

IELTS

雅思阅读真题及预测

9

曹书畅 主编

管永川 主审

内部资料·翻录必究

顶级名师推荐

王耀宁	环球雅思学校北京总校校长
曹书畅	北外雅思学校校长
胡 敏	新航道学校校长
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耿 耿	青岛新东方学校校长
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彭新松	北京新东方总校雅思听力部门首席教师
祁连山	原环球雅思学校顶级阅读教师 北京泰迪学校 校长
乐 静	原北京新东方学校雅思阅读部门顶级教师
江 涛	80 天攻克雅思系列图书创始人
李国栋	EQ 英语 31 天高分公式创始人
张 皓	新航道雅思顶级听力教师

简 介

管永川

无忧雅思网 www.51ielts.com 创始人，著名英语测试和教学专家，计算机及语言测试学硕士，澳洲 IDP 教育机构（雅思三大考试主办方之一）中国地区指定合作方，亚太地区雅思资讯网站排名连续 10 年第一。曾在美国、加拿大地区从事雅思、托福、SAT 等留学考试的中外交流合作，长期和雅思、托福领域顶级学校及著名教师进行合作交流、图书出版、机经编辑、预测解析等工作。到目前为止合作方包括英国使馆文化教育处、IDP、剑桥大学出版社、环球雅思学校、新航道、新东方、北外雅思等雅思官方机构和培训机构、为数百万雅思考生排忧解难，指引雅思考试的最新方向。自 2003 年开始，每年连续推出《无忧雅思机经》《无忧托福机经》各种版本，销量及下载量累计超过 500 万册次以上。



曹书畅

毕业于北京外国语大学，随后赴澳洲取得 MBA 硕士学位，期间一并攻读教育语言学的经典著作和辅修测试学，不断探索语言学源流，深入钻研各种出国留学考试，参与雅思、托福等出国留学考试的内部测试测评。回国后在众家国内顶级学校任教，从事雅思、托福、SAT 等考试的研发和教学工作。从事教育工作长达十年之久，2011 年创造雅思阅读、听力 11 种考点串联，开拓阅读领域教学新篇章。2012 年任职北京外国语大学雅思学院，开办 8 小时雅思全日制 A+A 保分课程，学员保分成功率达到 98%，缔造业绩又一个奇迹。2013 年联合业界顶级雅思研发团队（无忧雅思网）一同推出《每周雅思预报》和《雅思机经超详细》系列资料，受到业界顶级名师的联合推荐，在广大烤鸭们中产生轰动效应。



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雅思阅读高分策略

雅思阅读考试中取得高分并不难。

首先，要深入透彻的理解雅思阅读考试的表面形式与实质特点。

然后，有针对性地培养雅思阅读能力和解题技巧，做到阅读实力的提升和十大题型解题技巧的完美结合。

下文分述之。

一、表面形式

● 3 个部分

A 类阅读：三个部分分别为三篇长文章，每篇长度在 900 - 1000 个单词左右，学术类科普读物。

G 类阅读：第一部分通常有两篇较短的文章，阅读的是提供某种产品或服务的基本信息的广告类文章；第二部分稍复杂，阅读短信息，内容多为有关学习课程、学校介绍的信息；第三部分最难，阅读一篇篇幅较长的学术类文章。

● 40 道题

A 类和 G 类阅读考试均为 40 道题。答案要求用铅笔填在答题卡上。

● 60 分钟

A 类和 G 类阅读考试时间均为 60 分钟，紧接在雅思听力考试之后。阅读考试无额外的时间誊写答案。所以考试时答案应直接写在答题卡上。

● 10 种题型

雅思考试官方按题型形式分为 10 种题型，但针对中国考生的学习习惯特点，培训机构一般在雅思教学培训中按解题思路的不同分为下面 10 种题型分别进行讲解。

● 9 分

雅思阅读评分标准 (A 类和 G 类)

学术类阅读		移民类阅读	
正确题数	分数	正确题数	分数
10—12	4	15—17	4
13—15	4. 5	18—19	4. 5
16—19	5	20—22	5
20—22	5. 5	23—24	5. 5
23—25	6	25—27	6
26—27	6. 5	28—29	6. 5
28—30	7	30—32	7
31—32	7. 5	33—34	7. 5
33—35	8	35—37	8
36—38	8. 5	38—39	8. 5
39—40	9	40	9

二、实质特点

● 考试目的

A 类: Study, 考查考生通过学术话题文章的阅读掌握所需信息, 理解并获取知识的能力。

G 类: Survival, 考查考生在英语国家中生活所必备的阅读能力。

● 文章题材

A 类文章内容主要由选自世界各大重要媒体 (相关网站如: www.nature.com; www.nationalgeographic.com; www.economist.com) 的文章改写而成。内容涉及经济、教育、科技、医学、环境、能源、地质、海洋、动植物等方面问题。

G 类文章内容与日常生活息息相关。文章来自于布告、广告、官方文件、小册子、报纸、说明书、时间表、杂志, 以及学校的各种规章制度等。

文章体裁

A 类: 说明文和议论文, 三篇文章中必然有一篇包含详细的议论。

G 类: 说明文。

● 考试特点

雅思阅读部分由剑桥大学考试委员会和澳大利亚考试中心负责试题的编写, 所以阅读试题以前多以英国和澳大利亚的生活背景为主, 但现在的选材以更趋于国际化。

考试文章以大众题材为主, 不涉及专业性很强的文章, 以免给某些专业的考生造成优势或劣势。除选材多样化以外, 尽量设计多层次、多范畴信息题型, 从不同角度考查考生理解把握文章的能力。

雅思阅读考试没有专门设计语法和词汇的专项题型, 这是有别于其他外语考试形式的一个重要特征。相反, 在一些较难的文章之后还附带有一些提示的生词表或注解 (Glossary), 以帮助考生理解某些关键词语和定义, 从而更好点理解全文。这是因为雅思阅读考试既不是考查考生是否能理解每一个单词、每一句话的确切含义, 也不是考查在某一学科的专业能力, 而旨在评估考生的综合英语阅读能力。

● 重点考查技能

雅思 A 类阅读最大特点是阅读量大。三篇文章, 最常见的文章长度为 900 个单词左右一篇, 大部分考生在学习雅思之前很少接触此类长文章。因此, 如何在 10 分钟内快速的浏览完一篇文章, 把握文章结构大意, 留出更多的时间做题是提高雅思阅读成绩的关键。雅思阅读还强调考生 reading with purpose 的能力, 在大量的信息中找到自己想要的信息。这对考生今后对付国外大学教授布置的如山的课后阅读材料是大有裨益的。而且, 我们“有幸”生活在信息时代, 每个人都不缺乏信息, 相反都是 information overloaded。那么雅思阅读其实培养了我们一种基本的生存能力: 如何在信息的海洋中找到自己想要的部分, 而不是被信息所包围, 最终遭遇灭顶之灾。

所以, A 类阅读考试的考核重点是: 阅读文章时能正确理解文章, 把握文章主旨和结构; 做题时能回原文迅速找到考点具体信息, 理解文中的主要事实和某些特定的细节, 根据上下文猜出某些词句大意, 弄清句子间的逻辑关系, 能进行

一定的判断推理。

雅思 G 类考到的题目涉及考生在英语国家必备的生存技能，即是否具备获取、理解并处理基本信息的能力。就考核技能而言，雅思 G 类阅读主要涉及抓主旨、定位细节和比较信息，较少考核推理、判断与得出结论等学术技能。

三、雅思阅读实力提升

雅思阅读实力提升阅读实力的提升绝非一朝一夕之功。单词量和对英语语法的熟练程度是各类英语阅读考试高分的基石。雅思亦是如此。通常来说，达到大学英语六级水平的考生，其单词量（5500 左右）和语法程度达到雅思阅读的基本要求，再通过对雅思阅读特点和方法的掌握，可望在短期内达到 6 分以上的水平。

● 单词

根据自己的英语基础制定出每天能够坚持的、切实可行的背单词计划。结合阅读文章记忆单词是颇为有效的方法。如脱离语言环境，孤立地背词汇，就很容易把单词的意义和正确用法遗忘或混淆。而且枯燥的单词书、字母表很容易让人疲倦和产生挫败感。在精读雅思文章的同时背单词，除了单词的收获，还能深入理解文章中的各类人文常识、趣味科普知识，从而产生每天坚持阅读、坚持背单词的兴趣和动力。另外，有效背记单词的另一个重要原则是：一定要反复多遍。背过的单词一定要定期的重复复习。

● 语法

雅思的语法掌握侧重对句子的理解，应学会从句子的主干成分主谓结构入手，对并列句、比较句、指代句、复合句和双重否定句有充分的把握，注意人称、语态在句子中的变化，并结合句子上下文，正确地掌握其要表达的意思。要逐渐培养将一个长句子读成一个相对短的句子，即长句短读的能力。读完一个长句后自己能总结归纳，提炼其陈述的要点。

● 加大阅读广度

以往在和雅思阅读 8 分以上的高分学员的交流中发现：学员们的单词量大小可能有所差异，但共同点却很明显：英语的累积阅读量大。有的是考前通读过多

种雅思阅读材料；有的是过去读过 TOEFL、GRE 和 GMAT 的各类文章，有的是因为工作的需要每天上网快速阅读英文参考文献……所以，积累和扩大自己的英语阅读量是迈向高分的必由之路。G 类考试的阅读中前两部分通常是实用性强的功能性短文，如菜单、产品说明、通知、住宿安排和广告等，非常贴近西方的实际生活，但对国内绝大多数考生而言很陌生。建议争取每天阅读一定量的原版英文报刊、书籍，如 Time、Reader's Digest 等，尤其注意其中的各类广告。而 A 类阅读则注意多阅读篇幅较长的科普文章或学术性议论文，建议每天坚持半小时以上浏览 www.nature.com、www.nationalgeographic.com、www.economist.com、www.newscientist.com 等网站。它们的文风、常用词汇和句子结构都和雅思 A 类阅读相似。

● 提高阅读速度

雅思考试的阅读部分，无论是 A 类还是 G 类都是同时测试考生的阅读速度和理解的精确度。而如何快速的阅读完长文章，留出充足的时间回答各类题型，是考生必然面临的一个难题。要想提高阅读速度首先要改掉影响阅读速度的不良习惯。针对大多数考生的通病，提出下面四点注意事项：

1. 扩大眼睛扫描的宽度。要达到雅思阅读的速度，请注意训练自己一眼看过，至少阅读到 3 - 5 个单词
2. 阅读过程中只使用眼睛和大脑两大器官。不要用手指和笔引导阅读，不要小声读出来（使用了嘴和耳朵），不要在心中默读（能默读说明你一眼只看到一个单词）。
3. 遇到生词不用紧张，学会通过上下文猜测大意。
4. 有重点的阅读，把握文章结构和大意。

● 培养重要考核能力

有了以上基础，还要有针对性的训练和提高雅思阅读所要求的各种阅读能力。按照各种阅读能力对获得雅思高分的重要性排序，它们依次为：

把握长文章结构（Understanding framework of a passage）快速浏览长文章（Skimming）扫描特定信息（Scanning）理解复杂句子结构（Understanding complex structures）通过上下文猜测词义（Understanding meaning from context）形成概念（Forming a mental image）

雅思阅读真题词汇同意替换整理版

序号	题目单词	原文替换单词	衍生同意单词
1	scientist	expert	physicist, specialist, biologist, zoologist, chemist, researcher, professor, master, skeptics, advocate
2	revision	change, rather than, instead of, shift	correct, transformation, contrast, adjustment, turn, but, however, nevertheless, contrary
3	policy	way, philosophy organisation	rule, law, principle, guideline, decision government, department
4	explanation	explain	claim, conclusion, tell, instruct, demonstrate, declare, argue, believe, maintain, insist, emphasize, say, “”
5	reduce	decrease, drop, fall, slow	minus, decline, descend, down, cut, small, ressession, shrink, leak, downward, small
6	use	consume	apply, employ, utilize, adopt, make use of
7	irrigation	agriculture	food supply, water, canal, lake, ocean, sea, river, field, farmland, farmer, meadow
8	disuse	No	without, not, lack, impossible, improper, inappropriate, unnecessary, abandon, desert, give up, refuse, resist
9	environmental	eco-system	environment, surrounding, atmosphere, circumstance, situation, condition
10	effect	consequence	influence, impact, reflect, result, affect, conclusion, end, hence, thus, therefore, accordingly, outcome, finally, last, fruit, yield
11	financial	Finance	cost, economy, economic, bill, fee, fare, freight, money, consumption, expenditure, spend, tax, tariff, expense, duty, custom, currency, fund, invest, donation, scholarship, penny, pound, dollar, rent, deposit, value, worth。 。 。 。 \$
12	technology	technology	science, skill, machine, equipment, facility, infrastructure, tool, vehicle, technician, engineer

13	relevance	Relate	connect, link, contact, associate, relationship, intimate, get touch with
14	health	Disease	fitness, well-being, well, illness, cancer, cold, sanitation
15	concern	Worry	care, matter
16	increase	superior, extend	rise, up, ascend, more, accelerate, speed up, accumulate, peak, summit, grow, climb, upward, raise, high, soar, leap
17	surprising	unexpected, predict	unbelievable, incredible, terrific, amazing, forecast, anticipate, think, plan
18	need	Demand	call for, require, request, want, desire, eager, willing...
19	standard	Criteria	example, model, size, weight, specification, line, regulation, limit, restrict, criterion...
20	research	Study	investigation, researcher
21	dental	tooth, teeth	dentist
22	development	develop, advancement	promotion, improvement, high, progress, boost
23	population movement	migration	immigrant, shift, change
24	method	technique	approach, measure, way, technology, technical, strategy, skill, tool
25	early	prehistoric	long long ago, before, previous, former, 过去式, 1890s, 1980s, ancestor, precede, date back, precursor, primitive, original, aboriginal, archaeology
26	further	Next	then, advance, additional...
27	question	?	problem, issue, doubt, difficulty, suspicious, suspect
28	cause	Reason	lead to, result in/from, attribute, abscribe, due to, owing to, because, contribute, why, thanks to, hence, thus, therefore, accordingly, consequence
29	relationship	Relate	relavant, relative, friendship, fellowship

30	different	but, however	unlike, conversely, yet, nevertheless, nonetheless
31	between	Two	2, as well as, and, on the one hand...on the other hand, either...or..., both...and..., the former...the latter, couple with
32	measure	calibrate	test, scale, calculate, figure out
33	domestic water	drinking water	shower, WC, toilet, wash, irrigate
34	purify	clean, removal	clear, tidy, anti-bacteria, sanitation, remove, get rid of
35	farming industry	Farm	agriculture, peasant, farmer, farmland, field, pest, animal, herd, cultivate, plant
36	stage	first, second, third, then	finally, next, level, rank, grade, class...
37	term	be referred to as	definition, technical word, vocabulary, be defined as, be known as, be called, be termed as, expression
38	hidden	not appear	disappear, invisible, vanish, hide, underlie, escape, secret, buried, concealed, obscure, cover
39	chemical	pesticide, fertilizer	dirty, science, pollution, chemistry, DDT, poison
40	city	urban	downtown, metropolitan
41	positive	phenomenal	encouraging, promote, energetic, excellent, extraordinary, attractive, great, gorgeous, prominent, supportive, favorable
42	military	battle, battlefield	soldier, navy, army, air force, force, war, arm, gun, marine,
43	electronically	computer	electricity, current, battery, laptop, mobile phone, television, telephone, e-mail, internet
44	difficulty	barrier	not deal with, not handle, not tackle, shortcoming, disadvantage, mistake, drawback, ban, problem
45	first	coin	start, primary, elementary, primitive, original, initial, begin, find, discover, create, invention, build, construct, compose

46	product	produce	vegetable, fruit, thing, article, item, object, physical, ware, goods...
47	abroad		oversea, foreign
48	local		native, our, domestic, own, themselves, civil
49	deliver	send	transport, traffic, sea, freight, airmail, EMS, post, import, export, convey
50	biological	gene, instinct	creature, biology, biologist, animal, tiger, snake, evolution
51	explanation	tell	explain, say, argue, claim, state, believe, maintain, insist, persist, doubt
52	experiment	lab	laboratory, subject, microscope, researcher
53	pupil	pupil	primary school, elementary school, education
54	identity	actor	identify, identification, student, son
55	statistical	数字	data, number, figure, census, demography, numeration
56	expect	predict, want	guess, think, estimate, anticipate, forecast, foresee
57	aim	goal	target, purpose
58	again	前缀 re-	back, second
59	common	general	public, people, person, society, social, share
60	topic	subject	theme, thesis, issue
61	conversation	talk	dialogue, speech, lecture, seminar
62	identify	identity	understand, know, acquaintance, recognize, realize, consider, opinion
63	improvement	advancement	great, promotion, propel, progress, positive, excellent, advantageous, remarkable, prominent, boost
64	official	government	officer, public servant, nation, country, worker, authority
65	location	boulevard	situation, place, sit, locate, situate, position, address, lane, road, street, avenue
66	actor	superstar	actress, player, personate, impersonate

67	pessimistic	worse	bad, negative, failure, fail, hopeless, harmful, inferior, tough
68	instantly	rapid	quickly, fast, speedy, immediately, promptly
69	well known	famous, notoriety	celebrated, noted, renowned, famed, illustrious
70	view	outlook	opinion, perspective, viewpoint, stand, sentiment, thought
71	bring	confer	supply, present, offer, give, apply
72	exchange	together	change, transform, communicate, associate, colleague, cooperation, collaborate
73	expertise	scientist	expert, master, researcher, engineer, physicist
74	different sports	a number of sports swimming, squash, golfer	a variety of sports, basketball, valleyball, football
75	visual imaging	camera, photo	see, view, picture, image, photograph, drawing, diagram
76	narrow	focus	specify, concentrate, shrink, decline, decrease
77	reproduce	copy, replicate	produce again, duplicate
78	optimum	best	greatest, first, leading
79	achievement	score	performance, accomplishment, skill, ability
80	event	championship	match, game, competition, olympic game, contest, sport activity, action
81	detailed	explicit	specific, elaborate, minute
82	potential	be liable to	may be, be able to, likely, possible, probable, be inclined to
83	difference	distinguish	distinction, different, differ, differentiate, unlike, contrast, contrary, adverse, discrimination, odds
84	the same as	like	equivalent, equal, parallel, similar, as, coincide...with, coincidence, resemble
85	entirely	totally	completely, utterly, undoubtedly, absolutely, whole

86	field	domain	kingdom, province, realm, scopes, sign, terrain
87	quickly	fast	swift, speedy, prompt, immediate, sudden
88	unpredictable	fluctuate	rebound, uncertain
89	big	massive	adequate, abundant, substantial, large quantity of, a great deal of, plenty of, accumulative, many, much, excessive
90	delieve	send	transmit, pass, hand over, submit, give
91	restrict	slow down	limit, confine, constrain, curb, minimal, few, smaller
92	pressing	urgent	clamant, emergent, exigent, hurry-up, imperative
93	such as	like	for example, for instance, as an illustration of, to illustrate, case
94	elderly people	old people	senior citizen, old folks, the elderly
95	sophisticated	developed	advanced, complicated, complex, intricate, perplexing, tangle some
96	fair	equal, equitable	disinterested, evenhanded, impartial, square, equality
97	target	goal	aim, cause, end, object, objective
98	vehicle	car, truck	automobile, motor vehicles, transportation means, bus, minibus, carriage, truck, van, traffic
99	unwanted material	waste	rubbish, trash, garbage, junk, litter, muck, sweeping
100	lifestyle	way	mode, method, manner, fashion

Alfred Noble

- A** 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.
- B** 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.
- C** 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. Nitroglycerine was produced by mixing glycerine with sulfuric and nitric acid. 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.

- D** 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 Malaren. Alfred was not discouraged and in 1864 he was able to start mass production of nitroglycerine. To make the handling of nitroglycerine safer, Alfred Noble 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.
- E** The market for dynamite and detonating caps grew very rapidly and Alfred Noble 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, Noble 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.
- F** 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.

G 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.

H 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	<i>if the sataement agrees with the information</i>
FALSE	<i>if the statement contradicts the information</i>
NOT GIVEN	<i>if there is no information on this</i>

- 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 1 800'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.

Amateur Naturalists

- A** Tim Sparks slides a small leather-bound notebook out of an envelope. The book's yellowing pages contain beekeeping notes made between 1941 and 1969 by the late Walter Coates of Kilworth, Leicestershire. He adds it to his growing pile of local journals, birdwatchers' lists and gardening diaries. "We're uncovering about one major new record each month," he says, "I still get surprised." Around two centuries before Coates, Robert Marsham, a landowner from Norfolk in the east of England, began recording the life cycles of plants and animals on his estate-when the first wood anemones flowered, the dates on which the oaks burst into leaf and the rooks began nesting. Successive Marshams continued compiling these notes for 211 years.
- B** Today, such records are being put to uses that their authors could not possibly have expected. These data sets, and others like them, are proving invaluable to ecologists interested in the timing of biological events, or phenology (生物气候学). By combining the records with climate data, researchers can reveal how, for example, changes in temperature affect the arrival of spring, allowing ecologists to make improved predictions about the impact of climate change. A small band of researchers is combing through hundreds of years of records taken by thousands of amateur naturalists. And more systematic projects have also started up, producing an overwhelming response. "The amount of interest is almost frightening," says Sparks, a climate researcher at the Centre for Ecology and Hydrology in Monks Wood, Cambridgeshire.
- C** Sparks became aware of the army of "closet phenologists", as he describes them, when a retiring colleague gave him the Marsham records. He now spends much of his time following leads from one historical data set to another. As news of his quest spreads, people tip him off to other historical records, and more amateur phenologists come out of their closets. The British devotion to recording and collecting makes his job easier-one man from Kent sent him 30 years' worth of kitchen calendar, on which he had noted the date that his neighbour's magnolia tree flowered.

- D** Other researchers have unearthed data from equally odd sources. Rafe Sargarin, an ecologist at Stanford University in California, recently studied records of a betting contest in which participants attempt to guess the exact time at which a specially erected wooden tripod will fall through the surface of a thawing river. The competition has taken place annually on the Tenana River in Alaska since 1917, and analysis of the results showed that the thaw now arrives five days earlier than it did when the contest began.
- E** Overall, Such records have helped to show that, compared with 20 years ago, a raft of natural events now occur earlier across much of the northern hemisphere, from the opening of leaves to the return of birds from migration and the emergence of butterflies from hibernation . The data can also hint at how nature will change in the future. Together with models of climate change, amateurs' records could help guide conservation. Terry Root, an ecologist at the University of Michigan in Ann Arbor, has collected birdwatchers' counts of wildfowl taken between 1955 and 1996 on seasonal ponds in the American Midwest and combined them with climate data and models of future warming. Her analysis shows that the increased droughts that the models predict could halve the breeding populations at the ponds. "The number of waterfowl in North America will most probably drop significantly with global warming," she says.
- F** But not all professionals are happy to use amateur data. "A lot of scientists won't touch them, they say they're too full of problems," says Root. Because different observers can have different ideas of what constitutes, for example, an open snowdrop. "The biggest concern with ad hoc observations is how carefully and systematically they were taken," says Mark Schwartz of the University of Wisconsin, Milwaukee, who studies the interactions between plants and climate. "We need to know pretty precisely what a person's been observing _ if they just say 'I noted when the leaves came out', it might not be



that useful.” Measuring the onset of autumn can be particularly problematic because deciding when leaves change colour is a more subjective process than noting when they appear.

G Overall, most phenologists are positive about the contribution that amateurs can make. “They get at the raw power of science: careful observation of the natural world,” says Sagarin. But the professionals also acknowledge the need for careful quality control. Root, for example, tries to gauge the quality of an amateur archive by interviewing its collector.

H “You always have to worry things as trivial as vacations can affect measurement. I disregard a lot of records because they’re not rigorous enough,” she says. Others suggest that the right statistics can iron out some of the problems with amateur data. Together with colleagues at Wageningen University in the Netherlands, environmental scientist Arnold van Vliet is developing statistical techniques to account for the uncertainty in amateur phenological data. With the enthusiasm of amateur phenologists evident from past records, professional researchers are now trying to create standardized recording schemes for future efforts. They hope that well-designed studies will generate a volume of observations: large enough to drown out the idiosyncrasies of individual recorders. The data are cheap to collect, and can provide breadth in space, time and range of species. “It’s very difficult to collect data on a large geographical scale without enlisting an army of observers,” says Root.

I Phenology also helps to drive home messages about climate change. “Because the public understand these records, they accept them,” says Sparks. It can also illustrate potentially unpleasant consequences, he adds, such as the finding that more rat infestations are reported to local councils in warmer years. And getting people involved is great for public relations, “People are thrilled to think that the data they’ve been collecting as a hobby can be used for something scientific—it empowers them,” says Root.

Questions 27-33

Reading Passage 3 has eight paragraphs A-H.

Which paragraph contains the following information?

Write the correct letter A-H in boxes 27-33 on your answer sheet.

- 27 Definition of Phenology introduced
- 28 Sparks first noticed amateur records
- 29 Surprise function of casual data in science
- 30 Impossible mission without enormous amateur data collection
- 31 Example of using amateur records for a scientific prediction
- 32 Records from an amateur contributed to climate change
- 33 Collection of old records compiled by a family of amateur naturalists

Questions 34-36

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

Write your answers in boxes 34-36 on your answer sheet.

- 34 In Waiter Coates's records, there are plenty of information of _____ .
- 35 Robert Marsham is well-known for noting animals and plants' _____ .
- 36 The number of waterfowl in North America decreases because of increased _____ according to some phenologists

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 do a lot of scientists questioned the amateurs data?
- A Data collection is not professional
 - B Amateur observers are careless.
 - C Amateur data is not reliable sometimes.
 - D They have one-sided work experience
- 38 Example of leaves Mark Schwartz used to explain that?
- A Amateur records are not reliable at all.
 - B Amateur records are not well organized.
 - C Some details are very difficult to notice.
 - D Valuable information is accurate one.
- 39 What suggestion of scientists for the usage of amateur data?
- A Use modified and better approaches.
 - B Only Observation data is valuable.
 - C Use original materials instead of changed ones.
 - D Method of data collection is the most important.
- 40 What's the implication of phenology for ordinary people?
- A It enriches the knowledge of the public.
 - B It improves ordinary people's relations with scientists.
 - C It encourages people to collect more animal information.
 - D It arouses public awareness about climate change.

Being Left-handed in a Right-handed World

The world is designed for right-handed people. Why does a tenth of the population prefer the left?

A The probability that two right-handed people would have a left-handed child is only about 9.5 percent. The chance rises to 19.5 percent if one parent is a lefty and 26 percent if both parents are left-handed. The preference, however, could also stem from an infant's imitation of his parents. To test genetic influence, starting in the 1970s British biologist Marian Annett of the University of Leicester hypothesized that no single gene determines handedness. Rather, during fetal development, a certain molecular factor helps to strengthen the brain's left hemisphere, which increases the probability that the right hand will be dominant, because the left side of the brain controls the right side of the body, and vice versa. Among the minority of people who lack this factor, handedness develops entirely by chance.

Research conducted on twins complicates the theory, however. One in five sets of identical twins involves one right-handed and one left-handed person, despite the fact that their genetic material is the same. Genes, therefore, are not solely responsible for handedness.

B Genetic theory is also undermined by results from Peter Hepper and his team at Queen's University in Belfast, Ireland. In 2004 the psychologists used ultrasound to show that by the 15th week of pregnancy, fetuses already have a preference as to which thumb they suck. In most cases, the preference continued after birth. At 15 weeks, though, the brain does not yet have control over the body's limbs. Hepper speculates that fetuses tend to prefer whichever side of the body is developing quicker and that their movements, in turn, influence the brain's development. Whether this early preference is temporary or holds up throughout development and infancy is unknown.

Genetic predetermination is also contradicted by the widespread observation that children do not settle on either their right or left hand until they are two or three years old.

- C** But even if these correlations were true, they did not explain what actually causes left-handedness. Furthermore, specialization on either side of the body is common among animals. Cats will favor one paw over another when fishing toys out from under the couch. Horses stomp more frequently with one hoof than the other. Certain crabs motion predominantly with the left or right claw. In evolutionary terms, focusing power and dexterity in one limb is more efficient than having to train two, four or even eight limbs equally. Yet for most animals, the preference for one side or the other is seemingly random. The overwhelming dominance of the right hand is associated only with humans. That fact directs attention toward the brain's two hemispheres and perhaps toward language.

- D** Interest in hemispheres dates back to at least 1836. That year, at a medical conference, French physician Marc Dax reported on an unusual commonality among his patients. During his many years as a country doctor, Dax had encountered more than 40 men and women for whom speech was difficult, the result of some kind of brain



damage. What was unique was that every individual suffered damage to the left side of the brain. At the conference, Dax elaborated on his theory, stating that each half of the brain was responsible for certain functions and that the left hemisphere controlled speech. Other experts showed little interest in the Frenchman's ideas.

Over time, however, scientists found more and more evidence of people experiencing speech difficulties following injury to the left brain. Patients with damage to the right hemisphere most often displayed disruptions in

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perception or concentration. Major advancements in understanding the brain's asymmetry were made in the 1960s as a result of so-called split-brain surgery, developed to help patients with epilepsy. During

this operation, doctors severed the corpus callosum—the nerve bundle that connects the two hemispheres. The surgical cut also stopped almost all normal communication between the two hemispheres, which offered researchers the opportunity to investigate each side's activity.

E In 1949 neurosurgeon Juhn Wada devised the first test to provide access to the brain's functional organization of language. By injecting an anesthetic into the right or left carotid artery, Wada temporarily paralyzed one side of a healthy brain, enabling him to more closely study the other side's capabilities. Based on this approach, Brenda Milner and the late Theodore Rasmussen of the Montreal Neurological Institute published a major study in 1975 that confirmed the theory that country doctor Dax had formulated nearly 140 years earlier: in 96 percent of right-handed people, language is processed much more intensely in the left hemisphere. The correlation is not as clear in lefties, however. For two thirds of them, the left hemisphere is still the most active language processor. But for the remaining third, either the right side is dominant or both sides work equally, controlling different language functions.

That last statistic has slowed acceptance of the notion that the predominance of right-handedness is driven by left-hemisphere dominance in language processing. It is not at all clear why language control should somehow have dragged the control of body movement with it. Some experts think one reason the left hemisphere reigns over language is because the organs of speech processing—the larynx and tongue—are positioned on the body's symmetry axis. Because these structures were centered, it may have been unclear, in evolutionary terms, which side of the brain should control them, and it seems unlikely that shared operation would result in smooth motor activity.

Language and handedness could have developed preferentially for very different reasons as well. For example, some researchers, including

evolutionary psychologist Michael C. Corballis of the University of Auckland in New Zealand, think that the origin of human speech lies in gestures. Gestures predated words and helped language emerge. If the left hemisphere began to dominate speech, it would have dominated gestures, too, and because the left brain controls the right side of the body, the right hand developed more strongly.

- F** Perhaps we will know more soon. In the meantime, we can revel in what, if any, differences handedness brings to our human talents. Popular wisdom says right-handed, left-brained people excel at logical, analytical thinking. Left-handed, right-brained individuals are thought to possess more creative skills and may be better at combining the functional features emergent in both sides of the brain. Yet some neuroscientists see such claims as pure speculation. Fewer scientists are ready to claim that left-handedness means greater creative potential. Yet lefties are prevalent among artists, composers and the generally acknowledged great political thinkers. Possibly if these individuals are among the lefties whose language abilities are evenly distributed between hemispheres, the intense interplay required could lead to unusual mental capabilities.
- G** Or perhaps some lefties become highly creative simply because they must be more clever to get by in our right-handed world. This battle, which begins during the very early stages of childhood, may lay the groundwork for exceptional achievements.

Questions 14-18

Reading Passage 2 has seven sections A-G.

Which section contains the following information?

Write the correct letter A-G in boxes 14-18 on your answer sheet.

- 14 Preference of using one side of the body in animal species.
- 15 How likely one-handedness is born.
- 16 The age when the preference of using one hand is settled.
- 17 Occupations usually found in left-handed population.
- 18 A reference to an early discovery of each hemisphere's function.

Questions 19-22

Look at the following researchers (Questions 19-22) and the list of findings below.

Match each researcher with the correct finding.

Write the correct letter A-G in boxes 19-22 on your answer sheet.

List of Findings

- A Early language evolution is correlated to body movement and thus affecting the preference of use of one hand.
- B No single biological component determines the handedness of a child.
- C Each hemisphere of the brain is in charge of different body functions.
- D Language process is mainly centered in the left-hemisphere of the brain.
- E Speech difficulties are often caused by brain damage.
- F The rate of development of one side of the body has influence on hemisphere preference in fetus.
- G Brain function already matures by the end of the fetal stage.

- 19 Marian Annett
- 20 Peter Hepper
- 21 Brenda Milner & Theodore Rasmussen
- 22 Michael Corballis

Questions 23-26

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

In boxes 23-26 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

- 23 The study of twins shows that genetic determination is not the only factor for left-handedness.
- 24 Marc Dax's report was widely accepted in his time.
- 25 Juhn Wada based his findings on his research of people with language problems.
- 26 There tend to be more men with left-handedness than women.

Bright Children

- A** BY the time Laszlo Polgar's first baby was born in 1969 he already had firm views on child-rearing. An eccentric citizen of communist Hungary, he had written a book called "Bring up Genius!" and one of his favourite sayings was "Geniuses are made, not born". An expert on the theory of chess, he proceeded to teach little Zsuzsa at home, spending up to ten hours a day on the game. Two more daughters were similarly hot-housed. All three obliged their father by becoming world-class players. The youngest, Judit, is currently ranked 13th in the world, and is by far the best female chess player of all time. Would the experiment have succeeded with a different trio of children? If any child can be turned into a star, then a lot of time and money are being wasted worldwide on trying to pick winners.
- B** America has long held "talent searches", using test results and teacher recommendations to select children for advanced school courses, summer schools and Other extra tuition. This provision is set to grow. In his state-of-the-union address in 2006, President George Bush announced the "American Competitiveness Initiative", which, among much else, would train 70,000 high-school teachers to lead advanced courses for selected pupils in mathematics and science. Just as the superpowers' space race made Congress put money into science education, the thought of China and India turning out hundreds of thousands of engineers and scientists is scaring America into prodding its brightest to do their best.
- C** The philosophy behind this talent search is that ability is innate; that it can be diagnosed with considerable accuracy; and that it is worth cultivating. In America, bright children are ranked as "moderately", "highly", "exceptionally" and "profoundly" gifted. The only chance to influence innate ability is thought to be in the womb or the first couple of years of life. Hence the fad for "teaching aids" such as videos and flashcards for newborns, and "whale sounds" on tape which a pregnant mother can strap to her belly.
- D** In Britain, there is a broadly similar belief in the existence of innate talent, but

also an egalitarian sentiment which makes people queasy about the idea of investing resources in grooming intelligence. Teachers are often opposed to separate provision for the best-performing children, saying any extra help should go to stragglers. In 2002, in a bid to help the able while leaving intact the ban on most selection by ability in state schools, the government set up the National Academy for Gifted and Talented Youth. This outfit runs summer



schools and master classes for children nominated by their schools. To date, though, only seven in ten secondary schools have nominated even a single child. Last year all schools were told they must supply the names of their top 10%.

- E** Picking winners is also the order of the day in ex-communist states, a hangover from the times when talented individuals were plucked from their homes and ruthlessly trained for the glory of the nation. But in many other countries, opposition to the idea of singling out talent and grooming it runs deep. In Scandinavia, a belief in virtues like modesty and social solidarity makes people flinch from the idea of treating brainy children differently.
- F** And in Japan there is a widespread belief that all children are born with the same innate abilities—and should therefore be treated alike. All are taught together, covering the same syllabus at the same rate until they finish compulsory schooling. Those who learn quickest are expected then to teach their classmates. In China, extra teaching is provided, but to a self-selected bunch. “Children’s palaces” in big cities offer a huge range of after-school classes. Anyone can sign up; all that is asked is excellent attendance.
- G** Statistics give little clue as to which system is best. The performance of the

most able is heavily affected by factors other than state provision. Most state education in Britain is nominally non-selective, but middle-class parents try to live near the best schools. Ambitious Japanese parents have made private, out-of-school tuition a thriving business. And Scandinavia's egalitarianism might work less well in places with more diverse populations and less competent teachers. For what it's worth, the data suggest that some countries—like Japan and Finland, see table—can eschew selection and still thrive. But that does not mean that any country can ditch selection and do as well.

H Mr Polgar thought any child could be a prodigy given the right teaching, an early start and enough practice. At one point he planned to prove it by adopting three baby boys from a poor country and trying his methods on them. (His wife vetoed the scheme.) Some say the key to success is simply hard graft. Judit, the youngest of the Polgar sisters, was the most driven, and the most successful; Zsofia, the middle one, was regarded as the most talented, but she was the only one who did not achieve the status of grand master. "Everything came easiest to her," said her older sister. "But she was lazy."

Questions 28-33

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

In boxes 28-33 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

- 28 America has a long history of selecting talented students into different categories.
- 29 Teachers and schools in Britain held welcome attitude towards government's selection of gifted students.
- 30 Some parents agree to move near reputable schools in Britain.
- 31 Middle-class parents participate their children's education.
- 32 Japan and Finland comply with selected students policy.
- 33 Avoiding-selection-policy only works in a specific environment.

Questions 34-35

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

Write your answers in boxes 34-35 on your answer sheet.

- 34** What's Laszlo Polgar's point of view towards geniuses of children?
- A Chess is the best way to train geniuses
 - B Genius tend to happen on first child
 - C Geniuses can be educated later on
 - D Geniuses are born naturally
- 35** What is the purpose of citing Zsofia's example in the last paragraph?
- A Practice makes genius
 - B Girls are not good at chessing
 - C She was an adopted child
 - D Middle child is always the most talented

Questions 36-40

Use the information in the passage to match the countries (listed A-F) with correct connection below. Write the appropriate letters A-F in boxes 36-40 on your answer sheet.

- A Scandinavia
- B Japan
- C Britain
- D China
- E America

- 36 Less gifted children get help from other classmates
- 37 Attending extra teaching is open to anyone
- 38 People are reluctant to favor gifted children due to social characteristics
- 39 Both view of innate and egalitarian co-existed
- 40 Craze of audio and video teaching for pregnant women.

Brunel: “the Practical Prophet”

A In the frontispiece of his book on Brunel, Peter Hay quotes from Nicholson’s British Encyclopaedia (百科全书) of 1909 as follows: ‘Engineers are extremely necessary for these purposes; wherefore it is requisite that, besides being ingenious, they should be brave in proportion.’ His father, Sir Marc Isambard Brunel (1769—1849), was himself a famous engineer, of French parents. He eventually settled in Britain and married Sophia Kingdom, an English woman whom he had known in France in earlier days. Their only son Isambard was born on 9 April, 1806. He was sent to France at the age of 14 to study mathematics and science and was 16 when he returned to England to work with his father. Sir Marc was then building his famous tunnel under the River Thames (泰晤士河). Isambard was recuperating (病后复原) near Bristol from injuries received in a tunnel cave—in when he became involved with his own first major project.

—— The Suspension Bridge on the Avon Gorge

B The span of Brunel’s bridge was over 700ft, longer than any existing when it was designed, and the height above water about 245ft. The technical challenges of this engineering project were immense, and Brunel dealt with them with his usual, thoroughness and ingenuity (独创性). But it is also interesting to look at how Brunel handled the other side of the engineering business: selling his ideas. Two design competitions were held, and the great bridge designer Thomas Telford was the committee’s expert. Brunel presented four designs. He went beyond technicalities to include arguments based on, among other things, the grace of his tower design. Unfortunately, he only got so far as to put up the end piers in his lifetime. The Clifton Suspension Bridge was completed in his honor by his engineering friends in 1864, and is still in use.

The Great Western Railway

C While Brunel was still in Bristol, and with the Avon Bridge project stopped or going slowly, he became aware that the civic authorities saw the need for

a railway link to London. Railway location was controversial, since private landowners and towns had to be dealt with. Mainly, the landed gentry did not want a messy, noisy railway anywhere near them. The Duke of Wellington (of Waterloo fame) was certainly against it. Again Brunel showed great skill in presenting his arguments to the various committees and individuals. Brunel built his railway with a broad gauge (7ft) instead of the standard 4ft 8½in, which had been used for lines already installed. There is no doubt that the broad gauge (轨道宽度) gave superior ride and stability, but it was fighting a standard. In this he was also up against his professional rival (but personal friend) Robert Stephenson and Robert's father, George Stephenson. After much argument, the government settled the matter in 1846 by requiring any new lines to be standard gauge.

Atmospheric railway:

- D** Brunel's ready acceptance of new ideas overpowered good engineering judgment (at least in hindsight) when he advocated the installation of an atmospheric railway in South Devon. It had the great attraction of doing away with the locomotive, and potentially could deal with steeper gradients. The system consisted of a 15in—diameter pipe, laid between the rail lines, with 13 slit cut along the top. A piston fitted into the pipe, and was connected to the driving railcar above by an arm. The pipe ahead of the piston (活塞) was then evacuated of air by pumps stationed about two miles apart along the line. The atmospheric pressure then drove the train. Since this connecting arm had to run along the slit, it had to be opened through a flap as the train



progressed, but closed airtight behind it. Materials were not up to it, and this arrangement was troublesome and expensive to keep in repair. After a year of frustration, the system was abandoned. Brunel admitted his failure and took responsibility. He also took no fee for his work, setting a good professional example.

Brunel's ships:

- E** The idea of using steam to power ships to cross the ocean appealed to Brunel. When his GWR company directors complained about the great length of their railway(it was only about 100 miles), Isambard jokingly suggested that they could even make it longer—why not go all the way to New York and call the link the Great Western. The “Great Western” was the first steamship to engage in transatlantic (横渡大西洋的)service. Brunel formed the Great Western Steamship Company and construction started on the ship in Bristol in 1836. Built of wood and 236ft long, the Great Western was launched in 1837, and powered by sail and paddlewheels. The first trip to New York took just 15 days, and 14 days to return. This was a great success, a one way trip under sail would take more than a month. The Great Western was the first steamship to engage in transatlantic service and made 74 crossings to New York.
- F** Having done so well with the Great Western, Brunel immediately got to work on an even bigger ship. The Great Britain was made of iron and also built in Bristol, 322ft in length. The initial design was for the ship to be driven by paddle wheels (船桨轮机), but Brunel had seen one of the first propeller driven ships to arrive in Britain, and he abandoned his plans for paddle wheel propulsion. The ship was launched in 1843 and was the first screw—driven iron ship to cross the Atlantic. The Great Britain ran aground early in its career, but was repaired, sold, and sailed for years to Australia, and other parts of the world, setting the standard for ocean travel. In the early 1970s the old ship was rescued from the Falklands, and is now under restoration in Bristol.
- G** Conventional wisdom in Brunel's day was that steamships could not carry enough coal to make long ocean voyages. But he correctly figured out that

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this was a case where size mattered He set out to design the biggest ship ever, five times larger than any ship built up to that time. Big enough to carry fuel to get to Australia without refueling, in addition it would carry 4,000 passengers. The Great Eastern was 692ft long, with a displacement of about 32,000 tons. Construction began in 1854 on the Thames at Millwall. Brunel had chosen John Scott Russell to build the ship. He was a well-established engineer and naval architect, but the contract did not go well. Among other things, Scott Russell was very low in his estimates and money was soon a problem. Construction came to a standstill in 1856 and Brunel himself had to take over the work. But Brunel was nothing if not determined and by September, 1859, after a delayed and problem ridden launch, the Great Eastern was ready for the maiden voyage, Brunel was too sick to go, but it was just as well, because only a few hours out there was an explosion in the engine room which would have destroyed a lesser ship. Brunel died within a week or so of the accident. The great ship never carried 4,000 passengers (among other things, the Suez Canal came along) and although it made several transatlantic crossings, it was not a financial success. Shortly after the Great Eastern began working life, the American entrepreneur Cyrus Field and his backers were looking for a ship big enough to carry 5,000 tons of telegraphic cable, which was to be laid on the ocean floor from Ireland to Newfoundland(纽芬兰, 加拿大). Although Brunel did not have it in mind, the Great Eastern was an excellent vessel for this work on July 27, 1866. It successfully completed the connection and a hundred years of transatlantic communication by cable began. The ship continued this career for several years, used for laying cables in many parts of the world.

Questions 1-6

Use the information in the passage to match the project Brunel did (listed A—G) with opinions or deeds below. Write the appropriate letters A—G in boxes 1-6 on your answer sheet.

- A River Thames Tunnel
- B Clifton Suspension Bridge
- C Atmospheric Railway
- D Great Britain
- E The Great Western
- F Great Western Railway
- G The Great Eastern

- 1 The project of construction that I.K.Brunel was not responsible for.
- 2 The project had stopped due to inconvenience and high maintaining cost.
- 3 The project was honored to yet not completed by Brunel himself.
- 4 The project had budget problem although built by a famous engineer.
- 5 Serious problem happened and delayed repeatedly.
- 6 The first one to cross Atlantic Ocean in mankind history.

Questions 7-9

The reading Passage has seven paragraphs A-G.

Which paragraph contains the following information?

Write the correct letter A—G in boxes 7-9 on your answer sheet

NB You may use any letter more than once.

- 7 There was a great ship setting the criteria for journey of ocean.
- 8 A ambitious project which seemed to be applied in an unplanned service later.
- 9 Brunel showed his talent of inter—personal skills with landlords and finally project had been gone through.

Questions 10-13

Summary

Complete the following summary of the paragraphs of Reading Passage, using no more than two words from the Reading Passage for each answer. Write your answers in boxes 10-13 on your answer sheet.

The Great Eastern was specially designed with a 10 _____ for carrying more fuels and was to take long voyage to 11 _____ ; However due to physical condition, Brunel couldn't be able to go with maiden voyage. Actually the Great Eastern was unprofitable because the construction of 12 _____. But soon after there was an ironic opportunity for the Great Eastern which was used to carry and to lay huge 13 _____ in Atlantic Ocean floor.

Intelligence and Giftedness

- A** In 1904 the French minister of education, facing limited resources for schooling, sought a way to separate the unable from the merely lazy. Alfred Binet got the job of devising selection principles and his brilliant solution put a stamp on the study of intelligence and was the forerunner of intelligence tests still used today, he developed a thirty-problem test in 1905, which tapped several abilities related to intellect, such as judgment and reasoning, the test determined a given child's mental age', the test previously established a norm for children of a given physical age. (for example, five-year-olds on average get ten items correct), therefore, a child with a mental age of five should score 10, which would mean that he or she was functioning pretty much as others of that age. the child's mental age was then compared to his physical age.
- B** A large disparity in the wrong direction (e.g., a child of nine with a mental age of four) might suggest inability rather than laziness and mean he or she was earmarked for special schooling, Binet, however, denied that the test was measuring intelligence, its purpose was simply diagnostic, for selection only. This message was however lost, and caused many problems and misunderstanding later.
- C** Although Binet's test was popular, it was a bit inconvenient to deal with a variety of physical and mental ages. So in 1912 Wilhelm Stern suggested simplifying this by reducing the two to a single number, he divided the mental age by the physical age, and multiplied the result by 100. An average child,irrespective of age, would score 100, a number much lower than 100 would suggest the need for help, and one much higher would suggest a child well ahead of his peer.
- D** This measurement is what is now termed the IQ (for intelligence quotient) score and it has evolved to be used to show how a person, adult or child, performed in relation to others, (the term IQ was coined by Lewis m. Terman, professor of psychology and education of Stanford university, in 1916. he had constructed an enormously influential revision of Binet's test, called the

Stanford-Binet test, versions of which are still given extensively.)

- E** The field studying intelligence and developing tests eventually coalesced(vi. 联合) into a sub-field of psychology called psychometrics (n. 心理测验学) (psycho for ‘mind’ and metrics for ‘measurements’). The practical side of psychometrics (the development and use of tests) became widespread quite early, by 1917, when Einstein published his grand theory of relativity, mass-scale testing was already in use. Germany’s unrestricted submarine warfare (which led to the sinking of the Lusitania (卢西塔尼亚号) in 1915) provoked the United States to finally enter the First World War in the same year. The military had to build up an army very quickly; it had two million inductees to sort out. Who would become officers and who enlisted men? Psychometricians developed two intelligence tests that helped sort all these people out, at least to some extent, this was the first major use of testing to decide who lived and who died, as officers were a lot safer on the battlefield, the tests themselves were given under horrendously (*adj.* 可怕的) bad conditions, and the examiners seemed to lack commonsense, a lot of recruits simply had no idea what to do and in several sessions most inductees (*n.* 应征者) scored zero! The examiners also came up with the quite astounding conclusion from the testing that the average American adult’s intelligence was equal to that of a thirteen-year-old!
- F** Nevertheless, the ability for various authorities to classify people on scientifically justifiable premises was too convenient and significant to be dismissed lightly, so with all good astounding intentions and often over enthusiasm, society’s affinity for psychological testing proliferated. Back in Europe, Sir Cyril Burt, professor of psychology at university college London from 1931 to 1950, was a prominent figure for his contribution to the field, he was a firm advocate of intelligence testing and his ideas fitted in well with English cultural ideas of elitism, a government committee in 1943 used some Burt’s ideas in devising a rather primitive typology on children’s intellectual behavior, all were tested at age eleven, the top 15 or 20 per cent went to grammar schools with good teachers and a fast pace of work to prepare for the

few university places available a lot of very bright working-class children, who otherwise would never have, made it to grammar schools and universities.

- G** The system for the rest was however disastrous these children attended lesser secondary or technical schools and faced the prospect of eventual education oblivion (*n.* 遗忘), they felt like dumb failures, having been officially branded as such be science, and their motivation to study naturally plummeted, it was not until 1974 that the public education system was finally reformed. (Nowadays it is believed that Burt has fabricated a lot of his data; having an obsession that intelligence is largely genetic, he apparently made up twin studies, which supported this idea, at the same time inventing two co-workers who were supposed to have gathered the results.)



- H** Intelligence testing enforced political and social prejudice, their results were used to argue that Jews ought to be kept out of the united states because they were so intelligently inferior that they would pollute the racial mix; and blacks ought not to be allowed to breed at all. And so abuse and test bias controversies continued to plague psychometrics.

- I** Measurement is fundamental to science and technology, science often advances in leaps and bounds when measurement devices improve, psychometrics has long tried to develop ways to gauge psychological qualities such as intelligence and more specific abilities, anxiety, extroversion (外向性), emotional stability, compatibility, with marriage partner, and so on. Their scores are often given enormous weight, a single IQ measurement can take on a life of its own if teachers and parents see it as definitive, it became a major issue in the 70s, when court cases were launched to stop anyone from making important decisions based on IQ test scores, the main criticism was and still is that current tests don't really measure intelligence, whether intelligence can be measured at all is still controversial, some say it cannot others say that IQ tests are psychology's greatest accomplishments.

Questions 14-17

The reading Passage has eleven paragraphs A-I.

Which paragraph contains the following information?

Write the correct letter A-I, in boxes 14-18 on your answer sheet.

NB You may use any letter more than once.

- 14 IQ is just one single factor of human characteristics.
- 15 Discussion of methodology behind the Professor Stern's test.
- 16 Inadequacy of IQ test from Binet.
- 17 The definition of IQ was created by a professor.

Questions 18-21

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

Write your answers in boxes 18-21 on your answer sheet.

- 18** The purpose of the text is to
- A discuss the validity of IQ test
 - B prove someone's theory is feasible.
 - C demonstrate the limitation of test
 - D outline the history of the test
- 19** Professor Binet devise the test to
- A find those who do not perform satisfied
 - B choose the best one
 - C measure the intelligence
 - D establish the standard of intelligence
- 20** The test is designed according to
- A math
 - B age
 - C reading skill
 - D gender
- 21** U.S. Army used Intelligence tests to select
- A Officers
 - B Normal Soldiers
 - C Examiners
 - D Submarine drivers.

Questions 22-26

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

In boxes 22-26 on your answer sheet, write

TRUE	<i>if the statement agrees with the information</i>
FALSE	<i>if the statement contradicts the information</i>
NOT GIVEN	<i>if there is no information on this</i>

- 22 Part the intension in designing the test by professor Binet has been misunderstood.
- 23 The tests of Sir Cyril Burt are only intended to be used in Paris school.
- 24 Einstein was a counter-example of IQ test conclusion.
- 25 IQ test may probably lead to racial discrimination as a negative effect.
- 26 The author regards measuring intelligent test as a goal hardly attained.

John Franklin: “the discovery of the slowness ”

- A** John Franklin (1786-1847) was the most famous vanisher of the Victorian era. He joined the Navy as a midshipman at the age of 14, and fought in the battles of Copenhagen and Trafalgar. When peace with the French broke out, he turned his attention to Arctic exploration (北冰洋探险), and in particular to solving the conundrum of the Northwest Passage, the mythical clear-water route which would, if it existed, link the Atlantic and the Pacific Oceans above the northern coast of the American continent. The first expedition (*n.* 远征, 航行) Franklin led to the Arctic was an arduous (*adj.* 费力的, 艰辛的) overland journey from Hudson Bay to the shores of the so-called Polar Ocean east of the Coppermine River. Between 1819 and 1822, Franklin and his twenty-strong team covered 5550 miles on foot. Their expedition was a triumph of surveying—they managed to chart hundreds of miles of previously unknown coastline.
- B** There followed a career as a travel writer and salon-goer ('the man who ate his boots' was Franklin's tag-line), a second long Arctic expedition, and a controversial spell as Governor of Van Diemen's Land. Then, in May 1845, Franklin set off with two ships—the Erebus and the Terror—and 129 men on the voyage (*n.* 航行) that would kill him. In July, the convoy was seen by two whalers, entering Lancaster Sound. Nothing more would be heard of it for 14 years. Had the ships sunk or been iced in? Were the men dead, or in need of rescue? Or had they broken through to the legendary open polar sea, beyond the 'ice barrier'?
- C** In his personal correspondence (*n.* 通信) and in his published memoirs, Franklin comes across as a man dedicated to (投身于, 奉献于) the external duties of war and exploration, who kept introspection and self-analysis to a minimum. His blandness makes him an amenably malleable (*adj.* 可塑造的) subject for a novelist, and Sten Nadolny has taken full advantage of this

licence. Most important, he has endowed his John Franklin with a defining character trait for which there is no historical evidence: ('slowness', or 'calmness').

- D** Slowness influences not only Franklin's behaviour, but also his vision, his thought and his speech. The opening scene of *The Discovery of Slowness* (The Discovery of Slowness by Sten Nadolny) depicts Franklin as a young boy, playing catch badly because his reaction time is too slow. Despite the bullying of his peers, Franklin resolves not to fall into step with 'their way of doing things'. For Nadolny, Franklin's fatal fascination with the Arctic stems from his desire to find an environment suited to his peculiar slowness.
- E** He describes Franklin as a boy dreaming of the 'open water and the time without hours and days' which exist in the far north, and of finding in the Arctic a place 'where nobody would find him too slow'. Ice is a slow mover. Ice demands a corresponding patience from those who venture onto it. The explorers who have thrived at high latitudes (*n. 经度*) and at high altitudes (*n. 纬度*) haven't usually been men of great speed. They have tended instead to demonstrate unusual self-possession, a considerable capacity (*n. 能力*) for boredom, and a talent for what the Scots call 'tholing', the uncomplaining endurance (*n. 忍耐力*) of suffering.
- F** These were all qualities which the historical Franklin possessed in abundance, and so Nadolny's concentration and exaggeration of them isn't unreasonable. Even as an adult, his slowness of thought means that he is unable to speak fluently, so he memorises 'entire fleets of words and batteries of (一套的) response', and speaks a languid, bric-a-brac language. In the Navy, his method of thinking first and acting later initially provokes (*v. 激起了*) mockery from his fellow sailors. But Franklin persists in doing things his way, and gradually earns the respect of those around him. To a commodore who tells him to speed up his report of an engagement, he replies: 'When I tell something, sir, I use my own rhythm.' A lieutenant says approvingly of him: 'Because Franklin is so slow, he never loses time.'
- G** Since it was first published in Germany in 1983, *The Discovery of Slowness*

has sold more than a million copies and been translated into 15 languages. It has been named as one of German literature's twenty 'contemporary classics', and it has been adopted (v. 被采纳为) as a manual and manifesto (n. 宣言) by European pressure groups and institutions representing causes as diverse as sustainable development, the Protestant Church, management science, motoring policy and pacifism (n. 和平主义).

H The various groups that have taken the novel up have one thing in common: a dislike of the high-speed culture of Postmodernity. Nadolny's Franklin appeals to them because he is immune to 'the compulsion to be constantly occupied', and to the idea that 'someone was better if he could do the same thing fast.' Several German churches have used him in their symposia (n. 讨论会) and focus groups as an example of peacefulness, piety and self-confidence. A centre scheme (a 'march of slowness' or 'of the slow'), inspired by the novel. Nadolny has appeared as a guest speaker for RIO, a Lucerne-based organisation which aims to reconcile management principles with ideas of environmental sustainability. The novel has even become involved in the debate about speed limits on German roads. Drive down an autobahn today, and you will see large road-side signs proclaiming 'tranquillity' (n. 安静) or 'unhurriedness', a slogan which deliberately plays off the title of the novel.

I A management journal in the US described The Discovery of Slowness as a 'major event not only for connoisseurs of fine historical fiction, but also for those of us who concern themselves with leadership, communication and systems-thinking, issues'. It's easy to see where the attraction lies for the management crowd. The novel is crammed with quotations about time-efficiency, punctiliousness (一丝不苟) and profitability: "As a rule, there are always three points in time: the right one, the lost one and the premature (adj. 不成熟的) one." What did too late mean? They hadn't waited for it long enough, that's what it meant.'

Questions 27-32

Reading Passage 1 has seven paragraphs A-H.

Which paragraph contains the following information?

Write the correct letter A-H, in boxes 27-32 on your answer sheet.

NB You may use any letter more than once.

- 27 What was Sir John Franklin's occupation before he went on career of the arctic exploration?
- 28 A story John Franklin reacted strangely when he met bullies by other children.
- 29 Reason of popularity for the book *The Discovery of Slowness*
- 30 A depiction that Sten Nadolny's biography on John Franklin is not much based on facts.
- 31 The particular career Sir John Franklin took after his expedition unmatched before.
- 32 what is the central scheme and environment conveyed by the book *The Discovery of Slowness*

Questions 33-36

Summary Complete the Summary paragraph described below. In boxes 33-36 on your answer sheet, write the correct answer with one word chosen from the box below.

In his personal correspondence to and in his published memoirs by Sten Nadolny, John Franklin was depicted as a man dedicated to the exploration, and the word of “slowness” was used to define his 33_____; when Franklin was in his childhood, his determination to the 34_____ of the schoolboys was too slow for him to fall into step. And Franklin was said to be a boy dreaming finding in a place he could enjoy the 35_____ in the Arctic. Later in 20th, His biography of discovery of slowness has been adopted as a 36_____ as for the movement such as sustainable development, or management science, motoring policy.

- | | | |
|---------------|----------------|---------------|
| A exploration | B blandness | C personality |
| D policy | E pressure | F guidebook |
| G management | H timelessness | I sports |
| J bully | K evidence | |

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 does the author mention “the ice is a slow mover” in the geological arctic, to demonstrate the idea
- A of the difficulties Franklin conquered
 - B that Franklin had a dream since his childhood
 - C of fascination with the Arctic exploration
 - D that explorer like Franklin should possess the quality of being patient
- 38 When Franklin was on board with sailors, how did he speak to his fellow sailors
- A he spoke in a way mocking his followers
 - B he spoke a bric-a-brac language to show his languish attitude
 - C he spoke in the words and phrases he previously memorized
 - D he spoke in a rhythmical tune to save chatting time
- 39 His effort to overcome his slowness in marine time life had finally won the
- A understanding of his personality better
 - B capacity for coping with boredom
 - C respect for him as he insisted to overcome his difficulties
 - D the valuable time he can use to finish a report
- 40 why is the book The Discovery of Slowness sold more than a million copies
- A it contains aspects of the life people would like to enjoy
 - B it contains the information for the flag language applied in ships
 - C it induces a debate about speed limits German
 - D it contains the technique for symposia German churches

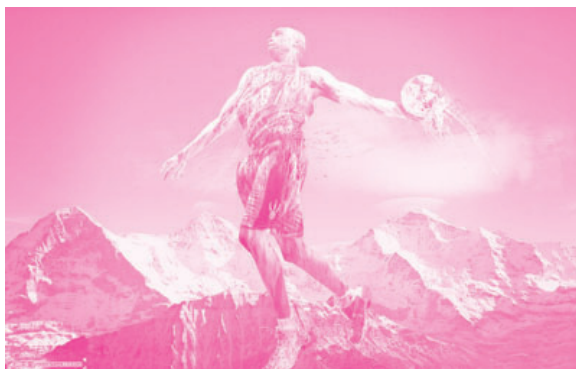
Last Hours of the Iceman

- A** It was late spring or early summer. The man hurried through a forest he knew well, wincing from the pain in his injured right hand and pausing occasionally to listen for sounds that he was being pursued. As he fled up the slope, the yellow pollen of the hornbeam blossoms fell like an invisible rain, salting the water and food he consumed when he stopped to rest. Five thousand years later, the Neolithic hunter we call the Iceman would still bear traces of this ancient dusting inside his body: a microscopic record of the time of year it was when he passed through this forest and into the nearby mountains, where fate would finally catch up with him.
- B** Since hikers discovered his mummified corpse in 1991 in a rocky hollow high in the Otztal Alps on Italy's border with Austria, scientists have used ever more sophisticated tools and intellectual cunning to reconstruct the life and times of the Iceman, the oldest intact member of the human family. We know that he was a small, sinewy, and, for his times, rather elderly man in his mid-40s. Judging from the precious, copper-bladed ax found with him, we suspect that he was a person of considerable social significance. He set off on his journey wearing three layers of garments and sturdy shoes with bearskin soles. He was well equipped with a flint-tipped dagger, a little fire-starting kit, and a birchbark container holding embers wrapped in maple leaves. Yet he also headed into a harsh wilderness curiously under-armed: The arrows in his deerskin quiver were only half finished, as if he had recently fired all his munitions and was in the process of hastily replenishing them. And he was traveling with a long, roughly shaped stalk of yew—an unfinished longbow, yet to be notched and strung. Why?
- C** When it comes to the Iceman, there has never been a shortage of questions, or theories to answer them. During the 16 years that scientists have poked, prodded, incised, and x-rayed his body, they have dressed him up in speculations that have not worn nearly as well as his rustic garments. At one time or another, he has been mistakenly described as a lost shepherd, a shaman,

a victim of ritual sacrifice, and even a vegan. But all these theories fade in the face of the most startling new fact scientists have learned about the Iceman. Although we still don't know exactly what happened up there on that alpine ridge, we now know that he was murdered, and died very quickly, in the rocky hollow where his body was found.

D “Even five years ago, the story was that he fled up there and walked around in the snow and probably died of exposure,” said Klaus Oeggl, an archaeobotanist at the University of Innsbruck. “Now it's all changed. It's more like a paleo crime scene.”

E The object of all this intense scientific attention is a freeze-dried slab of human jerky, which since 1998 has resided in a refrigerated, high-tech chamber in the South Tyrol Museum of Archaeology in Bolzano, Italy. The temptation to conduct fresh experiments on the body rises with every new twist of technology, each



revealing uncannily precise details about his life. Using a sophisticated analysis of isotopes in one of the Iceman's teeth, for example, scientists led by Wolfgang Muller (now at the Royal Holloway, University of London) have shown that he probably grew up in the Valle Isarco, an extensive north-south valley that includes the modern-day town of Bressanone. Isotope levels in his bones, meanwhile, match those in the soil and water of two alpine valleys farther west, the Val Senales and the Val Venosta. Muller's team has also analyzed microscopic chips of mica recovered from the Iceman's intestines, which were probably ingested accidentally in food made from stone-ground grain; geologic ages of the mica best match a small area limited to the lower Val Venosta. The Iceman probably set off on his final journey from this very area, near where the modern-day Adige and Senales Rivers meet.

F We also know that he was not in good health when he headed up into the

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mountains. The one surviving fingernail recovered from his remains suggests that he suffered three episodes of significant disease during the last six months of life, the last bout only two months prior

to his death. Doctors inspecting the contents of his intestines have found eggs of the whipworm parasite, so he may well have suffered from stomach distress. But he was not too sick to eat. In 2002, Franco Rollo and colleagues at the University of Camerino in Italy analyzed tiny amounts of food residue from the mummy's intestines. A day or two before his death, the Iceman had eaten a piece of wild goat and some plant food.

G Archaeobotanists have used equally clever analyses of pollen and plant fragments to plot the Iceman's last movements. James Dickson of the University of Glasgow has identified no less than 80 distinct species of mosses and liverworts in, on, or near the Iceman's body. The most prominent moss, *Neckera complanata*, still grows at several sites in the valleys to the south, in some cases quite near known prehistoric sites. According to Dickson, a clot of stems found in the Iceman's possession suggests he was probably using the moss to wrap food, although other ancient peoples used similar mosses as toilet paper.

H Taken together, the evidence strongly indicates that the Iceman's last journey began in the low-altitude deciduous forests to the south, in the springtime when the hop hornbeams were in bloom. But it may not have been a straight hike into the mountains. Oeggl has also found traces of pine pollen in the Iceman's digestive tract, both above and below the hornbeam pollen. This suggests that he may have climbed to a higher altitude where pine trees grow in mixed coniferous forests, then descended to the lower altitude of the hop hornbeams, and finally ascended again into the pine forests in his last day or two. Why? No one knows. But perhaps he wanted to avoid the steep, thickly wooded gorge of the lower Val Senales—especially if he was in a hurry.

Questions 1-5

The reading Passage has eight paragraphs A-H.

Which paragraph contains the following information?

Write the correct letter A-H, in boxes 1-5 on your answer sheet.

NB you may use any letter more than once

- 1 the last area in which the iceman might live and stay.
- 2 a mass of special plant was discovered and used to analyze the iceman's movements.
- 3 a scientist analyzes the iceman's last hike depending on pollen.
- 4 the time and area the iceman was found.
- 5 the iceman's body had been out of condition for months before his death.

Questions 6-9

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

In boxes 6-9 on your answer sheet, write

TRUE	<i>if the statement agrees with the information</i>
FALSE	<i>if the statement contradicts the information</i>
NOT GIVEN	<i>if there is no information on this</i>

- 6 According to the author, there must be another complete human corpse older than the iceman.
- 7 The iceman might be the leader of his society, and he was very rich.
- 8 Scientists guessed the iceman's information perfectly, and finally got the real cause of his death.
- 9 By testing the iceman's body, we know where he came from.

Questions 10-13

Complete the sentences below.

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

Write your answers in boxes 10-13 on your answer sheet.

- 10 The iceman has been placed in a _____ room since 1998.
- 11 The iceman might get _____, for eggs of the whipworm parasite were found in his gut.
- 12 There are a variety of mosses and liverworts found around the iceman such as _____
- 13 The route of the iceman's last movement might not be _____

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.

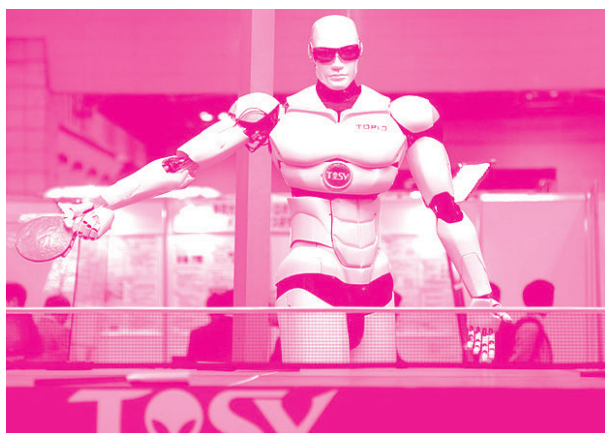
A During July 2003, the Museum of Science in Cambridge, Massachusetts exhibited what Honda calls 'the world's most advanced humanoid robot', ASIMO (the Advanced Step in Innovative Mobility). Honda's brainchild is on tour in North America and delighting audiences wherever it goes. After 17 years in the 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 ASIMO 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, CSAIL) have been making robots

that can behave like humans and interact with human. 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. The 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 on 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** There 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

Question 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 feeling through 11 _____. Another innovative project is a robot called 12 _____, which is expected to learn from its environment to gain some 13 _____.

Mungo Man

- A** Fifty thousand years ago, a lush landscape greeted the first Australians making their way towards the south-east of the continent. Temperatures were cooler than now. Megafauna—giant prehistoric animals such as marsupial lions, goannas and the rhinoceros-sized diprotodon—were abundant. The Lake Mungo remains are three prominent sets of fossils which tell the archeologists the story: Mungo Man lived around the shores of Lake Mungo with his family. When he was young Mungo Man lost his two lower canine teeth, possibly knocked out in a ritual. He grew into a man nearly 1.7m in height. Over the years his molar teeth became worn and scratched, possibly from eating a gritty diet or stripping the long leaves of water reeds with his teeth to make twine. As Mungo Man grew older his bones ached with arthritis, especially his right elbow, which was so damaged that bits of bone were completely worn out or broken away. Such wear and tear is typical of people who have used a woomera to throw spears over many years. Mungo Man reached a good age for the hard life of a hunter-gatherer, and died when he was about 50. His family mourned for him, and carefully buried him in the lunette, on his back with his hands crossed in his lap, and sprinkled with red ochre. Mungo Man is the oldest known example in the world of such a ritual,
- B** This treasure-trove of history was found by the University of Melbourne geologist Professor Jim Bowler in 1969. He was searching for ancient lakes and came across the charred remains of Mungo Lady, who had been cremated (火葬的). And in 1974, he found a second complete skeleton, Mungo Man, buried 300 metres away. Using carbon-dating, a technique only reliable to around 40,000 years old, the skeleton was first estimated at 28,000 to 32,000 years old. The comprehensive study of 25 different sediment layers at Mungo concludes that both graves are 40,000 years old.
- C** This is much younger than the 62,000 years Mungo Man was attributed with in 1999 by a team led by Professor Alan Thorne, of the Australian National University. The modern day story of the science of Mungo also has its fair

share of rivalry. Because Thorne is the country's leading opponent of the Out of Africa theory—that Homo sapiens had a single place of origin. “Dr Alan Thorne supports the multi-regional explanation (that modern humans arose simultaneously in Africa, Europe and Asia from one of our predecessors, Homo erectus, who left Africa more than 1.5 million years ago.) if Mungo Man was descended from a person who had left Africa in the past 200,000 years, Thorne argues, then his mitochondrial DNA should have looked like that of the other samples.”

- D** However, Out of Africa supporters are not about to let go of their beliefs because of the Australian research, Professor Chris Stringer, from the Natural History Museum in London, UK, said that the research community would want to see the work repeated in other labs before major conclusions were drawn from the Australian research. But even assuming the DNA sequences were correct, Professor Stringer said it could just mean that there was much more genetic diversity in the past than was previously realised. There is no evidence here that the ancestry of these Australian fossils goes back a million or two million years. It's much more likely that modern humans came out of Africa.” For Bowler, these debates are irritating speculative distractions from the study's main findings. At 40,000 years old, Mungo Man and Mungo Lady remain Australia's oldest human burials and the earliest evidence on Earth of cultural sophistication, he says. Modern humans had not even reached North America by this time. In 1997, Pddbo's research group recovered a mtDNA fingerprint from the Feldholer Neanderthal skeleton uncovered in Germany in 1865-the first Neanderthal remains ever found.
- E** In its 1999 study, Thome's team used three techniques to date Mungo Man at 62,000 years old, and it stands by its figures. It dated bone, teeth enamel and some sand. Bowler has strongly challenged the results ever since. Dating human bones is “notoriously unreliable”, he says. As well, the sand sample Thome's group dated was taken hundreds of metres from the burial site. “You don't have to be a gravedigger...to realize the age of the sand is not the same as the age of the grave,” says Bowler.

- F** Thorne counters that Bowler's team used one dating technique, while his used three. Best practice is to have at least two methods produce the same result. A Thorne team member, Professor Rainer Griin, says the fact that the latest results were consistent between laboratories doesn't mean they are absolutely correct. We now have two data sets that are contradictory. I do not have a plausible explanation." Now, however, Thorne says the age of Mungo Man is irrelevant to this origins debate. Recent fossils finds show modern humans were in China 110,000 years ago. "So he has got a long time to turn up in Australia. It doesn't matter if he is 40,000 or 60,000 years old.
- G** Dr Tim Flannery, a proponent of the controversial theory that Australia's megafauna was wiped out 46,000 years ago in a "blitzkrieg" of hunting by the arriving people, also claims the new Mungo dates support this view. In 2001 a member of Bowler's team, Dr Richard Roberts of Wollongong University, along with Flannery, director of the South Australian Museum, published research on their blitzkrieg theory. They dated 28 sites across the continent, arguing their analysis showed the megafauna died out suddenly 46,000 years ago. Flannery praises the Bowler team's research on Mungo Man as "the most thorough and rigorous dating" of ancient human remains. He says the finding that humans arrived at Lake Mungo between 46,000 and 50,000 years ago was a critical time in Australia's history. There is no evidence of a dramatic climatic change then, he says. "It's my view that humans arrived and extinction took place in almost the same geological instant."
- H** Bowler, however, is skeptical of Flannery's theory and says the Mungo study provides no definitive new evidence to support it. He argues that climate change at 40,000 years ago was more intense than had been previously realized and could have played a role in the megafauna's demise. "To blame the earliest Australians for their complete extinction is drawing along bow."

Questions 1-8

Use the information in the passage to match the people (listed A-F) with opinions or deeds below. Write the appropriate letters A-F in boxes 1-8 on your answer sheet.

NB you may use any letter more than once.

- A Jim Bowler
- B Alan Thorne
- C Pddbo
- D Tim Flannery
- E Chris Stringer
- F Rainer Grun

- 1 He was searching for ancient lakes and came across the charred remains of Mungo Lady, who had been cremated.
- 2 Professor who hold a skeptical attitude towards reliability for DNA analysis on some fossils.
- 3 Professor whose determination of the age of Mungo Man to be much younger than the former result which is older than the 62,000 years.
- 4 determining the age of Mungo Man has little to do with controversy for the origins of Australians.
- 5 research group who recovered a biological proof of first Neanderthal found in Europe.
- 6 a supporter of the idea that Australia's megafauna was extinct due to the hunting by the ancient human beings.
- 7 Instead of keep arguing a single source origin, multi-regional explanation has been raised.
- 8 Climate change rather than prehistoric human activities resulted in megafauna's extinction.

Questions 9-14

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

In boxes 9-14 on your answer sheet, write

TRUE	<i>if the statement agrees with the information</i>
FALSE	<i>if the statement contradicts the information</i>
NOT GIVEN	<i>if there is no information on this</i>

- 9 The Lake Mungo remains offer the archeologists the evidence of graphic illustration of human activities around
- 10 In Lake Mungo remains, weapons were found used by the Mungo.
- 11 Mungo Man is one of the oldest known archeological evidence in the world of cultural sophistication such as a burying ritual.
- 12 Mungo man and woman's skeletons were uncovered in the same year.
- 13 There is controversy among Scientists about the origin of the oldest Homo sapiens.
- 14 Out of Africa supporters have criticised Australian professors for using outmoded research method

Novice and Expert

Becoming an Expert

Becoming an Expert

Expertise is commitment coupled with creativity. Specifically, it is the commitment of time, energy, and resources to a relatively narrow field of study and the creative energy necessary to generate new knowledge in that field. It takes a considerable amount of time and regular exposure to a large number of cases to become an expert.

- A** An individual enters a field of study as a novice. The novice needs to learn the guiding principles and rules of a given task in order to perform that task. Concurrently, the novice needs to be exposed to specific cases, or instances, that test the boundaries of such heuristics (启发式的). Generally, a novice will find a mentor to guide her through the process. A fairly simple example would be someone learning to play chess. The novice chess player seeks a mentor to teach her the object of the game, the number of spaces, the names of the pieces, the function of each piece, how each piece is moved, and the necessary conditions for winning or losing the game.
- B** In time, and with much practice, the novice begins to recognize patterns of behavior within cases and, thus, becomes a journeyman. With more practice and exposure to increasingly complex cases, the journeyman finds patterns not only within cases but also between cases. More importantly, the journeyman learns that these patterns often repeat themselves over time. The journeyman still maintains regular contact with a mentor to solve specific problems and learn more complex strategies. Returning to the example of the chess player, the individual begins to learn patterns of opening moves, offensive and defensive game-playing strategies, and patterns of victory and defeat.
- C** When a journeyman starts to make and test hypotheses (*n.* 臆测、假定) about future behavior based on past experiences, she begins the next transition. Once she creatively generates knowledge, rather than simply matching superficial patterns, she becomes an expert. At this point, she is confident in her

knowledge and no longer needs a mentor as a guide—she becomes responsible for her own knowledge. In the chess example, once a journeyman begins competing against experts, makes predictions based on patterns, and tests those predictions against actual behavior, she is generating new knowledge and a deeper understanding of the game. She is creating her own cases rather than relying on the cases of others.

D The chess example is a rather short description of an apprenticeship (*n.* 学徒关系) model. Apprenticeship may seem like a restrictive 18th century mode of education, but it is still a standard method of training for many complex tasks. Academic doctoral programs are based on an apprenticeship model, as are fields like law, music, engineering, and medicine. Graduate students enter fields of study, find mentors, and begin the long process of becoming independent experts and generating new knowledge in their respective domains (*n.* 领域).

E Psychologists and cognitive scientists agree that the time it takes to become an expert depends on the complexity of the task and the number of cases, or patterns, to which an individual is exposed. The more complex the task, the longer it takes to build expertise, or, more accurately, the longer it takes to experience and store a large number of cases or patterns.

The Power of Expertise

F An expert perceives (*v.* 察觉、认知) meaningful patterns in her domain better than non-experts. Where a novice perceives random or disconnected data points, an expert connects regular patterns within and between cases. This ability to identify patterns is not an innate perceptual skill; rather it reflects the organization of knowledge after exposure to and experience with thousands of cases. Experts have a deeper understanding of their domains than novices do, and utilize higher-order principles to solve problems. A



novice, for example, might group objects together by color or size, whereas an expert would group the same objects according to their function or utility. Experts comprehend (v. 理解) the meaning of data and weigh variables with different criteria within their domains better than novices. Experts recognize



variables that have the largest influence on a particular problem and focus their attention on those variables.

G Experts have better domain-specific short-term and long-term memory than novices do. Moreover, experts perform tasks in their domains faster than novices and commit fewer errors while problem solving. Interestingly, experts go about solving problems differently than novices. Experts spend more time thinking about a problem to fully understand it at the beginning of a task than do novices, who immediately seek to find a solution. Experts use their knowledge of previous cases as context for creating mental models to solve given problems.

H Better at self-monitoring than novices, experts are more aware of instances where they have committed errors or failed to understand a problem. Experts check their solutions more often than novices and recognize when they are missing information necessary for solving a problem. Experts are aware of the limits of their domain knowledge and apply their domain heuristics to solve problems that fall outside of their experience base.

The Paradox of Expertise

I The strengths of expertise can also be weaknesses. Although one would expect experts to be good forecasters (*n.* 预言家), they are not particularly good at making predictions about the future. Since the 1930s, researchers have been

testing the ability of experts to make forecasts. The performance of experts has been tested against actuarial tables to determine if they are better at making predictions than simple statistical models. Seventy years later, with more than two hundred experiments in different domains, it is clear that the answer is no. If supplied with an equal amount of data about a particular case, an actuarial table is as good, or better than an expert at making calls about the future. Even if an expert is given more specific case information than is available to the statistical model, the expert does not tend to outperform the actuarial table.

J Theorists and researchers differ when trying to explain why experts are less accurate forecasters than statistical models. Some have argued that experts, like all humans, are inconsistent when using mental models to make predictions. A number of researchers point to human biases to explain unreliable expert predictions. During the last 30 years, researchers have categorized, experimented, and theorized about the cognitive aspects of forecasting. Despite such efforts, the literature shows little consensus regarding the causes or manifestations of human bias.

Questions 1-5

Complete the flow chart

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

Write your answers in boxes 1-5 on your answer sheet.

From a novice to an expert

Novice: need to study 1 _____ under the guidance of a 2 _____ 3 _____
start to identify 4 _____ for cases within or between study more 5 _____
ways of doing things create new knowledge

Expert: perform task independently

Questions 6-10

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

In boxes 6-10 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

- 6 Novices and experts use the same system of knowledge to comprehend and classify objects.
- 7 The focus of novices' training is necessarily on long term memory.
- 8 When working out the problems, novices want to solve them straightaway.
- 9 When handling problems, experts are always more efficient than novices in their fields.
- 10 Expert tend to review more than novices on cases when flaws or limit on understanding took place.

Questions 11-13

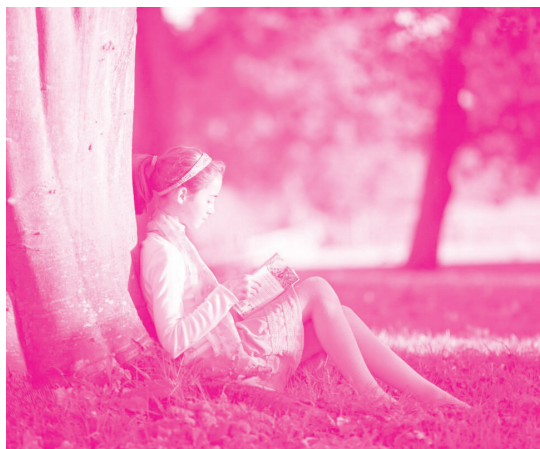
Complete the following summary of the paragraphs of Reading Passage I, using **NO MORE THAN TWO WORDS** from the Reading Passage for each answer.

Write your answers in boxes 11-13 on your answer sheet

While experts outperform novices and machines in pattern recognition and problem solving, expert predictions of future behavior or events are seldom as accurate as simple actuarial tables. Why? Some have tried to explain that experts differ when using cognitive 11 _____ to forecast. Researchers believe it is due to 12 _____ However attempting endeavour of finding answers did not yet produce 13 _____

Twin Study: Two of a kind

- A** The scientific study of twins goes back to the late 19th century, when Francis Galton, an early geneticist, realised that they came in two varieties: identical twins born from one egg and non-identical twins that had come from two. That insight turned out to be key, although it was not until 1924 that it was used to formulate what is known as the twin rule of pathology, and twin studies really got going.
- B** The twin rule of pathology (*n.* 病理学) states that any heritable disease will be more concordant (that is, more likely to be jointly present or absent) in identical twins than in non-identical twins—and, in turn, will be more concordant in non-identical twins than in non-siblings. Early work, for example, showed that the statistical correlation of skin-mole counts between identical twins was 0.4, while non-identical twins had a correlation of only 0.2. (A score of 1.0 implies perfect correlation, while a score of zero implies no correlation.) This result suggests that moles are heritable (*adj.* 可继承的), but it also implies that there is an environmental component to the development of moles, otherwise the correlation in identical twins would be close to 1.0.)
- C** Twin research has shown that whether or not someone takes up smoking is determined mainly by environmental factors, but once he does so, how much he smokes is largely down to his genes. And while a person's religion is clearly a cultural attribute, there is a strong genetic component to religious fundamentalism. Twin studies are also unraveling (*v.* 阐明) the heritability of various aspects of human personality. Traits from neuroticism and anxiety to thrill-and novelty-seeking all have large genetic components. Parenting matters, but it does not determine personality in the way that some had thought.
- D** More importantly, perhaps, twin studies are



helping the understanding of diseases such as cancer, asthma, osteoporosis, arthritis and immune disorders. And twins can be used, within ethical limits, for medical experiments. A study that administered vitamin C to one twin and a placebo to the other found that it had no effect on the common cold. The lesson from all today's twin studies is that most human traits are at least partially influenced by genes. However, for the most part, the age-old dichotomy between nature and nurture is not very useful. Many genetic programs are open to input from the environment, and genes are frequently switched on or off by environmental signals. It is also possible that genes themselves influence their environment. Some humans have an innate preference for participation in sports. Others are drawn to novelty. Might people also be drawn to certain kinds of friends and types of experience? In this way, a person's genes might shape the environment they act in as much as the environment shapes the actions of the genes.

E In the past, such research has been controversial. Josef Mengele, a Nazi doctor working at the Auschwitz extermination camp during the second world war, was fascinated by twins. He sought them out among arrivals at the camp and preserved them from the gas-chambers for a series of brutal experiments. After the war, Cyril Burt, a British psychologist who worked on the heredity of intelligence, tainted twin research with results that appear, in retrospect, to have been rather too good. Some of his data on identical twins who had been reared apart were probably faked. In any case, the prevailing ideology in the social sciences after the war was Marxist, and disliked suggestions that differences in human potential might have underlying genetic causes. Twin studies were thus viewed with suspicion.

F The ideological pendulum has swung back; however, as the human genome project and its aftermath have turned genes for abstract concepts to real pieces of DNA. The role of genes in sensitive areas such as intelligence is acknowledged by all but a few die-hards. The interesting questions now concern how nature and nurture interact to produce particular bits of biology, rather than which of the two is more important. Twin studies, which are a

good way to ask these questions, are back in fashion, and many twins are enthusiastic participants in this research.

G Research at the Twinsburg festival began in a small way, with a single stand in 1979. Gradually, news spread, and more scientists began turning up. This year, half a dozen groups of researchers were lodged in a specially pitched research tent. In one corner of this tent, Paul Breslin, who works at the Monell Institute in Philadelphia, watched over several tables where twins sat sipping clear liquids from cups and making notes. It was the team's third year at Twinsburg. Dr Breslin and his colleagues want to find out how genes influence human perception, particularly the senses of smell and taste and those (warmth, cold, pain, tingle, itch and so on) that result from stimulation of the skin. Perception is an example of something that is probably influenced by both genes and experience. Even before birth, people are exposed to flavours such as chocolate, garlic, mint and vanilla that pass intact into the bloodstream, and thus to the fetus. Though it is not yet clear whether such pre-natal exposure shapes taste-perception, there is evidence that it shapes preferences for foods encountered later in life.

H However, there are clearly genetic influences at work, as well—for example in the ability to taste quinine. Some people experience this as intensely bitter, even when it is present at very low levels. Others, whose genetic endowment is different, are less bothered by it. Twin studies make this extremely clear. Within a pair of identical twins, either both, or neither, will find quinine hard to swallow. Non-identical twins will agree less frequently.

I On the other side of the tent Dennis Drayna, from the National Institute on Deafness and Other Communication Disorders, in Maryland, was studying hearing. He wants to know what happens to sounds after they reach the ear. It is not clear, he says, whether sound is processed into sensation mostly in the



ear or in the brain. Dr Drayna has already been involved in a twin study which revealed that the perception of musical pitch is highly heritable. At Twinsburg, he

is playing different words, or parts of words, into the left and right ears of his twinned volunteers. The composite of the two sounds that an individual reports hearing depends on how he processes this diverse information and that, Dr Drayna believes, may well be influenced by genetics.

J Elsewhere in the marquee, Peter Miraldi, of Kent State University in Ohio, was trying to find out whether genes affect an individual's motivation to communicate with others. A number of twin studies have shown that personality and sociability are heritable, so he thinks this is fertile ground. And next to Mr. Miraldi was a team of dermatologists (*n.* 皮肤科专家) from Case Western Reserve University in Cleveland. They are looking at the development of skin diseases and male-pattern baldness. The goal of the latter piece of research is to find the genes responsible for making men's hair fall out.

K The busiest part of the tent, however, was the queue for forensic-science research into fingerprints. The origins of this study are shrouded in mystery. For many months, the festival's organisers have been convinced that the Secret Service—the American government agency responsible for, among other things, the safety of the president—is behind it. When The Economist contacted the Secret Service for more information, we were referred to Steve Nash, who is chairman of the International Association for Identification (IAI), and is also a detective in the scientific investigations section of the Marin County Sheriff's Office in California. The IAI, based in Minnesota, is an organisation of forensic scientists from around the world. Among other things, it publishes the Journal of Forensic Identification.

Questions 14-18

The reading Passage has seven paragraphs A-K.

Which paragraph contains the following information?

Write the correct letter A-K , in boxes 14-18 on your answer sheet.

NB You may use any letter more than once.

- 14 Mentioned research conducted in Ohio
- 15 Medical contribution to the researches for twins.
- 16 Research situation under life threatening conditions
- 17 Data of similarities of identical twins
- 18 Reasons that make one study unconvincing

Questions 19-20

Summary

Complete the following summary of the paragraphs of Reading Passage, using no more than two words from the Reading Passage for each answer. Write your answers in boxes 19-20 on your answer sheet.

The first one that conducted research on twins is called 19 _____. He separated twins into two categories: non identical and identical twins. The twin research was used in medical application in as early as the year of 20 _____

Questions 21-23

Choose the correct letters in following options:

Write your answers in boxes 21-23 on your answer sheet.

Please choose **THREE** research fields that had been carried out in Ohio, Maryland and Twinsburgh?

- A Sense
- B Cancer
- C Be allergic to Vitamin D
- D Mole heredity
- E Sound
- F Boldness of men

Questions 24-26

Choose the correct letters in following options:

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

Please choose **THREE** results that had been verified in this passage.

- A Non identical twins come from different eggs.
- B Genetic relation between identical twins is closer than non-identical ones.
- C Vitamin C has evident effect on a cold.
- D Genetic influence to smoking is superior to environment's
- E If a pregnant woman eats too much sweet would lead to skin disease.
- F Hair loss has been found to be connected with skin problem.

We have Star performers!

- A** The difference between companies is people. With capital and technology in plentiful supply, the critical resource for companies in the knowledge era will be human talent. Companies full of achievers will, by definition, outperform organisations of plodders. Ergo, compete ferociously for the best people. Poach and pamper stars; ruthlessly weed out second-raters. This in essence has been the recruitment strategy of the ambitious company of the past decade. The ‘talent mindset’ was given definitive form in two reports by the consultancy McKinsey famously entitled *The War for Talent*. Although the intensity of the warfare subsequently subsided along with the air in the internet bubble, it has been warming up again as the economy tightens: labour shortages, for example, are the reason the government has laid out the welcome mat for immigrants from the new Europe.
- B** Yet while the diagnosis-people are important-is evident to the point of platitude, the apparently logical prescription-hire the best-like so much in management is not only not obvious: it is in fact profoundly wrong. The first suspicions dawned with the crash to earth of the dotcom meteors, which showed that dumb is dumb whatever the IQ of those who perpetrate it. The point was illuminated in brilliant relief by Enron, whose leaders, as a New Yorker article called *The Talent Myth*’ entertainingly related, were so convinced of their own cleverness that they never twigged that collective intelligence is not the sum of a lot of individual intelligences. In fact in a profound sense the two are opposites. Enron believed in stars, noted author Malcolm Gladwell, because they didn’t believe in systems. But companies don’t just create: ‘they execute and compete and co-ordinate the efforts of many people, and the organisations that are most successful at that task are the ones where



the system is the star'. The truth is that you can't win the talent wars by hiring stars-only lose it. New light on why this should be so is thrown by an analysis of star behaviour in this month's Harvard Business Review. In a study of the careers of 1,000 star-stock analysts in the 1990s, the researchers found that when a company recruited a star performer, three things happened.

- C First, stardom doesn't easily transfer from one organisation to another. In many cases, performance dropped sharply when high performers switched employers and in some instances never recovered. More of success than commonly supposed is due to the working environment-systems, processes, leadership, accumulated embedded learning that are absent in and can't be transported to the new firm. Moreover, precisely because of their past stellar performance, stars were unwilling to learn new tricks and antagonised those (on whom they now unwittingly depended) who could teach them. So they moved, upping their salary as they did-36 per cent moved on within three years, fast even for Wall Street. Second, group performance suffered as a result of tensions and resentment by rivals within the team. One respondent likened hiring a star to an organ transplant. The new organ can damage others by hogging the blood supply, other organs can start aching or threaten to stop working or the body can reject the transplant altogether, he said. 'You should think about it very carefully before you do a transplant to a healthy body.' Third, investors punished the offender by selling its stock. This is ironic, since the motive for importing stars was often a suffering share price in the first place. Shareholders evidently believe that the company is overpaying, the hiree is cashing in on a glorious past rather than preparing for a glowing present, and a spending spree



is in the offing.

- D** The result of mass star hirings as well as individual ones seem to confirm such doubts. Look at County NatWest and Barclays de Zoete Wedd, both of which hired teams of stars with loud fanfare to do great things in investment banking in the 1990s. Both failed dismally. Everyone accepts the cliché that people make the organisation-but much more does the organisation make the people. When researchers studied the performance of fund managers in the 1990s, they discovered that just 30 per cent of variation in fund performance was due to the individual, compared to 70 per cent to the company-specific setting.
- E** That will be no surprise to those familiar with systems thinking. W Edwards Deming used to say that there was no point in beating up on people when 90 per cent of performance variation was down to the system within which they worked. Consistent improvement, he said, is a matter not of raising the level of individual intelligence, but of the learning of the organisation as a whole. The star system is glamorous - for the few. But it rarely benefits the company that thinks it is working it. And the knock-on consequences indirectly affect everyone else too. As one internet response to Gladwell's New Yorker article put it: after Enron, 'the rest of corporate America is stuck with overpaid, arrogant, underachieving, and relatively useless talent.'
- F** Football is another illustration of the stars vs systems strategic choice. As with investment banks and stockbrokers, it seems obvious that success should ultimately be down to money. Great players are scarce and expensive. So the club that can afford more of them than anyone else will win. But the performance of Arsenal and Manchester United on one hand and Chelsea and Real Madrid on the other proves that it's not as easy as that. While Chelsea and Real have the funds to be compulsive star collectors-as with Juan Sebastian Veron-they are less successful than Arsenal and United which, like Liverpool before them, have put much more emphasis on developing a setting within which stars-in-the-making can flourish. Significantly, Thierry Henry, Patrick Veira and Robert

Pires are much bigger stars than when Arsenal bought them, their value (in all senses) enhanced by the Arsenal system. At Chelsea, by contrast, the only context is the stars themselves-managers with different outlooks come and go every couple of seasons. There is no settled system for the stars to blend into. The Chelsea context has not only not added value, it has subtracted it. The side is less than the sum of its exorbitantly expensive parts. Even Real Madrid's galacticos, the most extravagantly gifted on the planet, are being outperformed by less talented but better-integrated Spanish sides. In football, too, stars are trumped by systems.

G So if not by hiring stars, how do you compete in the war for talent? You grow your own. This worked for investment analysts, where some companies were not only better at creating stars but also at retaining them. Because they had a much more sophisticated view of the interdependent relationship between star and system, they kept them longer without resorting to the exorbitant salaries that were so destructive to rivals.

Questions 14-17

The reading Passage 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 One example from non-commerce/business settings that better system wins bigger stars
- 15 One failed company that believes stars rather than system
- 16 One suggestion that author made to acquire employees then to win the competition nowadays
- 17 One metaphor to human medical anatomy that illustrates the problems of iring stars.

Questions 18-21

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

In boxes 18-21 on your answer sheet, write

TRUE	<i>if the statement agrees with the information</i>
FALSE	<i>if the statement contradicts the information</i>
NOT GIVEN	<i>if there is no information on this</i>

- 18 McKinsey who wrote *The War for Talent* had not expected the huge influence made by this book.
- 19 Economic condition becomes one of the factors which decide whether or not a country would prefer to hire foreign employees.
- 20 The collapse of Enron is caused totally by a unfortunate incident instead of company's management mistake.
- 21 Football clubs that focus making stars in the setting are better than simply collecting stars.

Questions 22-26

Summary

Complete the following summary of the paragraphs of Reading Passage, using no more than two words from the Reading Passage for each answer. Write your answers in boxes 22-26 on your answer sheet.

An investigation carried out on 1000 22 _____ participants of a survey by Harvard Business Review found a company hire a 23 _____ has negative effects. For instance, they behave considerably worse in a new team than in the 24 _____ that they used to be. They move faster than wall street and increase their 25 _____. Secondly, they faced rejections or refuse from those 26 _____ within the team. Lastly, the one who made mistakes had been punished by selling his/her stock share.

William Gilbert and Magnetism

- A** 16th and 17th centuries saw two great pioneers of modern science: Galileo and Gilbert. The impact of their findings is eminent. Gilbert was the first modern scientist, also the accredited father of the science of electricity and magnetism, an Englishman of learning and a physician at the court of Elizabeth. Prior to him, all that was known of electricity and magnetism was what the ancients knew, nothing more than that the lodestone possessed magnetic properties and that amber and jet, when rubbed, would attract bits of paper or other substances of small specific gravity. However, he is less well-known than he deserves.
- B** Gilbert's birth predated Galileo. Born in an eminent local family in Colchester county in the UK, on May 24, 1544, he went to grammar school, and then studied medicine at St. John's College, Cambridge, graduating in 1573. Later he traveled in the continent and eventually settled down in London.
- C** He was a very successful and eminent doctor. All this culminated in his election to the president of the Royal Science Society. He was also appointed the personal physician to the Queen (Elizabeth I), and later knighted by the Queen. He faithfully served her until her death. However, he didn't outlive the Queen for long and died on December 10, 1603, only a few months after his appointment as personal physician to King James.
- D** Gilbert was first interested in chemistry but later changed his focus due to the large portion of mysticism of alchemy involved (such as the transmutation of metal). He gradually developed his interest in physics after the great minds of the ancient, particularly about the knowledge the ancient Greeks had about lodestones, strange minerals with the power to attract iron. In the meantime, Britain became a major seafaring nation in 1588 when the Spanish Armada was defeated, opening the way to British settlement of America. British ships depended on the magnetic compass, yet no one understood why it worked. Did the pole star attract it, as Columbus once speculated; or was there a magnetic mountain at the pole, as described in Odyssey, which ships would never approach, because the sailors thought its pull would yank out all their iron

nails and fittings? For nearly 20 years William Gilbert conducted ingenious experiments to understand magnetism. His works include *On the Magnet and Magnetic Bodies*, *Great Magnet of the Earth*.

E Gilbert's discovery was so important to modern physics. He investigated the nature of magnetism and electricity. He even coined the word "electric". Though the early beliefs of magnetism were also largely entangled with superstitions such as that rubbing garlic on lodestone can neutralize its magnetism, one example being that sailors even believed the smell of garlic would even interfere with the action of compass, which is why helmsmen were forbidden to eat it near a ship's compass. Gilbert also found that metals can be magnetized by rubbing materials such as fur, plastic or the like on them. He named the ends of a magnet "north pole" and "south pole". The magnetic poles can attract or repel, depending on polarity. In addition, however, ordinary iron is always attracted to a magnet. Though he started to study the relationship between magnetism and electricity, sadly he didn't complete it. His research of static electricity using amber and jet only demonstrated that objects with electrical charges can work like magnets attracting small pieces of paper and stuff. It is a French guy named du Fay that discovered that there are actually two electrical charges, positive and negative.

F He also questioned the traditional astronomical beliefs. Though a Copernican, he didn't express in his quintessential beliefs whether the earth is at the center of the universe or in orbit around the sun. However he believed that stars are not equidistant from the earth, but have their own earth-like planets orbiting around them. The earth



51· 无忧雅思 ielts

is itself like a giant magnet, which is also why compasses always point north. They spin on an axis that is aligned with the earth's polarity. He even likened the polarity of the magnet to the polarity

of the earth and built an entire magnetic philosophy on this analogy. In his explanation, magnetism was the soul of the earth. Thus a perfectly spherical lodestone, when aligned with the earth's poles, would wobble all by itself in 24 hours. Further, he also believed that suns and other stars wobble just like the earth does around a crystal core, and speculated that the moon might also be a magnet caused to orbit by its magnetic attraction to the earth. This was perhaps the first proposal that a force might cause a heavenly orbit.

G His research method was revolutionary in that he used experiments rather than pure logic and reasoning like the ancient Greek philosophers did. It was a new attitude toward scientific investigation. Until then, scientific experiments were not in fashion. It was because of this scientific attitude, together with his contribution to our knowledge of magnetism, that a unit of magneto motive force, also known as magnetic potential, was named Gilbert in his honor. His approach of careful observation and experimentation rather than the authoritative opinion or deductive philosophy of others had laid the very foundation for modern science.

Questions 1-7

Reading passage 1 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 1-7 on your answer sheet.

List of Headings

- i Early years of Gilbert
- ii What was new about his scientific research method
- iii The development of chemistry
- iv Questioning traditional astronomy
- v Pioneers of the early science
- vi Professional and social recognition
- vii Becoming the president of the Royal Science Society
- viii The great works of Gilbert
- ix His discovery about magnetism
- x His change of focus

- 1 Paragraph A
- 2 Paragraph B
- 3 Paragraph C
- 4 Paragraph D
- 5 Paragraph E
- 6 Paragraph F
- 7 Paragraph G

Questions 8-10

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

In boxes 8-10 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

- 8 He is less famous than he should be.
- 9 He was famous as a doctor before he was employed by the Queen.
- 10 He lost faith in the medical theories of his time.

Questions 11-13

Choose THREE letters A-F.

Write your answers in boxes 11-13 on your answer sheet.

Which **THREE** of the following are parts of Gilbert's discovery?

- A Metal can be transformed into another.
- B Garlic can remove magnetism.
- C Metals can be magnetized.
- D Stars are at different distances from the earth.
- E The earth wobbles on its axis.
- F There are two charges of electricity.

雅思阅读分类词汇

常见花卉

azalea 杜鹃花
begonia 秋海棠
Brazil 巴西木
cactus 仙人掌
camellia 山茶花
carnation 麝香石竹 (康乃馨)
Chinese enkianthus 灯笼花
Chinese flowering crab-apple 海棠花
chrysanthemum 菊花
dahlia 大丽花
daisy 雏菊
datura 曼陀罗
epiphyllum 昙花
fringed iris 蝴蝶花
fuchsia 倒挂金钟
gardenia 栀子
India canna 美人蕉
jasmine 茉莉
lilac 丁香
lily 百合
mangnolia 木兰花
mangnolia 玉兰花
morning glory 牵牛 (喇叭花)
narcissus 水仙花
oleander 夹竹桃
orchid 兰花

pansy 三色堇
peony 牡丹
peony 芍药
phalaenopsis 蝶兰
rose 玫瑰
rose 月季
setose asparagus 文竹
touch-me-not (balsam) 凤仙花
tulip 郁金香
violet, stock violet 紫罗兰
water hyacinth 凤眼

环境问题

conservation 保护, 保存
environmentalist = conservationist
acid 酸; 酸的
alkali 碱;
carbon 碳 (C) vs. charcoal (炭)
carbon dioxide, carbon monoxide
fume exhaust fumes vs. smoke, fog, smog
petroleum 石油 petrol (BE) = gasoline/
gas (AE)
ozone 臭氧 (o + zone) ozone layer
ooze 渗出 渗出物
radiation 辐射 ultraviolet (UV) radiation~
radioactive
greenhouse 温室 greenhouse effect/gases

solar 太阳的
phenomenon 现象
catastrophe = disaster, cataclysm
deterioration 恶化
extinction 灭绝
species endangered species
drought 干旱
recurrent 反复发生的 re + (oc)cur + rent
vs. concurrent
inundate 淹没
embankment 筑堤 (em + bank + ment)
sediment 沉积 (物) = deposit
delta 三角洲 the Pearl River Delta
alluvial 冲积的
desertification 沙漠化 desert vs. dessert
dust-storm 沙尘暴
barren 贫瘠的, 不育的, 无效的
attributable 归因于 be attributable to...
deforestation 滥砍滥伐 (森林)
log 原木, 日志 伐木 vs. logo
vegetation 植物, 植被 vs. vegetable,
vegetarian
habitat 栖息地
ecosystem 生态系统
viability
demographic 人口统计的
interdependence
counterbalance 使平衡, 弥补
mechanism 机理, 机制
precipitation 陡降, 降水
circulation 流通, 循环

typhoon, tornado, hurricane
meteorology 气象 (学)
volcano 火山
eruption 喷发 volcanic eruption
granite 花岗岩
imminent = impending vs. eminent
Celsius 摄氏的
Fahrenheit 华氏的
latitude 纬度 longitude, altitude
tropical (the) tropics tropical/torrid zone,
temperate zone, frigid zone
glacier 冰川
dump 倾倒, 倾销
contaminate 弄脏
recycle 回收再利用
irreversible 不可逆的 (= irrevocable)
reclaim 开垦, 改造 à reclamation
contentious 有争议的
opt 选择 n
prioritize 优先考虑

生物、生理

molecule 分子
amino acids (氨基酸)
protein 蛋白质
enzyme 酶 (proteins that are produced
by cells and act as catalysts in specific
biochemical reactions)
catalyst 催化剂
chlorophyll 叶绿素 "chloro-":

photosynthesis 光合作 (photo + synthesis)photosynthetic	roe 鱼子 caviar 鱼子酱
botany 植物学 botanist, botanical	tadpole 蝌蚪 frog, toad
flora 植物群	caterpillar 毛毛虫 (cater + pillar)
fauna 动物群	grasshopper 蚱蜢, 蝗虫 (= locust)
bacterium bacteria (pl.) 细菌	cricket 蟋蟀; 板球
fungus fungi (pl.) 真菌	butterfly vs. moth
algae alga (pl.) 海藻	pollen 花粉 传粉 pollination
herb	hive 蜂房
carnation 康乃馨	larva larvae (pl.) 幼虫 vs. lava
fade 凋谢, 褪色	pupa 蛹
organism 机体, 组织	penguin 企鹅 vs. dolphin (海豚)
arthropod 节肢动物 vs. anthropoid	raccoon 浣熊 vs. kangaroo (袋鼠)
reptile 爬行动物	hibernate 冬眠 (=hole up)
amphibian 两栖动物	torpid 麻木的, 蛰伏的 vs. torpedo (鱼雷)
mammal 哺乳动物	cerebral (大) 脑的
primate 灵长目动物	hemisphere 半球 (hemi + sphere)
evolution 进化	cortex 脑皮层
anthropoid 类人猿 (“anthrop” : human-kind) anthropology, philanthropy v.s. ape, gorilla, chimpanzee	migraine 偏头疼
gene 基因 DNA (deoxyribonucleic acid)	somatic 躯体的
genetics 遗传学 genetical	limb 四肢 upper/lower limb
helix 螺旋, 螺旋状物... analyze every single gene within the double helix of humanity's DNA	anatomy 解剖, 剖析
identical 同一的	paralyze 使瘫痪 (=incapacitate, immobilize)
mutation 突变 mutable, immutable, mutant	artery 动脉 vein 静脉
predator 捕食者	gland 腺体
embryo 胚胎	pancreas 胰
	hormone 荷尔蒙, 激素
	cholesterol 胆固醇
	efficacy 功效 vs. efficiency, effectiveness

心理

theorem 原理，定理 v.s. theory

methodology 方法论；

physiology 生理学；

psychiatry 精神病学

correlation 相互关系

sensation 感觉，知觉；sensational

perception 感知，认知

intuition 直觉；intuitive

ESP 第六感 Extrasensory Perception

motivate 激励 motivation

incentive 激励因素

ESP 第六感 Extrasensory Perception

motivate 激励

incentive 激励因素

stimulus 刺激

disorder 紊乱，失调

dysfunction 机能障碍

dissonance 不和谐，不一致

trauma 创伤

anxiety 焦虑 = anxiousness

depression 沮丧

insomnia 失眠

phobia 恐惧 (症) à suffix: -phobia

acrophobia 恐高症

xenophobia 仇外者，惧外者

claustrophobia 幽闭恐怖症

allergy 过敏 (症)，反感 He is allergic to card playing.

propensity 倾向 *Most boys have a

propensity of playing with machinery.=

tendency, inclination

paranoid 偏执的 paranoia 偏执狂

workaholic 工作狂 (alcoholic)

symptom 症状

diagnosis 诊断 (n.)

electroencephalogram 脑电图

electrocardiogram (心电图)

assertive 武断的

therapy 治疗法

hypnotism 催眠术 (~ hypnotize)

prescribe 开药方 vs. subscribe, describe,

antidepressant 抗抑郁药

tranquilizer 镇静药

side-effect (+s) 副作用

immune 免疫的，免除的

rehabilitation 复原，康复

relapse 旧病复发，故态复萌 vs. elapse

流逝 (子在川上曰：逝者如斯夫，不舍昼夜！)

chronic 慢性的

adulthood 成人期

puberty 青春发动期

adolescence 青 春 期 (the time of life between puberty and adulthood)

emotional 情绪的

affective 情感的

sane 神智健全的 insane

superstition 迷信

telepathy 传心术，通灵术

apathy 无感情，无兴趣，冷漠 (=

indifference)

pathology 病理学, 病理, 病变

delusion 迷惑, 欺瞒 vs. illusion

disorientation 迷失 (dis + orientation)~

disoriented

pervert 使反常 / 变态 反常 / 变态者

introspection 内省 vs. retrospection 回顾, 反省

sublimation 纯化, 升华

personality = personal characteristics

multiple personality 多重人格

innate 天赋的 in + nate (nature)= inborn,

congenital

attribute 属性

trait 特征, 品质 national traits 国民性
vs. traitor 叛逆者

文化

homogeneous 同质的 vs. homosexual,
heterosexual

mainstream 主流, 主流的

dialect 方言 (vs. accent)

discrepancy 差异

misconception 误解 (mis + concept +
ion)= misunderstanding

barrier 障碍 (物) = barricade

discrimination 区别, 歧视 racial/sexual
discrimination

hierarchy 等级制度

heir + arch (govern) + y

insularity 岛国性质

*British industry has often been criticized
for its linguistic insularity.

microcosm 小天地

nostalgia = homesickness

patriot 爱国者

compatriot 同胞, 同胞的 com + patriot

vernacular 本地的, 本国的 本地话, 本
国话 *the vernacular languages of India

immigration 移入~ immigrant, immigrate
v.s. emigration (~ emigrant, emigrate)

Antipodes 澳大利亚和新西兰 (非正式
用法)

permeate 渗透, 弥漫 *Smoke permeated
the house.

entrepreneur 企业家 entrepreneurship

practitioner 开业者, 从业者

celebrity 名人 luminary, VIP

proxy 代理人

anecdote 轶事

notoriety 恶名 notorious

counterpart 对应人, 对等物 *Who's
George Bush's counterpart in China? (Hu
Jintao ^^)

peer 同等的人 凝视, 窥视

subordinate 下级, 下级的

tactics 战术, 技巧 vs. strategy (战略, 策
略) marketing strategy v.s. selling tactics

nuance 细微差别

benchmarking 类比分析

punctual 准时的, 守时的

absenteeism 旷工

flextime 弹性工作时间

harass 骚扰 harassment *Mary said that Gary had sexually harassed her.

redundancy 冗余, 冗员

network redundancy

downsize 裁员 (~ lay off)

ballot 投票 (= vote)

impartial 不偏不倚的

lobby 大堂 (n.) 游说 (v.)

shortlist (BE) (供最后挑选或考虑的)

候选人名单

equilibrium 平衡, 均衡

questionnaire 调查表, 问卷

quantitative 定量的 vs. qualitative

contingency 偶然性, 偶然事件

incur 招致 incur debts/hatred/danger vs.

occur, concur, recur

ethical 伦理的, 符合伦理的

dubious 疑惑的, 可疑的 *People were dubious about the result.

manifestation 显示, 证明 manifest

subtitle 字幕, 副标题 subsidiary,

submarine, subway (BE: underground, tube), suburb (~ downtown, uptown, outskirts)

dubbing 配音录制

vogue 时尚 = chic

bizarre 奇异的 vs. weird (怪异的)

mediocre 平庸的

dietitian 饮食学家

connoisseur 行家, 鉴赏家

教育

accommodation (膳宿) 供应 = room and board

lodging 寄宿 (处)

lease 出租 “for lease”, “to let” v.s. rent

tenant 房客, 佃户

landlord 房东 landlady 房东太太 tenant 租客

housemate, roommate, dormmate, schoolmate, classmate

dormitory 寝室 dorm

au pair 为换取房间、住处、及学习某家语言的机会而为该家做家务的年轻外国人

reciprocal 相互的, 互惠的

hostel 宿舍, 客栈

youth hostel 青年旅馆

real estate 房地产

vicinity = neighborhood

flat 平的, 瘪的 flat tire 公寓 = apartment vs. condo, studio

bond = deposit

linen 亚麻的 亚麻织品, 床单 = bed linen

utensil 器皿

stationery 文具 vs. stationary 固定的

laundry 洗衣, 洗衣店

cafeteria 自助餐厅 = canteen
cater 满足 (需要)
aerobics 有氧健身操 “aero” : air
badminton 羽毛球 (运动)
baseball 棒球 baseball bat
squash 壁球 (运动)
amateur vs. professional
gathering 聚会 v.s. meeting, reunion
excursion 远足 = outing, expedition
commonwealth 共和国, 联邦
Commonwealth 英联邦
tertiary 第三的
post-secondary postgraduate,
postdoctoral, post-sale, postwar
illiterate 文盲 不识字的 literacy
discipline 学科, 纪律 v.s. subject
terminology 术语
faculty (大学的) 系、科, 全部教员
dean (大学) 教务长
curriculum 课程 extracurricular 课外的
syllabus 课程提纲
calendar 日历, 日程 schedule, agenda,
timetable
compulsory 强制的, 必修的 elective 选
修的
examiner vs. examinee
recruit 招生, 招募 recruitment = enroll
prestige 声望, 威信 prestigious
esteem 尊敬 n. & v.
aptitude 智力 SAT: School Aptitude Test
matriculation 录取入学

vocation 职 业 = calling, occupation,
career
abbreviation 缩略 (词) abridge 缩短,
删节
transferable (学分等) 可转换的
scholarship 奖学金 = fellowship
tutorial 辅 导 (课) tutor = lecturer,
instructor
pedagogue 教员, 学究 pedagogy 教育
学, 教学法
lexicography 词典编撰
assignment 任务, (课外) 作业
dissertation 论文 (= thesis)
credential 证明, 文凭 credentials
alumni 校友 (男) vs. alumnae
overestimate 高估 vs. underestimate
decipher 解码, 解释 = decode
caliber 才干

科技

ubiquitous 普遍存在的 = omnipresent
omniscient, omnipotent
versatile (人) 多才多艺的, (物) 通用
的
alchemy 炼金术
transmute 变形, 变质
arduous 艰巨的 = strenuous
pitfall 陷阱, 未预见之困难
metallurgy 冶金
alloy 合金

aluminum = aluminium (BE) calcium,
uranium, radium, copper, brass, bronze
electrode 电极
distill 蒸馏 distilled water
quartz 石英
phosphorus 磷, 磷光物质
inflammable 易燃的
combustion 燃烧
spontaneous combustion
ceramic 陶瓷的 瓷器
insulate 隔离, 绝缘
insulator vs. conductor
fiber 纤维 (BE: fibre) fiber optics 纤维
光学
optics 光学
retina 视网膜
iris 虹膜
opaque 不透明的 v.s. transparent,
translucent
microprocessor 微处理器
binary 二进制的
buffer 缓冲区 buffer storage
browser 浏览器
hypertext 超文本
envisage 想象, 看作
momentous (极为) 重要的
reticular 网状的
Ethernet 以太网
domain 域 domain names
cyberlaw 网络法律 “cyber-” : Internet
related cyberlove, cybercafe, ...

patent 专利
chronological 按时间顺序的
robot 机器人
artificial 人造的, 做作的 artificial
satellite
cone 圆锥体, 锥形物
Jupiter 木星 Mercury, Venus, Mars,
Saturn
exorbitant 过度的, 过分的, 过高的
centripetal 向心 (力) 的 centrifugal
high-rise 高楼 skyscraper
cathedral 大教堂
dome 圆顶
infrastructure 基础设施 superstructure
sewage 污水, 下水道
hydraulic 水力的, 水压的
landfill 垃圾掩埋 (地)
ventilation 通风
thermostat 温控器 thermos, thermometer,
thermonuclear
prefabricate 预先制造
polytechnic 各种工艺的 理工学校 Hong
Kong Polytechnic
geometric 几何 (学) 的 geometry
asymmetry 不对称 symmetry
concave 凹的 convex
bilateral 双边的, 两方面的 unilateral
paradoxical “似非而是” 的 paradox 悖
论
empirical 经验的 empirical law/formula
clockwise 顺时针的 anticlockwise

火山爆发

abundant adj. 丰富的, 富余的

accretion n. 增长

accumulation n. 积聚, 堆积物

active volcano 活火山

Alaska Volcano Observatory 阿拉斯加州火山观察站

Aleutian Islands 阿留申群岛(环布于阿拉斯加半岛尖端的弧形岛屿)

alternating layers of lava flows 熔岩流的交互叠层

aluminum n. [化] 铝

Archean adj. [地质] 太古代的

Archeology n. 考古学

ascending adj. 上升的, 向上的

ash particle 灰烬微粒

avalanche n.&v. 雪崩

awesome adj. 引起敬畏的, 可怕的

basaltic lava 玄武岩火山石

basin-shaped adj. 盆状的

beat out 敲平

belated adj. 误期的, 迟来的

blacksmith n. 铁匠

blanket n. 毯子, 覆盖

blast n. 一股(气流), 爆炸, 冲击波

blob n. 一滴, 水滴

blocky adj. 短而结实的, 斑驳的

bombs n. 火山口喷出的大堆球状熔岩

bowl-shaped crater 碗型的火山口

bubble n. 泡沫

bulbous adj. 球根的

buoyancy n. 浮性, 浮力

calcium n. [化] 钙(元素符号 ca)

caldera n. [地质] 喷火山口, 凹陷处

carbon dioxide [化] 二氧化碳

carbonated soft drink 碳酸饮料

Caribbean n. 加勒比海

catastrophic adj. 悲惨的, 灾难的

chimney n. 烟囱, 灯罩

cinder cone 火山渣形成的圆锥体

circular depression 圆形的凹陷

circular adj. 圆形的, 循环的

composite volcano 复式火山

conduit n. 导管, 沟渠

conduit system 沟渠系统

cone n. 锥形物, 圆锥体

congeal v. (使) 冻结, (使) 凝结

conical hill 圆锥型的小山

Cotopaxi n. 科多帕希火山(在厄瓜多尔北部)

coulee n. 深谷, [地质] 熔岩流

craggy adj. 陡峭的

crater n. 坑

crumple v. 弄皱, 压皱

crystal adj. 结晶状的; n. 晶体

crystalline adj. 水晶的

crystallization n. 结晶化

cubic kilometer 立方公里

debris n. 碎片, 残骸

demolish vt. 毁坏, 破坏

dense clouds of lava fragments 浓密的火

山岩碎片

descend on 袭击

destructive power 破坏力

devastate vt. 毁坏

diameter n. 直径

dike n. 堤防

dissolved gases 稀释的气体

dome n. 圆屋顶

domical shape 圆顶型

dormancy n. 睡眠, 冬眠

dormant adj. 睡眠状态的, 静止的

downslope adj. 下坡的; adv. 向着坡下

Earth's crust 地壳

ejected material 喷射出来的物质

elongate v. 拉长, (使) 伸长

embedded adj. 植入的, 内含的

emission n. (光、热等的) 散发, 发射, 喷射

Enceladus n. 土卫 [希神] 恩克拉多斯 (反叛众神的巨人)

eon n. 永世, 无数的年代

erosion n. 腐蚀, 侵蚀

formation of cone 火山口的形成

lava flow 熔岩流

eruption n. 爆发, 火山灰

evacuate v. 撤退

evolve v. (使) 发展, (使) 进展

exhume vt. 掘出, 发射

fanning n. 铺开, 展开

fertile adj. 肥沃的, 富饶的

fissure n. 裂缝, 裂沟

flank n. 侧面

flooding n. 泛滥, 水灾

fluid lava flow 流动的熔岩流

folding adj. 可折叠的

force of gravity 重力, 地心引力

forge v. 铸造

fracture n. 破裂

fragment n. 碎片, 断片

froth n. 泡沫, 废物

Fuji n. 富士山 (在日本本州岛上的死火山)

funnel-shaped crater 漏斗型的火山口

gas pressure 气压

gaseous adj. 气体的, 气态的

geologic adj. 地质 (学) 的, 地质 (学) 上的

geologist n. 地质学者

geophysicist n. 地球物理学者

glassy adj. 像玻璃的

granitic adj. 花岗石的, 由花岗岩形成的

hemisphere n. 半球

high-velocity adj. 高速的

igneous adj. 火的, 似火的 [地] 火成的

imaging n. [计] 成像

imperceptible adj. 觉察不到的, 感觉不到的, 极细微的

incandescent adj. 遇热发光的, 白炽的

inferno n. 阴间, 地狱

ingredient n. 成分, 因素

interfere with 妨碍

intermittently adv. 间歇地	烈释放
island chain 列岛	plain n. 平原, 草原
Jupiter n. 木星	planetary probe 行星探测器
Kamchatka n. 勘察加半岛(苏联东北部)	planetary scientist 行星科学家
landscape n. 风景, 地形	Pompeii n. 庞培(意大利古都, 公元 79
landslide n.[山崩], 崩塌的泥石	年火山爆发, 全城淹没)
lava dome 圆顶火山	population density 人口密度
lava plateau 火山岩高地	potassium n. [化] 钾
lava n. 熔岩, 火山岩	precipitate n. 沉淀物; v. 使沉淀
linear chain 线形链	precursory adj. 预示的, 先驱的
live in harmony with 与 和睦相处	probe n. 探测器
magma n. 岩浆	profile n. 剖面, 侧面, 外形
magnesium n.[化] 镁	project v. 凸出
magnitude n. 量级	prominent adj. 显著的, 突出的
majestic adj. 宏伟的, 庄严的	property damage 财务损坏
manganese n. 锰(元素符号为 Mn)	pumice n. 轻石, 浮石
mantle composition 覆盖物的成分	pyroclastic flow [地质] 火成碎屑流,
Mercury n. 水星	火山灰流
molten v. 溶化; adj. 熔铸的	quench v. 熄灭, 平息
monitor n. 监视器, 监控	reawaken v. 再度觉醒
mudflow n.[地] 泥流	reemergence n. 再度出现
Neptune n. [天] 海王星	reminder n. 提醒的人, 暗示
non-explosive lava flows 非爆炸性的火山岩流	reservoir n. 水库, 蓄水池
oval adj. 卵形的, 椭圆的	resurgent adj. 复活的
oxygen n.[化] 氧	rift zone 断裂区
particle n. 粒子, 微粒	Saturn n. [天] 土星
pasty adj. 浆状的	sculpt v. 雕刻, 造型
Pele, Goddess of Volcanoes 火山女神	seismograph n. 地震仪, 测震仪
pent adj. 被关闭的, 郁积的	shatter n. 粉碎, 碎片; vt. 粉碎, 破坏
periodic violent unleashing 周期性的猛烈释放	shield volcano 盾状火山
	Sierra Nevada 内华达山脉

silicate n. [化] 硅酸盐

silicon n. [化] 硅

sloping cone 有坡度的圆锥体

sodium n. [化] 钠

solar system [天] 太阳系

solidification n. 凝固

solidify v. (使) 凝固, 巩固

spine n. 脊骨, 地面隆起地带

spiteful adj. 怀恨的, 恶意的

steep-sided, symmetrical cone 陡峭和对称的圆锥体

steep-walled adj. 峭壁的

stratospheric winds 同温层风

stratovolcanoes n. 层云火山

succession n. 连续, 连续性

sulfur dioxide n. [化] 二氧化碳

summit n. 顶点

supernatural adj. 超自然的, 神奇的

sustain vt. 支撑, 撑住, 维持

swarm n. 一大群

swelling n. 河水猛涨, 涨水

telltale remnant 证据性的残余物

terrane n. 岩石

Titan n. [希腊] 提坦, 太阳神

titanium n. [化] 钛

trace n. 微量

Triton n. 海卫, [希神] 人身鱼尾的海神

tsunami n. 海啸

uplift v. & n. 升起

vegetation n. [植] 植被, (总称) 植物

ventilated adj. 通风的

vent n. 通风孔, 出烟孔, 出口

Venus n. [罗神] 维纳斯, [天] 金星

Vesuvius n. 维苏威火山 (位于意大利西南部, 欧洲大陆惟一的活火山)

viscous adj. 粘性的, 粘滞的

volcanic activity 火山活动

volcanic ash and dust 火山灰尘

volcanic ash 火山灰

volcanic cinders 火山灰

volcanic dust 火山尘土

volcanic eruption 火山爆发

volcanic feature 火山特征

volcanic landform 火山地形

volcanic lava dome 火山岩圆顶

volcanic terrain 火山地形

volcanic vent 火山口

volcanism n. 火山作用

volcano n. 火山

volcanologist n. 火山学家

weathering n. 侵蚀, 风化

whopping adj. 巨大的, 庞大的

wrathful adj. 愤怒的, 激怒的

Yosemite National Park (美国加利福尼亚州中部) 约塞米蒂国家公园

zircon n. 锆石

答案

Alfred Noble 诺贝尔

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

Amateur naturalists 业余自然者

27. B
28. C
29. H
30. G
31. E
32. D
33. A
34. beekeeping(notes)
35. life cycle(s)
36. drought(s)
37. C
38. D

39. A

40. D

Being Left-handed in a Right-handed World 在右撇子世界里做左撇子

14. C

15. A

16. B

17. F

18. D

19. B

20. F

21. D

22. A

23. YES

24. NO

25. NOT GIVEN

26. NOT GIVEN

Bright Children 天才儿童

28. YES

29. NO

30. YES

31. NOT GIVEN

32. NO

33. YES

34. C

35. A

36-40

B

D

A

C

E

Brunel: “the Practical Prophet” 布鲁内尔 实际的预言家

1. A

2. C

3. B

4. G

5. G

6. E

7. F

8. G

9. C

10. lager/large size

11. Australia

12. Suez canal

13. telegraphic cable

Intelligence and giftedness 智商和天赋

14. I

15. C

16. B

17. D

18. C

19. B

20. B

21. A

22. TRUE

23. FALSE

24. NOT GIVEN

25. TRUE

26. NOT GIVEN

John Franklin: “the discovery of the slowness” 航海家富兰克林

27. A

28. D

29. H: 第 2 行, 受欢迎的原因就是 a dislike of the high of culture...·

30. C

31. B

32. H

33. C

34. J

35. H

36. F

37. D 原文 “Ice demands a corresponding patience from those who(just like Franklin) venture onto it

38. C: C 符合主旨, B a bric-a-Brac (way) language 太具体, 而且也算不上一种语言。D 答案 rhythmical 是有 “美妙节奏的, 音律的”, 来节约时间显然不对

39. C: F 段倒数第 4-5 行, his persists in doing...·gradually earns the respect...·

40. A: H 段的第 1-2 行, “喜欢这本书的人们都有一个共同点: 他们不喜欢后现代社会的快节奏的生活 “选项 C 太具体, 只是一个个例

Last Hours of the Iceman 冰人调查

1. E

2. G

3. H

4. B

5. F

6. NO

7. NOT GIVEN

8. NO

9. YES

10. refrigerated high — tech
11. stomach distress
12. Neckera complanata
13. straight

Man or Machine? 人或机器人

1-7

E A C D F G F

8-13

8. 17

9. Backpack

10. Interact

11. facial expressions

12. Cog

13. Intelligence

Mungo man 澳洲古人

1-8

A E A B C D B A

9-14

T N T F T N

Novice and expert 新手和专家

1. principles and rules
2. mentor
3. journeyman
4. patterns of behavior
5. complex
6. FALSE
7. NOT GIVEN
8. TRUE

- 9. FALSE
- 10. TRUE
- 11. Models
- 12. human biases
- 13. consensus

Twin study:two of a kind 双胞胎研究

- 14. J
- 15. D
- 16. E
- 17. B
- 18. E
- 19. Francis Galton
- 20. 1924

Questions 21-23

A E F

Questions 24-26

A B D

We have Star performers! 团队中的明星

- 14. F
- 15. B
- 16. G
- 17. C
- 18. NG
- 19. YES
- 20. NO
- 21. YES
- 22. analysts
- 23. performance star / star / star performer
- 24. working environment/settings

25. salary

26. rivals

William Gilbert and Magnetism 威廉·吉尔伯特与磁场学

1-7

1. Paragraph A: v

2. Paragraph B: i

3. Paragraph C: vi

4. Paragraph D: x

5. Paragraph E: ix

6. Paragraph F: iv

7. Paragraph G: ii

8-10

8. True

9. True

10. Not Given

11-13

C D E

