

**Đề thi Tiếng Anh\_11**  
(Đề thi gồm: 15 trang)

**KỲ THI CHỌN HỌC SINH GIỎI**  
**LẦN THỨ XVII, NĂM 2026**  
**ĐỀ THI MÔN: TIẾNG ANH - LỚP 11**  
**Thời gian làm bài: 180 phút**  
(Không kể thời gian giao đề)

**I. LISTENING (5.0 points)**

**Part 1. Listen to a conversation about a geology field trip ONCE and do the tasks that follow.**

**Part A: Questions 1–5**

**For questions 1–5, decide whether each of the following statements is True (T), False (F), or Not Given (NG).**

1. The small number of participants made it easier for students to get to know each other.
2. Both Jason and Cathy expressed dissatisfaction with the cold weather during the trip.
3. Jason was satisfied with the level of support he received from his tutor.
4. Cathy realised she needed to become less impulsive in her approach to tasks.
5. Jason stated that careful planning is the most important factor in achieving academic success.

**Part B: Questions 6–10**

**For questions 6–10, decide whether the following are mentioned by only one of the speakers, or by both of them.**

Write:

**C** – for Cathy

**J** – for Jason

**B** – for Both speakers

6. An improvement in maintaining concentration following the trip
7. Researching fairly conventional research topic
8. Experiencing difficulty in narrowing down the scope of a research topic
9. The view that originality is not a key requirement at their current level
10. Concern about being unable to meet upcoming academic deadlines

**Your answers:**

|    |    |    |    |     |
|----|----|----|----|-----|
| 1. | 2. | 3. | 4. | 5.  |
| 6. | 7. | 8. | 9. | 10. |

**Part 2. Listen to a talk about excessive use of internet ONCE and do the tasks that follow.**

**Questions 11–12**

Choose TWO letters from A–E.

Which TWO points does the host make about adult screen use?

- A. Adults also suffer from brain rot like children.
- B. A significant proportion of adults use the internet more than once
- C. Adults tend to underestimate how often they go online
- D. Patterns of adult screen use are comparable to those of children
- E. About half of adults indicate persistent internet use throughout the day.

**Questions 13–15**

Choose THREE letters from A–F.

Which THREE statements reflect the effects of excessive screen exposure described by Dr. Sue Varma?

- A. It can result in difficulties recalling familiar information
- B. It leads to permanent cognitive decline in all users
- C. It produces symptoms resembling clinically recognised conditions
- D. It may be associated with physical changes in brain structure

- E. It primarily affects decision-making rather than memory
- F. It reduces the need for mental effort in daily tasks

### Questions 16–20

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

16. What distinction does the speaker make regarding older adults and technology use?
  - A. Their usage patterns are more varied than commonly assumed
  - B. They rely on technology mainly for professional purposes
  - C. They are less affected by the negative impacts of screen use
  - D. Their engagement with technology is declining over time
17. According to the speaker, why might some individuals become highly dependent on screens?
  - A. They are encouraged by family members to stay informed
  - B. They lack alternative sources of entertainment
  - C. They experience reduced social or physical engagement
  - D. They find digital platforms more intellectually stimulating
18. What does the speaker suggest about the effects of social media use among older adults?
  - A. It may contribute to both positive and negative outcomes
  - B. It mainly replaces real-life interaction
  - C. It has minimal impact on emotional wellbeing
  - D. It reduces reliance on traditional communication
19. What key factor determines whether screen use is beneficial or harmful?
  - A. The total amount of time spent online
  - B. The type of content being consumed
  - C. The level of interaction involved
  - D. The age of the user
20. What overall approach to screen use does the speaker recommend?
  - A. Eliminating digital devices from daily routines
  - B. Adapting usage patterns to minimise negative effects
  - C. Increasing awareness of technological advancements
  - D. Limiting screen use to professional activities

**Your answers:**

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| 11. | 12. | 13. | 14. | 15. |
| 16. | 17. | 18. | 19. | 20. |

**Part 3. Questions 21–25 listen to part of a talk about happiness decline, TWICE and answer each of the following questions with no more than THREE words taken from the recording.**

21. Which specific demographic group has experienced a drop in life satisfaction recently?  
\_\_\_\_\_
22. What metaphor describes disruptive societal crises like the pandemic?  
\_\_\_\_\_
23. What digital mechanism attempts to manipulate human feelings?  
\_\_\_\_\_
24. Which part of the brain is neglected due to constant digital distraction?  
\_\_\_\_\_
25. What natural part of life do people now try to avoid?  
\_\_\_\_\_

**Part 4. For questions 26 - 35, listen to part of a talk about the energy crisis TWICE, and complete the following summary with no more than THREE words taken from the recording for each space.**

A prolonged Iran war could trigger a global energy crisis that would (26) \_\_\_\_\_ major economies, increasing costs for households and businesses.

The world is already experiencing the (27) \_\_\_\_\_, as a significant drop in oil supply has led to countries scrambling for resources and driving prices upward.

However, the impact is uneven, as some countries are less able to (28) \_\_\_\_\_. In Europe, economies such as Germany and Italy are particularly vulnerable due to their reliance on the (29) \_\_\_\_\_ sector and sensitivity to (30) \_\_\_\_\_. In addition, the UK depends heavily on (31) \_\_\_\_\_, making its electricity costs more volatile.

Japan is especially exposed, as most of its oil passes through the (32) \_\_\_\_\_, while a (33) \_\_\_\_\_ further increases import costs. Among emerging economies, the Gulf region faces potential (34) \_\_\_\_\_, reversing (35) \_\_\_\_\_ if exports are disrupted.

**Your answers:**

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| 26. | 27. | 28. | 29. | 30. |
| 31. | 32. | 33. | 34. | 35. |

## **II. READING (8.0 points)**

### **II. 1. LANGUAGE IN USE (3.0 points)**

**Part 1. For questions 36 - 40, read the passage below and decide which answer (A, B, C, or D) best fits each space. Write the letter A, B, C, or D In the corresponding numbered boxes provided.**

A recent study looked at whether virtual reality is more addictive than other online activities. The researchers asked 754 people (36) \_\_\_\_\_. They found that between 2% and 20% of these users had serious problems with using VR too much. The exact number depended on how they measured addiction, (37) \_\_\_\_\_. This information helps us understand the real risks.

The most interesting finding was about something called "presence." This is the special feeling that you are actually inside the virtual world instead of in the real room. The study showed that this feeling was very strongly connected to addiction problems and bad behavior. People who felt more present in the virtual environment (38) \_\_\_\_\_. This was the most important factor that predicted addiction and problematic use.

If virtual reality becomes even more realistic in the future, (39) \_\_\_\_\_. This means more people might develop addiction problems. Scientists say we need to do more research over a longer period of time; (40) \_\_\_\_\_. Long-term studies are very important; therefore, researchers should track how immersive experiences affect people's mental health and habits. The scientists recommend creating programs to help prevent addiction while we continue learning.

36. A. who use AR occasionally to explore surveys about general technology trends  
 B. who use VR regularly to answer questions about their habits and screen time  
 C. who could be classified as regular VR user to provide detailed reports of their engagement  
 D. who test new devices but do not report on their own usage patterns
37. A. but these results were similar to what they found with regular games and social media  
 B. but these results were similar only among participants with minimal prior VR exposure  
 C. albeit with a degree of convergence with trends identified in adjacent domains of digital consumption  
 D. although broadly consistent with patterns as observed in gaming and social media
38. A. were more likely to engage in excessive use, thereby exceeding typical limits  
 B. were more inclined toward excessive use, frequently surpass expected limits

- C. were more prone to excessively use and longer engagement  
 D. were more likely to engage in excessive usage, with frequent exceed of typical limits.
39. A. the level of engagement will probably remain quite stable  
 B. the sense of immersion will probably decline rather quickly  
 C. the feeling of presence will probably become even stronger  
 D. the awareness of interaction will probably become less important
40. A. therefore, researchers should draw conclusions from current usage patterns alone  
 B. moreover, we need to watch how people's behavior changes as VR technology improves  
 C. conversely, ongoing adoption trends deserve no further systematic observation  
 D. instead, specialists may disregard evolving user conduct entirely

**Your answers:**

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| 36. | 37. | 38. | 39. | 40. |
|-----|-----|-----|-----|-----|

## Part 2:

**For questions 41 - 45, read the passage below and decide which answer (A, B, C, or D) best fits each space. Write the letter A, B, C, or D in the corresponding numbered boxes provided.**

### A new style of camping

If you decided to go camping, where do you think you would go? Perhaps you would head for the mountains or go trekking through thick forest lands? And what would your holiday checklist include? Maybe a tent, a sleeping bag and some matches to start a fire?

Well, think again, because the latest holiday trend is (41) \_\_\_ different from that traditional image. Combining the words 'glamorous' and 'camping', the latest fashion is 'glamping' and when it comes to (42) \_\_\_ away from it all, 'glampers' do it in style. Although they want to experience all the (43) \_\_\_ excitement of spending time in the great outdoors, they stay in luxurious eco lodges, each with its own (44) \_\_\_ chef! Or they might choose a(n) elegant eco-dome style tent, richly decorated with traditional woven tapestries and including a heated spa pool.

Of course, such an experience doesn't come cheap. In fact, with prices ranging from \$400 to \$2,000 a night, they can be (45) \_\_\_ expensive!

- |                    |                |                  |                  |
|--------------------|----------------|------------------|------------------|
| 41. A. terminally  | B. famously    | C. largely       | D. vastly        |
| 42. A. getting     | B. going       | C. running       | D. hiking        |
| 43. A. low-season  | B. far-flung   | C. all-inclusive | D. action-packed |
| 44. A. open-topped | B. world-class | C. self-catering | D. wrinkle-free  |
| 45. A. luxuriously | B. costly      | C. exclusively   | D. exorbitantly  |

**Your answers:**

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| 41. | 42. | 43. | 44. | 45. |
|-----|-----|-----|-----|-----|

**Part 3.** For questions 46 - 50, complete the passage by filling in each space with one of the words given In the box in its correct form. There are THREE words unused.

|                 |              |               |                 |
|-----------------|--------------|---------------|-----------------|
| <b>CONTRACT</b> | <b>ORDER</b> | <b>IMPLY</b>  | <b>BUILD</b>    |
| <b>THOUGHT</b>  | <b>APPLY</b> | <b>IMPAIR</b> | <b>RENOVATE</b> |

### A home for life

For many of us, owning our own home is the dream of a lifetime. It is the ultimate accomplishment. That being the case, we work away week after week scrimping and saving hoping that our diligence will pay off and that we will eventually have a place that we can call our own. In many cases, the dream becomes reality and we become owners. However, what happens as we grow older and we are afflicted with physical (46) \_\_\_\_\_ which may reduce our ability to move about our residence easily?

Developing disabilities later in life can have many (47) \_\_\_\_\_, one of them being whether we will be able to continue to live in the home that we worked so hard for. If we were clever enough to have had the (48) \_\_\_\_\_ to buy insurance or put away money to support us in our later years, we can have (49) \_\_\_\_\_ done which will make the house better-suited to our new living needs.

Nowadays, there are (50) \_\_\_\_\_ who specialise in just that. They have been professionally trained and educated to make the homes of older people more liveable and efficient. For example, many of them have trained as plumbers so if it has become too difficult for us to climb in and out of our old bathtub, they have got the skills to install a shower which is far more suited to our physical limitations. These people have had a lot of experience with this type of work and have developed an acute awareness of what is needed to keep aging people in the place they so dearly love ... their home.

***Your answers:***

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| 46. | 47. | 48. | 49. | 50. |
|-----|-----|-----|-----|-----|

**Part 4: The passage below contains 5 mistakes. Underline the mistakes and give your corrections as advised. (10 pts)**

The world's energy watchdog has advised governments to reduce highway speeds and encouraged workers to carpool or, ideal, work from home to combat soaring oil prices and impend fuel shortages caused by the Middle East conflict.

It has also recommended countries to consider limiting car access to designated zones in large cities, by giving vehicles with odd-numbered plates access on different weekdays to that with even-numbered plates.

The International Energy Agency (IEA) has advised member countries, including Australia, the UK and the US, to take emergency measures to curb oil demand, following the military strikes on Iran that have triggered the most significant supply disruptions in the history of the global oil market.

***Your Answers:***

| No | Mistake | Correction |
|----|---------|------------|
| 51 |         |            |
| 52 |         |            |
| 53 |         |            |
| 54 |         |            |
| 55 |         |            |

**II. 2. READING COMPREHENSION (5.0 points)**

**Part 1: Read the passage and fill each of the following numbered blanks with ONE suitable word. Write your answers in the corresponding numbered boxes provided. (10 pts)**

**What makes Finland the happiest place on Earth?**

For the last eight years, Finland has (56) \_\_\_\_\_ the list of the world's happiest countries. Our writer embarks on a tour to discover their secret.

I've been visiting the happiest country on Earth every year since I was a baby. At first glance, Finland doesn't seem like an obvious (57) \_\_\_\_\_ ground for happiness. In midwinter the sun only appears for two to five hours a day and temperatures can plummet to below -20C. (It would seem a warm-year-round, sunny climate is not a (58) \_\_\_\_\_ to happiness.)

The World Happiness Report is based on a survey in which people rate their satisfaction with life – and the Finns have been happiest with their lot for the last eight years. Not short of marketing (59) \_\_\_\_\_, Visit Finland latched on to this with a "Masterclass of Happiness" advertising

campaign. And it's probably (60) \_\_\_\_\_ coincidence that Lonely Planet named Finland in its 2026 Best in Travel guide (61) \_\_\_\_\_ a country "for finding happiness in wild places". I'm half-Finnish, and I'm interested to find out what Finns think is the secret to happiness, as well as what visitors can learn from them. I started by asking my friends and family. The answer was unanimous: "It's because we have low expectations" – a response which speaks (62) \_\_\_\_\_ about Finns. Direct, to the (63) \_\_\_\_\_ and wry.

Of course, there are societal factors, too, such as relatively high levels of education and equality. But I see (64) \_\_\_\_\_ reason, one that visitors can tap into: Finland is all about the peace of (65) \_\_\_\_\_ that comes from simple pleasures, a slower pace of life and connecting with nature

**Your answers:**

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| 56. | 57. | 58. | 59. | 60. |
| 61. | 62. | 63. | 64. | 65. |

**Part 2. For questions 66 - 72, rearrange the following sentences from A-H in order to make a complete and meaningful passage. Write your answers (A-H) in the corresponding numbered boxes provided. The first one, (0), has been done as an example.**

(A) Ever heard the phrase 'go to work on an egg'? Still occasionally bandied around today, this was actually a slogan dreamt up by the UK Egg Marketing Board in the 1950s. Far from being based on science or nutrition, it was simply a marketing effort to encourage people to eat more eggs – but had the effect of making many believe that breakfast was key.

(B) "Having a meal at some point in the morning is important, but it is personal preference what time this takes place," says specialist dietitian Clare Thornton-Wood. "The name literally means 'break fast'. What the meal contains, rather than the timing, is more important. Some people might prefer a later, more substantial breakfast, while others want to eat immediately when they wake up."

(C) These days, skipping breakfast is commonplace. The rise in popularity of intermittent fasting (such as the 16:8 plan, where people eat only during an eight-hour window) has seen many people foregoing their morning meal in the hope of losing a few pounds. According to a YouGov survey, 13% of adults never eat breakfast.

(D) But one study found that skipping breakfast and late meal consumption decreased the hormone leptin (which helps you feel full), while increasing the hunger hormone ghrelin.

(E) Others, however, swear by their morning meal, and you only have to look at the rising popularity in shakes, smoothies and nuts and seeds toppers for bowls of yogurt or overnight oats to see how big the market for breakfast actually is.

(F) Similar concepts such as breakfast being the 'most important meal of the day' are commonplace, but is this notion actually true? And on the flipside, what does the science say about skipping breakfast? Is it effective as a weight-loss method, for example, or does it have health implications?

(G) For some people, missing breakfast is no big deal. They simply don't feel hungry first thing, and it can help them get up and out quicker in the mornings. But if you're used to starting the day with some food and a cuppa, going without can feel odd. Not only is it part of your morning routine, but your body is used to being refueled, so chances are you'll probably feel hungry and a bit light-headed without it.

(H) Inside your body, there's a lot going on. Intermittent fasting can cause changes in your body's hormone levels. It can decrease insulin levels and improve insulin sensitivity, which is beneficial for weight loss overall and reduces your risk of diabetes.

**Your answers:**

|      |     |     |     |     |     |     |     |
|------|-----|-----|-----|-----|-----|-----|-----|
| 0. A | 66. | 67. | 68. | 69. | 70. | 71. | 72. |
|------|-----|-----|-----|-----|-----|-----|-----|

### **Part 3: Read the text and do the tasks that follow. (20 pts)**

#### **How stress affects our judgement**

Some of the most important decisions of our lives occur while we're feeling stressed and anxious. From medical decisions to financial and professional ones, we are all sometimes required to weigh up information under stressful conditions. But do we become better or worse at processing and using information under such circumstances?

My colleague and I, both neuroscientists, wanted to investigate how the mind operates under stress, so we visited some local fire stations. Firefighters' workdays vary quite a bit. Some are pretty relaxed; they'll spend their time washing the truck, cleaning equipment, cooking meals and reading. Other days can be hectic, with numerous life-threatening incidents to attend to; they'll enter burning homes to rescue trapped residents, and assist with medical emergencies. These ups and downs presented the perfect setting for an experiment on how people's ability to use information changes when they feel under pressure.

We found that perceived threat acted as a trigger for a stress reaction that made the task of processing information easier for the firefighters – but only as long as it conveyed bad news.

This is how we arrived at these results. We asked the firefighters to estimate their likelihood of experiencing 40 different adverse events in their life, such as being involved in an accident or becoming a victim of card fraud. We then gave them either good news (that their likelihood of experiencing these events was lower than they'd thought) or bad news (that it was higher) and asked them to provide new estimates.

People are normally quite optimistic – they will ignore bad news and embrace the good. This is what happened when the firefighters were relaxed; but when they were under stress, a different pattern emerged. Under these conditions, they became hyper-vigilant to bad news, even when it had nothing to do with their job (such as learning that the likelihood of card fraud was higher than they'd thought), and altered their beliefs in response. In contrast, stress didn't change how they responded to good news (such as learning that the likelihood of card fraud was lower than they'd thought).

Back in our lab, we observed the same pattern in students who were told they had to give a surprise public speech, which would be judged by a panel, recorded and posted online. Sure enough, their cortisol levels spiked, their heart rates went up and they suddenly became better at processing unrelated, yet alarming, information about rates of disease and violence.

When we experience stressful events, a physiological change is triggered that causes us to take in warnings and focus on what might go wrong. Brain imaging reveals that this 'switch' is related to a sudden boost in a neural signal important for learning, specifically in response to unexpected warning signs, such as faces expressing fear.

Such neural engineering could have helped prehistoric humans to survive. When our ancestors found themselves surrounded by hungry animals, they would have benefited from an increased ability to learn about hazards. In a safe environment, however, it would have been wasteful to be on high alert constantly. So, a neural switch that automatically increases or decreases our ability to process warnings in response to changes in our environment could have been useful. In fact, people with clinical depression and anxiety seem unable to switch away from a state in which they absorb all the negative messages around them.

It is also important to realise that stress travels rapidly from one person to the next. If a co-worker is stressed, we are more likely to tense up and feel stressed ourselves. We don't even need to be in the same room with someone for their emotions to influence our behaviour. Studies show that if we observe positive feeds on social media, such as images of a pink sunset, we are more likely to

post uplifting messages ourselves. If we observe negative posts, such as complaints about a long queue at the coffee shop, we will in turn create more negative posts.

In some ways, many of us now live as if we are in danger, constantly ready to tackle demanding emails and text messages, and respond to news alerts and comments on social media. Repeatedly checking your phone, according to a survey conducted by the American Psychological Association, is related to stress. In other words, a pre-programmed physiological reaction, which evolution has equipped us with to help us avoid famished predators, is now being triggered by an online post. Social media posting, according to one study, raises your pulse, makes you sweat, and enlarges your pupils more than most daily activities.

The fact that stress increases the likelihood that we will focus more on alarming messages, together with the fact that it spreads extremely rapidly, can create collective fear that is not always justified. After a stressful public event, such as a natural disaster or major financial crash, there is often a wave of alarming information in traditional and social media, which individuals become very aware of. But that has the effect of exaggerating existing danger. And so, a reliable pattern emerges – stress is triggered, spreading from one person to the next, which temporarily enhances the likelihood that people will take in negative reports, which increases stress further. As a result, trips are cancelled, even if the disaster took place across the globe; stocks are sold, even when holding on is the best thing to do. The good news, however, is that positive emotions, such as hope, are contagious too, and are powerful in inducing people to act to find solutions. Being aware of the close relationship between people's emotional state and how they process information can help us frame our messages more effectively and become conscientious agents of change.

#### Questions 73-76

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

73. In the first paragraph, the writer introduces the topic of the text by

- A. defining some commonly used terms.
- B. questioning a widely held assumption.
- C. mentioning a challenge faced by everyone.
- D. specifying a situation which makes us most anxious.

74. What point does the writer make about firefighters in the second paragraph?

- A. The regular changes of stress levels in their working lives make them ideal study subjects.
- B. The strategies they use to handle stress are of particular interest to researchers.
- C. The stressful nature of their job is typical of many public service professions.
- D. Their personalities make them especially well-suited to working under stress.

75. What is the writer doing in the fourth paragraph?

- A. explaining their findings
- B. justifying their approach
- C. setting out their objectives
- D. describing their methodology

76. In the seventh paragraph, the writer describes a mechanism in the brain which

- A. enables people to respond more quickly to stressful situations.
- B. results in increased ability to control our levels of anxiety.
- C. produces heightened sensitivity to indications of external threats.
- D. is activated when there is a need to communicate a sense of danger.

#### Questions 77-81

Complete each sentence with the correct ending, A-G, below.

- A. made them feel optimistic.
- B. took relatively little notice of bad news.
- C. responded to negative and positive information in the same way.
- D. were feeling under stress.



- E. put them in a stressful situation.  
 F. behaved in a similar manner, regardless of the circumstances.  
 G. thought it more likely that they would experience something bad.  
 77. At times when they were relaxed, the firefighters usually  
 78. The researchers noted that when the firefighters were stressed, they  
 79. When the firefighters were told good news, they always  
 80. The students' cortisol levels and heart rates were affected when the researchers  
 81. In both experiments, negative information was processed better when the subjects

Questions 82-86

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

YES if the statement agrees with the claims of the writer

NO if the statement contradicts the claims of the writer

NOT GIVEN if it is impossible to say what the writer thinks about this

82. The tone of the content we post on social media tends to reflect the nature of the posts in our feeds.  
 83. Phones have a greater impact on our stress levels than other electronic media devices.  
 84. The more we read about a stressful public event on social media, the less able we are to take the information in.  
 85. Stress created by social media posts can lead us to take unnecessary precautions.  
 86. Our tendency to be affected by other people's moods can be used in a positive way.  
 87. Understanding emotional states guarantees successful influence on others' behaviour.

**Your answers:**

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| 73. | 74. | 75. | 76. | 77. |
| 78. | 79. | 80. | 81. | 82. |
| 83. | 84. | 85. | 86. | 87. |

#### Part 4. Read the text and do the tasks that follow.

##### The Geologic History of the Mediterranean

In 1970 geologists Kenneth J. Hsu and William B. F. Ryan were collecting research data while aboard the oceanographic research vessel *Glomar Challenger*. An objective of this particular cruise was to investigate the floor of the Mediterranean and to resolve questions about its geologic history. One question was related to evidence that the invertebrate fauna (animals without spines) of the Mediterranean had changed abruptly about 6 million years ago. Most of the older organisms were nearly wiped out, although a few hardy species survived. A few managed to migrate into the Atlantic. Somewhat later, the migrants returned, bringing new species with them. Why did the near extinction and migrations occur?

(I) Another task for the *Glomar Challenger*'s scientists was to try to determine the origin of the domelike masses buried deep beneath the Mediterranean seafloor. (II) These structures had been detected years earlier by echo-sounding instruments, but they had never been penetrated in the course of drilling. (III) Were they salt domes such as are common along the United States Gulf Coast, and if so, why should there have been so much solid crystalline salt beneath the floor of the Mediterranean? (IV)

With questions such as these clearly before them, the scientists aboard the *Glomar Challenger* proceeded to the Mediterranean to search for the answers. On August 23, 1970, they recovered a sample. The sample consisted of pebbles of hardened sediment that had once been soft, deep-sea mud, as well as granules of gypsum<sup>1</sup> and fragments of volcanic rock. **Not a single pebble was found that might have indicated that the pebbles came from the nearby continent**. In the days following, samples of solid gypsum were repeatedly brought on deck as drilling operations penetrated the seafloor. Furthermore, the gypsum was found to possess peculiarities of composition and structure that suggested it had formed on desert flats. Sediment above and below

the gypsum layer contained tiny marine fossils, indicating open ocean conditions. As they drilled into the central and deepest part of the Mediterranean basin, the scientists took solid, shiny, crystalline salt from the core barrel. Interbedded with the salt were thin layers of what appeared to be windblown silt.

The time had come to formulate a hypothesis. The investigators theorized that about 20 million years ago, the Mediterranean was a broad seaway linked to the Atlantic by two narrow straits. Crustal movements closed the straits, and the landlocked Mediterranean began to evaporate. Increasing salinity caused by the evaporation resulted in the extermination of **scores** of invertebrate species. Only a few organisms especially tolerant of very salty conditions remained. As evaporation continued, the remaining brine (salt water) became so dense that the calcium sulfate of the hard layer was precipitated. In the central deeper part of the basin, the last of the brine evaporated to precipitate more soluble sodium chloride (salt). Later, under the weight of overlying sediments, this salt flowed plastically upward to form salt domes. Before this happened, however, the Mediterranean was a vast desert 3,000 meters deep. Then, about 5.5 million years ago came the deluge. As a result of crustal adjustments and faulting, the Strait of Gibraltar, where the Mediterranean now connects to the Atlantic, opened, and water cascaded spectacularly back into the Mediterranean.

Turbulent waters tore into the hardened salt flats, broke them up, and ground them into the pebbles observed in the first sample taken by the Challenger. As the basin was refilled, normal marine organisms returned. Soon layers of oceanic ooze began to accumulate above the old hard layer.

The salt and gypsum, the faunal changes, and the unusual gravel provided abundant evidence that the Mediterranean was once a desert.

88. Which of the following is NOT mentioned in paragraph 1 as a change that occurred in the fauna of the Mediterranean?

- A. Most invertebrate species disappeared during a wave of extinctions.
- B. A few hardy species wiped out many of the Mediterranean's invertebrates.
- C. Some invertebrates migrated to the Atlantic Ocean.
- D. New species of fauna populated the Mediterranean when the old migrants returned.

89. What does the author imply by saying "**Not a single pebble was found that might have indicated that the pebbles came from the nearby continent**"?

A. The most obvious explanation for the origin of the pebbles was not supported by the evidence.

- B. The geologists did not find as many pebbles as they expected.
- C. The geologists were looking for a particular kind of pebble.
- D. The different pebbles could not have come from only one source.

90. What is the main purpose of paragraph 3?

A. To describe the physical evidence collected by Hsu and Ryan  
B. To explain why some of the questions posed earlier in the passage could not be answered by the findings of the Glomar Challenger

- C. To evaluate techniques used by Hsu and Ryan to explore the sea floor
- D. To describe the most difficult problems faced by the Glomar Challenger expedition

91. According to paragraph 4, which of the following was responsible for the evaporation of the Mediterranean's waters?

- A. The movements of Earth's crust
- B. The accumulation of sediment layers
- C. Changes in the water level of the Atlantic Ocean
- D. Changes in Earth's temperature

92. The word "**scores**" in the passage is closest in meaning to

- A. members

- B. large numbers
- C. populations
- D. different types

93. According to paragraph 4, what caused most invertebrate species in the Mediterranean to become extinct?

- A. The evaporation of chemicals necessary for their survival
- B. Crustal movements that connected the Mediterranean to the saltier Atlantic
- C. The migration of new species through the narrow straits
- D. Their inability to tolerate the increasing salt content of the Mediterranean

94. In paragraph 2 of the passage, there is a missing sentence.

**Thus, scientists had information about the shape of the domes but not about their chemical composition and origin.**

Where would the sentence best fit?

**Your answers:**

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
| 88. | 89. | 90. | 91. | 92. | 93. | 94. |
|-----|-----|-----|-----|-----|-----|-----|

**For questions 95 - 100, complete the summary with no more than TWO words taken from the passage for each space. Write your answers in the corresponding numbered boxes provided.**

In 1970, scientists aboard the Glomar Challenger investigated the Mediterranean's geologic past, focusing on changes in its (95) \_\_\_\_\_ and the origin of mysterious (96) \_\_\_\_\_ beneath the seafloor. Evidence showed that many species disappeared around 6 million years ago, while some migrated and later returned. Core samples revealed gypsum formed on (97) \_\_\_\_\_, along with layers of volcanic material and crystalline (98) \_\_\_\_\_, suggesting dramatic environmental change.

To explain these findings, researchers proposed a (99) \_\_\_\_\_ that the Mediterranean was once a landlocked sea that gradually evaporated due to tectonic movements. Rising salinity eliminated most marine life, and mineral deposits accumulated as the basin dried into a deep desert. Later, geological shifts reopened the connection to the Atlantic, allowing water to rush back in.

As the basin was (100) \_\_\_\_\_, marine conditions were restored, and new sediment layers formed. Altogether, geological and biological evidence strongly supports the idea that the Mediterranean once experienced a dramatic cycle of desiccation and renewal.

**Your answers:**

|     |     |      |
|-----|-----|------|
| 95. | 96. | 97.  |
| 98. | 99. | 100. |

**Part 5: In the following text, six paragraphs have been removed. Below the extract you will find the six removed paragraphs PLUS one paragraph which doesn't fit. Choose from the sentences (A-G) the one which fits each gap. The first one has been done as an example. Write your answers in the corresponding numbered boxes provided. (10 pts)**

In 1842, more than a century before the start of the information age, in a brilliant flash of penetrating insight, Ada Lovelace had a glimpse of the future. She saw that with suitable modifications, Charles Babbage's proposed Analytical Engine would be capable of much more than its intended purpose of simple mathematical calculation.

Ada Lovelace was born in London in 1815, the daughter of the poet Byron. She never met her father: her parents separated a month after her birth, he left England four months later and eventually died abroad. Her upbringing was unusual for the period, in that her mother was

determined she should have a thorough grounding in logic, mathematics and the sciences. To that end, Ada was provided with a succession of tutors.

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Among their number was the mathematician, philosopher, inventor and Professor of Mathematics at the University of Cambridge, Charles Babbage, one of several people credited with being ‘the father of the computer’. His importance lies in the fact that he invented several devices which paved the way for modern computers. Lovelace was introduced to him while still in her late teens, and soon afterwards visited his workshop to see his ‘Difference Engine’.

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The device was incomplete, weighed over a ton and was not yet working. Despite these limitations, Lovelace grasped its true significance; whereas Babbage saw it purely being used to increase the accuracy of mathematical processes, it was Lovelace who saw its far greater potential.

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At this event, Babbage described his proposal for a more advanced computing machine, his Analytical Engine. A mathematician who was present subsequently wrote up the ideas in a memoir in French, and Babbage asked Lovelace to translate it. Because she understood the machine so well, at his request she added a comprehensive set of notes to her translation, much longer than the memoir itself. It was these notes that have established her importance in the development of computers.

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In this insight, she anticipated the development of both modern computing and artificial intelligence by more than a hundred years. Again, she saw that the Analytical Engine could be used to do much more than even Babbage perceived.

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The memoir, and Lovelace’s notes, attracted little attention at the time, but that does not detract from her achievement, the essence of which is that she grasped how to create physical instances of wholly abstract concepts. In any computer, it is the software which gives the hardware the ability to perform its wonders, a totally new, and very strange, idea for the time.

### Missing paragraphs

A. Neither this prototype nor his later devices were completed in his lifetime, although working versions have since been built. However, his efforts to construct them aroused widespread interest, particularly when he attended a scientific conference in Italy and presented his work.

B. Of course, the same could be said of many scientists: Leonardo da Vinci, for instance, designed flying machines several centuries before they became a reality, but at least he had the advantage of having seen birds flying.

C. Unlike him, Lovelace realised that it could be set to execute any logically coherent sequence of instructions. This in effect made her the world’s first computer programmer, as she demonstrated in the document.

D. In them, as well as describing the revolutionary implications of Babbage’s ideas, Lovelace wrote out the first computer program and made the sensational suggestion that such a device should be able to compose music if a suitable set of rules could be devised.

E. One of these was Augustus de Morgan, a leading mathematician of the time. De Morgan soon confirmed Ada’s outstanding mathematical ability and, importantly, communicated his admiration to his scientific friends. As a result, long before women were eligible to study for degrees, Ada came to move in no less her own with the leading scientists of the day.

F. This mechanical calculator was Babbage’s first invention. He, like others before him, had realised that logarithmic tables – at that time produced by human ‘calculators’, and notoriously full of errors – could be generated by machinery.

**Your answers:**



This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

**Part 2: Write an essay of about 350 words on the following topic. (30 pts)**

Some argue that digital devices should be largely excluded from classrooms in favor of traditional learning methods such as paper books and handwriting, as they undermine students' focus and academic performance. Others contend that technology is indispensable and that schools must actively develop students' digital literacy to prepare them for modern society.

Discuss both views and give your own opinion.

[illegible]

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.