

# IELTS

## 雅思阅读真题及预测

# 7

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
刘 创	新航道雅思阅读、写作首席名师
刘洪波	原北京雅思学校校长
耿 耿	青岛新东方学校校长
何 钢	北京新东方北京雅思部门主任
刘 薇	环球雅思学校总校校长 雅思口语天后
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](http://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](http://www.nature.com); [www.nationalgeographic.com](http://www.nationalgeographic.com); [www.economist.com](http://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](http://www.nature.com)、[www.nationalgeographic.com](http://www.nationalgeographic.com)、[www.economist.com](http://www.economist.com)、[www.newscientist.com](http://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

## Activating the brain

- A** In 1937 the great neuroscientist Sir Charles Scott Sherrington of the University of Oxford laid out what would become a classic description of the brain at work. He imagined points of light signaling the activity of nerve cells and their connections. During deep sleep, he proposed, only a few remote parts of the brain would twinkle, giving the organ the appearance of a starry night sky. But at awakening, “it is as if the Milky Way entered upon some cosmic dance,” Sherrington reflected. “Swiftly the head-mass becomes an enchanted loom where millions of flashing shuttles weave a dissolving pattern, always a meaningful pattern though never an abiding one; a shifting harmony of subpatterns.”
- B** Although Sherrington probably did not realize it at the time, his poetic metaphor contained an important scientific idea: that of the brain revealing its inner workings optically. Understanding how neurons work together to generate thoughts and behavior remains one of the most difficult open problems in all of biology, largely because scientists generally cannot see whole neural circuits in action. The standard approach of probing one or two neurons with electrodes reveals only tiny fragments of a much bigger puzzle, with too many pieces missing to guess the full picture. But if one could watch neurons communicate, one might be able to deduce how brain circuits are laid out and how they function. This alluring notion has inspired neuroscientists to attempt to realize Sherrington’s vision.
- C** Their efforts have given rise to a nascent field called optogenetics, which combines genetic engineering with optics to study specific cell types. Already investigators have succeeded in visualizing the functions of various groups of neurons. Furthermore, the approach has enabled them to actually control the neurons remotely simply by toggling a light switch. These achievements raise the prospect that optogenetics might one day lay open the brain’s circuitry to neuroscientists and perhaps even help physicians to treat certain medical disorders.



- D** Enchanting the Loom Attempts to turn Sherrington's vision into reality began in earnest in the 1970s. Like digital computers, nervous systems run on electricity; neurons encode information in electrical signals, or action potentials. These impulses, which typically involve voltages less than a tenth of those of a single AA battery, induce a nerve cell to release neurotransmitter molecules that then activate or inhibit connected cells in a circuit. In an effort to make these electrical signals visible, Lawrence B. Cohen of Yale University tested a large number of fluorescent dyes for their ability to respond to voltage changes with changes in color or intensity. He found that some dyes indeed had voltage-sensitive optical properties. By staining neurons with these dyes, Cohen could observe their activity under a microscope.
- E** Dyes can also reveal neural firing by reacting not to voltage changes but to the flow of specific charged atoms, or ions. When a neuron generates an action potential, membrane channels open and admit calcium ions into the cell. This calcium influx stimulates the release of neurotransmitters. In 1980 Roger Y. Tsien, now at the University of California, San Diego, began to synthesize dyes that could indicate shifts in calcium concentration by changing how brightly they fluoresced. These optical reporters have proved extraordinarily valuable, opening new windows on information processing in single neurons and small networks.
- F** Synthetic dyes suffer from a serious drawback, however. Neural tissue is composed of many different cell types. Estimates suggest that the brain of a mouse, for example, houses many hundreds of types of neurons plus numerous kinds of support cells. Because interactions between specific types of neurons form the basis of neural information processing, someone who wants to understand how a particular circuit works must be able to identify and monitor the individual players and pinpoint when they turn on (fire an action potential) and off. But because synthetic dyes stain all cell types indiscriminately, it is generally impossible to trace the optical signals back to specific types of cells.

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- G** Optogenetics emerged from the realization that genetic manipulation might be the key to solving his problem of indiscriminate staining. An individual's cells all contain the same genes, but what makes two cells different from each other is that different mixes of genes get turned on or off in them. Neurons that release the neurotransmitter dopamine when they fire, for instance, need the enzymatic machinery for making and packaging dopamine. The genes encoding the protein components of this machinery are thus switched on in dopamine-producing (dopaminergic) neurons but stay off in other, non-dopaminergic neurons. In theory, if a biological switch that turned a dopamine-making gene on was linked to a gene encoding a dye and if the switch-and-dye unit were engineered into the cells of an animal, the animal would make the dye only in dopaminergic cells. If researchers could peer into the brains of these creatures (as is indeed possible), they could see dopaminergic cells functioning in virtual isolation from other cell types. Furthermore, they could observe these cells in the intact, living brain. Synthetic dyes cannot perform this type of magic, because their production is not controlled by genetic switches that flip to on exclusively in certain kinds of cells. The trick works only when a dye is encoded by a gene—that is, when the dye is a protein.
- H** The first demonstrations that genetically encoded a decade ago, from teams led independently by Tsien, Ehud Y. Isacoff of the University of California, Berkeley with James E. Rothman, now at Yale University. In all cases, the gene for the dye was borrowed from a luminescent marine organism, typically a jellyfish that makes the so-called green fluorescent protein. Scientists tweaked the gene so that its protein product could detect and reveal the changes in voltage or calcium that underlie signaling within a cell, as well as the release of neurotransmitters that enable signaling between cells.

**Questions 1-5** .....

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

*In boxes 1-5 on your answer sheet, write*

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

- 1 Sherrington's imaginary picture triggered scientists' enthusiasm of discovering how the whole set of neurons operates.
- 2 A jumped-up domain optogenetic is a pure unexpected accident.
- 3 Electric tension is one key component to realize the communication between neurons.
- 4 The variations of voltages is the sole response that the coloration of related neurons could provide when neural discharge takes place.
- 5 The vital defect synthetic dyes possess is the most challenging obstacle for researchers to overcome .

## Questions 6-10 .....

The reading Passage has seven paragraphs A-H.

Which paragraph contains the following information?

*Write the correct letter A-H, in boxes 6-10 on your answer sheet.*

- 6 a sea creature producing light triggered by certain genes
- 7 first attempts to make a great idea come true
- 8 the reason to explain the failure of synthetic dyes
- 9 difficulty in observing how the whole set of neurons works
- 10 visual indicators to show how information is handled in and between cells in the Brain

## Questions 11-13 .....

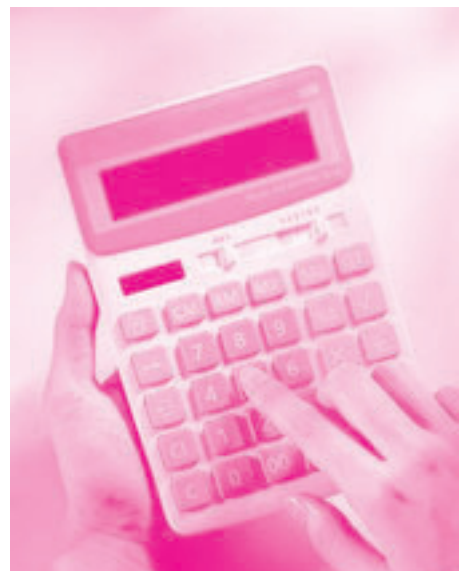
### Summary

*Complete the following summary of the paragraphs of Reading Passage, using no more than three words from the Reading Passage for each answer. Write your answers in boxes 11-13 on your answer sheet.*

Synthesized by enzymatic machinery , 11\_\_\_\_\_ plays as vehicle for the information flow between cells. Protein is the ingredient of the enzymatic machinery, so first it needs genes in charge of encoding the required protein 12\_\_\_\_\_ before the neurotransmitter is produced. This 13\_\_\_\_\_ can be used to differentiate the dopaminergic neurons from the nondopaminergic counterparts with a premise that the dye is a protein after a transfer process.

## Assessing the risk

- A** As a title for a supposedly unprejudiced debate on scientific progress, “Panic attack: interrogating our obsession with risk” did not bode well. Held last week at the Royal Institution in London, the event brought together scientists from across the world to ask why society is so obsessed with risk and to call for a “more rational” approach. “We seem to be organising society around the grandmotherly maxim of ‘better safe than sorry’,” exclaimed Spiked, the online publication that organised the event. “What are the consequences of this overbearing concern with risks?”
- B** The debate was preceded by a survey of 40 scientists who were invited to describe how awful our lives would be if the “precautionary principle” had been allowed to prevail in the past. Their response was: no heart surgery or antibiotics, and hardly any drugs at all; no aeroplanes, bicycles or high-voltage power grids; no pasteurisation, pesticides or biotechnology; no quantum of America. In short, their message was:
- C** They have absolutely missed the point. The precautionary principle is a subtle idea. It has various forms, but all of them generally include some notion of cost-effectiveness. Thus the point is not simply to ban things that are not known to be absolutely safe. Rather, it says: “Of course you can make no progress without risk. But if there is no obvious gain from taking the risk, then don’t take it.”
- D** Clearly, all the technologies listed by the 40 well-chosen savants were innately risky at their inception, as all technologies are. But all of them would have received the green light under the precautionary principle because they all had the potential to offer tremendous benefits-the solutions to very big problems-if only the snags could be overcome.
- E** If the precautionary principle had been in place, the



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

the 1920s, infective bacteria were laying waste to the world. Children died from diphtheria and whooping cough, every open drain brought the threat of typhoid, and any wound could lead to septicaemia and even gangrene.

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

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

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

**I** Indeed, in contrast to all the other items on Spiked's list, GM crops stand out as an example of a technology whose benefits are far from clear. Some of the risks can at least be defined. But in the present economic climate, the benefits

that might accrue from them seem dubious. Promoters of GM crops believe that the future population of the world cannot be fed without them. That is untrue. The crops that really matter are wheat and rice, and there is no GM research in the pipeline that will seriously affect the yield of either. GM is used to make production cheaper and hence more profitable, which is an extremely questionable ambition.

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

# Questions 27-32 .....

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

In boxes 27-32 on your answer sheet, write

**TRUE** if the sataement agrees with the information

**FALSE** if the statement contradicts the information

**NOT GIVEN** if there is no information on this

- 27 Title of the debate is not unbiased.
- 28 All scientist invited to the debate were from the field of medicine.
- 29 Those scientists who conducted the survey were people who shouldn't take risks.
- 30 All listed technologies are riskier than other technologies.
- 31 It is worth taking the risks to invent antibiotics.
- 32 All other inventions on the list were also judged by the precautionary principle.



### Questions 33-39 .....

Complete the following summary of the paragraphs of Reading Passage, using no more than three words from the Reading Passage for each answer. Write your answers in boxes 33-39 on your answer sheet.

When the applied precautionary principle in deciding whether to invent a new technology, people should also consider the 33\_\_\_\_\_, along with the usual consideration of 34\_\_\_\_\_. For example, although risky and dangerous enough, people still enjoy 35\_\_\_\_\_ for the excitement that it provides. On the other hand, experts believe that future population desperately needs 36\_\_\_\_\_ in spite of their undefined risks. However researches conducted have not been directed towards increasing the yield of 37\_\_\_\_\_ so far, to reduce the cost of 38\_\_\_\_\_ and to bring more profits out of it. In the end, such selfish use of precautionary principle for business and political gain has often led people to 39\_\_\_\_\_ science because they believe that scientists can not be trusted.

### Questions 40 .....

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

Write your answers in boxes 40 on your answer sheet.

- 40 What is the main theme of the passage?
- A people have right to doubt science and technologies
  - B the precautionary principle could have prevented the development of science and technology
  - C there are not enough people who truly understand the precautionary principle
  - D the precautionary principle bids us to take risks at all costs

## Bestcom 2

# CONSIDERATE COMPUTING

- A** “YOUR BATTERY IS NOW FULLY CHARGED,” ANNOUNCED THE LAPTOP COMPUTER to its owner, Donald A. Norman, with enthusiasm perhaps even a hint of pride?—in its synthetic voice. To be sure, distractions and multitasking are hardly new to the human condition. “A complicated life, continually interrupted by competing requests for attention, is as old as procreation,” laughs Ted Selker of the Massachusetts Institute of Technology Media Lab. But increasingly, it is not just our kids pulling us three ways at once; it is also a relentless barrage of e-mail, alerts, alarms, calls, instant messages and automated notifications, none of them coordinated and all of them oblivious to whether we are busy or even present. “It’s ridiculous that my own computer can’t figure out whether I’m in front of it, but a public toilet can,” exclaims Roel Vertegaal of Queen’s University in Ontario.
- B** Humanity has connected itself through roughly three billion networked telephones, computers, traffic lights—even refrigerators and picture frames—because these things make life more convenient and keep us available to those we care about. So although we could simply turn off the phones, close the e-mail program, and shut the office door when it is time for a meeting or a stretch of concentrated work, we usually don’t. We just endure the consequences.
- C** Numerous studies have shown that when people are unexpectedly interrupted, they not only work less efficiently but also make more mistakes. “It seems to add cumulatively to a feeling of frustration,” Picard reports, and that stress response makes it hard to regain focus. It isn’t merely a matter of productivity and the pace of life. For pilots, drivers, soldiers and doctors, errors of inattention can be downright dangerous. “If we could just give our computers and phones some understanding of the limits of human attention and memory, it would make them seem a lot more thoughtful and courteous,” says Eric

Horvitz of Microsoft Research. Horvitz, Vertegaal, Selker and Picard are among a small but growing number of researchers trying to teach computers, phones, cars and other gadgets (小配件) to behave less like egocentric oafs (利己主义者的笨人) and more like considerate colleagues.

**D** To do this, the machines need new skills of three kinds: sensing, reasoning and communicating. First a system must sense or infer where its owner is and what he or she is doing. Next it must weigh the value of the messages it wants to convey against the cost of the disruption. Then it has to choose the best mode and time to interject. Each of these pushes the limits of computer science and raises issues of privacy, complexity or reliability. Nevertheless, “attentive” computing systems have begun appearing in newer Volvos and IBM has introduced Websphere communications software with a basic busyness sense. Microsoft has been running extensive in-house tests of a much more sophisticated system since 2003. Within a few years, companies may be able to offer every office worker a software version of the personal receptionist that only corner-suite executives enjoy today. But if such an offer should land in your inbox, be sure to read the fine print before you sign. An attentive system, by definition, is one that is always watching. That considerate computer may come to know more about your work habits than you do.

**E** Most people aren’t as busy as they think they are, which is why we can usually tolerate interruptions from our inconsiderate electronic paraphernalia (设备). James Fogarty and Scott E. Hudson of Carnegie Mellon University recently teamed up with Jennifer Lai of IBM Research to study 10 managers, researchers and interns at work. They videotaped the subjects and periodically had them rate their “interruptibility.” The amount of time the workers spent in leave-me-alone mode varied from person to person and day to day, ranging from 10 to 51 percent. On average, the subjects wanted to work without interruption about one third of the time. In studies of Microsoft employees, Horvitz has similarly found that they typically spend more than 65 percent of their day in a state of low attention.

**F** Today’s phones and computers, which naively (天真无邪地) assume that the

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user is never too busy to take a call, read an email, or click “OK” on an alert box, thus are probably correct about two thirds of time. To be useful, then, considerate systems will have to be more than 65

percent accurate in sensing when their users are near their cognitive limits. Bestcom/Enhanced Telephony, a Microsoft prototype based on Horvitz’s work, digs a little deeper into each user’s computer to find clues about what they are up to. Microsoft launched an internal beta test of the system in mid-2003. By last October, Horvitz says, about 3,800 people were using the system to field their incoming phone calls.

**G** Horvitz himself is one of those testers, and while we talk in his office in Redmond, Wash., Bestcom silently handles one call after another. First it checks whether the caller is listed in his address book, the company directory, or its log of people he has called recently. Triangulating these sources, it tries to deduce their relationship. Family members, supervisors and people he called earlier today ring through. Others see a message on their computer that he is in a meeting and won’t be available until 3 P.M. The system scans Horvitz’s and the caller’s calendar and offers to reschedule the call at a time that is open for both. Some callers choose that option; others leave voice mail. E-mail messages get a similar screening. When Horvitz is out of the office, Bestcom automatically offers to forward selected callers to his cellphone—unless his calendar and other evidence suggest that he is in a meeting.

**H** Most large companies already use computerized phone systems and standard calendar and contact management software, so tapping into those “sensors” should be straightforward. Not all employees will like the idea of having a microphone on all the time in their office, however, nor will everyone want to expose their datebook to some program they do not ultimately control. Moreover, some managers might be tempted to equate a “state of low attention” with “goofing off” and punish those who seem insufficiently busy.

**Questions 14-19 .....**

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

In boxes 14-19 on your answer sheet, write

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

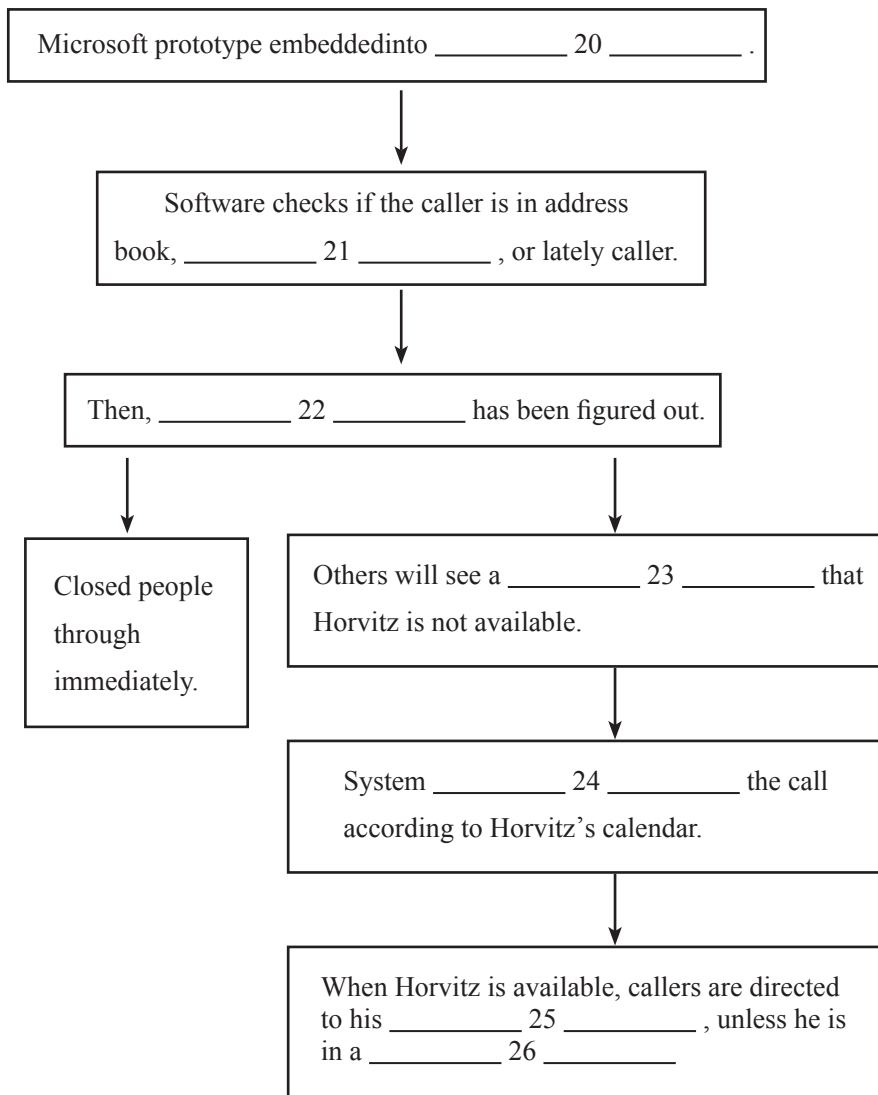
- 14 According to Ted Selker, human reproduction has been disturbed throughout history.
- 15 If people are interrupted by calls or E-mails, they usually put up with it instead of feeling sickness.
- 16 Microsoft are now investigating a software which is compatible with ordinary office.
- 17 People usually have misperception about whether they are busy or not.
- 18 Experts in Carnegie Mellon University conducted a research observed all occupations of IBM.
- 19 Current phone and computer system has a shortcut key for people receive information immediately.

**Questions 20-26** .....

Answer the questions in the diagram below.

Choose **NO MORE THAN THREE WORDS AND/OR A NUMBER** from the passage for each answer.

**Bestcom Working Process:**



## Designed to Last

### Could better design cure our throwaway culture?

- A** Jonathan Chapman, a senior lecture at the University of Brighton, UK, is one of a new breed of ‘sustainable designers’. Like many of us, they are concerned about the huge waste associated with Western consumer culture and the damage this does to the environment. Some, like Chapman, aim to create objects we will want to keep rather than discard. Others are working to create more efficient or durable consumer goods, or goods designed with recycling in mind. The waste entailed in our fleeting relationships with consumer durables is colossal (*adj.* 巨大的 ).
- B** Domestic (*adj.* 家庭的 ) power tools, such as electric drills, are a typical example of such waste. However much DIY the purchaser plans to do, the truth is that these things are thrown away having been used, on average, for just ten minutes. Most will serve ‘conscience (*n.* 良心 , 愧疚 ) time’ gathering dust on a shelf in the garage; people are reluctant (*adj.* 不情愿的 ) to admit that they have wasted their money. However, the end is inevitable (*adj.* 不可避免的 ); thousands of years in landfill waste sites. In its design, manufacture, packaging, transportation and disposal, a power tool consumes many times its own weight in resources, all for a shorter active lifespan than that of the average small insect.
- C** To understand why we have become so wasteful, we should look to the underlying motivation (*n.* 动机 ) of consumers. ‘People own things to give expression to (*v.* 表达出 ) who they are, and to show what group of people they feel they belong to,’ Chapman says. In a world of mass production, however, that symbolism has lost much of its potency. For most of human history, people had an intimate (*adj.* 密切的 ) relationship with objects they



used or treasured. Often they made the objects themselves, or family members passed them on. For more specialist objects, people relied on expert manufacturers living close by, whom they probably knew personally. Chapman points out that all these factors gave objects a history-a narrative-and an emotional connection that today's mass production can not match. Without these personal connections, consumerist culture instead idolizes (v. 崇拜) novelty (n. 新奇). We know we can't buy happiness, but the chance to remake ourselves with glossy, box-fresh products seems irresistible. When the novelty fades we simply renew the excitement by buying more new stuff: what John Thackara of Doors of Perception, a network for sharing ideas about the future of design, calls the "schlock of the new".

**D** As a sustainable designer, Chapman's solution is what he calls "emotionally durable design". Think about your favorite old jeans. They just don't have the right feel until they have been worn and washed a hundred times, do they? It is like they are sharing your life story. You can fake that look, but it isn't the same. Chapman says the gradual unfolding of a relationship like this transforms our interactions with objects into something richer than simple utility (n. 效用, 功用). Swiss industrial analyst Walter Stahel, visiting professor at the University of Surrey, calls it the "teddy-bear factor". No matter how ragged and worn a favorite teddy becomes, we don't rush out and buy another one. As adults, our teddy bear connects us to our childhoods, and this protects it from obsolescence (废弃). Stahel says this is what sustainable design needs to do.

**E** It is not simply about making durable items that people want to keep. Sustainable design is a matter of properly costing the whole process of production, energy use and disposal. "It is about the design of systems, the design of culture," says Tim Cooper from the Centre for Sustainable Consumption at Sheffield Hallam University in Britain. He thinks sustainable design has been "surprisingly slow to take off" but says looming (adj. 阴森的逼近) environmental crises and resource depletion (n. 消耗, 用尽) are pushing it to the top of the agenda.

**F** Thackara agrees. For him, the roots of impending (adj. 即将出现的) environmental collapse (n. 倒塌) can be summarized in two words: weight and speed.



We are making more stuff than the planet can sustain and using vast amounts of energy moving more and more of it around ever faster. The Information Age was supposed to lighten our economies and reduce our impact on the environment, but the reverse seems to be happening. We have simply added information technology to the industrial era and hastened the developed world's metabolism ( 新陈代谢 ), Thackara argues.

- G** Once you grasp that, the cure is hardly rocket science: minimize waste and energy use, stop moving stuff around so much and use people more. EZIO MANZINI, PROFESSOR of industrial design at Politecnico di Milano university, Italy, describes the process of moving to a post-throwaway society as like “changing the engine of an aircraft in mid-flight”. Even so, he believes it can be done, and he is not alone.
- H** Manzini says a crucial step would be to redesign our globalized world into what he calls the “multi-local society”. His vision is that every resource, from food to electricity generation, should as far as possible be sourced and distributed locally. These local hubs would then be connected to national and global networks to allow the most efficient use and flow of materials.
- I** So what will post-throwaway consumerism look like? For a start, we will increasingly buy sustainably designed products. This might be as simple as installing energy-saving light bulbs, more efficient washing machines, or choosing locally produced groceries with less packaging.
- J** We will spend less on material goods and more on services. Instead of buying a second car, for example, we might buy into a car-sharing network. We will also buy less and rent a whole lot more: why own things that you hardly use, especially things that are likely to be updated all the time? Consumer durables will be sold with plans already in place for their disposal. Electronic goods will be designed to be recyclable, with the extra cost added to the retail ( *n.* 零售 ) price as prepayment. As consumers become increasingly concerned about the environment, many big businesses are eagerly adopting sustainable design and brushing up their green credentials ( *n.* 信任状 ) to please their customers and stay one step ahead of the competition.

## Questions 28-32 .....

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

Write the correct letter in boxes 28-32 on your answer sheet.

- 28** What does 'conscience time' imply in paragraph 2?
- A People feel guilty when they throw things away easily.
  - B The shelf in the garage needs cleaning.
  - C The consumers are unaware of the waste problem.
  - D The power tool should be place in the right place after being used.
- 29** Prior to the mass production, people own things to show
- A their quality
  - B their status
  - C their character
  - D their history
- 30** The word 'narrative' in paragraph 3 refers to
- A the novelty culture pursued by the customers
  - B the motivation of buying new products
  - C object stories that relate personally and meaningfully to the owners
  - D the image created by the manufacturers
- 31** Without personal connection, people buy new stuff for
- A sharing
  - B freshness
  - C collection
  - D family members
- 32** The writer quotes the old jeans and teddy bear to illustrate that
- A the products are used for simple utility.
  - B producers should create more special stuff to attract the consumers.
  - C Chapman led a poor childhood life.
  - D the emotional connections make us to keep the objects for longer.

### Questions 33-36 .....

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

Write the correct letter, A-H, in boxes 33-36 on your answer sheet.

Tim Cooper claims that although sustainable design proceeds 33\_\_\_\_\_, the coming problems are pushing the move. In accordance with Tim Cooper, Thackara believes that the origins of the looming environmental crises are weight and 34\_\_\_\_\_. The technology which was assumed to have a positive effect on our society actually accelerates the world's 35\_\_\_\_\_. To cure this, Manzini proposes a 'multi-local society' which means every resource should be located and redeployed 36\_\_\_\_\_.

- |            |              |           |
|------------|--------------|-----------|
| A properly | B energy     | C locally |
| D economy  | E slowly     | F speed   |
| G quickly  | H metabolism |           |

## Questions 37-40 .....

Do the following statements agree with the claims of the writer in Reading Passage?

In boxes 37-40 on your answer sheet, write

**TRUE** if the statement agrees with the information

**FALSE** if the statement contradicts the information

**NOT GIVEN** if there is no information on this

- 37 People often buy things that are seldom used and throw them away.
- 38 In a post-throwaway society, we will pay extra money after disposing the electronic goods.
- 39 Some businesses have jumped on the sustainability bandwagon.
- 40 Company will spend less on repairing in the future.

## Going nowhere fast

### New transportation mode PRT RUF

- A** This is ludicrous! We can talk to people anywhere in the world or fly to meet them in a few hours. We can even send probes to other planets. But when it comes to getting around our cities, we depend on systems that have scarcely changed since the days of Gottlieb Daimler.
- B** In recent years, the pollution belched out by millions of vehicles has dominated the debate about transport. The problem has even persuaded California that home of car culture to curb traffic growth. But no matter how green they become, cars are unlikely to get us around crowded cities any faster. And persuading people to use trains and buses will always be an uphill struggle. Cars, after all, are popular for very good reasons, as anyone with small children or heavy shopping knows.
- C** A professor of mechanical engineering sits typing at a computer keyboard, conjuring up a scene on his monitor that looks something like the classic computer game PacMan. White dots stream in from the right of the screen, switch to red, and merge with green boxes, which swiftly change colour to yellow and then red, while moving through a bewildering maze. But this is not a video game. J. Edward Anderson of Boston University is testing an urban transit system that he believes could revolutionise public transport worldwide.
- D** For the past quarter of a century, Anderson has been promoting his version of a personal rapid transit (PRT). Other versions came and went in the 1970s, from Europe, Japan and elsewhere in the US, but he was so convinced of the idea's potential that he stuck with it and, in 1983, founded the Taxi 2000 Corporation to 'commercialise' the initiative. Although the University of Minnesota, Anderson's employer until 1986, holds the patents to the technology, he is licensed to develop it and to sub-license other developers. So politicians should be trying to lure people out of their cars, not forcing them out. There's certainly no shortage of alternatives. Perhaps the most attractive is the concept

known as personal rapid transit (PRT), independently invented in the US and Europe in the 1950s.

**E** The idea is to go to one of many stations and hop into a computer-controlled car which can whisk you to your destination along a network of guide ways. You wouldn't have to share your space with strangers, and with no traffic lights, pedestrians or parked cars to slow things down, PRT guideways can carry far more traffic, nonstop, than any inner city road. It's a wonderful vision, but the odds are stacked against PRT for a number of reasons. The first cars ran on existing roads, and it was only after they became popular and after governments started earning revenue from them that a road network designed specifically for motor vehicles was built. With PRT, the infrastructure would have to come first and that would cost megabucks.

**F** What's more, any transport system that threatened the car's dominance would be up against all those with a stake in maintaining the status quo, from private car owners to manufacturers and oil multinationals. Even if PRTs were spectacularly successful in trials, it might not make much difference. Superior technology doesn't always triumph, as the VHS versus Betamax and Windows versus Apple Mac battles showed.

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

**H** Build a fast network of guideways in a busy city centre and people would have a strong incentive not just to use public RUF vehicles, but also to buy their own dual-mode vehicle. Commuters could drive onto the guide way, sit back and



read as they are chauffeured into the city. At work, they would jump out, leaving their vehicles to park themselves. Unlike PRT, such a system could grow organically, as each network would serve a large area around it and people nearby could buy into it. And a dual-mode system might even win the support of car manufacturers, who could easily switch to producing dual-mode vehicles. The RUF system can reduce the energy consumption from individual traffic. The main factor is the reduction of air resistance due to close coupling of vehicles. The energy consumption per ruf can be reduced to less than 1/3 at 100 km/h. Since RUF is an electric system, renewable sources can be used without problems. A combination of windmills and a RUF rail could be used over water. Solar cells can also be integrated into the system and ensure completely sustainable transportation.

- I Of course, creating a new transport system will not be cheap or easy. But unlike adding a dedicated bus lane here or extending the underground railway there, an innovative system such as Jensen's could transform cities. The vehicles in a RUF system "rides" very safely on top of a triangular monorail. This means that derailments are impossible and that the users will feel safe because it is easy to understand that when the rail is actually inside the vehicle it is absolutely stable. The special rail brake ensures that braking power is always available even during bad weather. The brake can squeeze as hard against the rail as required in order to bring the vehicle to a safe stop. If a vehicle has to be evacuated, a walkway between the two rails can be used.
- J And it's not just a matter of saving a few minutes a day. According to the Red Cross, more than 30 million people have died in road accidents in the past century three times the number killed in the First World War and the annual death toll is rising. And what's more, the Red Cross believes road accidents will become the third biggest cause of death and disability by 2020, ahead of diseases such as AIDS and tuberculosis. Surely we can find a better way to get around.

## Questions 14-17 .....

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

In boxes 14-17 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

- 14 Cars develop slower than communication system.
- 15 Many states in the US consider to reduce cars growth.
- 16 Car pollution has been concerned these days.
- 17 Trains and buses are not suitable to drive on uphill road.

## Questions 18-24 .....

Use the information in the passage to match the category (listed A-C) with description below. Write the appropriate letters A-C in boxes 5-10 on your answer sheet.

A ONLY PRT  
 B ONLY RUF  
 C BOTH OF THEM

- 18 Totally apply computer system
- 19 Opposition to system from companies
- 20 Reach destination fast
- 21 Not necessary to share with the public
- 22 Work on existing road
- 23 Individuals can buy the cars after all
- 24 Controlled both by computer and manual



**Questions 25-27** .....

Choose **THREE** correct letters from followings that are advantages of developing a **NEW TRANSPORT SYSTEM**.

*Write your answers in boxes 25-27 on your answer sheet.*

- A Stimulating economy
- B Successful application in Europe
- C Safety consideration
- D Less pollution to environment
- E Economical budget
- F Public popularity
- G Fast speed

## Hypnotism it real or just a circus trick?

*Hypnosis is “a special psychological state with certain physiological attributes, resembling sleep only superficially and marked by a functioning of the individual at a level of awareness other than the ordinary conscious state. “One theory suggests that hypnosis is a mental state, while another theory links hypnosis to imaginative role-enactment. Persons under hypnosis are said to have heightened focus and concentration with the ability to concentrate intensely on a specific thought or memory, while blocking out sources of distraction. Hypnosis is usually induced by a procedure known as a hypnotic induction involving a series of preliminary instructions and suggestions. The hypnotic suggestions may be delivered by a hypnotist in the presence of the subject, or may be self-administered. The use of hypnotism for therapeutic purposes is referred to as “hypnotherapy”, while its use as a form of entertainment for an audience is known as “stage hypnosis”.*

- A** A Hypnosis has been shown through a number of rigorously controlled studies to reduce pain, control blood pressure, and even make warts go away. But because very few studies have attempted to define the actual processes involved, most scientists are sceptical of its power and uses. That scepticism has driven David Spiegel, a professor of psychiatry at Stanford University School of Medicine, USA, and other researchers to take a hard look at what happens in the brain during hypnosis.
- B** Along researchers there are two schools of thought. One claims that hypnosis fundamentally alters subjects' state of mind: they enter a trance, which produces changes in brain activity. The other believes that hypnosis is simply a matter of suggestibility and relaxation. Spiegel belongs to the first school and over the years has had a debate with two scientists on the other side, Irving Kirsch, a University of Connecticut psychologist, and Stephen Kosslyn, a Harvard professor.
- C** Kirsch often uses hypnosis in his practice and doesn't deny that it can be effective. 'With hypnosis you do put people in altered states,' he says. 'But you

don't need a trance to do it.' To illustrate the point, Kirsch demonstrates how a subject holding a small object on a chain can make it swing in any direction by mere suggestion, the chain responding to minute movements in the tiny muscles of the fingers. 'You don't have to enter a trance for your subconscious and your body to act upon a suggestion,' Kirsch says. The reaction is the result of your focusing on moving the chain in a particular direction.'

- D** Spiegel disagrees. One of his best known studies found that when subjects were hypnotised and given suggestions their brain wave patterns changed, indicating that they had entered a trance. In one of his studies, people under hypnosis were told their forearms were numb, then given light electrical shocks to the wrists. They didn't flinch or respond in any way, and their brain waves resembled those of people who experienced a much weaker shock. To Kirsch this still wasn't enough to prove the power of trance, but Stephen Kosslyn was willing to be convinced. Many external factors could have been responsible for the shift in the subjects' state of mind, but Kosslyn wondered, 'Is there really something going on in the brain?'
- E** To find out, Spiegel and Kosslyn decided to collaborate on a study focusing on a part of the brain that is well understood: the circuit which has been found to process the perception of colour. Spiegel and Kosslyn wanted to see if subjects could set off the circuit by visualising colour while under hypnosis. They selected eight people for the experiment conducted at Massachusetts General Hospital. The subjects were put in a scanner and shown a slide with coloured rectangles while their brain activity was mapped. Then they were shown a black and white slide and told to imagine its having colour. Both tasks were then repeated under hypnosis.
- F** The results were striking. When the subjects truly saw the coloured rectangles, the circuit lit up on both sides of the brain; when they only had to imagine the colour, the circuit lit up only in the right hemisphere. Under hypnosis, however, both sides of the brain became active, just as in regular sight; imagination seemed to take on the quality of a hallucination.
- G** After the experiment, Kosslyn was forced to admit, 'I'm absolutely convinced

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now that hypnosis can boost what mental imagery does.’ But Kirsch remained sceptical, saying, The experiments demonstrate that people are experiencing the effects of hypnotic suggestion

but don’t prove that they are entering a trance.’ He also argued that ‘ subjects were told to see the card in colour when they were hypnotised but only to imagine it in colour when they weren’t. ‘Being told to pretend you’re having an experience is different from the suggestion to have the experience.’

**H** Spiegel, however, is a clinician first and a scientist second. He believes the most important thing is that doctors recognise the power of hypnosis and start to use it. Working with Elvira Lang, a radiologist at a Harvard Medical Centre, he is testing the use of hypnosis in the operating room just as he and Kossiyin did in the scanner. Spiegel and Lang took 24 patients scheduled for surgery and divided them into three groups. One group received standard care, another standard care with a sympathetic care provider and the third received standard care, a sympathetic care provider and hypnosis. Every 15 minutes the patients were asked to rate their pain and anxiety levels. They were also hooked up to painkilling medication which they could administer to themselves.

**I** On average, Spiegel and Lang found the hypnotised subjects used less medication, experienced less pain and felt far less anxiety than the other two groups. Original results published in The Lancet have been further supported by ongoing studies conducted by Lang.

**J** Spiegel’s investigations into the nature of hypnosis and its effects on the brain continue. However, if hypnosis is ever to work its way into mainstream medicine and everyday use, physicians will need to know there is solid science behind what sounds like mysticism. Only then will their reluctance to using such things as mind over matter be overcome. ‘I agree that the medical use of hypnotism should be based on data rather than belief,’ says Spiegel, ‘but in the end it doesn’t really matter why it works, as long as it helps our patients.’

### Questions 27-31 .....

*The reading passage has ten paragraphs A-J*

*Which paragraph contains the following information?*

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

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

- 27. Experiment show similarity between hypnosis and vision.
- 28. An experiment from an opposing expert.
- 29. Opposing views appear due to lack of data.
- 30. Medical benefits makes scientific proof unimportant.
- 31. An experiment using people who are under medical treatment.

### Questions 32-36 .....

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

*Write the correct letter in boxes 32-36 on your answer sheet.*

- 32** Kirsch uses a small object on a chain to demonstrate that
  - A inducing a trance is a simple process.
  - B responding to a suggestion does not require a trance.
  - C muscles respond as a result of a trance.
  - D it is difficult to identify a trance.
- 33** Spiegel disagrees with Kirsch because the subjects in Spiegel's experiment
  - A believed what they were told.
  - B showed changes in brain activity.
  - C responded as expected to shocks.
  - D had similar reactions to control subjects.
- 34** Kosslyn's response to Spiegel's electric shock experiment was to
  - A challenge the results because of external factors.

- B work with Kirsch to disprove Spiegel's results.
  - C reverse his previous position on trance.
  - D accept that Spiegel's ideas might be correct.
- 35 Spiegel and Kosslyn's experiment was designed to show that hypnosis
- A affects the electrical responses of the brain.
  - B could make colour appear as black and white.
  - C has an effect on how shapes are perceived.
  - D can enhance the subject's imagination.
- 36 Kirsch thought Spiegel and Kosslyn's results
- A were worthy of further investigation.
  - B had nothing to do with hypnotic suggestion.
  - C showed that the possibility of trance existed.
  - D were affected by the words used in the instructions.

### Questions 37-40 .....

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

In boxes 37-40 on your answer sheet, write

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

- 37 Spiegel is more interested in scientific research than medical practice.
- 38 Patients in the third group in Spiegel and Lang's experiment were easily hypnotised.
- 39 In Spiegel and Lang's experiment, a smaller amount of painkiller was needed by the hypnotised patients than by the other two groups.
- 40 Spiegel feels that doctors should use hypnotism only when it is fully understood

## Lie Detector

- A** However much we may abhor it, deception comes naturally to all living things. Birds do it by feigning injury to lead hungry predators away from nesting young. Spider crabs do it by disguise: adorning themselves with strips of kelp and other debris, they pretend to be something they are not—and so escape their enemies. Nature amply rewards successful deceivers by allowing them to survive long enough to mate and reproduce. So it may come as no surprise to learn that human beings—who, according to psychologist Gerald Jellison of the University of South California, are lied to about 200 times a day, roughly one untruth every five minutes—often deceive for exactly the same reasons: to save their own skins or to get something they can't get by other means.
- B** But knowing how to catch deceit can be just as important a survival skill as knowing how to tell a lie and get away with it. A person able to spot falsehood quickly is unlikely to be swindled by an unscrupulous business associate or hoodwinked by a devious spouse. Luckily, nature provides more than enough clues to trap dissemblers in their own tangled webs if you know where to look. By closely observing facial expressions, body language and tone of voice, practically anyone can recognize the telltale signs of lying. Researchers are even programming computers, like those used on Lie Detector, to get at the truth by analyzing the same physical cues available to the naked eye and ear. “With the proper training, many people can learn to reliably detect lies,” says Paul Ekman, professor of psychology at the University of California, San Francisco, who has spent the past 15 years studying the secret art of deception.
- C** In order to know what kind of lies work best, successful liars need to accurately other peoples emotional states. Ekman's research shows that this same emotional intelligence is essential for good lie detectors, too. The emotional state to watch out for is stress, the conflict most liars feel between the truth and what they actually say and do.
- D** Even high-tech lie detectors don't detect lies as such; they merely detect the

physical cues of emotions, which may or may not correspond to what the person being tested is saying. Polygraphs, for instance, measure respiration, heart rate and skin conductivity, which tend to increase when people are nervous—as they usually are when lying. Nervous people typically perspire, and the salts contained in perspiration conduct electricity. That’s why a sudden leap in skin conductivity indicates nervousness—about getting caught,

perhaps?—which might, in turn, suggest that someone is being economical with the truth. On the other hand, it might also mean that the lights in the television studio are too hot—which is one reason polygraph tests are inadmissible in court. “Good lie detectors don’t rely on a single sign,” Ekman says, “but interpret clusters of verbal and nonverbal clues that suggest someone might be lying.”

**E** Those clues are written all over the face.

because the musculature (肌肉组织) of the face is directly connected to the areas of the brain that process emotion, and the countenance can be a window to the soul. Neurological studies even suggest that genuine emotions travel different pathways through the brain than insincere ones. If a patient paralyzed by stroke on one side of the face, for example, is asked to smile deliberately, only the mobile side of the mouth is raised. But tell that same person a funny joke, and the patient breaks into a full and spontaneous smile. Very few people—most notably, actors and politicians—are able to consciously control all of their facial expressions. Lies can often be caught when the liar’s true feelings briefly leak through the mask of deception. “We don’t think before we





feel,” Ekman says. “Expressions tend to show up on the face before we’re even conscious of experiencing an emotion.”

- F** One of the most difficult facial expressions to fake or conceal, if it is genuinely felt, is sadness. When someone is truly sad, the forehead wrinkles with grief and the inner corners of the eyebrows are pulled up. Fewer than 15% of the people Ekman tested were able to produce this eyebrow movement voluntarily. By contrast, the lowering of the eyebrows associated with an angry scowl can be replicated at will by almost everybody. “If someone claims they are sad and the inner corners of their eyebrows don’t go up,” Ekman says, “the sadness is probably false.”
- G** The smile, on the other hand, is one of the easiest facial expressions to counterfeit ( 伪造 ). It takes just two muscles—the zygomaticus major muscles that extend from the cheekbones to the corners of the lips to produce a grin. But there’s a catch. A genuine smile affects not only the corners of the lips but also the orbicularis oculi ( 眼轮匝肌 ), the muscle around the eye that produces the distinctive ‘crow’s-feet’ associated with people who laugh a lot. A counterfeit grin can be unmasked if the lip corners go up; the eyes crinkle but the inner corners of the eyebrows are not lowered, and a movement controlled by the orbicularis oculi that is difficult to fake. The absence of lowered eyebrows is one reason why false smiles look so strained and stiff.

## Questions 1-5 .....

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

In boxes 1-5 on your answer sheet, write

**TRUE** if the statement agrees with the information

**FALSE** if the statement contradicts the information

**NOT GIVEN** if there is no information on this

- 1 All living animals can lie.
- 2 Some people tell lies for self-preservation.
- 3 The fact of lying is more important than detecting one.
- 4 Researchers are using equipment to study which part of the brain is responsible for telling lies.
- 5 To be a good liar, one has to understand other people's emotions.

## Questions 6-9 .....

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

Write the correct letter in box 6-9 on your answer sheet.

- 6 How does a lie-detector work?
- A It analyzes one's verbal response to a question.
  - B It records the changes in one's facial expression.
  - C It illustrates the reasons about the emotional change when one is tested.
  - D It monitors several physical reactions in the person undergoing the test.
- 7 Why couldn't lie detectors be used in a court of law?
- A because the nonverbal clues are misleading.
  - B because there could be other causes of a certain change in the equipment.
  - C because the lights are too hot.
  - D because the statistic data on the lie detectors are not accurate.
- 8 The writer quotes from the paralyzed patients
- A to exemplify people's response to true feelings.
  - B to show the pathways for patients to recover.
  - C to demonstrate the paralyzed patient's ability to smile.
  - D to emphasize that the patient is in a state of stroke.
- 9 According to the passage, politicians
- A can express themselves clearly.
  - B are good at masking their emotions.
  - C are conscious of the surroundings.
  - D can think before action.

## Questions 10-13 .....

Classify the following facial traits as referring to

*Write the correct letter A, B, C or D in boxes 10-13 on your answer sheet.*

A	Happiness
B	Anger
C	Sadness

- 10 Lines formed above eyebrows
- 11 Movement from muscle that orbits the eye
- 12 Eyebrows down
- 13 Inner corner of eyebrows raised

## Overdosing on nothing

- A** An international protest this week aims to demonstrate the truth about homeopathy—that there's literally nothing in it, says Martin Robbins. At 10.23 am on 30 January, more than 300 activists in the UK, Canada, Australia and the US will take part in a mass homeopathic “overdose”. Skeptics will publicly swallow an entire bottle of homeopathic pills to demonstrate to the public that homeopathic remedies, the product of a scientifically unfounded 18th-century ritual, are simply sugar pills. Many of the skeptics will swallow 84 pills of arsenicum album, a homeopathic remedy based on arsenic which is used to treat a range of symptoms, including food poisoning and insomnia. The aim of the “10:23” campaign, led by the Merseyside Skeptics Society, based in Liverpool, UK, is to raise public awareness of just exactly what homeopathy is, and to put pressure on the UK's leading pharmacist, Boots, to remove the remedies from sale. The campaign is called 10:23 in honor of the Avogadro constant (approximately  $6 \times 10^{23}$ , the number of atoms or molecules in one mole of a substance), of which more later.
- B** That such a protest is even necessary in 2010 is remarkable, but somehow the homeopathic industry has not only survived into the 21st century, but prospered. In the UK alone more than £40 million is spent annually on homeopathic treatments, with £4 million of this being sucked from the National Health Service budget. Yet the basis for homeopathy defies the laws of physics, and high-quality clinical trials have never been able to demonstrate that it works beyond the placebo effect.
- C** The discipline is based on three “laws”; the law of similars, the law of infinitesimals and the law of succession. The law of similars states that something which causes your symptoms will cure your symptoms, so that, for example, as caffeine keeps you awake, it can also be a cure for insomnia. Of course, that makes little sense, since drinking caffeine, well, keeps you awake. Next is the law of infinitesimals, which claims that diluting a substance makes it more potent. Homeopaths start by diluting one volume of their remedy-



arsenic oxide, in the case of arsenicum album—in 99 volumes of distilled water or alcohol to create a “centesimal”. They then dilute one volume of the centesimal in 99 volumes of water or alcohol, and so on, up to 30 times. Application of Avogadro’s constant tells you that a dose of such a “30C” recipe is vanishingly unlikely to contain even a single molecule of the active ingredient. The third pillar of homeopathy is

the law of succession. This states—and I’m not making this up—that by tapping the liquid in a special way during the dilution process, a memory of the active ingredient is somehow imprinted on it. This explains how water is able to carry a memory of arsenic oxide, but apparently not of the contents of your local sewer network.

**D** The final preparation is generally dropped onto a sugar pill which the patient swallows. Homeopaths claim that the application of these three laws results in a remedy that, even though it contains not a single molecule of the original T-T-J.—ingredient, somehow carries an “energy signature” of it that nobody can measure or detect. Unsurprisingly, when tested under rigorous scientific conditions, in randomized, controlled and double-blind trials, homeopathic remedies have shown to be no better than a placebo. Of course, the placebo effect is quite powerful, but it’s a bit like justifying building a car without any wheels on the basis that you can still enjoy the comfy leather seats and play with the gear shift.

**E** Even some retailers who sell the treatments have admitted there is no evidence that they work. In November, Paul Bennett, the superintendent pharmacist at Boots, appeared before the UK parliament’s Commons Science and Technology Committee’s “evidence check” on homeopathy. He was questioned by Member of Parliament Phil Willis, who asked: “Do they work beyond the placebo effect?” I have no evidence before me to suggest that

they are efficacious,” Bennett replied. He defended Boots’s decision to sell homeopathic remedies on the grounds of consumer choice. “A large number of our consumers actually do believe they are efficacious, but they are licensed medicinal products and, therefore, we believe it is right to make them available,” he said.

**F** You might agree. You might also argue that homeopathy is harmless: if people want to part with their money for sugar pills and nobody is breaking the law, why not let them? To some extent that’s true—there’s only so much damage you can do with sugar pills short of feeding them to a diabetic or dropping a large crate of them on someone’s head. However, we believe there is a risk in perpetuating the notion that homeopathy is equivalent to modern medicine. People may delay seeking appropriate treatment for themselves or their children.

**G** We accept that we are unlikely to convince the true believers. Homeopathy has many ways to sidestep awkward questions, such as rejecting the validity of randomized controlled trials, or claiming that homeopathic remedies only work if you have symptoms of the malady they purport to cure. Our aim is to reach out to the general public with our simple message: “There is nothing in it”. Boots and other retailers are perfectly entitled to continue selling homeopathic remedies if they so wish and consumers are perfectly entitled to keep on buying them. But hopefully the 10:23 campaign will ram home our message to the public. In the 21st century, with decades of progress behind us, it is surreal that governments are prepared to spend millions of tax pounds on homeopathy. There really is nothing in it.

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## Questions 1-7 .....

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

Write the correct number, i-ix, in boxes 1-7 on your answer sheet.

### List of Headings

- i The definition of three laws
- ii Quoting three laws to against the homeopathy
- iii There are many methods of avoiding answering ambiguous questions.
- iv The purpose of illustrating the symptoms of homeopathy
- v The constant booming of homeopathy
- vi Some differences between homeopathy and placebo
- vii Placebo is better than homeopathy
- viii A example of further demonstrating the negative effect of homeopathy.
- ix The purpose of staging an demonstration to against homeopathy

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



**Questions 8-14** .....

Do the following statements agree with the information given in the reading passage 1?

In boxes 8-14 on your answer sheet write

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

- 8 Skeptics planning to hold a demonstration in “10.23” campaign is to against UK’s leading pharmacist, Boots.
- 9 National Health Service budget gained a small portion of homeopathic industry
- 10 The example of Caffeine is to present that homeopathy resists the laws of similars.
- 11 Instilling the idea to people that homeopathy is equal to modern medicine poses danger.
- 12 Paul Bennett claimed that taking the homeopathic medicine is effective.
- 13 The adoption of homeopathy mainly contributes to the delay of seeking appropriate treatment for themselves or their children.
- 14 The campaign has exerted pressure on Boots and other retailers.

## Radio Automation forerunner of the integrated circuit

*Today they are everywhere. Production lines controlled by computers and operated by robots. There's no chatter of assembly workers, just the whirr and click of machines. In the mid-1940s, the workerless factory was still the stuff of science fiction. There were no computers to speak of and electronics was primitive. Yet hidden away in the English countryside was a highly automated production line called ECME, which could turn out 1500 radio receivers a day with almost no help from human hands.*

- A** John Sargrove, the visionary engineer who developed the technology, was way ahead of his time. For more than a decade, Sar grove had been trying to figure out how to make cheaper radios. Automating the manufacturing process would help. But radios didn't lend themselves to such methods: there were too many parts to fit together and too many wires to solder. Even a simple receiver might have 30 separate components and 80 hand-soldered connections. At every stage, things had to be tested and inspected. Making radios required highly skilled labour—and lots of it.
- B** In 1944, Sar grove came up with the answer. His solution was to dispense with most of the fiddly bits by inventing a primitive chip—a slab of Bakelite with all the receiver's electrical components and connections embedded in it. This was something that could be made by machines, and he designed those too. At the end of the war, Sar grove built an automatic production line, which he called ECME (electronic circuit-making equipment), in a small factory in Effingham, Surrey.

### ECME line

- C** An operator sat at one end of each ECME line, feeding in the plates. She didn't need much skill, only quick hands. From now on, everything was controlled by electronic switches and relays ( 继电器 ). First stop was the sandblaster

( 喷砂器 ), which roughened the surface of the plastic so that molten metal would stick to it. The plates were then cleaned to remove any traces of grit. The machine automatically checked that the surface was rough enough before sending the plate to the spraying section. There, eight nozzles ( 喷嘴 ) rotated into position and sprayed molten zinc over both sides of the plate. Again, the nozzles only began to spray when a plate was in place.



The plate whizzed on. The next stop was the milling machine, which ground away the surface layer of metal to leave the circuit and other components in the grooves and recesses. Now the plate was a composite of metal and plastic. It sped on to be lacquered (vt. 涂漆; 使表面光泽) and have its circuits tested. By the time it emerged from the end of the line, robot hands had fitted it with sockets to attach components such as valves and loudspeakers. When ECME was working flat out, the whole process took 20 seconds.

**D** ECME was astonishingly advanced. Electronic eyes, photocells that generated a small current when a panel arrived, triggered each step in the operation, so avoiding excessive wear and tear on the machinery. The plates were automatically tested at each stage as they moved along the conveyor. And if more than two plates in succession were duds, machines were automatically adjusted—or if necessary halted. In a conventional factory, workers would test faulty circuits and repair them. But Sargrove's assembly line produced circuits so cheaply they just threw away the faulty ones. Sargrove's circuit board was even more astonishing for the time. It predated the more familiar printed circuit, with wiring printed on aboard, yet was more sophisticated. Its built-in components made it more like a modem chip.

**E** When Sar grove unveiled his invention at a meeting of the British Institution of Radio Engineers in February 1947, the assembled engineers were impressed.

So was the man from The Times. ECME, he reported the following day, “produces almost without human labour, a complete radio receiving set. This new method of production can be equally well applied to television and other forms of electronic apparatus.”

**F** The receivers had many advantages over their predecessors. With fewer components they were more robust. Robots didn’t make the sorts of mistakes human assembly workers sometimes did. “Wiring mistakes just cannot happen,” wrote Sargrove. No wires also meant the radios were lighter and cheaper to ship abroad. And with no soldered wires to come unstuck, the radios were more reliable. Sargrove pointed out that the circuit boards didn’t have to be flat. They could be curved, opening up the prospect of building the electronics into the cabinet of Bakelite radios.

**G** Sargrove was all for introducing this type of automation to other products. It could be used to make more complex electronic equipment than radios, he argued. And even if only part of a manufacturing process were automated, the savings would be substantial. But while his invention was brilliant, his timing was bad. ECME was too advanced for its own good. It was only competitive on huge production runs because each new job meant retooling the machines. But disruption was frequent. Sophisticated as it was, ECME still depended on old-fashioned electromechanical relays and valves—which failed with monotonous regularity. The state of Britain’s economy added to Sargrove’s troubles. Production was dogged by power cuts and post-war shortages of materials. Sargrove’s financial backers began to get cold feet.

**H** There was another problem Sargrove hadn’t foreseen. One of



ECME's biggest advantages—the savings on the cost of labour—also accelerated its downfall. Sargrove's factory had two ECME production lines to produce the

two circuits needed for each radio. Between them these did what a thousand assembly workers would otherwise have done. Human hands were needed only to feed the raw material in at one end and plug the valves into their sockets and fit the loudspeakers at the other. After that, the only job left was to fit the pair of Bakelite panels into a radio cabinet and check that it worked.

- I Sargrove saw automation as the way to solve post-war labour shortages. With somewhat Utopian idealism, he imagined his new technology would free people from boring, repetitive jobs on the production line and allow them to do more interesting work. “Don't get the idea that we are out to rob people of their jobs,” he told the Daily Mirror. “Our task is to liberate men and women from being slaves of machines.”
- J The workers saw things differently. They viewed automation in the same light as the everlasting light bulb or the suit that never wears out—as a threat to people's livelihoods. If automation spread, they wouldn't be released to do more exciting jobs. They'd be released to join the dole queue. Financial backing for ECME fizzled out. The money dried up. And Britain lost its lead in a technology that would transform industry just a few years later.

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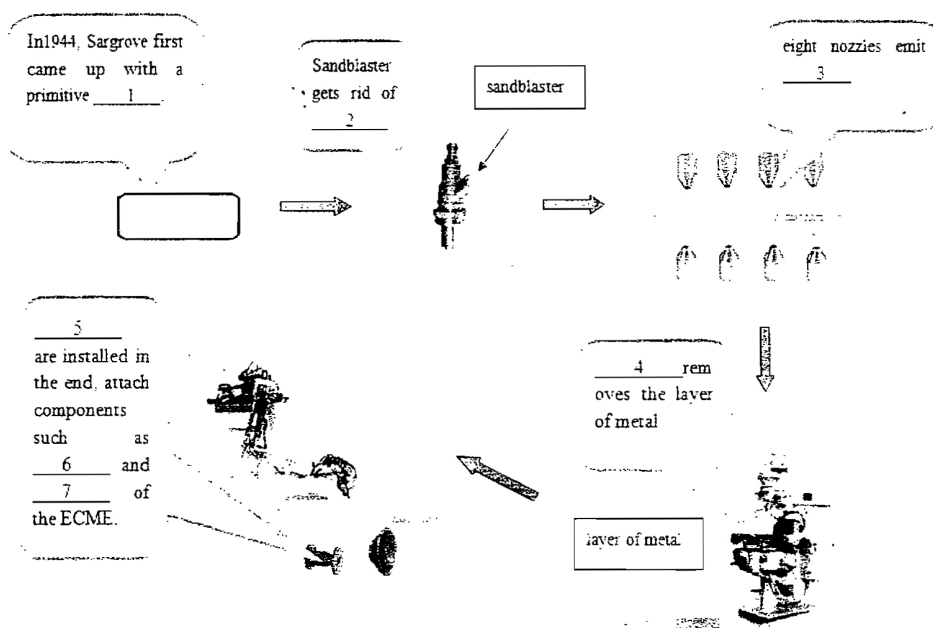
## Questions 1-7 .....

### Summary

The following diagram explains the process of ECME:

Complete the following chart of the paragraphs of Reading Passage, using no more than two words from the Reading Passage for each answer. Write your answers in boxes 1-7 on your answer sheet.

Diagram for ECME line on Bakelite



## Questions 8-11 .....

### 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 8-11 on your answer sheet.

Sargrove had been dedicated to create a 8 \_\_\_\_\_ radio by automation of manufacture. The old version of radio had a large number of independent 9 \_\_\_\_\_ After this innovation made, wireless-style radios became 10 \_\_\_\_\_ and inexpensive to export oversea. As the Sargrove saw it, the real benefit of ECME's radio was that it reduced 11 \_\_\_\_\_ of manual work ,which can be easily copied to other industries of manufacturing electronic devices.

## Questions 12-13 .....

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

Write your answers in boxes 12-13 on your answer sheet.

- 12 What were workers attitude towards ECME Model initially?
- A anxious
  - B welcoming
  - C boring
  - D inspiring
- 13 What is the main idea of this passage?
- A approach to reduce the price of radio
  - B a new generation of fully popular products and successful business
  - C an application of the automation in the early stage
  - D ECME technology can be applied in many product fields

## Roller Coaster

- A** 600 years ago, roller coaster pioneers never would have imagined the advancements that have been made to create the roller coasters of today. The tallest and fastest roller coaster in the world is the Kingda Ka, a coaster in New Jersey that launches its passengers from zero to 128 miles per hour in 3.5 seconds. It then heaves its riders skyward at a 90 degree angle until it reaches a height of 456 feet, over one and a half football fields above the ground before dropping another 418 feet. With that said, roller coasters are about more than just speed and height, they are about the creativity of the designers that build them, each coaster having its own unique way of producing intense thrills at a lesser risk than the average car ride. Roller coasters have evolved drastically over the years, from their primitive beginnings as Russian ice slides, to the metal monsters of today. Their combination of creativity and structural elements make them one of the purest forms of architecture.
- B** At first glance, a roller coaster is something like a passenger tram. It consists of a series of connected cars that move on tracks. But unlike a passenger train, a roller coaster has no engine or power source of its own. For most of the ride, the train is moved by gravity and momentum. To build up this momentum, you need to get the train to the top of the first hill or give it a powerful launch. The traditional lifting mechanism is a long length of chain running up the hill under the track. The chain is fastened in a loop, which is wound around a gear at the top of the hill and another one at the bottom of the hill. The gear at the bottom of the hill is turned by a simple motor. This turns the chain loop so that it continually moves up the hill like a long conveyer belt. The coaster cars grip onto the chain with several chain dogs, sturdy hinged hooks. When the train rolls to the bottom of the hill, the dog catches will be onto the chain links. Once the chain dog is hooked, the chain simply pulls the train to the top of the hill. At the summit, the chain dog is released and the train starts its descent down the hill.
- C** Roller coasters have a long, fascinating history. The direct ancestors of roller



coasters were monumental ice slides -- long, steep wooden slides covered in ice, some as high as 70 feet -- that were popular in Russia in the 16th and 17th centuries. Riders shot down the slope in sleds made out of wood or blocks of ice, crash-landing in a sand pile. Coaster historians diverge on the exact evolution of these ice slides into actual rolling carts. The most widespread account is that a few entrepreneurial Frenchmen imported the ice slide idea to France. The warmer climate of France tended to melt the ice, so the French started building waxed slides instead, eventually adding wheels to the sleds. In 1817, the Russian Belleville became the first roller coaster where the train was attached to the track. The French continued to expand on this idea, coming up with more complex track layouts, with multiple cars and all sorts of twists and turns.

- D** In comparison to the world's first roller coaster, there is perhaps an even greater debate over what was America's first true coaster. Many will say that it is Pennsylvania's own Maunch Chunk-Summit Hill and Switch Back Railroad. The Maunch Chunk-Summit Hill and Switch Back Railroad was originally America's second railroad, and considered to be the greatest coaster of the time. Located at the Lehigh valley, it was originally used to transport coal from the top of Mount Pisgah to the bottom of Mount Jefferson, until Josiah White, a mining entrepreneur, had the idea of turning it into a part-time thrill ride. Because of its immediate popularity, it soon became strictly a passenger train. A steam engine would haul passengers to the top of the mountain before letting them coast back down with speeds rumored to reach 100 miles per hour! The reason that it was called a switch back railroad is that a switch back track which was located at the top-where the



steam engine would let the riders coast back down. This type of track featured a dead end where the steam engine would detach its cars, allowing riders to coast down backwards. The railway went through a couple of minor track changes and name changes over the years, but it managed to last from 1829 to 1937, over 100 years.

**E** The coaster craze in America was just starting to build. The creation of the Switch Back Railway, by La Marcus Thompson, gave roller coasters national attention. Originally built at New York's Coney Island in 1884, Switch Back Railways began popping up all over the country. The popularity of these rides may puzzle the modern-day thrill seeker, due to the mild ride they gave in comparison to the modern-day roller coaster. Guests would pay a nickel to wait in line five hours just to go down a pair of side-by-side tracks with gradual hills that vehicles coasted down at a top speed around six miles per hour. Regardless of this, Switchback Railways were very popular, and sparked many people, including Thompson, to design coasters that were bigger and better.

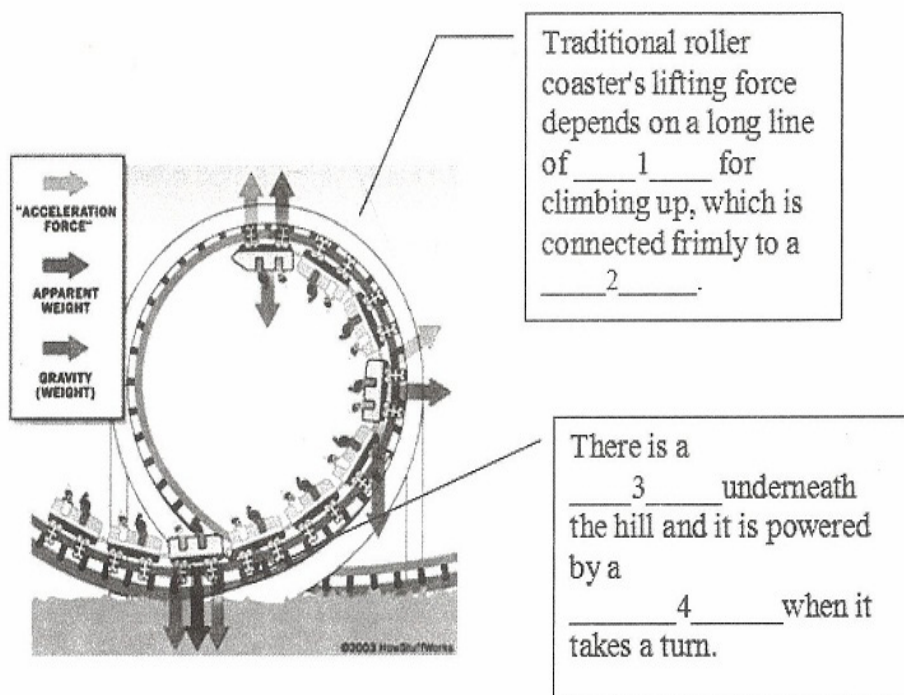
**F** The 1910s and 1920s were probably the best decade that the roller coaster has ever seen. The new wave of technology, such as the upstop wheels, an arrangement that kept a coaster's wheels to its tracks by resisted high gravitational forces, showed coasters a realm of possibilities that has never been seen before. In 1919, North America alone had about 1,500 roller coasters, a number that was rising rampantly. Then, the Great Depression gave a crushing blow to amusement parks all over America. As bad as it was, amusement parks had an optimistic look on the future in the late 1930s. But, in 1942, roller coasters could already feel the effects of World War Two, as they were forced into a shadow of neglect. Most, nearly all of America's roller coasters were torn down. To this very day, the number of roller coaster in America is just a very tiny fraction of the amount of roller coasters in the 1920s.

### Questions 1-4 .....

Answer the questions below.

a diagram that explains the mechanism and working principles of roller coaster.

Choose **NO MORE THAN TWO WORDS AND/OR A NUMBER** from the passage for each answer.



## Questions 5-10 .....

### 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 5-10 on your answer sheet.

The first roller coaster was perhaps originated from Russia which is wrapped up by 5 \_\_\_\_\_. Ice slide was introduced into France, and it was modified to 6 \_\_\_\_\_, because temperature there would 7 \_\_\_\_\_ the ice. This time 8 \_\_\_\_\_ were installed on the board. In America, the first roller coaster was said to appear in Pennsylvania, it was actually a railroad which was designed to send 9 \_\_\_\_\_ between two mountains. Josiah White turned it into a thrill ride, it was also called switch back track and a 10 \_\_\_\_\_ where allowed riders to slide downward back again.

## Questions 11-14 .....

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

In boxes 11-14 On your answer sheet, write

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

- 11 The most exiting roller coaster in the world is in New Jersey.
- 12 French added more innovation on Russian ice slide including both cars and tracks.
- 13 Switch Back Railways began to gain popularity since its first construction in New York.
- 14 The Great Depression affected amusement parks significantly only in several states of America.

## Sounds Good?

- A** The versificator, a machine described in George Orwell's novel "1984", automatically generated music for the hapless masses. The idea of removing humans from the creative process of making music, an art form so able to stir the soul, made for a good joke when the book was published in 1949. But today, computer programmers working in a new field called "music intelligence" are developing software capable of predicting which songs will become hits. This surprisingly accurate technology could profoundly change the way pop music is created.
- B** The software uses a process called "spectral deconvolution" to isolate and analyse around 30 parameters that define a piece of music, including such things as sonic brilliance, octave, cadence, frequency range, fullness of sound, chord progression, timbre and "bend" (variations in pitch at the beginning and end of the same note). "Songs conform to a limited number of mathematical equations," says Mike McCready of Platinum Blue, a music-intelligence company based in New York, that he founded last December. Platinum Blue has compiled a database of more than 3m successful musical arrangements, including data on their popularity in different markets. To the human ear, music has changed a lot over the years. Music-intelligence software, however, can reveal striking similarities in the underlying parameters of two songs from different eras that, even to a trained ear, seem unrelated. According to Platinum Blue's software, called Music Science, for example, a number of hit songs by U2 have a close kinship to some of Beethoven's compositions. If a song written today has parameters similar to those of a number of past hits, it could well be a hit too.
- C** Carlos Quintero, a producer and remixer at Orixia Producciones in Madrid, recently tried out another music-intelligence system, called Hit Song Science (HSS). "It practically left me in shock, it's stunning," he says. Mr Quintero's production company now has the most promising demo songs it receives from aspiring musicians evaluated by Polyphonic HMI, the Barcelona-

based developer of HSS and Platinum Blue's only serious competitor. (Both companies perform analyses in-house, rather than selling software.) The results—consisting of a graph, numerical scores, computer-generated comments and suggested changes—help Orixa's managers decide which songs to produce. Then, during the recording and post-production phases, Orixa uses HSS to reanalyse successive versions of each track for fine-tuning.

**D** Belief in music intelligence is spreading, as Polyphonic HMI and Platinum Blue rack up bull's-eye predictions of success, including “Candy Shop” by 50 Cent, “Be the Girl” by Aslyn, “Unwritten” by Natasha Bedingfield, “She Says” by Howie Day, and “You're Beautiful” by James Blunt. Still, labels that use music intelligence generally prefer to keep quiet about it, so non-disclosure agreements are common. “No one wants people to think their decisions are coming from a box,” says Ric Wake, an American producer of two Grammy-winning acts who routinely employs Music Science. Even so, the names of many customers have leaked out. They include Capitol Records, Universal Music Group, Sony Music, EMI and Casablanca Records. Labels sometimes don't tell even their established artists when they use music intelligence to help decide which singles to promote.

**E** Revenues at Polyphonic HMI will exceed \$1m this year, twice last year's take. In March the company began serving India's music industry, after compiling a database of that country's pop music. Platinum Blue refuses to release figures. But one of its managers, Trade Reed (who, like several people at Platinum Blue, used to work at Polyphonic HMI), says customers now come knocking—a reversal of the state of affairs not long ago, when “people's eyes glazed over and they asked things like, 'Are you joking?'" The service is relatively inexpensive: a year's subscription for unlimited analyses typically costs a large record company around \$100,000. And the service reduces the need for expensive “call-out” research, in which labels call consumers, play part of a song over the telephone, and compile their reactions.

**F** It is not just record companies that are interested in music intelligence, however. The market is expanding as radio playlist-programmers adopt the

technology, often to put mathematically similar songs together to create a better “flow”. Mobile operators such as Vodafone and Orange use the technology to develop mobile ring tones. Disney’s Hollywood Records uses music intelligence to design soundtracks. Mr McCready of Platinum Blue says television advertising agencies have expressed interest in using it to select jingles, which, while structurally similar to those in a successful previous campaign, sound fresh to consumers. Lawyers are also interested in using the technology. Hillel Parness, a specialist in music copyright-violation at Brown Raysman, a law firm in New York, contacted Platinum Blue to discuss the legal applications of the software. He would like to use the software in plagiarism suits as an objective way to alert judges, who often have little background in music, to suspicious similarities between two pieces of music. Music-intelligence software could also rustle up additional (and lucrative) copyright suits. Using a function known as “melody detection”, record labels will soon be able to use the software to find songs that may have plagiarised songs in the label’s catalogue.

- G** Is there not a danger, however, that giving software a say in music selection will promote uniformity and hamper creativity? The opposite is more likely. High music-intelligence scores can help convince notoriously risk-averse and “it’s-who-you-know” record labels to take a chance on new talent. Take the case of Frederic Monneron, a publisher of equestrian books in Mesnil-Simon, a village of 150 people in Lower Normandy, France. After a setback in his love life, the 43-year-old self-taught guitarist and pianist set up a makeshift home studio, where he wrote and recorded 12 syrupy, and somewhat improbable, romantic-political ballads. For fun, he paid Polyphonic HMI to analyse his songs. The results indicated that the tunes had what it takes. In September a French label will begin distributing 200,000 copies of Monneron’s CD, “Fred’s Pentagone”, in Europe and North America. Two music videos and a tour will follow. “What happened is a fairy tale,” says Mr Monneron.

## Questions 14-19 .....

The reading Passage has seven paragraphs A-G.

Which paragraph contains the following information?

*Write the correct letter A-G, in boxes 14-19 on your answer sheet.*

- 14 Small amount of money cost for record company
- 15 Working principle of music intelligence
- 16 Technology Contrasted between past and present
- 17 Another version of software depicted
- 18 More singers believe music intelligence
- 19 Offer opportunities for new talent

## Questions 20-25 .....

### 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 20-26 on your answer sheet.*

Music intelligence software working theory is using a procedure named 20\_\_\_\_\_ which assess decades of parameters of a music. According to McCready, "Songs follows several 21\_\_\_\_\_. The company he worked in called 22\_\_\_\_\_ which accumulates enough musical database. Music intelligence has ability to distinguish remarkable 23\_\_\_\_\_ between two different songs. For example, a software called 24\_\_\_\_\_ once compared pop songs from U<sub>2</sub> and 25\_\_\_\_\_, and found there were a few close relationship between the two.



*Questions 26* .....

Which one is **CORRECT** statement according to paragraph F and G?

- A Music intelligence is not a promising industry
- B Music intelligence help judge make right decision
- C Music industry dominates music intelligence application
- D Music intelligence has a wide range of application

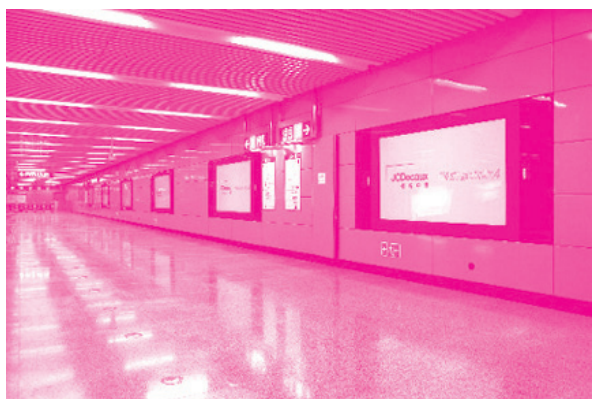
## Texting! the television 2

- A** THERE was a time when any self-respecting television show, particularly one aimed at a young audience, had to have an e-mail address. But on Europe's TV screens, such addresses are increasingly being pushed aside in favour of telephone numbers to which viewers can send text messages from their mobile phones. And no wonder: according to research about to be published by Gartner, a consultancy, text messaging has recently overtaken Internet use in Europe. One of the fastest-growing uses of text messaging, moreover, is interacting with television. Gartner's figures show that 20% of teenagers in France, 11% in Britain and 9% in Germany have sent messages in response to TV shows.
- B** This has much to do with the boom in "reality TV" shows, such as "Big Brother", in which viewers' votes decide the outcome. Most reality shows now allow text-message voting, and in some cases, such as the most recent series of "Big Brother" in Norway, the majority of votes are cast in this way. But there is more to TV-texting than voting. News shows encourage viewers to send in comments; games shows allow viewers to compete; music shows take requests by text message; and broadcasters operate on-screen chatrooms. People tend to have their mobiles with them on the sofa, so "it's a very natural form of interaction," says Adam Daum of Gartner.
- C** It can also be very lucrative, since mobile operators charge premium rates for messages to particular numbers. The most recent British series of "Big Brother", for example, generated 5.4m text-message votes and £1.35m (\$2.1m) in revenue. According to a report from Van Dusseldorp & Partners, a consultancy based in Amsterdam, the German edition of MTV's "Videoclash", which invites viewers to vote for one of two rival videos, generates up to 40,000 messages an hour, each costing euro0.30 (\$0.29). A text contest alongside the Belgian quiz show "I Against 100" (以一敌百) attracted 10,000 players in a month, each of whom paid euro 0.50 per question in an eight-round contest. In Spain, a cryptic-crossword (神秘的猜字游戏) clue

is displayed before the evening news broadcast; viewers are invited to text in their answers at a cost of euro 1, for a chance to win a euro300 prize. On a typical day, 6,000 people take part. TV-related text messaging now accounts for an appreciable share of mobile operators' data revenues. In July, a British operator, mmO2, reported better-than-expected financial results, thanks to the flood of messages caused by "Big Brother". Operators typically take 40-50% of the revenue from each message, with the rest divided between the broadcaster, the programme maker and the firm providing the message-processing system. Text-message revenues are already a vital element of the business model for many shows. Inevitably, there is grumbling (怨言) that the operators take too much of the pie. Endemol, the Netherlands-based production company behind "Big Brother" and many other reality TV shows has started building its own database of mobile-phone users. The next step will be to establish direct billing relationships with them, and bypass the operators (运营商).

**D** Why has the union of television and text message suddenly proved so successful? One important factor is the availability of special four-, five- or six-digit numbers, called "shortcodes"(简码). Each operator controls its own shortcodes, and only relatively recently have operators realised that it makes sense to co-operate and offer shortcodes that work across all networks. The availability of such common shortcodes was a breakthrough, says Lars Becker of Flytxt, a mobile-marketing firm, since shortcodes are far easier to remember when flashed up on the screen.

**E** The operators' decision to co-operate in order to expand the market is part of a broader trend, observes Katrina Bond of Analysys, a consultancy. Faced with a choice between protecting their margins and allowing a new medium to emerge, operators have always chosen the first. WAP (无线应用协议), a technology for reading cut-down web pages on



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mobile phones, failed because operators were reluctant to share revenue with content providers.

Having learnt their lesson, operators are changing their tune. In France, one operator, Orange, has

even gone so far as to publish a rate card for text-message revenue-sharing, a degree of transparency (透明度) that would once have been unthinkable.

**F** At a recent conference organised by Van Dusseldorp & Partners, Han Weegink of CMG, a firm that provides text-message infrastructure, noted that all this is subtly changing the nature of television. Rather than presenting content to viewers, an increasing number of programmes involve content that reacts to the viewer's input. That was always the promise of interactive TV, of course. Interactive TV was supposed to revolve around fancy set-top boxes that plug directly into the television. But that approach has a number of drawbacks, says Mr Daum. It is expensive to develop and test software for multiple and incompatible types of set-top box, and the market penetration, at 40% or less, is lower than that for mobile phones, which are now owned by around 85% of Europeans. Also, mobile-phone applications can be quickly developed and set up. "You can get to market faster, and with fewer grasping (贪婪的) intermediaries," says Mr Daum. Providers of set-top box technology are adding text-messaging capabilities to their products.

**G** The success of TV-related texting is a reminder of how easily an elaborate technology can be unexpectedly overtaken by a simpler, lower-tech approach. It does not mean that the traditional approach to interactive TV is doomed: indeed, it demonstrate^ that there is strong demand for interactive services. People, it seems, really do want to do more than just stare at the screen. If nothing else, couch potatoes like to exercise their thumbs.

**Questions 28-32** .....

The reading passage has seven paragraphs, A-E Choose the correct heading for paragraphs A-E from the list below.

Write the correct number, i-v, in boxes 28-32 on your answer sheet.

**List of Headings**

- i. an existed critical system into operating in a new way
- ii. Overview of a fast growing business
- iii. profitable games are gaining more concerns
- iv. Netherlands takes the leading role
- v. a new perspective towards sharing the business opportunities
- vi. opportunities for all round prevalent applications
- vii. revenue gains and bonus share
- viii. the simpler technology prevails over complex ones
- ix. set-top box provider changed their mind

- 28 Paragraph A
- 29 Paragraph B
- 30 Paragraph C
- 31 Paragraph D
- 32 Paragraph E

## Questions 33-35 .....

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

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

- 33** In Europe, a consultancy suggested that young audiences spend more money on
- A thumbing text message
  - B writing E-mail
  - C watching TV program
  - D talking through Mobile phones
- 34** what happened when some TV show invited audience to participate:
- A get attractive bonus
  - B shows are more popular in Norway than in other countries
  - C change to invite them to the reality show
  - D their participation could change the result
- 35** Interactive TV change their mind of concentrating set-top box but switched to:
- A increase their share in the market
  - B change a modified set-top box
  - C build a embedded message platform
  - D march into European market

**Questions 36-40** .....

Use the information in the passage to match the people (listed A-E) with opinions or deeds below. Write the appropriate letters A-E in boxes 36-40 on your answer sheet.

- A Lars Becker Flytxt
- B Katrina Bond of Analysys
- C Endemol
- D CMG
- E mmO2
- F Gartner

- 36 offer mobile phone message technology
- 37 earned considerable amount of money through a famous program
- 38 shortcodes are convenient to remember when turn up
- 39 build their own mobile phone operating applications
- 40 it is easy for people to send messages in an interactive TV

## The Mozart Effect

- A** Music has been used for centuries to heal the body. In the Ehers Papyrs (one of the earliest medical documents, circa 1500 B.C.), it was recorded that physicians chanted to heal the sick (Castleman, 1994). In various cultures, we have observed singing as part of healing rituals. In the world of Western medicine, however, using music in medicine lost popularity until the introduction of the radio. Researchers then started to notice that listening to music could have significant physical effects. Therapists noticed music could help calm anxiety and researchers saw that listening to music could cause a drop in blood pressure. In addition to these two areas, music has been used with cancer chemotherapy to reduce nausea, during surgery to reduce stress hormone production, during childbirth, and in stroke recovery (Castleman, 1994 and Westley, 1998). It has been shown to decrease pain as well as enhance the effectiveness of the immune system. In Japan, compilations of music are used as medication, of sorts. For example, if you want to cure a headache or migraine, the album suggested Mendelssohn's "Spring Song," Dvorak's "Humoresque," or part of George Gershwin's "An American in Paris" (Campbell, 1998). Music is also being used to assist in learning, in a phenomenon called the Mozart Effect.
- B** Frances H. Rauscher, Ph.D., first demonstrated the correlation between music and learning in an experiment in 1993. His experiments indicated that a 10 minute dose of Mozart could temporarily boost intelligence. Groups of students were given intelligence tests after listening to silence, relaxation tapes, or Mozart's Sonata for Two Pianos in D Major for a short time. He found that after silence, the average IQ score was 110, and after the relaxation tape, scores rose a point. After listening to Mozart, however, the scores jumped to 119 (Westley, 1998). Even students who did not like the music still had an increased score on the IQ test. Rauscher hypothesized that "listening to complex, non-repetitive music, like Mozart, may stimulate neural pathways that are important in thinking" (Castleman, 1994).



- C** The same experiment was repeated on rats by Rauscher and Hong Hua Li from Stanford. Rats also demonstrated enhancement in their intelligence performance. These new studies indicate that rats that were exposed to Mozart showed “increased gene expression of BDNF (a neural growth factor), CREB (a learning and memory compound), and Synapsin I (a synaptic growth protein)” in the brain’s hippocampus, compared with rats in the control group, which heard only white noise (e.g. the whooshing sound of a radio tuned between stations)
- D** How exactly does the Mozart affect work? Researchers are still trying to determine the actual mechanisms for the formation of these enhanced learning pathways. Neuroscientists suspect that music can actually help build and strengthen connections between neurons in the cerebral cortex in a process similar to what occurs in brain development despite its type. When a baby is born, certain connections have already been made — like connections for heartbeat and breathing. As new information is learned and motor skills develop, new neural connections are formed. Neurons that are not used will eventually die while those used repeatedly will form strong connections. Although a large number of these neural connections require experience, they also must occur within a certain time frame. For example, a child born with cataracts cannot develop connections within the visual cortex. If the cataracts are removed by surgery right away, the child’s vision develops normally. However, after the age of 2, if the cataracts are removed, the child will remain blind because those pathways cannot establish themselves.
- E** Music seems to work in the same way. In October of 1997, researchers at the University of Konstanz in Germany found that music actually rewires neural circuits (Begley, 1996). Although some of these circuits are formed for physical skills needed to play an instrument, just listening to music strengthens connection used in higher-order thinking. Listening to music can then be thought of as “exercise” for the brain, improving concentration and enhancing intuition.
- F** If you’re a little skeptical about the claims made by supporters of the Mozart

Effect, you're not alone. Many people accredit the advanced learning of some children who take music lessons to other personality traits, such as motivation and persistence, which is required in all types of learning. There have also been claims of that influencing the results of some experiments.

**G** Furthermore, many people are critical of the role the media had in turning an isolated study into a trend for parents and music educators. After Mozart Effect was published to the public, the sales of Mozart CDs stayed on the top of the hit list for three weeks. In an article by Michael Linton, he wrote that the research that began this phenomenon (the study by researchers at the University of California Irvine) showed only a temporary boost in IQ, which was not significant enough to even last throughout the course of the experiment. Using music to influence intelligence was used in Confucian civilization and Plato alluded to Pythagorean music when he described his ideal state in *The Republic*. In both of these examples, music did not have caused any overwhelming changes, and the theory eventually died out. Linton also asks, "If Mozart's Music were able to improve health, why was Mozart himself so frequently sick? If listening to Mozart's music increases intelligence and encourages spirituality, why aren't the world's smartest and most spiritual people Mozart specialists?" Linton raises an interesting point, if the Mozart Effect causes such significant changes, why isn't there more documented evidence?

**H** The "trendiness" of the Mozart Effect may have died out somewhat, but there are still strong supporters (and opponents) of the claims made in 1993. Since that initial experiment, there has not been a surge of supporting evidence. However, many parents, after playing classical music while pregnant or when their children are young, will swear by the Mozart Effect. A classmate of mine once told me that listening to classical music while studying will help with memorization. If we approach this controversy from a scientific aspect, although there has been some evidence that music does increase brain activity, actual improvements in learning and memory have not been adequately demonstrated.

### Questions 1-8 .....

Reading Passage 1 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.*

- 1 Music influences brain development of baby.
- 2 Popularity of public to the introduction of Mozart Effect
- 3 Description of the pioneer experiment of a person
- 4 Music is helpful as a healing method in some place
- 5 Learning needs other qualities though

### Questions 6-8 .....

Complete the summary below.

Choose **NO MORE THAN THREE WORDS** from the passage for each answer. Write your answers in boxes 6-8 on your answer sheet.

In the experiment carried out by Frances Rauscher, participants were immersed in the music for a 6 \_\_\_\_\_ period of time before they were tested. Rauscher suggested that enhancement of their performance is related to the 7 \_\_\_\_\_ nature of Mozart's music. After that, another parallel experiment was also conducted on 8 \_\_\_\_\_

## Questions 9-13.....

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

In boxes 9-13 on your answer sheet, write

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

- 9 Music has the power to improve people's brain performance according to the passage.
- 10 All neural connections are built up after a baby's born instead of the time he or she had born.
- 11 There is no one who questions Mozart Effect so far.
- 12 Michael Linton carried out further experiment on Mozart's life to support his viewpoint
- 13 Not sufficient evidence supports Mozart Effect from the very first experiment till new.

## The Power of Nothing

*Geoff Watts, New Scientist (May 26th, 2001)*

- A** Want to devise a new form of alternative medicine? No problem. Here is the recipe. Be warm, sympathetic, reassuring and enthusiastic. Your treatment should involve physical contact, and each session with your patients should last at least half an hour. Encourage your patients to take an active part in their treatment and understand how their disorders relate to the rest of their lives. Tell them that their own bodies possess the true power to heal. Make them pay you out of their own pockets. Describe your treatment in familiar words, but embroidered with a hint of mysticism: energy fields, energy flows, energy blocks, meridians, forces, auras, rhythms and the like. Refer to the knowledge of an earlier age: wisdom carelessly swept aside by the rise and rise of blind, mechanistic science. Oh, come off it, you are saying. Something invented off the top of your head could not possibly work, could it?
- B** Well yes, it could-and often well enough to earn you a living. A good living if you are sufficiently convincing, or, better still, really believe in your therapy. Many illnesses get better on their own, so if you are lucky and administer your treatment at just the right time you will get the credit. But that's only part of it. Some of the improvement really would be down to you. Your healing power would be the outcome of a paradoxical force that conventional medicine recognizes but remains oddly ambivalent about: the placebo effect.
- C** Placebos are treatments that have no direct effect on the body, yet still work because the patient has faith in their power to heal. Most often the term refers to a dummy pill, but it applies just as much to any device or procedure, from a sticking plaster to a crystal to an operation. The existence of the placebo effect implies that even quackery may confer real benefits, which is why any mention of placebo is a touchy subject for many practitioners of complementary and alternative medicine, who are likely to regard it as tantamount to a charge of charlatanism. In fact, the placebo effect is a powerful part of all medical care,

orthodox or otherwise, though its role is often neglected or misunderstood.

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

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

pumps the tear glands. But exactly how placebos

work their medical magic is still largely unknown.

Most of the scant research done so far has focused on the control of pain, because it's one of the

commonest complaints and lends itself to experimental study. Here, attention has turned to the endorphins, morphine-like neurochemicals known to help control pain.

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

**G** "But endorphins are still out in front." That case has been strengthened by the recent work of Fabrizio Benedetti of the University of Turin, who showed that the placebo effect can be abolished by a drug, naloxone, which blocks the effects of endorphins. Benedetti induced pain in human volunteers by inflating a blood-pressure cuff on the forearm. He did this several times a day for several days, using morphine each time to control the pain. On the final day, without saying anything, he replaced the morphine with a saline solution. This

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still relieved the subjects' pain: a placebo effect. But when he added naloxone to the saline the pain relief disappeared. Here was direct proof that placebo analgesia is mediated, at least in part, by these natural opiates.

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

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

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

## Questions 27-32 .....

Use the information in the passage to match the deed (listed A-H) with people below.

*Write the appropriate letters A-H in boxes 27-32 on your answer sheet.*

NB you may use any letter more than once

- A Should easily be understood
- B should improve by itself
- C Should not involve any mysticism
- D Ought to last a minimum length of time.
- E Needs to be treated at the right time.
- F Should give more recognition.
- G Can earn valuable money.
- H Do not rely on any specific treatment

- 27 Appointments with alternative practitioner
- 28 An alternative practitioner's description of treatment
- 29 An alternative practitioner who has faith in what he does
- 30 The illness of patients convinced of alternative practice
- 31 Improvements of patients receiving alternative practice
- 32 Conventional medical doctors



### Questions 33-35 .....

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

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

- 33** In the fifth paragraph, the writer uses the example of anger and sadness to illustrate that:
- A People's feeling could affect their physical behaviour
  - B Scientists don't understand how the mind influences the body.
  - C Research on the placebo effect is very limited
  - D How placebo achieves its effect is yet to be understood.
- 34** Research on pain control attracts most of the attention because
- A Scientists have discovered that endorphins can help to reduce pain.
  - B Only a limited number of researchers gain relevant experience
  - C Pain reducing agents might also be involved in placebo effect.
  - D Patients often experience pain and like to complain about it
- 35** Fabrizio Benedetti's research on endorphins indicates that
- A They are widely used to regulate pain.
  - B They can be produced by willful thoughts
  - C They can be neutralized by introducing naloxone.
  - D Their pain-relieving effects do not last long enough.

## Questions 36-40 .....

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

In boxes 36-40 on your answer sheet, write

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

- 36 There is enough information for scientists to fully understand the placebo effect.
- 37 A London based researcher discovered that red pills should be taken off the market.
- 38 People's preference on brands would also have effect on their healing.
- 39 Medical doctors have a range of views of the newly introduced drug of chlopromazine.
- 40 Alternative practitioners are seldom known for applying placebo effect.

## Water Filter

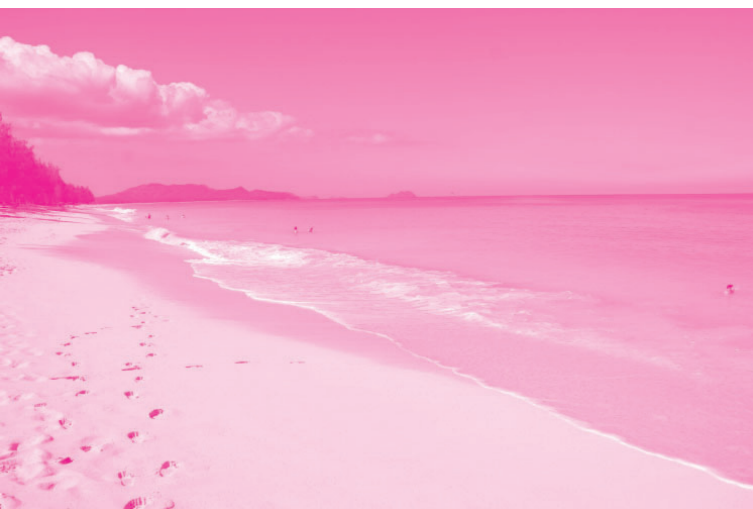
- A** An ingenious invention is set to bring clean water to the third world, and while the science may be cutting edge, the materials are extremely down to earth. A handful of lay (*n.* 粘土), yesterday's coffee grounds and some cow manure are the ingredients that could bring clean, safe drinking water to much of the third world.
- B** The simple new technology, developed by ANU materials scientist Mr. Tony Flynn, allows water filters to be made from commonly available materials and fired on the ground using cow manure as the source of heat, without the need for a kiln. The filters have been tested and shown to remove common pathogens (disease-producing organisms) including E-coli (大肠杆菌). Unlike other water filtering devices, the filters are simple and inexpensive to make. "They are very simple to explain and demonstrate and can be made by anyone, anywhere," says Mr. Flynn. "They don't require any western technology. All you need is terracotta clay, a compliant cow and a match."
- C** The production of the filters is extremely simple. Take a handful of dry, crushed clay, mix it with a handful of organic material, such as used tea leaves, coffee grounds or rice hulls (*n.* 稻壳), add enough water to make a stiff biscuit-like mixture and form a cylindrical pot that has one end closed, then dry it in the sun. According to Mr. Flynn, used coffee grounds have given the best results to date. Next, surround the pots with straw; put them in a mound of cow manure, light the straw and then top up the burning manure as required. In less than 60 minutes the filters are finished. The walls of the finished pot should be about as thick as an adult's index. The properties of cow manure are vital as the fuel can reach a temperature of 700 degrees in half an hour and will be up to 950 degrees after another 20 to 30 minutes. The manure makes a good fuel because it is very high in organic material that burns readily and quickly; the manure has to be dry and is best used exactly as found in the field, there is no need to break it up or process it any further.
- D** "A potter's kiln (*n.* 窑) is an expensive item and can could take up to four

or five hours to get up to 800 degrees. It needs expensive or scarce fuel, such as gas or wood to heat it and experience to run it. With no technology, no insulation (*n.* 绝缘、隔热) and nothing other than a pile of cow manure and a match, none of these restrictions apply,” Mr. Flynn says.

**E** It is also helpful that, like terracotta clay and organic material, cow dung is freely available across the developing world. “A cow is a natural fuel factory. My understanding is that cow dung as a fuel would be pretty much the same wherever you would find it.” Just as using manure as a fuel for domestic uses is not a new idea, the porosity of clay is something that potters have known about for years, and something that as a former ceramics lecturer in the ANU School of Art, Mr. Flynn is well aware of. The difference is that rather than viewing the porous nature of the material as a problem—after all not many people want a pot that won’t hold water — his filters capitalize on this property.

**F** Other commercial ceramic filters do exist, but, even if available, with prices starting at US\$5 each, they are often outside the budgets of most people in the developing world. The filtration process is simple, but effective. The basic principle is that there are passages through the filter that are wide enough for water droplets to pass through, but too narrow for pathogens. Tests with the deadly E-coli bacterium have seen the filters remove 96.4 to 99.8 per cent of the pathogen—well within safe levels. Using only one filter it takes two hours

to filter a litre of water. The use of organic material, which burns away leaving cavities after firing, helps produce the structure in which pathogens will become trapped. It overcomes the potential problems of finer clays that may not let water through and also means that cracks are soon halted. And like clay and cow dung, it is universally



available.

- G** The invention was born out of a World Vision project involving the Manatuto community in East Timor ( 东帝汶 ).The charity wanted to help set up a small industry manufacturing water filters, but initial research found the local clay to be too fine—a problem solved by the addition of organic material. While the problems of producing a working ceramic filter in East Timor were overcome, the solution was kiln-based and particular to that community's materials and couldn't be applied elsewhere. Manure firing, with no requirement for a kiln, has made this zero technology approach available anywhere it is needed. With all the components being widely available, Mr. Flynn says there is no reason the technology couldn't be applied throughout the developing world, and with no plans to patent his idea, there will be no legal obstacles to it being adopted in any community that needs it. "Everyone has a right to clean water, these filters have the potential to enable anyone in the world to drink water safely," says Mr. Flynn.

## Questions 14-19 .....

Complete the flow chart, using **NO MORE THAN TWO WORDS** from the Reading Passage for each answer. Write your answers in boxes 14-19 on your answer sheet.

### Guide to Making Water Filters

Step one:

combination of 14 \_\_\_\_\_ and organic material, with sufficient 15 \_\_\_\_\_ to create a thick mixture sun dried

Step two:

pack 16 \_\_\_\_\_ around the cylinders place them in 17 \_\_\_\_\_ for firing (maximum temperature: 18 \_\_\_\_\_ ) filter being baked in under 19 \_\_\_\_\_

## Questions 20-23 .....

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

*In boxes 20-23 on your answer sheet, write*

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

- 20 It takes half an hour for the manure to reach 950 degrees.
- 21 Clay was initially found to be unsuitable for filter making.
- 22 Coffee grounds are twice as effective as other materials.
- 23 E-coli is the most difficult bacteria to combat.

## Questions 24-26 .....

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

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

- 24** When making the pot, the thickness of the wall
- A is large enough to let the pathogens to pass.
  - B varied according to the temperature of the fuel.
  - C should be the same as an adult's forefinger.
  - D is not mentioned by Mr. Flynn.
- 25** what is true about the charity, it
- A failed in searching the appropriate materials.
  - B thought a kiln is essential.
  - C found that the local clay are good enough.
  - D intended to build a filter production factory.
- 26** Mr. Flynn's design is purposely not being patented
- A because he hopes it can be freely used around the world.
  - B because he doesn't think the technology is perfect enough.
  - C because there are some legal obstacles.
  - D because the design has already been applied thoroughly.

## What are you laughing at?

- A** We like to think that laughing is the height of human sophistication. Our big brains let us see the humour in a strategically positioned pun, an unexpected plot twist or a clever piece of word play. But while joking and wit are uniquely human inventions, laughter certainly is not. Other creatures, including chimpanzees, gorillas and even rats, chuckle. Obviously, they don't crack up at Homer Simpson or titter at the boss's dreadful jokes, but the fact that they laugh in the first place suggests that sniggers and chortles have been around for a lot longer than we have. It points the way to the origins of laughter, suggesting a much more practical purpose than you might think.
- B** There is no doubt that laughing typical involves groups of people. 'Laughter evolved as a signal to others—it almost disappears when we are alone,' says Robert Provine, a neuroscientist at the University of Maryland. Provine found that most laughter comes as a polite reaction to everyday remarks such as 'see you later', rather than anything particularly funny. And the way we laugh depends on the company we're keeping. Men tend to laugh longer and harder when they are with other men, perhaps as a way of bonding. Women tend to laugh more and at a higher pitch when men are present, possibly indicating flirtation or even submission.
- C** To find the origins of laughter, Provine believes we need to look at play. He points out that the masters of laughing are children, and nowhere is their talent more obvious than in the boisterous antics, and the original context is play,' he say. Well-known primate watchers, including Dian Fossey and Jane Goodall, have long argued that chimps laugh while at play. The sound they produce is known as a pant laugh. It seems obvious when you watch their behavior—they even have the same ticklish spots as we do. But remove the context, and the parallel between human laughter and a chimp's characteristic pant laugh is not so clear. When Provine played a tape of the pant laughs to 119 of his students, for example, only two guessed correctly what it was.
- D** These findings underline how chimp and human laughter vary. When we



laugh the sound is usually produced by chopping up a single exhalation into a series of shorter with one sound produced on each inward and outward breath. The question is: does this pant laughter have the same source as our own laughter? New research lends weight to



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

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

**F** All this still doesn't answer the question of why we laugh at all. One idea is that laughter and tickling originated as a way of sealing the relationship between mother and child. Another is that the reflex response to tickling is protective, alerting us to the presence of crawling creatures that might harm us or compelling us to defend the parts of our bodies that are most vulnerable in hand-to-hand combat. But the idea that has gained most popularity in recent

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years is that laughter in response to tickling is a way for two individuals to signal and test their trust in one another. This hypothesis starts from the observation that although a little tickle can be enjoyable, if it goes on too long it can be torture. By engaging in a bout of tickling, we put ourselves at the mercy of another individual, and laughing is a signal that we laughter is what makes it a reliable signal of trust according to Tom Flamson, a laughter researcher at the University of California, Los Angeles. ' Even in rats, laughter, tickle, play and trust are linked. Rats chirp a lot when they play, 'syas Flamson. 'These chirps can be aroused by tickling. And they get bonded to us as a result, which certainly seems like a show of trust.'

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

## Questions 1-6 .....

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

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

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

NB You may use any letter more than once.

- |   |                |
|---|----------------|
| A | Tom Flamson    |
| B | Elke Zimmerman |
| C | Robert Provine |
| D | Jaak Panksepp  |

- 1 Babies and chimps produce similar sounds of laughter .
- 2 Primates are not the only animals who produce laughter Pan
- 3 Laughter also suggests that we trust others.
- 4 Laughter is a response to polite situation instead of humour.
- 5 Animal laughter evolved before human laughter
- 6 Laughter is a social activity.

## Questions 7-10.....

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

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

Some researchers believe that laughter first evolved out of 7\_\_\_\_\_. Investigation has revealed that human and chimp laughter may have the same 8\_\_\_\_\_. Besides, scientists have been aware that 9\_\_\_\_\_ laugh, however, it now seems that laughter might be more widespread than once we thought. Although the reasons why humans started to laugh are still unknown, it seems that laughter may result from the 10\_\_\_\_\_ we feel with another person.

- |              |            |            |            |
|--------------|------------|------------|------------|
| A evolution  | B chirps   | C origins  | D voice    |
| E confidence | F rats     | G primates | H response |
| I play       | J children | K tickling |            |

## Questions 11-13.....

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

In boxes 11-13 on your answer sheet, write

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

- 11 Both men and women laugh more when they are with members of the same sex.
- 12 Primates lack sufficient breath control to be able to produce laughs the way humans do.
- 13 Chimpanzees produce laughter in a wider range of situations than rats do.

## 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 ] 泥石流	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

### Activating the brain 激活大脑

1. T (B 段最后一句)
2. NG (C 段第 1 句, 原文只是说新的学科 optogenetic 诞生了, 并未说明其产生的原因 nascent = jumped-up 新兴的, field = domain 领域)
3. T (D 段第 3 句, voltage = electric tension 电压, activate or inhibit connected cells = communication between neurons)
4. F (E 段第 1 句, neural firing = neural discharge 神经放电, variation = change, dye = coloration, 不是仅仅通过电压变化, 还可通过 the flow of specific charged atoms, or ions)
5. NG (F 段第一句只说合成染料有一个严重的缺点, 并未说它是最 challenging 的障碍 drawback = defect)
6. H (H 段第二句 the gene for the dye was borrowed from a luminescent marine organism, typically a jellyfish that makes the so-called green fluorescent protein, a jellyfish 指的是一种海洋生物 sea creature, 它能发光 luminescent, 是因为有相应基因 gene 合成绿色荧光蛋白质 green fluorescent protein)
7. D (D 段第 1 句)
8. F (F 段最后一句)
9. B (B 段第 2 句)
10. E (E 段最后一句 optical reporters = visual indicators information processing = how information is handled, in single neuron and a small network = in and between cells in the brain)
11. dopamine
12. switched on
13. switch-and-dye unit (Summary 11-13 见 G 段, 思路整理, 神经细胞之间信息传导需要一种神经递质 neurotransmitter 叫做 dopamine (多巴胺), 但是要产生多巴胺, 需要有 enzymatic machinery 酶, 而酶的重要组成部分是 protein 蛋白质, 而 protein 蛋白质的合成是受相应基因控制的, 因此相应基因就像是开关, 只有基因打开 switched on, 才能合成蛋白质, 从而才会有传导过程发生, 所以如果将该

控制基因的开关和编码染色蛋白质的基因开之间做一个关联，这样的 switch-and-dye unit 如果植入生物体 animal 中，那么就可以通过观察该 animal 的大脑，单独观察只发生神经传导也就是有多巴胺合成的细胞之间工作关系 .G 段最后有讲这个应用发生的前提是这个染料 dye 必须是一种蛋白质，才能有基因上的关联 )

### Assessing the risk 新型药物

27. TRUE
28. NOT GIVEN
29. FALSE
30. NOT GIVEN
31. TRUE
32. TRUE
33. consumer's choice
34. risk and benefit
35. skiing
36. GM crops
37. wheat and rice
38. production
39. Mistrust
40. A

### Bestcom 2 considerate computing 电话系统 2

14. NOT GIVEN
15. TRUE
16. TRUE
17. TRUE
18. FALSE
19. NOT GIVEN
20. users' computer
21. company directory

22. relationship

23. message

24. reschedule

25. cellphone

26. meeting

**Designed to Last 持久环保设计**

28-36

A B C B D E F H C

37. YES 符合全文主题

38. NO 倒二段最后一句

39. YES 最后一段

40. NOT G 工 VEN 文中未提及

**Going nowhere fast -New transportation mode PRT RUF 新交通模式**

14-17

NOT GIVEN

FALSE

TRUE

NOT GIVEN

18-24

A A C A A B B

25-27

C D G

**Hypnotism it real or just a circus trick? 催眠治疗法**

27. F

28. C

29. A

30. J

31. H

- 32. B
- 33. B
- 34. D
- 35. A
- 36. D
- 37. FALSE
- 38. NOT GIVEN
- 39. TRUE
- 40. FALSE

### Lie detector 测谎仪

1-5

T T F N T

6-13

D B A B C A B C

### Overdosing on nothing 顺势治疗法

Questions 1-7

1. ix

2. v

3. i

4. vii

5. iv

6. viii

7. iii

Questions 8-14

8. T

9. F

10. T

11. T

12. F

13. F

14. NG

**Radio Automation-forerunner of the integrated circuit 收音机化自动生产**

1. (primitive)chip
2. grit
3. molten Zinc
4. milling machine
5. robot hands
6. loudspeaker
7. valves
8. Cheaper
9. components
10. lighter
11. cost
12. A
13. C

**Roller Coaster 过山车**

1-4 答案在 B 段

1. chain
2. loop
3. gear
4. moter

5-10

C 段:

5. ice
6. melt
7. waxed sliders
8. wheels

D 段:

9. coal

10. steam engine

11-14

11. NG

12. YES C 段最后一句

13. YES E 段第二句

14. NOT GIVEN F 段第六行

### Sounds Good? 音乐软件

14-19

E

B

A

C

D

G

20-25

spectral deconvolution

mathematical equations

Platinum Blue

similarities

Music Science

Beethoven

26. D

### Texting! The television 2 短信和电视 2

28. ii

29. vi

30. vii

31. i

32. v

33. A

34. D

35. C

36. D

37. E

38. A

39. C

40. F

### The Mozart effect 莫扎特效应

1. D

2. G

3. B

4. A

5. F

6. short

7. complex

8. rats

9. TRUE

10. FALSE

11. FALSE

12. NOT GIVEN

13. TRUE

### The Power of Nothing 镇静剂

27-32

D A G B H F

33-35

A D C

36-40

FALSE

NOT GIVEN

TRUE

TRUE

FALSE

### Water Filter 新水过滤

14. clay

15. water

16. straw

17. cow manure

18. 950 degrees

19. 60 minutes

20. FALSE

21. TRUE

22. NOT GIVEN

23. FALSE

24. C

25. D

26. A

### What are you laughing at? 笑的研究

1-6

B D A C B C

7-10

ICGE

11-13

NOT GIVEN

TRUE

NOT GIVEN