑声是为了向其他个体传达信号进化而来的——当我们独自相处时，它几乎会消失，”马里兰州立大学神经科学家罗伯特·普罗文说道。普罗文发现大多数的笑实际上是人们对日常交流中“再见”这类话语的礼貌回应，而非对什么可笑事物作出的反应。并且，我们发笑的方式也取决于我们结交的同伴。男性和男性在一起时通常笑得更长、更猛烈，这也许是一种联络感情的方式。女性在有男性的场合笑得更多，音调也更高，这也许意味着调情甚至顺服。

普罗文认为，要想真正地发现笑的起源，我们需要从玩耍着手。他指出最善于笑的就是儿童，它们喧闹而滑稽的动作和笑声把这个天赋显露得一览无余，而这里的场景就是玩耍。著名的灵长类动物观察者，包括黛安·福赛和珍·古德，长久以来一直认为黑猩猩在玩耍时会笑。它们会发出一种类似于气喘的笑声。当你观察它们的行为时，你就会很明显地发现这一点——它们甚至有和我们一样的怕痒点。但是，如果不看背景画面，人类的笑声与黑猩猩特有的喘笑之间的联系就不甚明显了。举个例子，普罗文曾经向他的 119 名学生播放了黑猩猩喘笑的录音带，但是只有两个学生能够正确地猜出这是什么。

这些研究发现强调了人类与黑猩猩的笑声的不同之处。当我们发笑时，我们的笑声通常是由一个被切分成一系列更短气息的呼出来的气息，并伴随着每次的吸气和呼气所创造出的声音。但问题是：这个喘笑和我们人类自己的笑声是否有着共同的来源呢？新的研究支持两者是有共同来源这一说法。这些发现来自于德国动物学研究所所长埃尔克·齐默曼的研究，她比较了婴儿和黑猩猩在他们出生的头一年对胳肢的反应。通过使用声谱仪揭示发声的音调和强度，她发现黑猩猩和人类婴孩的笑声都有大致相似的模式。

因此，齐默曼认为人类婴孩的笑声与黑猩猩的笑声的相似性能够支持笑在人类登上历史舞台之前就已经存在很久这一观点。这个起初仅用来表示愉悦和玩耍互动时呼吸方式改变的动作，现已经成为象征性表达愉悦的方式。

但是，想要确定笑声究竟诞生于何时却又是另一回事了。人类和黑猩猩在800万年前拥有共同的祖先，但是动物也许在更早之前就会笑了。与人类关系再远一点的灵长类动物，包括大猩猩，也会笑，并且还有所谓的证据显示其他社会性哺乳动物也能发笑。科学家们目前正在利用发笑在动物界有多常见的比较性分析来验证这些证据。但是，到目前为止，关于灵长类动物之外的动物能发笑的最有说服力的证据只有俄亥俄博林格林州立大学雅克·潘克塞普的关于耗子在玩耍或被胳肢之后发出超声波啾啾声的研究。

所有这一切仍然不能回答我们为什么会发笑。有一个观点认为笑声和胳肢起源于一种绑定母婴之间关系的方式。另外一个观点则认为笑声是对胳肢的反射性保护反应，警告我们周围可能有爬行动物会伤害我们，或者迫使我们保护在面对肉搏时最脆弱的身体部位。但是，最近在学术界最流行的观点是，笑声作为对胳肢的反应，是两个个体之间相互表示和测试信任的一种方式。这个假说来自于一个观察，即一点点的胳肢可能会很享受，但如果时间太长了，它就会变成一种折磨。在胳肢的过程中，我们置身于别人的掌控之中，根据加州大学洛杉矶分校的笑声研究专家汤姆·弗拉姆森的观点，此时笑声就是一个可靠的传达信任的信号。“甚至在耗子当中，笑声、胳肢、玩耍和信任也是有联系的。耗子在玩耍时经常会发出啾啾的声音，”弗拉姆森说道，“这些啾啾声可能是由胳肢引起的。而且，它们也会因此和我们联系在一起，这当然看起来像是一种信任的表现。”

也许我们永远都不会知道是哪种动物最先开始笑以及为什么笑。但是，我们能确定，那绝对不是因为什么史前的笑话。有趣的是，尽管笑声的起源问题可能相当严肃，但我们人类的笑声以及基于语言的幽默也是源自相同的绝技。动物们只能喘息式的笑，而只有我们人类可以很好地控制气息来创造真正的笑声。没有这种控制，也就永远不会有语言——当然也就没有笑话了。

Reading Passage 2. The Lost City

题目详解

Questions 14-17

思路

“Which paragraph contains the following information?” 这种题型对大多数考生来说是最费事、最难的题型，但是该题型却总是文章的第一组题。正确处理这种题型的策略是把

该题型放在最后去做，解答时多利用反向思维和下位词进行思考。

解答

14. 该题目略难，虽然利用反向思维词“a variety of investigative methods”可以推测原文对应信息应该出现多种具体的侦测方法，且很明显原文从C段落开始讲到很多不同的侦测方法，例如使用“hand-held balloon”，“magnetometry”，“resistivity”等等，但是都只是在讲具体的方法，而真正讲到原因是在B段落“Dr Summers quickly realised it would take far too long to excavate the site using traditional techniques alone. So he decided to use modern technology as well to map the entire site...”。所以正确答案为B。

15. 利用反向思维词“an unexpected find”，原文中一定会提到一个具体的发现，于是定位于原文G段落第三句话“One surprise came when they dug out one of the fates in the defensive walls”和倒数第二句话“When we started to excavate we were staggered to discover that the walls were made entirely from stone and that the gate would have stood at least ten metres high”，这里“staggered”对应题目中的“unexpected”。所以正确答案为G。

16. 利用反向思维词“surveyed from above”可以推测这种侦测方法和天空、高空、太空等有关，于是可以很容易定位于原文C段落，这里很明显提及了用手持气球，甚至热气球从空中拍摄照片的方法，对应题目的“surveyed from above”，所以正确答案为C。

17. 该题目略难，因为题目中没有明显的反向思维词（“experts”一般会对应大量的学者，也就是许多具体的人名，但是原文中并没有任一个段落出现这样的情况），但是通读文章后不难发现全文就是在讲对Pteria的考古发掘工作，所以“The reason why experts are interested in the site”应该出现在人们具体进行勘测工作之前，在本文也就是文章的开头第一段“Many respected archaeologists believe these are the remains of the fabled city of Pteria”。所以正确答案为A。

Questions 18-25

解答

18. 利用细节信息“taking photographs”定位于原文段落C的第二和第三句话“He walked over the entire site holding the balloon and taking photos. Then one afternoon, he rented a hot-air balloon and floated over the site, taking yet more pictures”。这里“float over the site”对应题目的“from a distance”，所以正确答案为hot-air balloon。

19 & 20. 利用细节词“magnetometer”，“changed direction”和“great heat”定位于原文D段落中间“If something containing iron oxide was heavily burnt, by natural or human actions, the iron particles in it can be permanently reoriented, like a compass needle, to

align with the Earth's magnetic field...", 这里 "heavily burnt" 对应题目的 "great heat", "reoriented" 对应 "changed direction", 所以正确答案为 iron particles 和 compass/compass needle。

21. 利用细节词 "resistivity" 和 "fire electrical pulses" 定位于原文 F 段落的第三句话 "It's done by shooting pulses into the ground through a thin metal probe", 原文 "shooting pulses" 对应题目 "fire electrical pulses", 所以正确答案为 thin metal probe。

22 & 23. 这两道题按照顺序性原则很容易定位到原文 F 段落第五句话 "For example, stone and mudbrick are poor conductors, but looser, damp soil conducts very well"。所以正确答案为 mudbrick 和 looser damp soil。

24. 利用顺序性原则也很好定位到原文 F 段落中倒数第六行 "This is one of the reasons that the project has a spring season, when most of the resistivity work is done", 所以正确答案为 spring season。

25. 利用顺序性原则定位到 F 段落最后一句话 "Consequently, the team is concentrating on areas where they want to clarify pictures from the magnetometry", 所以正确答案为 clarify。

Question 26

解答

该题目对应原文最后一段开头的两句话 "Remote sensing does not reveal everything about Kerkenes Dag, but it shows the most interesting sub-surface areas of the site. The archaeologists can then excavate these using traditional techniques", 所以正确答案为 B。

参考译文

失落的城市

由于现代遥感技术的运用，一座埋藏在废墟中的土耳其城市正慢慢地揭开面纱，它曾经是人类古代历史上最辉煌最神秘的城市之一。萨莉·帕尔默为我们带来更多的报道。

A 低矮的花岗岩山脉 Kerkenes Dag 从土耳其卡帕多西亚平原的北部边缘延伸出来。蔓延在山腰的是一个巨大城市的废墟，被已经破碎不堪且长达 7 公里的防御城墙所环绕。许多备受尊敬的考古学家认为，这就是传说中的 Pteria 城的遗址，即希腊历史学家希罗多德在自己的著作《历史》中描述的公元前 6 世纪米堤亚人的要塞。这个短命的城市沦陷到米堤亚人的手中，短短 50 年之后就被洗劫、焚烧，而它厚实的石墙也被破坏了。

B 英国考古学家杰弗里·萨默斯博士已经花了 10 年的时间来研究这个古迹。由于它覆

盖范围极其广大，使得废墟挖掘工作成为一项挑战。废墟边缘7公里的围墙足足环绕了271公顷的遗址。萨默斯博士很快就意识到，只用传统技术挖掘这片古迹太耗费时间了。因此，他决定使用现代技术对地表和地下进行古迹的地图重建，并确定最有趣的区域和需要优先挖掘的地点。

C 1993年，萨默斯博士租用了一种带有远程遥控摄像头的特殊手持气球。他带着这个气球走遍了整个遗址，边走边拍照。然后，某天下午，他租用了热气球，飞到废墟上空，以拍摄更多的照片。到1994年考古季节结束时，萨默斯博士和他的团队已经拥有整个遗址的空中照片拼图了。下一步是使用远程传感装置，弄清废墟轮廓和围墙下面有些什么。该项目的副主管斯科特·布兰廷介绍说："远程传感装置在空间中进行全方位记录，这对考古学有极大帮助。"他从1995年开始和萨默斯博士一起工作。

D 这个项目应用了两种远程传感技术。首先是磁力测定，它是根据地球表面磁场受地下埋葬物影响的原理进行测量的。它能够测量磁场方向和强度的局部变化状况。"地球的磁场因地而异，这取决于过去在该地发生的事，"布兰廷介绍说，"如果某处由于自然变化或人类活动而导致含有铁矿石的物质被严重焚烧，那其中的铁粒子将会被永久地定位，就像指南针那样，与当时当地的地球磁场方向对齐。"磁力计会探测这些铁粒子的排列方向和强度，对比它们与现代磁场的差异，从而借助这些差异绘制出地下物体的分布图。

E 磁力计在Kerkenes Dag的勘探中得到了非常好的应用，因为Kerkenes Dag曾经在一场巨大的火灾中被焚烧过。这使得很多地方的砂岩变成了玻璃，并融化了花岗岩。这场大火是如此巨大，以至于公元前547年的地球磁场至今仍保有很强的磁特征，工作人员因此得到了非常清晰的图片。此外，这个城市从来没有被重建过。"在存在多重覆盖层的情况下，磁性图片会受到干扰，因为你会检测到不同时期的城墙的不同走向信息，"布兰廷解释说，"我们检测到的地层只有1.5米深，因此，我们可以为这个短暂出现的城市绘制非常完好的图片。"

F 另一项主要的地下绘图设备是电阻仪，目前该遗址仍在使用此项技术。它能够测量地下土壤中电脉冲的传导方式。该设备通过一根细铁质探针，向地面发射脉冲。不同的物质会呈现出不同的电导率。比如，石头和泥砖的电导率很低，但松散潮湿的土壤的电导率则很高。在整片废墟上四处走动，每一米内设置四个检测点，就可能获知地下具体物体的具体分布情况了。根据这些，考古团队会绘制出墙壁、壁炉以及其他遗存物的分布图。"下雨时效果会更好，因为电脉冲可以更容易地进行传导，"布兰廷介绍说，"此时如果有非传导介质，它将会清楚地显示出来。"这也就是为什么该项目组要在春季完成大部分电阻仪工作的原因之一。不幸的是，电阻仪测量要比磁力测定慢得多。"如果我们要在整片废墟上都进行电阻仪测量，那将需要100年

左右的时间”，布兰廷介绍说。因此，考古团队根据磁力测定找到他们想要精确绘图的区域，再着重进行电阻仪测量。

G 远程传感技术并不能展现 Kerkenes Dag 的全貌，但它能展示出这片遗址中最令人感兴趣的地下区域。然后，考古学家们就可以采用传统技术对这些地点进行挖掘。在他们挖掘防御城墙中的一部分时，一个惊喜从天而降。“我们早期的观测使得我们以为当时发现的是一段泥砖城墙的石基，就像在古代近东其他大部分城市的发现一样，”萨默斯博士介绍说，“当我们开始挖掘这段城墙时，我们惊奇地发现它完全是由石头搭建而成的，而且其城门至少有 10 米高。在经历了 10 年的研究之后，Pteria 正逐渐地揭开其神秘的面纱。”

Reading Passage 3.
Designed to Last: Could Better Design Cure Our Throwaway Culture?

题目详解

Questions 27-31

解答

27. 很明显，在“people are reluctant to admit that they have wasted their money”这句话之前全都是作者在用“domestic power tools”的例子来说明人们经常浪费。“conscience”本身的意思是“良心”，这里作者用“conscience time”来说明人们其实已经用不上这些工具，但是觉得丢弃又违背良心，于是只能把它们丢在角落“gathering dust”。能正确表达这个意思的选项为 D，所以正确答案为 D。

28. 很明显“narrative”单词前后的破折号表明了这是一个解释说明，而且直接是说明前面的“history”。“narrative”本身的意思是叙述，故事，记叙文，这里是为了说明“For most of human history, people had an intimate relationship with objects...”，也就是说物品已经超出了物品本身的含义而有了更高的价值，和使用者更加“intimate”，也就是后面所提及的“emotional connection”。这个“emotional connection”的产生来源于“they made the objects themselves, or family members passed them on. For more specialised objects, people relied on expert manufacturers living close by, whom they probably knew personally”，这也就是说人们“was aware of how the item had come into being”，所以正确答案为 B。

29. 原文说道“In a world of mass production, however, that symbolism has lost much of its potency”，这里“symbolism”指代前面所提及的“People own things to give expres-

sion to who they are, and to show what group of people they feel they belong to"，也就是说物品是一种自我的表达，具有超出本身使用价值的价值，而这一切都丧失了，所以它们就变得不再被人们珍惜，所以当新鲜感消失时人们必须通过购买新的物品来带来新的刺激，也就是说这些物品就"less likely to be kept for a long time"。所以正确答案为选项B。

30. 利用细节词"personal connection"定位于原文第三段最后三句话。这里作者明显提到没有"personal connection"之后，人们就开始膜拜新鲜感，而产生新鲜感的唯一方式就是"buying more"。能正确表达这个意思的选项为D，所以正确答案为D。

31. 利用细节词"jeans"和"teddy bears"很容易定位到原文第四段，这里作者提及"jeans"穿的时间越长，洗的次数越多，人们越喜欢；"teddy bear"再烂也不会随意丢掉，因为"As adults, our teddy bear connects us to our childhood and this protects it from obsolescence"。能正确表达这个意思的选项为C，所以正确答案为C。

Questions 32-35

解答

32. 该题目对应原文第二段的信息。第二段整个段落就是在说明人们经常买一些自己使用频率较低的物品，例如"domestic power tools"，从而形成浪费。题目是对原文信息的简单归纳与总结，所以答案为True。

33. 利用顺序原则定位于原文第三段第一句话"To understand why we have become so wasteful, we should look to the underlying motivation of consumers"，这里"the underlying motivation of consumers"对应题目中"the reasons for buying goods"。题目与原文是同意表达，所以答案为True。

34. 利用细节信息rent goods定位于原文第五段最后一句话"Rather than following our current wasteful practices, we will buy less and rent a lot more"，但是这里并没有提及人们现在是否已经"rent more goods than they buy"，而只是一个建议，所以题目信息在原文信息的基础上无法判断是True还是False，该题正确答案为Not Given。

35. 利用细节信息"repair goods"定位于原文第六段最后两句话"products which will be repaired rather than replaced"，"Companies will replace profit from bulk sales by servicing and repairing products chosen"。虽然这里提到公司会收取维修费用并以此牟利，但是却未提及是否会"charge less in the future"，所以题目信息在原文信息的基础上无法判断是True还是False，该题正确答案为Not Given。

Questions 36-40

36 & 37. 利用细节词"lighting"定位于原文第五段中间"It might be as simple as installing

energy-saving light bulbs, more efficient washing machines or choosing locally produced groceries with less packaging"。题目中"less energy"对应原文"energy-saving","lighting"对应原文"light bulbs",所以36题正确答案为D(laundry),对应原文"washing machines",37题正确答案为F(food)对应原文"groceries",且题目中"not need to be moved across long distances"对应原文"locally produced"。

38. 利用顺序性原则和细节信息"shared"定位于原文第五段倒数第二句话"Instead of buying a second car, for example, we might buy into a car-sharing network",所以该题正确答案为H(cars)。

39. 利用顺序性原则和细节信息"rented"定位于原文第五段最后一句话"we will buy less and rent a lot more; why own things such as tools that you use infrequently",所以该题正确答案为C(tools)。

40. 利用顺序性原则和细节信息"recycled"定位于原文第六段第二句话"Electronic goods such as mobile phones will be designed to be recyclable",所以该题正确答案为A(mobile phones)。

参考译文

更耐用的设计:更好的设计能治愈我们的丢弃型文化吗?

英国布莱顿大学的高级讲师乔纳森·查普曼是"耐用设计者"中的一员。和我们大多数人一样,他们对西方社会消费文化中所产生的大量废弃物及其对自然造成的危害感到担忧。有些人,例如查普曼,志在创造出我们愿意保留下来的物品而不是希望扔掉的物品。另外一些人则在努力创造更加有效率或耐用的消费产品,或者可以回收利用的产品。因为,我们与消费品之间过于短暂的关系所产生的浪费是巨大的。

家用电动工具,例如电钻,是浪费的一个典型例子。不管购买这些产品的人打算做多少的DIY,事实上,这些东西通常在使用十分钟后就被丢弃了。为了让良心过得去,它们大多被扔在车库的架子上以积累灰尘,因为人们不愿意承认自己浪费了金钱。但是,最终的结果却是不可避免的:被永久地遗弃在废物填埋场里。在设计、制造、包装、运输和废弃物处置中,一个电动工具会消耗掉比自己的重量重许多倍的资源,而它的使用寿命却比一般的小昆虫更短。

为了更好地理解人类为何会如此浪费,我们应当看看消费者的消费动机。"人们通过拥有物品来展示自己以及来显示自认为所属的群体,"查普曼说道。然而,在今天产品大批量生产的社会,这种象征意义已经基本上丧失了其效力。在人类历史长河中,人们与自己使用或珍视的物品都有着亲密的关系。他们通常自己创造了这些物品或把这些物品世代相传。对于更特殊的物品,人们通常依靠住在附近且为他们所熟知的专业人士来创

作。查普曼指出，所有的这些特点赋予了物品一定的历史感———一段故事——以及当今社会大规模生产的商品所不具备的情感纽带。没有了这些情感联系，消费主义文化转而崇尚新奇。虽然人们知道金钱买不来幸福，但是，用闪亮的、全新的产品重塑自我看起来却是如此的诱人。当这样的新奇感逐渐淡去时，人们只能通过购买更多的产品来补充这种兴奋感。

对此，查普曼提出了他称为“情感持久设计”的解决方案。他说，设计师面临的挑战是创造出我们想保存下去的产品。这听起来也许像是一个过分的要求，但实际上它却可以极其简单。例如，一条牛仔裤，被穿在身上并洗过一百次后才会有好的质感。就好像裤子分享了其使用者的生活经历一样。外形可能会如假包换，但绝不是相同的东西。英国萨里大学的客座教授沃尔特·施塔尔称之为“泰迪熊效应”。无论我们心爱的泰迪熊变得多么破旧，我们都不会急着买一个新的。对于成年人来说，泰迪熊联系着我们的童年，这让我们永远都不会觉得它过时。施塔尔认为，这才是耐用型设计需要关注的地方。

信息时代本应使我们经济上更节约，并减轻我们对环境的影响，但实际情况却正好相反。人们只是简单地在工业时代加入了信息技术，提高了世界物质代谢的速度。解决的办法一点儿也不复杂：最大限度地减少浪费、减少物质迁移以及更多地使用人力。那么，后丢弃型消费主义模式是什么样的呢？简单说来，可能就是安装节能灯泡、使用高效率洗衣机或选择本地生产的简装食物。这样，我们会减少商品的花费，增加服务开销。例如，我们可以通过付费加入汽车共享网络，而不必去购买一辆二手车。和当前浪费严重的生活模式不同的是，我们会买得更少，租得更多。为什么一定要拥有那些很少使用的工具呢？尤其是这些东西无时无刻不在更新换代。

耐用消费品将逐渐结合相关回收计划一同被出售。例如，手机等电子商品会被设计成可回收使用的产品，该额外费用会算在零售价之中。按照查普曼的“情感持久设计”理论，消费趋势将会从大宗商品转向特制产品、更具工艺特色的制造品，以及那些可修补而不必替换的产品，就像我们祖辈的消费模式一样。由于人们希望能更持久地使用产品，生产商将通过提供服务和维修来获得利润，而不是通过批量销售来盈利。

查普曼承认，说服人们减少购买商品转而购买耐用商品是件具有挑战性的事。就目前而言，零售商之间的价格竞争使得可替代产品的消费价格低于可修复产品的价格。

能持久使用的并能满足我们情感需要的产品似乎更为昂贵，那么怎样才能说服人们选择持久性产品呢？来自英国谢菲尔德哈勒姆大学的蒂姆·库珀指出，已经有人开始乐于为产品品质出更高的价钱，而且他们也更加看重和关注昂贵的商品。查普曼对此也比较乐观，他说道：“人们已经做好持久使用商品的准备了，问题是大部分生产商不知道该怎么做。”查普曼认为持久性设计的产品已经存在于生活中了。他说，“大企业纠结于是否加入持久性产品潮流的日子即将结束了。”不过，这是否意味着丢弃型社会开始走向终结还有待观察。

Test

Reading Passage 1. Alfred Nobel

题目详解

Questions 1-6

解答

1. 利用细节信息“1895”和顺序性原则很容易定位到原文第一段。原文开头明显提到诺贝尔奖是从 1901 才开始颁奖的（“Since 1901, the Nobel Prize has been honoring men and women from all corners of the globe...”），而不是 1895。1895 年是诺贝尔写遗嘱和奠定诺贝尔奖基础的时间。题目信息与原文信息不相符，所以答案为 False。
2. 利用细节信息“Nobel's father”和“education”定位于原文第二段中间“There, his sons were given a first class education by private teachers...”。原文这里只提到诺贝尔的父亲为其提供了最好的教育，但是并未提及此教育是否比自己接受的教育好。题目信息在原文信息的基础上无法判断，所以答案为 Not Given。
3. 利用细节信息“businessman”定位于原文第五段第一句话“...Alfred Nobel also proved himself to be a very skillful entrepreneur and businessman”。原文这里明显提及诺贝尔是一个成功的企业家和商人，而题目却说其“unsuccessful”。题目信息与原文信息正好相反，所以答案为 False。
4. 利用细节信息“Bertha von Suttner”以及“first peace prize”定位于原文第六段最后一句话“Several years after the death of Alfred Nobel, the Norwegian Storting (Parliament) decided to award the 1905 Nobel Peace Prize to Bertha von Suttner”。原文这里明显提到“Bertha von Suttner”是在诺贝尔死后由挪威国会选出并授予其和平奖的，而不是诺贝尔本人。题目信息与原文信息不相符，所以答案为 False。
5. 利用细节信息“Nobel Foundation”和“the death of Nobel”定位于原文倒数第二段信息，

这里明显提及诺贝尔死于 1896 年，当遗嘱打开时，人们都为其内容感到吃惊，遗嘱要求将他的所有遗产应用于奖励诸多领域的杰出人物，然后他的遗嘱执行人设立了"Nobel Foundation"。题目信息与原文信息为同意表达，所以答案为 True。

6. 利用顺序性原则定位于原文最后一段第二句话 "Nobel was very interested in social and peace-related issues and held what were considered radical views in his era"。题目信息 "social involvement" 对应原文 "social and peace-related issues"，"uncommon" 对应原文 "radical"。题目信息是原文信息的同意表达，所以答案为 True。

Questions 7-13

解答

7. 利用细节信息 "sent him abroad" 定位于原文第三段第一句话 "In order to widen Alfred's horizons his father sent him abroad for further training in chemical engineering"，所以该题正确答案为 chemical engineering。

8. 利用细节信息 "Paris" 和 "nitroglycerine" 定位于原文第三段第三行 "In Paris, the city he came to like best, he worked in the private laboratory of Professor T. J. Pelouze, a famous chemist. There he met the young Italian chemist Ascanio Sobrero who, three years earlier, had invented nitroglycerine, a highly explosive liquid"。题目信息 "came in contact with" 对应原文 "met"，所以正确答案为 Ascanio Sobrero。

9. 利用顺序性原则和细节信息 "more powerful" 定位于原文第三段中间 "...its explosive power greatly exceeded that of gunpowder..."。题目信息 "more powerful" 对应原文 "greatly exceeded"，所以正确答案为 gunpowder。

10. 利用顺序性原则和细节信息 "banned"，"city"（可以确定答案填城市名），定位于原文第四段第三句话 "They forbade further experimentation with nitroglycerine within the Stockholm city limits..."。题目信息 "banned for experiments" 对应原文 "forbade further experimentation"，所以该题正确答案为 Stockholm。

11 & 12. 利用细节信息 "dynamite" 和顺序性原则定位于原文第四段倒数第四行 "To be able to detonate the dynamite rods he also invented a detonator (blasting cap) which could be ignited by lighting a fuse. These inventions were made at the same time as the pneumatic drill came into general use"。题目信息 "along with" 对应原文 "also invented"，"in the meantime" 对应原文 "at the same time"，"became popular" 对应原文 "came into general use"。所以正确答案分别为 detonator 和 pneumatic drill。

13. 利用顺序性原则和细节信息 "lowered" 定位于原文第四段最后一句话 "Together these inventions drastically reduced the cost of blasting rock, drilling tunnels, building

canals and many other forms of construction work"。题目信息"lowered"对应原文"reduced"，所以正确答案为 cost。

参考译文

阿尔弗雷德·诺贝尔

诺贝尔奖背后的人

自 1901 年，全球各地在物理、化学、医学、文学及和平领域作出重大贡献的人们就开始被授予诺贝尔奖。阿尔弗德·诺贝尔在 1895 年写下最后的一份遗嘱时，将大量的遗产留作创建诺贝尔奖，为诺贝尔奖奠定了基础。

阿尔弗雷德·诺贝尔于 1833 年 10 月 21 日出生于斯德哥尔摩。他的父亲伊曼纽尔·诺贝尔是位工程师兼发明家，在斯德哥尔摩建造桥梁和建筑。在建筑工程中，伊曼纽尔·诺贝尔也试验过用不同的技术爆破岩石。由于在工业和企业经营上的成功，伊曼纽尔·诺贝尔于 1842 年带着全家人来到圣彼得堡。在那里，他雇请私人教师对他的孩子进行一流的教育。上课内容包括自然科学、语言和文学。到 17 岁时，阿尔弗雷德·诺贝尔已经能讲流利的瑞典语、俄语、法语、英语和德语了。他主要的兴趣是英国文学和诗歌以及化学和物理。诺贝尔的父亲希望他的儿子们能成为工程师，继承他的事业，所以他对诺贝尔爱好诗歌这一点感到很不悦，而且他发现诺贝尔相当内向。

为了扩大儿子的视野，老诺贝尔送儿子出国深造化学工程。诺贝尔在两年里访问了瑞典、德国、法国和美国。他最喜欢巴黎，在那里，他在著名的化学家 T·J·佩卢兹教授的私人实验室工作。同样在那里，他认识了年轻的意大利化学家阿斯卡尼奥·索布雷罗。索布雷罗在三年前发明了爆炸能力极强的炸药——硝化甘油。不过由于危险太大，当时没有考虑将它投入实际应用。虽然硝化甘油的爆炸力远远超过火药，但这种液体炸药在一定温度和压力的作用下会以难以预测的方式发生爆炸。诺贝尔对硝化甘油以及如何将它投入建筑工程的实际运用产生了浓厚的兴趣。他也意识到需要解决安全问题，以及如何控制硝化甘油的爆破。

于 1863 年重返瑞典后，诺贝尔开始专注于制造硝化甘油炸药。经历几次爆炸事故（包括 1864 年那次事故，他的弟弟埃米尔和其他几个人被炸死）后，当局认定硝化甘油产品极度危险，于是明令禁止在斯德哥尔摩进行硝化甘油试验。诺贝尔只好把他的实验搬到梅拉伦湖的一只船上进行。诺贝尔并没有因此气馁，并于 1864 年开始大规模生产硝化甘油。为了使硝化甘油的使用更加安全，诺贝尔用了不同的添加剂进行试验。不久后，诺贝尔发现硝化甘油可被硅藻土吸附，变成浆糊，然后可以塑造成大小合适的棒体，插进钻孔里。1867 年，他将发明的炸药命名为"达那马特"（又称安全炸药），并取得专利。为了引爆这种炸药，他还发明了用导火线点燃的雷管引爆装置。诺贝尔的这些发明问世时，恰逢风钻在大规模地被使用。这些装置的结合大大地减少了爆破岩石、开凿隧道、挖掘

河道以及其他许多建筑工程的成本。

诺贝尔发明的炸药和雷管的市场发展迅速，而这也证明了他是一个非常成功的企业家和商人。多年来，诺贝尔在20多个国家约90个不同的地方建立了工厂和实验室。尽管定居巴黎，但是他大部分的时间都在各地奔波。如果不是在外奔波或为商业活动应酬，诺贝尔就会在他的各个实验室（先是在斯德哥尔摩的，后来在其他地方）忙碌工作。他专注于改良爆炸技术以及其他化学发明，包括合成橡胶和皮革、人造丝等物质。到1896年诺贝尔逝世时，他已获得355项专利。

紧张的工作和出行使得他没有多少私人时间。到43岁时，诺贝尔觉得自己就像是个老人。于是他在报纸上刊登了一则广告，称“一个富有的、受过良好教育的老绅士寻找一位成熟女士，她要能担当秘书和管家，且有语言天赋”。结果，最合格的应聘者是奥地利的女伯爵贝莎·金斯基。在为诺贝尔工作了很短的一段时间后，她决定返回奥地利，与阿瑟·冯·苏特纳伯爵结婚。尽管如此，诺贝尔和贝莎·冯·苏特纳仍保持朋友关系，且在此后的几十年里互有通信。多年来，贝莎·冯·苏特纳越发猛烈地批评军备竞赛。她写了一本名著《放下你的武器》，还成为了和平运动的一个杰出人物。这无疑对诺贝尔产生了影响。在他的最后一份遗嘱里，诺贝尔增设了和平奖，以奖励那些促进和平的个人或团体。在诺贝尔去世的几年后，挪威议会决定把1905年的诺贝尔和平奖授予贝莎·冯·苏特纳。

诺贝尔于1896年12月10日在意大利的圣雷莫去世。当打开他的遗嘱时，人们大吃一惊，他们没有想到诺贝尔会把大量遗产留作表彰那些在物理、化学、生理学或医学、文学和和平方面做出重大贡献的人。诺贝尔的遗嘱执行人是两位年轻的工程师，他们分别是拉格纳·索尔曼和鲁道夫·利耶奎李维斯特。他们着手成立诺贝尔基金会，来管理诺贝尔留下的金融资产，并协助颁奖机构的工作。当然，由于这份遗嘱受到诺贝尔亲戚的异议以及各国当局的质疑，他们开展的工作还是遇到了困难。

诺贝尔的伟大之处在于他综合了科学家、发明家的睿智和实业家的高瞻远瞩。同时，他对社会及与和平相关的问题非常感兴趣，并持有在他那个时代被认为是激进的想法。此外，诺贝尔十分爱好文学，还创作了自己的诗歌和戏剧作品。可以说，诺贝尔奖是他毕生各种兴趣的延伸和实现。

Reading Passage 2. Bird Migration

题目详解

Questions 14-20

思路

这种题型忌讳寻找主题句或中心句，因为每个人对段落中心思想的判断通常不同，而且每个段落的首尾句也不一定是主题句或中心句，所以最好的解答方法应该是通过对每位考生都能读懂的标题进行反向思维，然后和段落内容进行比较，排除作答。

i. *The best moment to migrate*

如果某段落选这个标题，则该段落应该重点讲述鸟儿在冬天到来之前的什么时候或多久就开始迁徙，以及有什么可能的标志，例如第一片树叶落下或树叶变黄等等之类。

ii. *The unexplained rejection of closer feeding ground*

如果某段落选这个标题，则该段落应该讲到鸟儿迁徙到一个相对较近的地方就可以过冬，但它们却没有这样做，反而喜欢迁徙到较远的地方，这种现象是始料未及的。段落中除了对这种现象的描述之外，还可能有对这种现象的分析和解释。

iii. *The influence of weather on the migration route*

反向思维词：weather, migration route

如果某段落选这个标题，则该段落应该出现具体的天气状况以及不同的天气状况对鸟儿迁徙路线的影响，其中还可能出现具体的路线，也就是路线起止的地名等等。

iv. *Physical characteristics that allow birds to migrate*

反向思维词：physical characteristics

如果某段落选这个标题，则该段落应该具体提及鸟儿的一些生理特征，例如体型、羽毛，或解剖学特征，例如骨骼等，对飞行的影响。

v. *The main reason why birds migrate*

不容易进行反向思维，可以结合段落阅读进行判断。但是，可以猜测如果某段落选这个标题，则该段落应该在开头或结尾。

vi. *The best wintering grounds for birds*

反向思维词：wintering grounds

如果某段落选这个标题，则该段落应该出现具体的鸟儿过冬地点、具体的地名之类的列举，并陈述它们为什么是最好的等等。

vii. *Research findings on how birds migrate*

如果某段落选这个标题，则该段落应该出现关于鸟儿迁徙方面的一系列研究发现，还可能出现具体的对应的科学家或科学机构等等。

viii. *Successful migration despite trouble of wind*

反向思维词：wind

如果某段落选这个标题，则该段落应该会提及风，以及风对鸟儿迁徙的影响。

ix. *Contrast between long-distance migration and short-distance migration*

反向思维词：long-distance migration, short-distance migration

如果某段落选这个标题，则该段落应该出现具体的涉及距离的信息，也就是数字，并对两种迁徙进行比较。可以结合具体的比较句型进行判断。

x. *Mysterious migration despite lack of teaching*

反向思维词：teaching

如果某段落选这个标题，则该段落应该提及鸟儿没有学习却仍然能够成功迁徙的现象及可能的原因解析。

解答

14. ***Paragraph A.*** 该段落明显提及鸟类诸多生理和解剖结构上的特点利于鸟类飞行，例如“lightweight, hollow bones, intricately designed feathers”，“navigation systems superior to any that man has developed, and an ingenious heat conserving design”等等，并且其他标题的信息均未提及。所以正确答案为 iv。
15. ***Paragraph B.*** 段落开头便开章明义地提出鸟类迁徙的基本原因是为了食物，全段都是围绕这个内容进行阐述的。所以正确答案为 v。
16. ***Paragraph C.*** 段落开头提及标题 ii 的信息“rejection of closer feeding ground”，后面继续说到没有人知道这是为什么，并且举例说明。在段落后面继续提及这种现象的一个规律“the further north a migrant species breeds, the further south it spends the winter”。同时，其他标题信息也没有出现。所以正确答案为 ii。
17. ***Paragraph D.*** 该段落主要是讲鸟类不需要“parental guidance”便能够找到自己的“wintering areas”，然后以杜鹃鸟（cuckoo）举例说明这个现象，并在最后提出可能的解释“The obvious implication is that it inherits from its parents an inbuilt route map and direction-finding capability, as well as a mental image of what another cuckoo looks like”。该段落虽然出现“wintering grounds”信息对应标题 vi（The best wintering grounds for birds），但是并未提及什么样的地方才是鸟类最好的过冬之地，所以应该排除。于是，与该段落对应的唯一标题只有 x（Mysterious migration despite lack of teaching），“teaching”对应原文“parental guidance”，“mysterious”对应原文“One of the greatest mysteries”和“Yet nobody has the slightest idea as to how this is possible”。所以正确答案为 x。
18. ***Paragraph E.*** 该段落比较明显地提及了鸟类迁徙时辨别方向的机制，比如利用太阳和星星、利用地球磁场等等，这些信息都对应标题 vii（Research findings on how birds

migrate），虽然没出现具体的科学家或机构。段落最后提及的“Traveling at night provides other benefits”虽然对应标题 i（The best moment to migrate），但是该段落并不是主要在讲鸟类应该在晚上迁徙或应该在什么时间迁徙，而是主要讲鸟类如何在迁徙时辨别方向，所以应该排除。正确答案为 vii。

19. ***Paragraph F.*** 该段落开头提及“...part of the skill in arriving safely is setting off at the right time”对应标题 i（The best moment to migrate），次句又提及“weather”对应标题 iii（The influence of weather on the migration route），和“winds”对应标题 viii（Successful migration despite trouble of wind），但是全段只是在讲鸟类有能力对气候变化做出最及时的反应（“react to weather changes before there is any visible sign of them”），并藉此选择最佳的迁徙时刻，并未提及具体的不同天气状况怎样影响鸟类迁徙路线，也未具体讲风的内容，所以标题 iii 和标题 viii 都应排除。所以正确答案为 i。

20. ***Paragraph G.*** 段落以一个例子引出鸟类可以不受美洲和欧洲之间风的影响自由迁徙的事实，明显对应标题 viii（Successful migration despite trouble of wind），且其他标题信息都未提及，所以正确答案为 viii。

Questions 21-22

思路

这种多选多的选择题具有信息分散的特点，且通常具有归纳总结性特征，在雅思阅读中属于难题，所以应该放在做题顺序的最后，在其余细节题做完之后再来解答，此时更容易定位。做题过程中，只能对每一个选项进行原文定位，阅读原文信息并判断。

解答

选项 A 该信息明显对应 C 段落所述内容“many birds journey much further than would be necessary”，所以为正确选项。

选项 B 全文唯一提及“family”相关信息的地方是在 D 段落，但是这里并没有讲到“traveling in family groups”安全，只是提及鸟类没有父母指引仍然能寻觅到自己的过冬之地。全文唯一提及“safe”相关信息的地方是在段落 E，但是也没有讲到“traveling in family groups”安全，只是提及夜晚飞行相对安全，因为“Daytime predators are avoided and the danger of dehydration due to flying for long periods in warm, sunlit skies is reduced”。所以该选项应该排除。

选项 C 该信息对应 E 段落的倒数第二句话“the danger of dehydration due to flying for long periods in warm, sunlit skies is reduced”，也就是说夜晚飞行“need less water”。所以为正确选项。

选项D 原文虽然提及鸟类有较出色的身体构造，适合飞行，有比人类更敏锐的对天气变化感知的能力，有出色的认知方位的能力，但是却没有任何地方提及鸟类的“eye-sight”比人类出色，所以该选项应该排除。

选项E 原文G段落确实提及有些鸟类不会受到风的影响，可以自由横渡大西洋，原文只是说“each autumn a small number of North American birds...”，但是并未提及是只有“shorebirds”才能这样，所以该选项应该排除。

综上所述，正确答案为A，C。

Questions 23-26

23. 利用细节信息“young birds”，“cuckoos”和“wintering grounds”可以很容易定位到原文D段落第一句话“One of the greatest mysteries is how young birds know how to find the traditional wintering areas without parental guidance”，所以正确答案为parental guidance。

24. 利用细节信息“the sun and the stars”定位于原文E段落第一句话“Mounting evidence has confirmed that birds use the positions of the sun and stars to obtain compass directions”，所以正确答案为compass。

25. 利用细节信息“flying at night”定位于原文E段落倒数第二、三句话“Traveling at night provides other benefits. Daytime predators are avoided...”，所以正确答案为predators。

26. 利用细节信息“Laboratory tests”和“weather”定位于原文F段落“Birds are adept at both, and, in laboratory tests... birds react to weather changes before there is any visible sign of them”，所以正确答案为visible。

参考译文

鸟类迁徙

A 鸟类有许多独特的结构特征，使得它们表现出令人惊叹的耐久力。鸟类拥有极轻的体重、中空的骨骼、复杂的羽毛，这些为快速飞行提供了上升力和推动力。同时，鸟类还拥有比人类发明的任何导航系统都要优越的导航体系。此外，它精密的热保护结构会保证其温暖防水羽毛之下的血液循环的畅通，以便它们能够适应最恶劣的气候环境。鸟类必须具备极为高效的呼吸系统才能适应高空的持久飞行，因此，它们从肺部提取氧气的呼吸系统比任何其他物种的都高效得多。在食物丰富的夏季繁殖季后期，它们的体内会储存大量脂肪层，为它们长途迁徙飞行提供充足的能量。

B 鸟类迁徙主要是为了在冬季食物短缺时寻找到足够的食物。尤其是那些生长在北半球温带和北极圈地区的鸟类，因为这些地方只有在短暂的生长季节才会有充足的食物。在食物充足的情况下，很多鸟类都能忍受寒冷的天气，但当食物缺乏时，它们就不得不迁徙。然而，目前还存在一些令人不解的问题。

C 一个令人不解的现象是，很多鸟类的旅程距离远远长于它们为寻找食物和好天气所必需飞行的距离。例如，没人知道为什么本可以在非洲赤道区过冬的英国燕子非要不远千里飞到南非的开普省过冬。另一个谜团则是关于北极燕鸥以及在北极附近滩涂区哺育生活的水禽的大规模迁徙活动。通常，鸟类生活繁殖的地方越偏北，其冬季迁徙的地方就越偏南。对于北极燕鸥来说，它们每年的旅程长达 25,000 英里。但是，在飞往遥远的位于南纬度地区的目的地的途中，所有这些鸟类都会飞越许多地跨两个半球，看上去适合栖息的地区。虽然我们可能无法完全理解鸟类前往特定地区的原因，但是，我们也对鸟类游历世界的能力感到无比惊讶。

D 最大的谜团之一是幼鸟是如何在没有父母引导的情况下找到传统越冬之地的。成年的鸟类很少带领幼鸟一起迁徙，稚鸟甚至很少或者从没见过其父母。以布谷鸟（杜鹃）为例，它们将蛋产在其它鸟类的巢中，然后再也不会回去看望幼仔。让人惊讶的是，当小杜鹃在宿主家里长大后，它便会自己飞到其祖先在热带地区的越冬地，然后独自飞回北欧，寻找和自己同种类的配偶。这有力地说明了杜鹃能够从其父母那里继承内置的迁徙路线图和方向定位的能力，以及其他杜鹃鸟的外在长相的精神意象。然而，还没有人知道这究竟是怎么一回事。

E 越来越多的证据显示，鸟类能够利用太阳和星辰的方位来辨别方向。同时，它们似乎还能侦测地球磁场，这可能是由于鸟类脑部具有微小的磁性晶体的缘故。不过，真正的导航还需要对位置和时间的认知，特别是在迷路的时候。实验表明，当鸟儿被带出数千英里，跨越陌生的大陆板块之后，它们仍能迅速地回到自己的巢址。这种惊人的能力是对大量复杂的线索进行精密计算的结果，包括天生的夜空星图和地球磁场的拉力。鸟类是如何运用它们的“工具”的，我们还不得而知，但有一点是显而易见的：它们用比人类更高级的感官知觉来观察这个世界。大部分幼鸟在夜间进行迁徙，并通过日落的位置辨别方位。但是，当它们观察日落时，似乎还能观测到日落带来的偏极光，从而矫正它们的方位。夜间飞行还有其他好处。鸟类可以避开昼行食肉动物，并减少温暖日照下长时期飞行带来的脱水危险。此外，夜间的空气通常较为凉爽，很少有空气湍流，这有利于持续稳定的飞行。

F 然而，所有的旅程都暗含着危险，要想安全到达，其中一个要诀就是在正确的时间出发。这意味着要能准确地预测天气，并能合理地利用风向。鸟类从出生伊始就精通此道了。实验室测试还发现，有些鸟类甚至能够辨别出房间中天花板和地面之间气压的细微差别。通常，鸟类在有明显征兆前就能感应到即将发生的天气变化。鸟

头麦鸡，一种生活在草原的鸟类，能够在寒流到来前从荷兰向西飞到不列颠群岛、法国和西班牙。当地表结冰时，它们可能会饿死。在冰雪消融之前，鸟儿们会再回到荷兰，它们是通过气压变化来预测天气转变的。

G 以威尔士马恩岛海鸥为例，它们被带到美国，然后再被释放，但是，在宣布被释放的消息之前，它们就已经飞回自己的住所——彭布罗克郡海岸线外的斯科克霍尔姆（Skokholm）岛了！相反地，每个秋天都会有少量的北美鸟类被快速移动的西尾风刮到大西洋的另一边。它们不仅安全地到达了欧洲，而且越来越多的证据显示，其中一些可能还和欧洲候鸟们一起去了阳光充沛的非洲地区过冬，然后才在次年春天飞回北美。

Reading Passage 3. The Ingenuity Gap

题目详解

Questions 27-30

解答

27. 利用顺序性原则很容易定位于原文开头第一段“Ingenuity, as I define it here, consists not only of ideas for new technologies...but, more fundamentally, of ideas for better institutions and social arrangements...”。选项C很明显与此内容直接对应，所以正确答案为C。

28. 利用顺序性原则和细节信息“requirement”定位于原文第二段“How much and what kinds of ingenuity a society requires depends on a range of factors, including...an easy climate or a punishing one, whatever the case may be”。选项A很明显与此内容直接对应，所以正确答案为A。

29. 利用顺序性原则和细节信息“social wealth”定位于原文第四段第二句话“We know that the creation of wealth, for example, depends not only on an adequate supply of useful ideas but also on the availability of other, more conventional factors of production, like capital and labor”。选项D也很明显与此内容直接对应（原文信息“conventional factors of production”对应选项D中的“traditional resources”），所以正确答案为D。

30. 利用顺序性原则和细节信息“stability of society”定位于原文第四段第三句话“Similarly, prosperity, stability and justice usually depend on the resolution, or at least the containment, of major political struggles over wealth and power”。选项B的信息对应此处原文内容（原文“political struggles over wealth and power”对应题目中的“disputes”），所以正确答案为B。

Questions 31-33

解答

31. 利用细节信息“incremental change”和“last 100 years”很容易定位于到原文第五段前两句话“The past century's countless incremental changes in our societies around the planet...have accumulated slowly, it's often hard for us to recognize how profound and sweeping they've been”，这里作者明显提及这些变化是缓慢积累的，以至于人们往往忽略这些变化和它们的重要性，选项 B 刚好对应这个信息，所以正确答案为 B。

32. 按照顺序性原则和细节信息“The combination of changes”定位于原文第六段第一句话“In combination, these changes have sharply increased the density, intensity, and pace of our interactions with each other”，这里作者尤其提及这些变化增加了人们之间互动的“pace”，对应选项 B 的“faster”，所以正确答案为 B。

33. 利用细节信息“natural systems”定位于原文第八段“Many of the natural systems... they are often very sensitive to the smallest of changes and perturbations, and their behavior can flip from one mode to another suddenly and dramatically”。与此信息直接对应的为选项 C（“minor alterations”对应原文“smallest of changes and perturbations”，“change dramatically”对应原文“flip from one mode to another suddenly and dramatically”），所以正确答案为 C。

Questions 34-40

34. 利用细节信息“the past 100 years”定位于原文倒数第四段第一句话“the last century's stunning changes in our societies and technologies have not just increased our need for ingenuity; they have also produced a huge increase in its supply”，很明显原文这里提及过去的一个世纪（对应题目“the past 100 years”）里，我们社会和技术的变化不仅增加了我们对“ingenuity”的需求（对应题目“the demand for ingenuity has been growing”），同时还增加了供给。题目与原文是同意表达，所以答案为 True。

35. 利用顺序性原则和细节信息“solving problems at hand”定位于原文倒数第三段第三行“we can't always rely on the right kind of ingenuity appearing when and where we need it”和最后“...makes it hard to supply the ingenuity we need to solve problems associated with these systems”。原文明显提及我们的“ingenuity”不一定是“the right kind”（对应题目“inappropriate”），而且也不能够解决我们的问题。题目与原文是同意表达，所以答案为 True。

36. 利用细节信息“the complex systems of the present world”定位于原文倒数第三段中间“In many cases, the complexity and speed of operation of today's vital economic, social, and ecological systems exceed the human brain's grasp. Very few of us have more than a

rudimentary understanding of how these systems work"，也就是说这些系统如此之复杂，以至于往往超出人脑的理解范围，所以很少有人能有"a rudimentary understanding"。题目与原文是同意表达，所以答案为 True。

37. 利用细节信息"More information"和顺序性原则定位于倒数第二段最后一句话"The crush of information in our everyday lives is shortening our attention span, limiting the time we have to reflect on critical matters of public policy, and making policy arguments more superficial"，这里明显提及过多的信息往往会带来负面效果。题目信息与原文信息正好相反，所以答案为 False。

38. 按照顺序性原则往下找，可是根本找不到任何关于"next generation"和"the current government"之间的信息。题目信息无法在原文信息的基础上进行判断，所以答案为 Not Given。

39. 利用细节信息"Science tends to develop faster"定位于原文最后一段中间"And science's rate of advance depends on the characteristic of the natural phenomena it investigates, simply because some phenomena are intrinsically harder to understand than others, so the production of useful new knowledge in these areas can be very slow"。原文的意思是说科学的进步速度和它研究对象的特征相关，有些现象或领域就是比其他的现象或领域难，当然进步也就更加缓慢，这也就是说某些领域的科学发展会比其余领域快一些。题目信息是原文的简单归纳与推理，所以答案为 True。

40. 利用细节信息"social science"和顺序性原则定位于原文最后一段最后一句话"Progress in the social sciences is especially slow, for reasons we don't yet understand; but we desperately need better social scientific knowledge to build the sophisticated institutions today's world demands"，原文明显提及社会科学发展缓慢的原因目前尚未明确，同时肯定了社会科学的重要性（原文"we desperately need better social scientific knowledge"）。题目信息与原文信息正好相反，所以答案为 False。

参考译文

创造的空白

创造，就像笔者在这里定义的一样，不仅仅指那些关于计算机、抗旱作物之类的新科技的构想，更重要的是指那些关于优化制度和社会安排的思想，例如高效市场、法定政府等。

一个社会需要多少创造及哪种创造，取决于多种因素，包括社会目标和达成这些社会目标时所处的社会环境——无论它是年轻型社会还是老龄化社会；是自然物资丰富或是物资匮乏；是气候宜人或气候恶劣。

一个社会能提供多少或何种创造，同样取决于众多因素，例如人类创造和理解的本性、有用知识的制造者所获得的经济回报、以及社会制度改革的政治反对派的力量等。

充足优质的创造非常重要，当然这还不够。例如，我们知道财富的创造不仅取决于充足的、有价值的创意，还需要更多其他传统生产因素，如资本和劳动力。同样，繁荣、稳定、公正通常取决于对财富和权力的重大政治斗争的决议，或者至少是针对它们的遏制政策。然而目前，我们的经济创意常常将劳动力排挤在外，随着创意的增长，机器设备实体通常也随之增长。在现有的政治体系中，我们需要更多的创意来建设社会制度，从而成功地管控财富和权力斗争。很明显，我们的经济政治进程正紧密地与这些创意产物结合在一起。

过去的一个世纪中，在我们的整个社会范围、科技领域和我们与周围自然环境的互动中产生的不计其数并不断增加的变化，已经积累到了足以创造一个高品质的新世界。由于这些变化是慢慢积累起来的，所以我们通常很难认识到它们所影响的深度与广度。这些变化波及了更广泛、更密集的人群，它们使得人均自然资源消耗变得更高，并提供了更有效、更广泛的交通运输技术，尤其是信息传播技术。

总的来说，这些变化已经大大增加了我们彼此互动的深度、强度和速度；但也显著增加了人类对自然环境造成的负担；同时也促使人类社会将权力从国家和国际组织转移到个人和群体组织中，例如特殊政治利益和民族派别。

因此，来自不同领域的人们——从政治经济领袖到我们日常生活中的普通人——必须应对更为复杂、紧迫、甚至不可预料的社会环境。我们需要大量的、不断增长的社会和技术创新来处理我们与新世界的关系。当人类努力保持或增强社会繁荣、提高生活质量时，我们必须在比以往更短的时间内做出更精确的决策。

从汽车到环球金融网络，我们在提升任何一个体系的效能时，都会不由自主地把它复杂化。人类赖以生存的自然环境体系通常也是相当复杂的，例如全球气候和海洋。由于这些复杂体系对微小扰动极其敏感，系统表现可以从一种模式急剧切换到另一种模式，所以人类很难精确预测它们的各种变化。通常，当我们赖以生存的人造体系和自然体系越来越复杂时，当我们对这些生存体系的要求越来越多时，我们用来控制这些体系的制度和科技也会越来越复杂，而这些则会进一步增强我们对创意的需求。

好消息是，在社会与技术发生巨大变革的上个世纪中，我们不仅增加了对创意的需求，也创造出了大量的创意。随着人口的增加、城市化进程的加速，新的通讯和物流技术也迅速增长，这大大拓展了人与人之间的交流，并催生了更广泛、更综合、更高效的市场。反过来，这些变化在很大程度上也加速了这个创意时代的思潮解放。

但是——用批判的眼光来看——我们不能直接得出结论说，我们的创意能一直跟上需求的脚步：虽然说需求是创造之母，但我们不能总指望在我们有需要的时候，恰好就

有相应的创造产生。今天，在许多情况中，经济、社会、生态系统运转的复杂性和速度，都远远超出了人类大脑的应变范围。大部分人对这些系统的运转原理都知之甚少。人们仍然充满了数不胜数的“未知的未知”，这些未知使得人们很难创造出充足的创意来解决生活体系中的种种问题。

本书中，笔者研究分析了那些可能在新世纪中制约我们设计创意能力的各种因素。例如，许多人认为新的信息技术增强了社会民主性，并使得人们解决社会群体事件变得更容易，但事实似乎并非如此。日常生活中的信息拥塞反而分散了我们的注意力，减少了人们对公共政治等重要事件的思考时间，并使得政治观点更加表面化。

现代市场和科学是我们创意设计的重要组成部分。市场的重要性在于，它为企业家创造知识提供了经济动力。对于科学来说，尽管似乎没什么理论限制，但在实践环节上的制约会减缓科学的实现进程，至少在今后一段时间内都会如此。随着科学研究的深入，其成本也在逐渐上升。同时，科学的进步速率取决于人们研究的自然现象的特征，有些现象或领域就是比其他的现象或领域难，所以这些领域中的知识进步会非常缓慢。因此，在人们发现问题到提供解决问题的创意或技术之间，通常会有一段很长的滞后期。由于某些未知的原因，社会科学的进步尤其缓慢；但我们迫切需要更好的社会科学理论，以建立起符合现代世界需求的庞大制度体系。

Test

Reading Passage 1. Man or Machine?

题目详解

Questions 1-7

思路

"Which paragraph contains the following information?" 这种题型对大多数考生来说是最费事、最难解的，但是该题型却总是文章的第一组题。正确处理这种题型的策略是把该题型放在最后去做，解答时多利用反向思维和下位词进行思考。

解答

1. 利用反向思维词 "different uses" 可以推断原文对应信息应该提及具体的机器人的使用，例如替代人类工作、照顾老年人、机械战士等等。原文对应信息位于 E 段落中间 "Humanoid robots could have a plethora of uses in society, helping to free people from everyday tasks. In Japan, ..."，后面还具体提及了机器人可以做的工作，例如 "fire-fighters, astronauts or medical assistants to the elderly in the workplace and in homes"，所以正确答案为 E。
2. 利用反向思维词 "artistic work" 可以推断原文对应信息应该提及具体的艺术创作，例如绘画、音乐、舞蹈等方面的信息。原文对应信息位于 A 段落最后三句话 "Yet watching ASMIO perform at a show in Massachusetts it seemed uncannily human. The audience cheered as ASIMO walked forwards and backwards, side to side and up and downstairs. It can even dance to the Hawaiian Hula"，此处提及 ASIMO 在这里进行各种表演，尤其是夏威夷呼拉舞，对应题目信息 "artistic work"，所以正确答案为 A。
3. 利用反向思维词 "an adult" 可以推断原文对应信息应该提及一个具体的人物，甚至还可能出现姓名。原文对应信息位于 C 段落第二句话 "Cog has a head, eyes, two arms, hands and a torso — and its proportions were originally measured from the body of a

researcher in the lab"，这里提及"Cog"机器人是按照"a researcher"的身体比例制作的，对应题目信息"modelled on an adult"，所以正确答案为 C。

4. 利用反向思维词"two different types of robots"可以推断原文对应信息应该提及两类具体的机器人或名称。原文对应信息位于 D 段落，原文说 ASIMO 不是智能机器，不能"interact autonomously with unpredictabilities in its environment"，而 Cog 和 Kismet 却可以。所以正确答案为 D。
5. 利用反向思维词"negative effects"可以推断原文对应信息应该提及具体的机器人带来的负面影响，例如机器人叛乱，Terminator，Matrix 等等。原文信息位于 F 段落最后一句话"On the other hand, the aim to create a robot like a human being is spurred on by dehumanised ideas...that humans lose their humanity when they interact with technology"，这里的"dehumanised"和"lose their humanity"都对应题目信息的"negative effects"，所以正确答案为 F。
6. 利用反向思维词"first"可以推断原文对应信息应该出现与时间有关的内容。原文对应信息位于 G 段落第二句话"In Karel Capek's *Rossum's Universal Robots*, a 1921 play in which the term 'robot' was first coined..."，这里明显提及"robot"这个词是 Karel Capek 在 1921 年的一个舞台剧中最先创造出来的，所以正确答案为 G。
7. 不太好进行反向思维的思考，但是不难发现该题目也对应 F 段落的信息，尤其是最后一句话"...human companionship can be substituted by machines...we are little more than surface and ritual behaviours, that can be simulated with metal and electrical circuits"，所以正确答案为 F。

Questions 8-13

解答

8. 利用细节信息"years"很容易判断答案为一数字，同时利用顺序性原则定位于原文 A 段落的第三句话"After 17 years in the making, ASIMO..."，也就说制造 ASIMO 用掉了 17 年的时间，所以正确答案为 17。
9. 利用细节信息"controlled through a computer"定位于原文 A 段落的倒数第四句话"The robot cannot work autonomously — its actions are 'remote controlled' by scientists through the computer in its backpack"，这里明显提到这个电脑是安装在背包里，所以正确答案为 backpack。
10. 利用顺序性原则和细节信息"MIT"和"imitate human behavior"定位于原文 B 段落第一句话"...for the past 10 years scientists at MIT's former Artificial Intelligence (AI) lab (recently renamed the Computer Science and Artificial Intelligence Laboratory, CSAIL) have been making robots that can behave like humans and interact with humans"，这里

"behave like humans" 对应题目信息 "imitate human behavior"，所以正确答案为 interact。

11. 利用顺序性原则和细节信息 "express its own feelings" 定位于原文 B 段落第三句话 "It has several facial expressions, including happy, sad, frightened and disgusted"，这里 "happy, sad, frightened and disgusted" 对应题目信息 "feelings"，所以正确答案为 facial expressions。

12 & 13. 利用顺序性原则和细节信息 "learn from its environment" 定位于原文 C 段落第三句话 "The work on Cog has been used to test theories of embodiment and developmental robotics, particularly getting a robot to develop intelligence by responding to its environment via sensors, and to learn through these types of interactions"，也就是说 Cog 可以通过感应器和自然界 "交流" 并进行学习，并藉此获得智能，所以正确答案为 Cog 和 intelligence。

参考译文

人还是机器?

麻省理工学院的类人机器人展现了人类的创造力及现代的悲观情绪。

类人机器人曾是政治和科幻小说里的内容。如今，日本和美国的科学家将虚构转化成了现实。

A 2003 年 7 月，马萨诸塞州剑桥市的科学博物馆展出本田汽车公司宣称的 "世界上最先进的类人机器人" ——阿西莫（意为 "高级步行创新移动机器人"）。本田公司的心血结晶在北美巡演，所到之处大受欢迎。耗时 17 年研发的阿西莫身高四英尺，体重大约 115 磅，看上去就像是一个身穿宇航服的小孩。尽管从远处难以看到阿西莫的脸，但近距离观察却能看到它有一张笑脸和两只大 "眼睛"，眼中还藏着摄像头。这个机器人不能自动运作，科学家通过它背部的计算机遥控它的行动。从阿西莫在马萨诸塞州展会上的表演，可看出它与人类惊人地相似。群众一边欣赏着阿西莫前后、左右行走以及上下台阶的动作，一边欢呼着。阿西莫甚至可以跳夏威夷草裙舞。

B 在日本人解决人类动力学和双足运动的一些工程问题方面取得巨大进展的同时，来自麻省理工学院前人工智能实验室（最近改名为计算机科学与人工智能实验室，简称 CSAIL）的科学家在过去十年里一直在研发能与人类互动的类人机器人。他们研发的机器人中有一个名叫 "命运"（Kismet），它有头、两只眼睛（包括眼睑）、耳朵、嘴巴和眉毛。它能做一些面部表情，包括开心、悲伤、恐惧和厌恶。人们可以读懂它的一些面部表情，从而常常可以根据这些表情来改变对它的行为。例如，在它看上去伤心的时候，可以跟它一起玩。如今这个机器人在麻省理工学院的博物馆里，不过，研发新的机器人可以从它那里得到启发。

C 机器人“Cog”是麻省理工学院前人工智能实验室的另一杰作。“Cog”有头、眼睛、两条胳膊、两只手和一副躯干，各部分的比例是参照该实验室中一个研发者的身体尺寸。“Cog”机器人的研发是为了检验化身理论和可进化机器人技术，尤其是关于怎样让机器人通过利用感应器对环境做出反应以及在这些（与环境的）互动中学习来开发智能。这个开发人工智能的方法是由一支学生和研发者团队想出并开发的，该团队是由麻省理工学院前人工智能实验室的负责人罗德尼·布鲁克斯带领的。这个方法标志着一个全新的发展。

D 麻省理工学院正进一步研发可互动的类人机器人。一些科学家认为，阿西莫是一项伟大的工程成就，但是阿西莫不能算是智能机器，因为它不能对不可预测的环境作出有意义的自主反应，也不能吸取经验。而像麻省理工学院的实验室研发的“Cog”和“命运”（Kismet）这样的机器人以及其他新机器人却能够开始这么做了。

E 这些是让人兴奋的发明。创造能够行走、做姿势且能从环境中学习的机器是一项了不起的成就。想象一下：这些成就可能会快速趋近完善。在社会中，类人机器人可以得到广泛的运用，从而帮助人类从日常劳动中解脱出来。例如，日本人有志于研发能做普通人做的事的机器人，它们要能够在更复杂的情况下作出反应，就像在工作场所或家里的消防员、宇航员或照顾老人的医护人员那样——部分原因是希望以此来应对老龄化所带来的负面影响。

F 这些潜在的创意计划背后还有去人性化的一面。例如，用机器替代人类暗示着人际关系的机械化及退化。一方面，这些发展代表人类的创造力，即我们发明、试验并且扩大控制世界的能力；而另一方面，创造类人机器人的目标受到了去人性化思想的驱动，认为人类的伙伴关系可以由机器代替；认为人类在与技术互动时会丧失人性；或者认为人类行为只不过是可以通过金属和电路模拟的肤浅的例行行为。

G 长久以来，人们一直在对机器人去人性化和创意这两方面之间的紧张关系进行文化上的探讨。在卡雷尔·卡佩克 1921 年的戏剧《罗苏姆的全能机器人》里，第一次出现了“机器人”一词。尽管卡佩克的机器人有着类人的外表和行为，但这个戏剧家却从不认为这些机器人属于人类。对于卡佩克来说，人之所以为人，不仅仅是外表看上去像人。从某种程度上来说，这关乎挑战去人性化的机制，争取得到认可，并获得机器所没有的尊严。类似的精神将很好地引导我们进行 21 世纪的机器人实验。

Reading Passage 2. California's Age of Megafires

题目详解

Questions 14-18

14. 利用顺序性原则和细节信息 "unpredictable manner"，"raging heat" 和 "faster speed" 定位于原文第一段最后一句话 "The wildfires themselves, experts say, generally are hotter, move faster, and spread more erratically than in the past"，这里原文信息"erratically" 对应题目信息 "unpredictable manner"，所以正确答案为 spread。

15. 利用顺序性原则定位于原文第二段第一句话 "Megafires, also called 'siege fires,' are the increasingly frequent blazes that burn 500,000 acres or more — 10 times the size of the average forest fire of 20 years ago"，原文明显提及现在大火的规模是过去的 10 倍，所以正确答案为 10 times。

16 & 17. 利用顺序性原则和 "climate change" 定位于原文第三段第一、二句话 "The short-term explanation is...less rainfall than normal this year. Longer term, climate change across the West is leading to hotter days on average and longer fire seasons"，这里 "less" 对应题目信息 "below the average"，"longer" 对应题目信息 "extended"，所以正确答案分别为 rainfall 和 fire seasons。

18. 利用顺序性原则和细节信息 "government policy" 和 "underbrush" 定位于原文第三段最后两句话 "a century-long policy...The unintentional consequence was to halt the natural eradication of underbrush, now the primary fuel for megafires"，所以正确答案为 fuel。

Questions 19-23

19. 利用细节信息 "Open space" 定位于原文第五段前两句话 "In California...housing has pushed into such areas. 'What once was open space is now residential homes providing fuel to make fires burn with greater intensity'"。原文这里明显提及人们不停地向 "open space" 开进并在此建房，言外之意也就是 "open space" 在减少。题目信息与原文信息是同意表达，所以答案为 True。

20. 利用顺序性原则和消防员过去与现在使用设备的比较定位于原文第七段的信息，这里提及政府提供了新的 "fire engines"，也提供了 "planes, and helicopters"，所以现在的设备比过去好。题目信息与原文信息是同意表达，所以答案为 True。

21. 原文中没有任何地方提及加州招募了新的消防员。题目信息在原文信息的基础上无

法判断，所以正确答案为 Not Given。

22. 利用细节信息“other states”和顺序性原则定位于原文第八段第二句话“In the fire sieges of earlier years, we found out that we had the willingness of mutual-aid help from other jurisdictions and states”，这里原文明显提到其他各州愿意为加州提供帮助。题目信息与原文信息直接相反，所以答案为 False。

23. 利用细节信息“2004 blue-ribbon commission”定位于原文第八段最后一句话“After a 2004 blue-ribbon commission examined and revamped those procedures, the statewide response 'has become far more professional and responsive,' he says”，原文这里明显提及在“2004 blue-ribbon commission”之后，反应更快，而且更专业，而题目却说没获得任何成就。题目信息与原文信息正好相反，所以答案为 False。

Questions 24-26

24. 该题目很好定位，原文对应信息位于第九段。作者在这里提及“Governor Schwarzenegger, California National Guard, Pentagon and the California Department of Corrections and Rehabilitation”是为了举例说明第八段中提到的“the willingness of mutual-aid help from other jurisdictions and states”改善了“command-and-control facilities”，可以更好地协同运作，而且该信息在第十段也有对应（“coordination of firefighters from several states and jurisdictions”）。所有选项中唯一提及该内容的只有选项 B（To illustrate the cross-state and cross-jurisdiction cooperation in firefighting），所以正确答案为 B。

25. 利用细节信息“improvements made by the state government”和顺序性原则定位于原文第十段第一句话“Residents and government officials alike are noting the improvements with gratitude”，很明显当地居民对这样的改进感到满意，所以正确答案为 A。

26. 利用细节信息“Ross Simmons”定位于原文最后一段。选项 A（It's harder to evacuate people in daytime），原文只提及“Mr. Simmons and neighbors began receiving automated phone calls at 3:30 a.m”，但是并未提及原因是因为白天撤离困难或任何相关信息，所以排除。选项 B（People refuse to improve their house in fire resisting ability），原文中明显提及大火之后人们开始积极改善建筑标准（“the San Diego region turned communitywide soul-searching into improved building codes”），所以不可能拒绝改善自身房屋防御火灾的能力，排除。选项 C（People can hardly believe the magnitude of damage today），原文只是提及目前火灾影响面大且广，但是人们相信与否并未提及，所以排除。选项 D（People are less likely to die in fires now）对应原文最后一句话“Notwithstanding all the damage that will be caused by this, we will not come close to the loss of life...”，所以正确答案为 D。

参考译文

加州的特大火灾时代

干燥、房屋扩建以及过多的火种导致火灾规模更大、温度更高。

尽管消防队员比以前准备更充分，而且已积累了几十年的扑灭由众所周知的圣塔安娜风引发的火灾的经验，但是在他们与南加州十余起大火奋战时，仍对控制火势蔓延感到吃力。专家解释说，野火普遍比以前温度更高，移动速度更快，且蔓延更无规律了。

特大火灾，又称“包围火灾”，现在变得越发频繁，能把50万英亩或以上的土地变为焦土，十倍于20年前的森林大火的平均规模。根据州政府的数据和新闻报道，从被烧毁的土地面积来看，当前的一场野火是加州有史以来第六大严重的火灾。

从短期来看，该地区夏季普遍干燥，今年的降雨量比正常年份少9英寸。从长期来看，美国西部的气候变化导致年平均气温更高，火灾多发季节更长。专家认为，出现更多超高温火灾的趋势要归咎于美国林务局百年来的尽快扑灭野火的政策。这项政策带来的无心之失就是停止了对灌木丛的彻底根除，而灌木丛则是如今的特大山火的主要燃料来源。

专家还说，另外三个因素也加剧了这种趋势。其一，气候变化使得西部每年的年平均气温上升1华氏度；其二，与20世纪80年代后期相比，现在的火灾多发季节平均延长了78天；其三，丛林地区房屋及其他建筑的数量在增长。来自马萨诸塞州伍斯特市克拉克大学地理研究生院的生物学副教授多米尼克·库拉科夫斯基说：“我们在火灾高发区的生态系统里建造越来越多的房屋。在美国西部的众多森林地区这么做，就好比在活火山旁边建设家园。”

至少在过去十年里，加州年平均人口增长数量都超过了60万，房屋建设也涌入了这些区域。加州林业部消防员联盟的特里·麦克黑尔说：“过去空旷的地方现在成了居民区，这为熊熊大火提供了燃料。那么干燥，那么多社区着火，那么多前线要奔去抗战，救火几乎成了难以置信的工作。”

许多专家肯定了加州自2003年来在做好准备工作上取得的进步。2003年，加州遭遇历史上最严重的火灾，该火灾造成75英亩的土地被烧焦，3640栋房子被烧毁，22人死亡。有分析人士指出，当年政府被指责应对不力，导致本可控制的火灾继续蔓延。相比近几年，政府如今在应对社区和峡谷跳槽火灾的特有挑战时，表现得更好了。

州政府承诺提供的新的消防车、飞机和直升机已经兑现。那些曾抱怨设备过时、消防车老旧以及消防安全准备不充分的消防员联盟现如今在赞美州政府的承诺，因为他们发现，尽管许多其他项目遭到资金削减，但对消防事业的资金投入却增加了。消防员联盟的麦克黑尔说：“我们很高兴看到施瓦辛格政府非常积极地支持我们，还给与我们资金支持，满足我们期待已久的对基建投入的需求。”

除了提供资金更新消防车，使其能驰骋于广阔的加州、行驶于曲折的峡谷公路外，州政府还在设备和策略方面进行投入，使得两者更好掌控。加州紧急应变管理办公室消防及救援分支的负责人金·扎加里说："早些年发生火灾时，其他管辖区和州愿意为我们提供帮助，但那时我们不能和他们充分沟通，"他说，2004年蓝丝带委员会检验和修订一系列规程后，大家的反应是"变得更专业，反应更迅速"。

施瓦辛格州长除了周一下令加州国家防卫队派遣1500名卫兵参与救火外，他还请国防部为火灾区调用所有可用的模块机载灭火系统。军用洛克希德C-130型货物和多功能飞机装载受压的3000加仑水箱。它可通过飞机尾部的两个管道在五秒内喷出防火剂或水。这家伙可以覆盖0.25英里长，60英尺宽的区域，形成一个防火墙。此外，施瓦辛格州长还指挥加州管教与感化部的2300名犯人消防队员和170监护人员与州政府及当地消防队员一起协助救火。

居民和政府官员都对进步的一面表示感激。尽管有房屋、教堂、企业和农场遭到损失，大家还是认为从救灾的速度、奉献精神以及来自其他州和管辖区的消防队员的协助来看，现在的救火效率比过去高得多。

罗斯·西蒙斯说："目睹上次的和这次的大火，我对这次表现出来的进步印象非常深刻。"他是圣迭戈的一位律师，周一他要把家和公司撤离，移至他位于贝尔纳多牧场30英里以南的汉普顿旅馆。2003年的大火焚毁了圣迭戈17.2万英亩土地，之后，这个地区集体反思如何改进建筑条例、撤离步骤及获取新技术。西蒙斯和他的邻居于周一凌晨三点半接到自动电话让他们撤离。他说："尽管这样会带来损失，但还是要多亏我们从那时候起就做好的准备工作，这次才没有让我们失去生命。"

Reading Passage 3. The Rainmaker

题目详解

Questions 27-31

解答

27. 利用顺序性原则定位于原文第一段前两句话"Sometimes ideas just pop up out of the blue. Or in Charlie Paton's case, out of the rain"，也就是说Paton的想法是偶然产生的（"pop up out of the blue"对应题目信息"by pure accident"）。题目信息与原文信息为同意表达，所以答案为True。

28. 利用顺序性原则定位于原文第一段第三、四句话"It had been raining and the bus was

full of hot, wet people. The windows steamed up and I went to sleep with a towel against the glass", 但是原文这里只说窗户上蒙上了水汽 ("windows steamed up"), 却并没有提及通风不好的原因。题目信息在原文信息基础上无法判断, 所以答案为 Not Given。

29. 利用顺序性原则和细节信息 "towel" 定位于原文第一段最后部分 "When I woke, the thing was soaking wet. I had to wring it out", 显然 Paton 醒来后发现毛巾湿了。题目信息与原文信息是同意表达, 所以正确答案为 True。

30. 利用顺序性原则和细节信息 "meeting up with his friend" 定位于原文第二段。原文这里只提及了 Paton 在会见自己的朋友后 "I made my own solar stills (太阳能蒸馏器)", 而非立刻开始了自己的温室造水计划。题目信息与原文信息不相符, 所以答案为 False。

31. 利用细节信息 "Persian Gulf" 定位于原文第三段 "Today, a decade on, his dream has taken shape as a giant greenhouse on a desert island off Abu Dhabi in the Persian Gulf"。题目信息与原文信息为同意表达, 所以答案为 True。

Questions 32-36

该组题目对应信息全部位于原文第五、第六段, 其中第 32 题对应第五段第二句话 "Paton has constructed a double-layered roof with an outer layer of clear polythene and an inner, coated layer that reflects infrared light", 33-36 题对应第六段, 从第二句话到最后 "Just before entering this unit, the humid air of the greenhouse mixes with the hot, dry air...Drops of pure distilled water form on the condenser and flow into a tank for irrigating the crops", 所以正确答案分别为:

32. Infrared light

33. Hot dry air

34. moisture

35. Condenser

36. Pure distilled water

Questions 37-40

37. 利用细节信息 "keep the air flowing" 和 "wind stands still" 定位于原文第七段第三句话 "On windless days, fans ensure a constant flow of air through the greenhouse", 这里 "ensure a constant flow of air" 对应题目信息 "keep the air flowing", "windless" 对应题目信息 "wind stands still", 所以正确答案为 fans。

38. 利用顺序性原则和细节信息 "electricity" 定位于原文第七段最后一句话 "in future we could make it entirely independent of the grid, powered from a few solar panels", 这里

"independent of the grid" 对应题目信息 "solely"，所以正确答案为 solar panels。

39. 利用顺序性原则和细节信息 "desalination plant" 和 "produced in large quantities" 定位于原文倒数第二段最后一句话 "costs should plummet when mass production begins, he adds"，这里 "mass production" 对应题目信息 "produced in large quantity"，"plummet" 对应题目信息 "reduced remarkably"，所以正确答案为 costs。

40. 利用顺序性原则和细节信息 "clean" 和 "pollution free" 定位于原文最后一段 "Best of all, the greenhouses should be environmentally friendly...it is a clean technology and doesn't produce pollution or even large quantities of hot water"，所以正确答案为 environmentally friendly。

参考译文

造雨者

有时候灵感会不期而至。查理·佩顿的灵感来自雨。他回忆说："我在一辆穿过摩洛哥的沙漠的旅游车上。当时下着雨，车上挤满了又热又潮湿的人。车窗上布满了水汽，我枕着毛巾靠着车窗睡着了。当我醒后，我发现毛巾都湿透了。我只好拧干它，然后想：它为什么这么湿呢？"

答案当然是冷凝。佩顿回到伦敦的家后，他的物理学家朋友菲利普·戴维斯解释说，车窗玻璃受到外面雨的影响而变冷，车内的湿热空气遇冷，低于露点，从而在内窗上形成了水滴。佩顿被此激起了兴趣，职业是照明师的他开始装配设备。"我制造了自己的太阳能蒸馏器。我突然想到，或许能通过冷却空气在沙漠造水。只是我不知道能否造出足够的水来灌溉土地和供作物生长。"

如今十年过去了，他的梦想成形了，一个巨大的温室在波斯湾阿布扎比的一个荒岛上矗立。用他的话说，这是第一个商用"海水温室"。当地的科学家和佩顿的照明工程公司签约，从事浇灌沙漠和种植蔬菜的工作。这个温室通过一个巨大的机器制造水滴，这个机器能把海水变成淡水，把干热的空气变得凉爽湿润。在两年前的一个设计比赛中，当英国皇家建筑师学院主席马科尔·戈德施米德授予佩顿一等奖时，他称佩顿的想法是"一个真正有创意的想法，它有可能影响全世界数百万生活在沿海而缺乏淡水资源的人们"。

这个设计主要由三个部分组成（见图）。温室面朝盛行风，干热的沙漠空气可穿过温室前墙墙面上的有孔面板，从海岸线附近引入的海水水流会让该穿孔纸板保持湿润凉爽。蒸发的海水会使空气冷却并变得湿润。例如去年六月，阿布扎比温室外的温度是46℃，而温室内的是30℃。室外的空气干燥，而室内的湿度达90%。凉爽湿润的空气有利于植物更快地生长，而且，因为在这种环境下，叶子蒸发的水分更少，所以它们对水分的需求大幅下降。佩顿的作物每天每平方米只需一升的水就能茁壮生长，相比之下，在温室

外生长则需要八升的水。

第二个部分同样可以冷却空气，从而有利于作物生长。佩顿在温室建了两层的屋顶，外层是透明的聚乙烯层，内层则可以反射红外线。阳光穿过屋顶，为植物的光合作用提供条件，而红外线产生的热量则被隔离在两层之间的空间里，远离植物。

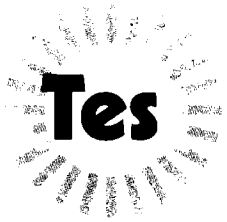
温室后部的造水装置是第三个主要部分。在进入这个造水装置之前，夹在温室屋顶两层之间的热气会与温室内的湿气混合。这意味着空气在通过第二道面板时能吸收更多的水分。最后，饱和的热空气会撞上一个冷凝器。这是一个金属表层，通过更多的海水保持着低温——这和佩顿摩洛哥之旅的车窗是一个道理。纯净的蒸馏水在冷凝器上形成，然后流入地下储水槽，以供灌溉作物之用。

这个温室几乎是自主运行的。当太阳升起时，感应器会启动所有设备，并会根据温度、湿度和阳光的变化来调节一天中空气和海水的流向。在无风的时候，温室的风扇会保证室内空气持续流通。“一旦这个温室适应了当地的环境，你就不需要任何人工操作了，”佩顿说，“我们靠一个 13 安培的插头保证整个运作，将来我们可以使它完全不需用电，而靠太阳能板发电运行。”

整个运作原理是将海水在干燥的沙漠空气里蒸发，然后再凝结成淡水。与此同时，阴凉湿润的水汽在温室内流动，为作物生长创造理想的条件。这个海水温室的特色是把海水脱盐与空气调节很好地结合起来。通过对太阳能的利用，温室冷却空气的效率相当于一个 500 千瓦的空调，却只需少于 3 千瓦的用电。实际上，温室每天能蒸发 3000 升海水，使其变成 800 升淡水，这足够灌溉之用。其余的变成水蒸汽流失了。

有批评家指出，这个温室的建筑成本达每平方米 25 英镑，这是传统脱盐工厂造水成本的两倍。不过佩顿说，这样的比较具有误导性。温室的天然空气调节系统大大提高了水的价值，因为与传统种植方式相比，温室内的植物只需要其八分之一的水，所以其实际成本只有标准脱盐工厂造水成本的四分之一。他还说，当开始大规模生产时，成本还会大幅下降。

最重要的是，这个温室是环保的。“我想会有人从美学角度反对在沿海地区建造这种大型的建筑。不过，这是清洁技术，它不产生污染，甚至不产生大量的热水，”哈里斯说道。



Reading Passage 1. Health in the Wild

题目详解

Questions 1-4

解答

1. 利用细节信息“Dr. Engel”，“10 years”和顺序性原则定位于原文第一段开头第一句话“For the past decade Dr Engel, a lecturer in environmental sciences at Britain's Open University, has been collating examples of self-medicating behaviour in wild animals”。原文这里明显提及 Dr. Engel 在过去十年（原文信息“past decade”）收集大量这方面的例子，也相当于做研究。题目信息与原文信息是同意表达，所以答案为 True。
2. 按照顺序性原则往下寻找，但并未找到任何与该题相关的信息。题目信息在原文信息基础上无法判断，所以答案为 Not Given。
3. 该题目判断上较有难度。利用细节信息“Macaw”和“clay”定位于原文第四段第三、四句话“Macaws eat seeds containing alkaloids, a group of chemicals that has some notoriously toxic members, such as strychnine. In the wild, the birds are frequently seen perched on eroding riverbanks eating clay”。原文这里虽然提及吃泥土是很多鸟类的行为（对应原文“the birds are frequently seen perched on eroding riverbanks eating clay”），但是题目里的因果关系“Birds, like Macaw, often eat clay because it is part of their natural diet”却有问题，它们并不是因为泥土是“natural diet”的一部分才吃，而是因为原文后面提及的为了“detoxify”才吃的。题目信息与原文信息不相符，所以答案为 False。
4. 利用顺序性原则和细节信息“Dr. Engel”定位于原文倒数第二段第一句话“Following that observation, Dr Engel is now particularly excited about how knowledge of the way that animals look after themselves could be used to improve the health of livestock”。原文这里明显提及这些研究有助于改善家畜的健康，而非研制新型止痛药。题目信息与原文

信息不相符，所以答案为 False。

Questions 5-9

5. 利用细节信息“Veronia”定位于原文第二段第二句话“local chimpanzees suffering from intestinal worms would dose themselves with the pith of a plant called Veronia”，所以正确答案为 pith。
6. 利用顺序性原则和“kill parasites”定位于原文第二段第三、四句话“This plant produces poisonous chemicals called terpenes. Its pith contains a strong enough concentration to kill gut parasites”，所以正确答案为 terpenes。
7. 利用细节信息“1999”、人名和“Seeds”定位于原文第四段第三句话“Macaws eat seeds containing alkaloids”，所以正确答案为 alkaloids。
8. 利用细节信息“Clay”和“poisonous contents”定位于原文第四段第一、二句话“and particularly the clay in it—helps to detoxify the defensive poisons...Evidence for the detoxifying nature of clay came in 1999, from an experiment carried out on macaws...”，所以正确答案为 detoxify。
9. 利用细节信息“1972”、人名定位于原文倒数第三段倒数第二句话“The factor common to all 19 species of leaves swallowed by the chimps was that they were covered with microscopic hooks”，所以正确答案为 hooks。

Questions 10-13

10. 利用细节信息“soil-consuming behavior”定位于原文第三段第二句话“Many species, for example, consume dirt—a behaviour known as geophagy”，所以正确答案为 G（geophagy）。
11. 利用顺序性原则和细节信息“clay”定位于原文第四段第一句话“The current belief is that soil—and particularly the clay in it—helps to detoxify the defensive poisons that some plants produce in an attempt to prevent themselves from being eaten”，所以正确答案为 D（toxic）。
12. 利用细节信息“Africa”和“market stalls”定位于原文倒数第二段第四句话“The medical stalls in African markets frequently sell tablets made of different sorts of clays, appropriate to different medical conditions”，所以正确答案为 E（clay tablets）。
13. 利用细节信息“leaves”定位于原文第六段倒数第二句话“Some of the chimps were noticed wrinkling their noses as they swallowed these leaves, suggesting the experience was unpleasant.”，所以正确答案为 C（unpleasant）。

参考译文

野外健康

许多动物似乎都有自我治疗的能力。人类或许可以从中得到启发。

在过去的十年里，英国公开大学环境科学讲师恩格尔博士一直在整理关于野生动物自我治疗行为的例子。最近，她就该课题出版了一本书。在本月月初举行的爱丁堡科学节的一个讲座中，恩格尔博士解释说，过去，她的同事对于动物能自我治疗的观点心存质疑。但是，越来越多的动物行为学家认为，野生动物能够且确实应对得了自己的医疗需求。

1987年，一个自我治疗的例子被发现了。迈克尔·霍夫曼和莫哈麦迪·赛义夫在坦桑尼亚的马哈尔山国家公园进行研究时，注意到当地的黑猩猩在遭到肠道寄生虫的入侵后，会服用一种名为“婆婆纳”的植物的茎髓。这种植物能产生有毒化学物质“萜烯”。婆婆纳植物的茎髓含有高浓度的萜烯，足以杀死肠道寄生虫，却不会强烈到能杀死黑猩猩（由于同样不会杀死人，因此当地人也会使用这种植物的茎髓进行治疗）。尽管这种植物在当地被称为“山羊杀手”，但是，似乎并不是所有的动物都像黑猩猩和人类那么聪明，有些动物滥用它并因此受害。

自从发现黑猩猩吃婆婆纳后，更多的证据浮出水面，这些证据均表明，动物吃东西常常是由于医疗而非补充营养的原因。例如，许多动物物种会吃土（这种行为被称为食土癖）。一直以来，普遍接受的解释是，土壤能提供诸如盐分等矿物质。但是食土癖的现象却会发生在土壤中几乎没有矿物质的地区，或者发生在能够更容易从富含矿物质的植物那里获取矿物质的地区。显然，动物吃土是另有因由的。

现在的观点认为土壤，尤其是其中的粘土，能够消除植物防止被吃而产生的毒素。粘土解毒的证据来自于1999年美国加州大学戴维斯分校的詹姆斯·吉拉尔迪和他的同事所进行的有关金刚鹦鹉的实验。金刚鹦鹉会吃含有生物碱的种子。生物碱是一组化学物质，含有臭名昭著的有毒成分，例如士的宁。在野外，常常能看到鸟类栖息在侵蚀的河岸上吃粘土。吉拉尔迪博士给一组鹦鹉喂食无害的生物碱和粘土混合物，又给另一组鹦鹉单单喂食生物碱。几个小时后，吃了粘土的那组鹦鹉的血液里含有的生物碱比另一组没有吃粘土的金刚鹦鹉少了60%。这证明了粘土解毒的假设是正确的。

其他的发现也支持粘土解毒的说法。越往热带地区，植物体内的有毒化合物的含量就越高，因此，食草动物所食用的泥土数量也就越多。大象常年从泥洞里舔吃粘土，除了九月份之外，因为这时它们会吃大量可食用的无毒果子。给畜牛喂食粘土的话，能让它们从食物中多吸收百分之十到百分之二十的营养成分。

第三个证明动物自我治疗的例子是运用机械擦洗来清除肠道寄生虫。1972年，理查

德·兰厄姆在坦桑尼亚的贡贝溪自然保护区研究时，发现黑猩猩正吃着一种名为 Aspilia 的树的叶子。黑猩猩用嘴巴仔细地检测和筛选树叶。选好树叶后，它就把树叶折成扇形，然后吞下。有些黑猩猩在吞叶子的时候会皱起鼻子，这表明吃叶子其实不好受。后来，在森林地面上还能发现未被消化的叶子。

兰厄姆博士猜对了这些叶子是有治疗用途的。这的确是自我治疗行为的最早诠释之一。但是，兰厄姆博士猜错了其中的原理。他和其他人当时认为 Aspilia 含有一种药物，这使得此后二十年的植物化学研究都以寻找黑猩猩吃的是什么化学物质为目的。但是，到了 20 世纪 90 年代，人们发现非洲的黑猩猩会吃 19 种不同植物的树叶，而这些植物树叶几乎不含有共同的化学物。药物假说变得越发站不住脚了。

终于，霍夫曼博士找到了问题的根源。他是通过观察黑猩猩的排泄物，而不是黑猩猩的食物发现的。他发现黑猩猩排泄出来的叶子含有大量的肠道寄生虫。黑猩猩吞食的 19 种植物树叶均含有一个共同点，那就是这些叶子都长满了微小的钩子。这些微小钩子勾住了寄生虫，并把它们拖出寄生体外。

继观察之后，恩格尔博士目前对于如何运用这个发现来改善家畜的健康问题感到相当兴奋。人类或许也可以从中学习，或者已经这么做了。譬如说，食土癖在世界的许多地方都是常见的现象。非洲的药店常售卖由不同种类的粘土做成的药丸，以对症下药。

从非洲被贩卖到美洲的黑奴继承了这个传统，这又多给了这些奴隶主一个鄙视他们的理由。但是，正如恩格尔博士指出的，卢旺达山地的大猩猩会吃一种类似高岭石的粘土，而高岭石是西方药店中售卖的治疗消化不良的专利药物的主要成分。有时候吃泥土会对你有益，毕竟，“非常失望”可能是一个理想的状态呢。

Reading Passage 2. The Conquest of Malaria in Italy, 1900-1962

题目详解

Questions 14-18

解答

14. 该题目不容易直接定位，只能利用顺序性原则知道该题目信息应该在文章开头。实际上该题目信息出现在 15 题之后，也就是 A 段落的第三句话“Others made a link between swamps, water and malaria, but did not make the further leap towards insects”。当然，如果根据 A 段落第一句话“Everybody now knows that malaria is carried by mosquitoes”确定答案为 mosquitoes 也算对。所以该题正确答案为 insects 或 mosquitoes。

15. 利用顺序性原则和细节信息“unclean air”定位于原文A段落第二句话“But in the 19th century, most experts believed that the disease was produced by ‘miasma’ or ‘poisoning of the air’”，这里“poisoning of the air”对应题目信息“unclean air”，所以正确答案为“miasma”。

16. 利用细节信息“rural people”和“malaria infested places”定位于原文A段落中间“In malarial zones the life expectancy of land workers was a terrifying 22.5 years”，这里“land workers”对应题目信息“rural people”，“malarial zones”对应题目信息“malaria infested places”，“terrifying 22.5 years”对应题目信息“extremely short”，所以正确答案为life expectancy。

17. 利用细节信息“the south of Italy”定位于原文A段落倒数第二句话“Epidemics were blamed on southern Italians, given the widespread belief that malaria was hereditary”，这里“epidemics”对应题目信息“spread so quickly”，所以正确答案为hereditary。

18. 利用细节信息“1880s”定位于原文A段落最后一句话“In the 1880s, such theories began to collapse as the dreaded mosquito was identified as the real culprit”，原文这里提及，在1880s人们最终发现蚊子才是真正的罪魁祸首（“the real culprit”），所以正确答案为culprit或real culprit。

Questions 19-21

19. 利用细节信息“volunteers”和“experiments that provided assuring evidence”定位于原文B段落倒数第二句话“Definitive proof of these new theories was obtained after an extraordinary series of experiments in Italy, where healthy people were introduced into malarial zones but kept free of mosquito bites — and remained well”，虽然原文这里提及这一系列的实验提供了蚊子和疟疾之间联系的确凿证据，但是原文这里并未提及参与这些实验的志愿者们来自于哪里。题目信息在原文信息基础上无法判断，所以答案为Not Given。

20. 利用细节信息“malarial zones”仍然定位于原文B段落倒数第二句话“Definitive proof of these new theories was obtained after an extraordinary series of experiments in Italy, where healthy people were introduced into malarial zones but kept free of mosquito bites — and remained well”，这里原文明显提及有些人进入了“malarial zones”，最后“remained well”（对应题目信息“alive”）。题目信息与原文信息是同意表达，所以答案为True。

21. 利用细节信息“quinine”定位于原文C段落最后两句话“It was originally decided to give quinine to all those in certain regions — even healthy people; peasants were often suspicious of medicine being forced upon them. Doctors were sometimes met with hostility

and refusal, and many were dubbed 'poisoners'", 原文这里虽然说政府尝试把 "quinine" 用于所有人，甚至健康人，但是人们对此却表示怀疑及反对（"Doctors were sometimes met with hostility and refusal"），所以并非所有人都接受了 "quinine" 的治疗，而题目却说政府成功地对所有人进行了 "quinine" 治疗。题目信息与原文信息正好相反，所以答案为 False。

Questions 22-26

思路

"Which paragraph contains the following information?" 这种题型对大多数考生来说是最费事、最难解的。正确处理这种题型的策略是把该题型放在最后去做，解答时多利用反向思维和下位词进行思考。

解答

22. 通读文章不难发现文章开头两段是在讲关于疟疾产生理论的讨论，所以答案应该在这里。题目信息出现在原文 B 段落，尤其是第一句话提及 "Italian scientists, drawing on the pioneering work of French doctor Alphonse Laveran, were able to predict the cycles of fever but it was in Rome that further key discoveries were made"，这里 "key discoveries" 对应题目信息 "breakthrough"，所以正确答案为 B。

23. 利用反向思维词 "a story" 推断原文对应信息应该提及一个具体的故事，尤其是对今日读者有启示作用的故事。原文对应信息位于 F 段落，这里提及一个关于 "popular cyclist" 的故事，并且最后提及 "It also provides us with 'a message of hope for a world struggling with the great present-day medical emergency'"，这就是对读者的启示，所以正确答案为 F。

24. 利用反向思维词 "an expert" 推断原文对应信息应该出现一个具体的专家，也就是人名。原文对应信息位于 E 段落，这里提及 "Shamefully, the Italian malaria expert Alberto Missiroli had a role to play in the disaster: he did not distribute quinine, despite being well aware of the epidemic to come"，所以正确答案为 E。

25. 利用反向思维词 "government policies" 推断原文应该提及具体的政府政策，并包含较多的对其后果的描述。原文对应信息出现在 D 段落中间，这里提及意大利法西斯政府在墨索里尼的领导下所指定的对策完全无效（"He shows how much of the regime's claims to have 'eradicated' malaria through massive land reclamation, forced population removals and authoritarian clean-ups were pure propaganda"），并最终导致 "As war swept through the drained lands in the 40s, the disease returned with a vengeance"，所以正确答案为 D。

26. 利用反向思维词“the human body”推断原文应该出现具体的人体方面的词汇，以及疟疾所导致的症状。原文对应信息出现于A段落中间偏下“Those who escaped death were weakened or suffered from splenomegaly — a ‘painful enlargement of the spleen’ and ‘a lifeless stare’”，所以正确答案为A。

参考译文

战胜疟疾：1900–1962的意大利

“疟疾”一词源自意大利语，意为“坏空气”。这种可怕的疾病数千年来伴随着这个半岛上的居民。但在1962年，意大利政府正式宣布消灭了疟疾，从此，意大利再没有发生过疟疾。弗兰克·斯诺登对这个成功案例的研究带着我们走进了历史学家很少涉足的区域。

A 现在大家都知道疟疾是由蚊子传播的。但在19世纪时，大部分专家认为这种疾病是由“瘴气”或者“毒气”引起的。有人认为疟疾与湿地和水有关，却没有进一步想到与蚊子相关。持这些理论的结果是，在19世纪末以前，人类与疟疾的对战几乎没有什么进展。更糟糕的是，在意大利2500万的总人口中，有1100万人患上了疟疾，处于“持久的危险中”。在疟疾横行区，陆上工人的预期寿命只有可怕的22.5岁。那些死里逃生的人则变得虚弱或者患上“脾肿大”疾病，表现为脾脏肿大及眼睛无神。这沉重地打击了经济。疟疾这种流行病被归咎于南部的意大利人，因为当时普遍认为疟疾是会遗传的。到19世纪80年代，随着人们发现可怕的蚊子是真正的元凶，遗传理论才开始崩溃。

B 意大利科学家在法国医生阿方斯·拉韦朗的开拓性研究的基础上，成功预测了发热的周期，不过关于疟疾更多的重大发现则是在罗马出现的。意大利动物学家乔瓦尼·巴蒂斯塔·格拉西发现传播疟疾的蚊子只有一种。通过在健康的志愿者身上做实验（使志愿者与蚊子共居一室，让蚊子吸取志愿者的血），他得知蚊子（全都是一种雌蚊）和疟疾有直接关系。不久后，医生和科学家得到另一个惊人的发现：蚊子不仅携带病毒，而且其自身也被感染了。在每年蚊虫肆虐的季节，蚊子都会携带疟疾的血液到处传播。及至在意大利进行一系列重要实验后，这个新理论得到了确切的佐证。健康的人到了疟疾流行区，只要不被蚊子叮咬，那么他们就能保持健康。这时，意大利得到对付这种疾病的必要信息了。

C 一个复杂的方法被采用了，那就是奎宁的使用。奎宁是从树皮中提取的药物，长期被应用于治疗发热，如今，它被认为是战胜疟疾的关键一步。意大利于1904年颁布了奎宁法律、开征了奎宁税，并分发了奎宁药物给大量的农民工。尽管这种药物常有可怕的副作用（会产生头痛，这种头痛被称为“奎宁响”），但是它能有效地控制疟疾的传播并破坏传染周期。此外，意大利还成立了乡村治疗中心，并加大教育投资。

正如斯诺登所展示的，疟疾不仅是医学问题，它还是社会和地区问题，只有通过多层面的策略才能解决。与疟疾对抗的运动改变了政治。政府最初的决定是要把奎宁分发给特定地区的所有人，包括健康的人。农民经常会怀疑这些被强加给他们的药物。有时候，医生会遭到敌意和拒绝，许多的医生被称为“毒害者”。

D 尽管遇到这些问题，该策略还是相当成功的。20 世纪的头 10 年，因疟疾而死亡的人数下降了 80%，而有些地区甚至完全摆脱了疟疾。不过，1915 年至 1918 年的第一次世界大战延误了这场运动。政府把大多数资金用于战争，于是，与疟疾的抗争成了军事话题，这促成了用法西斯办法解决问题的局面。墨索里尼于 20 世纪 20 年代和 30 年代颁布的政策受到斯诺登的严正“拷问”。墨索里尼政权宣称通过大量开垦荒地、强迫人口迁徙和专制的清洗运动已经消灭了疟疾。斯诺登在书中则展示了该政权所宣称的有多少只是出于宣传目的。实行大规模抽干湿地的代价是严重的，因为墨索里尼并不是对疾病本身发动战争，而是对携带病毒的蚊子发动战争。意大利的清洗运动还有民族差别性，那些被“精挑细选”出来的意大利人住在新兴的城镇，而这些城镇以前是罗马附近的湿地。法西斯主义下的所谓“成功”是十分脆弱的，因为这是基于自上而下的消灭概念。当 20 世纪 40 年代的战争席卷被抽干的土地时，疟疾卷土重来。

E 在这本书最震撼人心的部分中，斯诺登运用伟大历史学家所具有的技巧，热情地描述了在意大利撤退的纳粹军队如何于 1943 年至 1944 年间故意在拉齐奥引起一场大规模的疟疾瘟疫。这是“20 世纪欧洲唯一已知的生物战争”。可耻的是，意大利疟疾专家阿尔贝托·米西罗利在这场灾难中难辞其咎：尽管清楚地意识到了瘟疫即将来临，他却没有分发奎宁。斯诺登教授认为，米西罗利当时已在准备一个新的策略——在美国洛克菲勒基金会的支持下——使用新的杀虫剂，滴滴涕（DDT）。米西罗利任由瘟疫蔓延，是为了给一场大规模的、暴利的人类试验创造条件。1944 年，仅在意大利的拉蒂纳省就有 55000 个疟疾病例。据估计，受灾区里有超过三分之一的人感染了这种疾病。成百上千的人（没有人知道确切数字）因此死去。当二战结束后，美国政府和洛克菲勒基金会便可任意地拿滴滴涕来做试验。空气中喷洒着滴滴涕，这种化学物被洒到三百万意大利人的身上。其影响是巨大的，但当时没有人真正关注这种化学物的毒效。

F 及至 1962 年，疟疾在整个半岛基本消失了。西西里岛的一个落后地区发现了最后一批疟疾病例。最后一批疟疾受害者中有著名的自行车手浮士托·科皮。他于 1960 年在非洲感染了疟疾，而当时意大利北部的医生没能察觉这种疾病，这一事件是那个时代的写照。几十年以前，医生会马上注意到显著的病症；后来据称，一小剂的奎宁就能挽救科皮的命。每年，全球各地仍有超过 100 万人因疟疾而死亡，因此，斯诺登的书同样具有现代意义。这是一个在它肆虐的地方能影响社会各层的疾病。对于这个正与当今大型医疗紧急事故作斗争的世界来说，这本书也传递了一种希望的讯息。

Reading Passage 3. Sunset for the Oil Business?

题目详解

Questions 27-31

解答

27. 利用细节信息“Hubbert”和“ODAC”定位于原文第三段第一句话“M. King Hubbert, a Shell geologist of legendary status among depletion experts...”。原文中他是一个“geologist of legendary status”对应题目信息“high-profile reputation”。题目与原文是同意表达，所以答案为 Yes。

28. 按照顺序性原则和细节信息“other energy sources”定位于原文第四段第三句话“Oil from that area then becomes less competitive in relation to other sources of fuel”。但是这里并没有提及题目中所说的“last longer than some other energy sources”，只是说石油作为能源不再有竞争力而已。题目信息在原文基础上无法判断，所以答案为 Not Given。

29. 按照顺序性原则和细节信息“The majority of geologists”和“this decade”定位于原文第五段第二句话“Chief among them are the experts at ODAC, who worry that the global peak in production will come in the next decade”，原文明显在这里提及大多数地质学家认为，在“next decade”石油的生产会达到顶峰，而非“start to run out”。题目信息与原文信息正好相反，所以答案为 No。

30. 利用细节信息“50 percent”和“recovered”定位于原文倒数第三段“Average recovery rates (how much of the known oil in a reservoir can actually be brought to the surface) are still only around 30-35%. Industry optimists believe that new techniques on the drawing board today could lift that figure to 50-60% within a decade”。原文这里明显提及目前的油井提取率只能达到 30-35%，50% 是在未来人们可能达到的开采率，而不是现在。题目信息与原文信息正好相反，所以答案为 No。

31. 利用顺序性原则和细节信息“Hubbert's Principles”定位于原文倒数第二段第二句话“...undermining Dr. Hubbert's assumption that cheap reserves are developed first”。题目信息“some of Hubbert's principles were mistaken”对应原文“undermining Dr. Hubbert's assumption”。题目与原文是同意表达，所以答案为 Yes。

Questions 32-35

解答

32. 利用细节信息 "Hubbert's theory" 和 "originally presented" 定位于原文第三段第二句话 "At the time, his forecast was controversial, and many rubbished it"。因为题目说 "Many people believe...", 所以正确答案只能填 controversial, 而不能填 rubbished。

33. 利用细节信息 "new oilfield" 和 "easy to rise" 定位于原文第四段第一句话 "oil production in a new area typically rises quickly at first, as the easiest and cheapest reserves are tapped", 这里 "new area" 对应题目信息 "new oilfield", "rises quickly at first" 对应题目 "easy to rise", 所以正确答案为 tapped。

34. 利用细节信息 "the reservoir gets older" 定位于原文第四段第二句话 "Over time, reservoirs age and go into decline, and so lifting oil becomes more expensive", 这里 "reservoirs age" 对应题目信息 "the reservoir gets older", 所以正确答案为 expensive。、

35. 利用顺序性原则和这里的下降图示定位于原文第四段倒数第二、三句话 "Oil from that area then becomes less competitive in relation to other sources of fuel. As a result, production slows down and usually tapers off and declines"。所以正确答案为 competitive。

Questions 36-40

36. 对应原文第七段第三句话 Lynch 的观点, "He finds evidence of both bias and recurring errors, which suggests that methodological mistakes (rather than just poor data) were the problem", 原文 "recurring errors" 和 "methodological mistakes" 都对应题目信息 "found fault in geological research procedure", 所以正确答案为 E。

37. 对应原文第六段第四句话 "René Dahan, one of ExxonMobil's top managers, goes further: with an assurance characteristic of the world's largest energy company, he insists that the world will be awash in oil for another 70 years"。Dahan 认为在未来 70 年内, 人类都会有充足的石油可供使用 ("awash in oil for another 70 years"), 而其他人都认为石油很快会枯竭, 所以 Dahan "provided the longest-range forecast regarding oil supply", 正确答案为 D。

38. 对应原文第五段第一句话 "His successful prediction has emboldened a new generation of geologists to apply his methodology on a global scale", 这里 "emboldened a new generation of geologists" 对应题目信息 "convinced others", 前面段落所提及的 Hubbert 的 bell-shaped curve 也对应题目中的 "particular model", 所以正确答案为 B。

39. 对应原文第一段最后两句话 "Colin Campbell, rejected rival views...Dr Campbell even decried the "amazing display of ignorance, deliberate ignorance, denial and obfuscation" by governments, industry and academics on this topic", 这里 "decried" 对应题目信息

"accused"，所以正确答案为A。

40. 对应原文倒数第四段最后两句话"Dr Deffeyes captures this end-of-technology mindset well. He argues that because the industry has already spent billions on technology development, it makes it difficult to ask today for new technology, as most of the wheels have already been invented"，原文这里明显提及Dr. Deffeyes认为新技术的诞生不太可能了，所以正确答案为C。

参考译文

石油经济的衰退？

世界石油储备可能即将耗竭，也可能不会。事实究竟如何，要看你相信谁……

石油消耗分析中心（ODAC）的成员近期在伦敦召开会议，同时公布了他们极不乐观的预测，即世界石油储备已经岌岌可危，并发布了相关的技术数据。美国地质勘探局和国际能源机构（IEA）对此进行了否认，这一表态受到科林·坎贝尔等与会专家的反驳。坎贝尔博士甚至就此话题对政府、工业界、学术界进行了谴责，认为这是"令人震惊的愚昧无知，是蓄意的忽略、否认和模糊处理"的表现。

石油真的会耗竭么？答案很简单：是的。众所周知，石油是一种不可再生能源，无论用于何种用途，石油终将在数年或数十年间消耗殆尽。困难的是如何知道石油耗尽的准确时间。通过研究哈伯特的峰值论或许能回答这一问题。

马里恩·金·哈伯特是壳牌石油公司著名的地质学家，1956年他便预测美国的石油产量将会在20世纪70年代早期达到峰值，随后缓慢下降，就如钟状曲线那样。当时，他的预测备受争议，很多人对此嗤之以鼻。然而，1970年之后，现实证实了他是正确的：美国的石油产量真的到达顶峰，从此之后开始减产。

哈伯特博士的分析指出，在新的石油开发区，被当作最便捷、最廉价的储备资源的石油，其产量最初会迅猛上涨。久而久之，石油资源会逐渐枯竭并减产，开采石油的成本也随之增高。到那时，该区域的石油和其他能源相比，就逐渐失去了竞争力。于是，石油产量也随之下降并减产。这就形成了一个钟形曲线。

他的成功预测鼓舞了新一代地质学家在全球范围运用他的理论。其中的代表人物便是ODAC的学者专家们，他们担心全球石油产量峰值将在未来十年内到来。坎贝尔博士曾经提出石油产量应该已经到达峰值了；但现在他认为我们位于峰值附近。一位重量级人物现在也加入了这支不乐观的队伍。来自普林斯顿大学的肯尼思·德费耶在他最新的著作中指出，全球石油产量将在短短几年内达到峰值。

这与主流思想大相径庭。美国地质勘探局去年对石油消耗量进行了一次详尽的研究，

将石油产量峰值推迟到了数十年之后。IEA 也在它们新的“世界能源展望”中预测，当前石油储备充足，能满足各类需求直至 2020 年。埃克森美孚公司的负责人之一瑞尼·达汗则有更为乐观的预测：作为世界最大的能源公司之一的成员，他坚信世界在未来 70 年内都不会面临石油短缺问题。谁是对的？为了让这些完全相反的观点有意义，让我们来回顾一下石油预测的悲惨历史吧。灾难预测家们从 20 世纪 70 年代开始便在预言石油的枯竭，但到目前为止，石油仍然在喷涌而出。20 世纪 70 年代石油危机之后对 2000 年的所有预测几乎都太悲观了。

DRI-WEFA（华顿计量经济预测协会）经济咨询公司的迈克尔·林奇是少数对石油前景预测正确的人之一。在他最新的论文中，林奇博士分析了历史上的各种预测。他发现有证据显示，造成偏见和重复性错误的问题在于分析方法的错误（而不仅在于糟糕的数据）。他特别批评了那些用哈伯特式分析来作为依靠“最终可采”石油储量的固定估计数的依据的预测家们。他认为，那个数据是动态的，随着基础建设的改进、知识的进步和科技水平的提升，石油可开采量将会上升。

悲观者和乐观者谁是正确的，这可能要取决于科技创新水平。悲观者往往忽视前沿科技的发展，例如深水钻探、再度开采等领域的技术进步。德费耶博士就完全陷入了这种技术静止的心态中。他反驳说，因为工业界已经向科技发展投入数十亿资金，所以在大部分事物都已经被发明的今天，很难再有新的技术出现了。

但是，乐观者们则认为，石油领域的技术进步才刚刚开始。现在石油平均开采率（已探明的石油储量中可以被开采出来的石油比率）只有 30-35%。工业界的乐观者们相信，这一数据在现代处于开发阶段的新技术的支持下，仍有较大的提升空间，平均开采率可以在十年内提升至 50-60%。

在工业领域令人瞠目的创新发展下，质疑这一观点似乎是愚蠢的。这些成就是在逆境中得到的：20 世纪 70 年代的石油危机迫使石油巨头以昂贵的成本在北海、阿拉斯加这样的极限地带开采石油，而不是像哈伯特博士假定的那样以低成本开采为首。随之而来的逆向投资降低了勘探和开采油井的成本，过去的二十几年中，该成本从每桶 20 美元降低到每桶 6 美元左右。生产石油的成本也随之下降了一半，每桶才不到 4 美元。

然而，这种奇迹的到来并不廉价，因为世界大部分石油都产自老油田，而这些油田正在迅速衰退。国际能源机构 IEA 总结称，只要采取必要的投入，全球石油产量在未来二十年内不会达到峰值。那么，投入多少才是必要的呢？该机构估计，如果石油公司要填补老油田的产出损失，同时满足世界持续上升的石油需求，他们必须在未来十年中向非欧佩克国家投入 1 万亿美元。哦天哪。

Answer Keys

Test 1

Each question correctly answered scores 1 mark. **CORRECT SPELLING IS NEEDED IN ALL ANSWERS.**

Reading Passage 1

1 ten thousand
2 South-East Asia
3 hard seeds/seeds
4 F
5 A
6 D
7 C
8 E
9 B
10 C
11 Not Given
12 False
13 True

Reading Passage 2

14 B
15 C
16 D
17 True
18 False
19 True
20 False
21 Not Given
22 True
23 True
24 B
25 D
26 F

Reading Passage 3

27 C
28 B
29 Persian wars
30 allies
31 geographical knowledge
32 pilgrimage
33 India
34 colonies
35 principles
36 wealthy
37 D
38 B
39 A
40 D

If you score...

0-12	13-26	27-40
you are highly unlikely to get an acceptable score under examination conditions and we recommend that you spend a lot of time improving your English before you take IELTS.	you may get an acceptable score under examination conditions but we recommend that you think about having more practice or lessons before you take IELTS.	you are likely to get an acceptable score under examination conditions but remember that different institutions will find different scores acceptable.

Test 2

Each question correctly answered scores 1 mark. **CORRECT SPELLING IS NEEDED IN ALL ANSWERS.**

Reading Passage 1

1 C
2 A
3 D
4 B
5 A
6 A
7 beaks
8 vomiting
9 hardens
10 True
11 Not Given
12 False
13 Not Given

Reading Passage 2

14 iii
15 x
16 viii
17 ix
18 vi
19 i
20 iv
21 extra snacks
22 firewood
23 85%
24 50%
25 A
26 C

Reading Passage 3

27 D
28 A
29 G
30 B
31 H
32 F
33 A
34 D
35 C
36 False
37 Not Given
38 True
39 True
40 False

If you score...

0-12	13-26	27-40
you are highly unlikely to get an acceptable score under examination conditions and we recommend that you spend a lot of time improving your English before you take IELTS.	you may get an acceptable score under examination conditions but we recommend that you think about having more practice or lessons before you take IELTS.	you are likely to get an acceptable score under examination conditions but remember that different institutions will find different scores acceptable.

Test 3

Each question correctly answered scores 1 mark. **CORRECT SPELLING IS NEEDED IN ALL ANSWERS.**

Reading Passage 1

1 True
2 False
3 Not Given
4 Not Given
5 True
6 False
7 A
8 C
9 C
10 A
11 B
12 B
13 C, E, F

Reading Passage 2

14 extinction
15 drugs, crops
16 pioneers
17 Sir Joseph Banks
18 underground vaults
19 True
20 Not Given
21 True
22 True
23 False
24 True
25 A
26 D

Reading Passage 3

27 True
28 Not Given
29 False
30 Not Given
31 True
32 True
33 consumer's choice
34 risk and benefit
35 skiing
36 GM crops
37 wheat and rice
38 production
39 mistrust
40 A

If you score...

0-12	13-26	27-40
you are highly unlikely to get an acceptable score under examination conditions and we recommend that you spend a lot of time improving your English before you take IELTS.	you may get an acceptable score under examination conditions but we recommend that you think about having more practice or lessons before you take IELTS.	you are likely to get an acceptable score under examination conditions but remember that different institutions will find different scores acceptable.

Test 4

Each question correctly answered scores 1 mark. **CORRECT SPELLING IS NEEDED IN ALL ANSWERS.**

Reading Passage 1

1 B
2 C
3 D
4 A
5 B
6 A
7 E
8 D
9 G
10 H
11 Not Given
12 True
13 Not Given

Reading Passage 2

14 B
15 G
16 C
17 A
18 hot-air balloon
19 iron particles
20 compass/compass needle
21 thin metal probe
22 mudbrick
23 looser damp soil
24 spring season
25 clarify
26 B

Reading Passage 3

27 D
28 B
29 B
30 D
31 C
32 True
33 True
34 Not Given
35 Not Given
36 D
37 F
38 H
39 C
40 A

If you score...

0-12	13-26	27-40
you are highly unlikely to get an acceptable score under examination conditions and we recommend that you spend a lot of time improving your English before you take IELTS.	you may get an acceptable score under examination conditions but we recommend that you think about having more practice or lessons before you take IELTS.	you are likely to get an acceptable score under examination conditions but remember that different institutions will find different scores acceptable.

Test 5

Each question correctly answered scores 1 mark. **CORRECT SPELLING IS NEEDED IN ALL ANSWERS.**

Reading Passage 1

1 False
2 Not Given
3 False
4 False
5 True
6 True
7 chemical engineering
8 Ascanio Sobrero
9 gunpowder
10 Stockholm
11 detonator
12 pneumatic drill
13 cost

Reading Passage 2

14 iv
15 v
16 ii
17 x
18 vii
19 i
20 viii
21 A
22 C
23 parental guidance
24 compass
25 predators
26 visible

Reading Passage 3

27 C
28 A
29 D
30 B
31 B
32 B
33 C
34 True
35 True
36 True
37 False
38 Not Given
39 True
40 False

If you score...

0-12	13-26	27-40
you are highly unlikely to get an acceptable score under examination conditions and we recommend that you spend a lot of time improving your English before you take IELTS.	you may get an acceptable score under examination conditions but we recommend that you think about having more practice or lessons before you take IELTS.	you are likely to get an acceptable score under examination conditions but remember that different institutions will find different scores acceptable.

Test 6

Each question correctly answered scores 1 mark. **CORRECT SPELLING IS NEEDED IN ALL ANSWERS.**

Reading Passage 1

1 E
2 A
3 C
4 D
5 F
6 G
7 F
8 17
9 backpack
10 interact
11 facial expressions
12 Cog
13 intelligence

Reading Passage 2

14 spread
15 10 times
16 rainfall
17 fire seasons
18 fuel
19 True
20 True
21 Not Given
22 False
23 False
24 B
25 A
26 D

Reading Passage 3

27 True
28 Not Given
29 True
30 False
31 True
32 Infrared light
33 Hot dry air
34 moisture
35 Condenser
36 Pure distilled water
37 fans
38 solar panels
39 costs
40 environmentally friendly

If you score...

0-12	13-26	27-40
you are highly unlikely to get an acceptable score under examination conditions and we recommend that you spend a lot of time improving your English before you take IELTS.	you may get an acceptable score under examination conditions but we recommend that you think about having more practice or lessons before you take IELTS.	you are likely to get an acceptable score under examination conditions but remember that different institutions will find different scores acceptable.

Test 7

Each question correctly answered scores 1 mark. **CORRECT SPELLING IS NEEDED IN ALL ANSWERS.**

Reading Passage 1

1 True
2 Not Given
3 False
4 False
5 pith
6 terpenes
7 alkaloids
8 detoxify
9 hooks
10 G
11 D
12 E
13 C

Reading Passage 2

14 insects/mosquitoes
15 "miasma"
16 life expectancy
17 hereditary
18 culprit/real culprit
19 Not Given
20 True
21 False
22 B
23 F
24 E
25 D
26 A

Reading Passage 3

27 Yes
28 Not Given
29 No
30 No
31 Yes
32 controversial
33 tapped
34 expensive
35 competitive
36 E
37 D
38 B
39 A
40 C

If you score...

0-12	13-26	27-40
you are highly unlikely to get an acceptable score under examination conditions and we recommend that you spend a lot of time improving your English before you take IELTS.	you may get an acceptable score under examination conditions but we recommend that you think about having more practice or lessons before you take IELTS.	you are likely to get an acceptable score under examination conditions but remember that different institutions will find different scores acceptable.

新航道 NEW CHANNEL

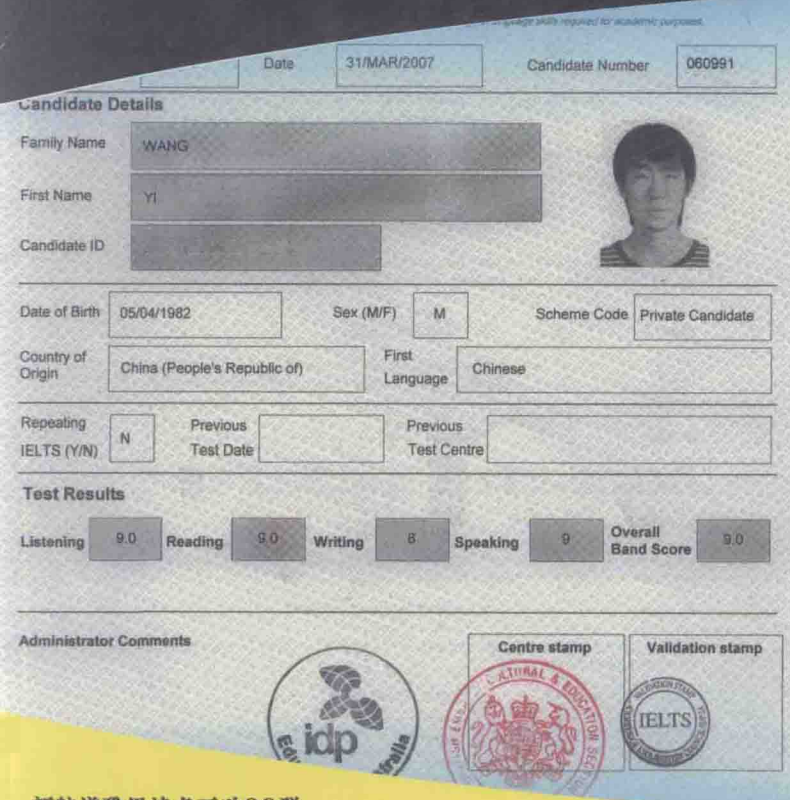
9分达人雅思真题还原及解析系列图书

《9分达人雅思听力真题还原及
《9分达人雅思口语真题还原及
《9分达人雅思阅读真题还原及
《9分达人雅思写作真题还原及解析》
《9分达人雅思阅读真题还原及解析2》

9分达人论剑雅思

2012年-2006年7套最新阅读真题

雅思风云廿载，然真题一卷难求。剑1-剑8虽曾独步天下，然宝刀渐老，锋芒渐消。雅思江湖剑谱纷扰，独缺真经。道逢剑客须呈剑，雅思中人论雅思。今新航道顶尖高手闭关潜修，阅读真题方得再现江湖。考生携此独门秘籍，必可独步江湖。



作者简介

王 毅 北京新航道学校雅思阅读与口语主讲，新航道英语测试研究中心主任，雅思高分全能班的开创者，美国博代尼大学硕士，中国大陆地区迄今为止唯一雅思总分满分得主。自2002年以来一直活跃在雅思考试培训第一线，其倡导的PAVE英语教学法、雅思阅读六点论、雅思口语“万径归一”等多种培训方法为众多雅思考生所推崇。

敬请访问新航道官方网站
book.newchannel.org

上架建议 雅 思 阅 读
ISBN 978-7-80103-871-5
9 787801 038715 >
定价：42.00元

新航道雅思读者互动QQ群

群1：164374082（成员已满）
群2：204560718（成员已满）
群3：211716320
群4：203900147