HỘI CÁC TRƯỜNG THPT CHUYÊN
VÙNG DH&ĐB BẮC BỘ

ĐỀ CHÍNH THỨC

(Đề thi gồm 18 trang)

KỲ THI CHỌN HỌC SINH GIỎI
LẦN THỨ XIV, NĂM 2023
ĐỀ THI MÔN: TIẾNG ANH - LỚP 11

Thời gian làm bài: 180 phút (không kể thời gian giao đề)

Ngày thi: 15 tháng 7 năm 2023

Điểm		**Giám khảo số 1** *(Họ tên, chữ ký)*	**Giám khảo số 2** *(Họ tên, chữ ký)*	**Số phách** *(Do chủ tịch HĐ ghi)*
Bằng số	**Bằng chữ**			

(Thí sinh làm bài trực tiếp vào đề thi theo hướng dẫn ở mỗi câu)

I. LISTENING (50 points)

HƯỚNG DẪN PHẦN THI NGHE HIỂU

- *Bài nghe gồm 4 phần; mỗi phần được nghe 2 lần, mỗi lần cách nhau 05 giây; mở đầu và kết thúc mỗi phần nghe có tín hiệu. Thí sinh có 20 giây để đọc mỗi phần câu hỏi.*
- *Mở đầu và kết thúc bài nghe có tín hiệu nhạc. Thí sinh có 03 phút để hoàn chỉnh bài trước tín hiệu nhạc kết thúc bài nghe.*
- *Mọi hướng dẫn cho thí sinh (bằng tiếng Anh) đã có trong bài nghe.*

Part 1. Listen to a talk about a chance to rethink the world and decide whether these statements are True (T), False (F) or Not Given (NG). Write your answers in the corresponding numbered boxes provided. (10 points)

1. Less than half of English population survived the Black Death after the first wave of the pandemic.
2. The collapse of the exploitative feudal system could attribute to the shortage of agricultural land.
3. Troop commuting and military factories provided a nesting ground for the spread of Spanish flu.
4. In1948, the establishment of the Britain's National Health Service resulted from the demands for a unified medical service.
5. Online learning will replace traditional schooling in the wake of the Covid-19 pandemic.

Your answers:

1.	2.	3.	4.	5.

Part 2: For questions 6-10, listen to the recording and answer the questions. Write NO MORE THAN THREE WORDS AND/OR A NUMBER taken from the recording. (10 points)

6. What number does he give for the current world population?

_____

7. How much land would be needed for organic farming in comparison to the current situation?

_____

8. What other solution from farms does he suggest?

_____

9. Which three cereal crops does he say are the most important?

_____

10. Apart from seeds and machinery, what factors assisted in boosting yields in farming?

_____

Part 3. For questions 11-15, part of a discussion in which a developer, Faye Mannia, and an environmentalist, Peter Green, talk about a new government-run trial. Choose the answer (A, B, C or D which fits best according to what you hear and write your answers in the corresponding numbered boxes provided. (10 points)

11. At the beginning of the discussion, it can be inferred that Faye believes the listeners

A. are unfamiliar with current property values.

B. are confident their government always acts wisely.

C. have no knowledge of the trials whatsoever.

D may be prejudiced against her opinion.

12. Peter says that the new government plan

A. has not been supported by a single scientist.

B. should be delayed by at least ten years.

C. will result in a decrease in the diversity of wildlife.

D. may cause property prices to rise too quickly.

13. Faye mentions the iron ore mine in Brazil

A. to highlight the dangers of allowing poverty to spread.

B. to illustrate the need to respond to changing priorities.

C. to point out that development is occurring on a global scale.

D. to show the importance of increasing employment opportunities.

14. Peter fears that those involved in the new plan

A. will use it to their advantage.

B. are unlikely to make any compromises during negotiations.

C. will break the law and go unpunished.

D. cannot be trusted to pay for the habitats they destroy.

15. Faye accuses environmentalists of

A. not appreciating historic buildings. **B**. ignoring the wishes of the general public.

C. using the media to attack developers. **D**. having a lack of foresight.

Your answers:

11.	12.	13.	14.	15.

Part 4: For question 16-25 listen to the recording and then complete the summary below by writing NO MORE THAN THREE WORDS AND/OR A NUMBER for each answer. Write your answers in the corresponding numbered boxes provided. (20 points)

- Apple has just (16) _____ its most ambitious product in years – a headset that lets people experience both (17) _____ reality.
- Vision Pro which is the biggest new hardware since the Apple Watch allows you to see through like (18) _____ our head that (19) _____ the real world with the virtual world.
- Apple is going for the mainstream consumers, looking to (20) _____ from beyond that just niche gaming space.
- The big question is that the price of this product hasn't been announced. However, it is rumoured that it should be (21) _____.
- Apple is running a big risk with this product because of their unproven demand and (22) _____ that is way beyond what's currently on the market.
- Virtually every (23) _____ is focusing on AI, which raises the questions of how Apple will (24) _____ it into their software.
- The (25) _____ for such a big, costly device hasn't been shown among consumers regardless of Apple's strategies.

Your answers:

16.	21.
17.	22.
18.	23.
19.	24.
20.	25.

II. LEXICO- GRAMMAR (30 points)

Part 1. For questions 26-45, choose the correct answer A, B, C, or D to complete each of the following questions. Write your answers in the corresponding numbered boxes provided. (20 points)

26. Google is the first major companies to _____ refuse China's demands for control.

A. blissfully **B.** sorely **C.** steadfastly **D.** woefully

27. The politician sought to _____ himself with the local community by actively participating in charitable events and supporting local initiatives.

A. ingratiate **B**. explicate **C**. espouse **D**. persevere

28. Patrick is too _____ a gambler to resist placing a bet on the final game.

A. instant **B**. spontaneous **C**. compulsive **D**. continuous

29. Mike decided that election to the local council would provide a _____ to a career in national politics.

A. milestone **B**. springboard **C**. highway **D**. turning point

30. The two of them didn't exactly become friends but achieved a sort of competitive _____.

A. unanimity **B**. symbiosis **C**. coexistence **D**. alliance

31. Unlike his friends who also rose to stardom when they were still teenagers, Andy didn't have any _____ but became even more modest.

A. airs and graces **B**. beer and skittles **C**. cock and bull **D**. nudge and wink

32. Tabloid magazines still exist for the reason that most people enjoy _____ gossips about celebrities' private lives.

A. juicy **B**. meaty **C**. fruity **D**. fleshy

33. How sad it is to see with your own eyes the squalor and poverty that lay behind the glittering _____ of Dubai.

A. facade **B**. antenna **C**. masquerade **D**. camouflage

34. It may be _____ or hopelessly out of touch, but if you don't have a rosy outlook, you don't belong here.

A. scatterbrained **B.** lamebrained **C.** peabrained **D.** harebrained

35. It would set a bad _____ if we changed the rules just for one student.

A. precaution **B**. infringement **C**. precedent **D**. manifestation

36. I am not sure I can answer that. I have only thought about it in the _____ before.

A. general **B**. hypothetical **C**. indefinite **D**. abstract

37. My secretary left me in the _____ last month and I haven't found a replacement yet.

A. rock **B**. lurch **C**. face **D**. fire

38. I heard _____ that Jack has been dropped from the basket team.

A. in the woods **B**. on the grapevine

C. under your feet **D**. on the olive branch

39. I know it works in theory, but try putting it into _____and you'll find out it's a failure.

A. operation **B**. exercise **C**. performance **D**. procedure

40. Large cities like New York are usually _____when it comes to adopting new technology.

A. before the wind **B**. beyond depth **C**. above bend **D**. ahead of the curve

41. This project is _____ for the level of this class.

A. too much really hard **B**. much too really hard

C. really much too hard **D**. really hard too much

42. On his desk _____, which he usually sits in front of and looks at.

A. stood the picture of us **B.** the picture of us stands

C. standing the picture of us **D**. stands the picture of us

43. We all decreed that _____.

A. there be an end to their quarrel **B.** their quarrel should put an end to

C. they ended their quarrel then **D.** their quarrel be coming to an end

44. It's difficult to emerge from such a scandal_____.

A. with your reputation still intact **B.** with your reputation still being intact

C. when your reputation still intact **D.** without keeping your reputation intact

45. Jane is out in the garden mulling _____ a problem to do _____ work.

A. over/ with **B**. away/ without **C**. in/to **D**. into/for

Your answers:

26.	27.	28.	29.	30.
31.	32.	33.	34.	35.
36.	37.	38.	39.	40.
41.	42.	43.	44.	45.

Part 2. For questions 46-55, write the correct form of each bracketed word in each sentence. Write your answers in the boxes provided. (10 points)

46. I believe he has committed a(n) _____ sin, so his punishment is well-deserved. (**PARDON**)

47. Viet Nam went through the _____ process and became an independent country. (**COLONY**)

48. There is a strong smell of _____ in the hospital. (**INFECT**)

49. High _____ among suppliers, distributors and customers via Internet is promoting the development of e-commerce in Vietnam. (**OPERATE**)

50. "What do you expect from your future wife, Mr. Robson?" - "I'd like one that is faithful and _____ so that she can fulfil all my requests." (**SUBMIT**)

51. She has a softly _____ voice that would melt anyone listening to her singing. (**FLUENT**)

52. Along the avenue, all the trees were of the same height and were _____. (**DISTANCE**)

53. Alternative energy strategies such as _____ panels can be used to teach about electricity and how it is produced. (**VOLT**)

54. The bank is _____ and will be unable to live up to its obligations. (**SOLVE**)

55. Discrimination against women is deeply _____ in our society and demands drastic measures from the government to change. (**BED**)

Your answers:

46.	47.	48.	49.
50.	51.	52.	53
54.	55.		

III. READING (60 points)

Part 1. ***For questions 56 – 65, read the passage and fill each of the following numbered blanks with ONE suitable word. Write your answers in the boxes provided. (15 points)***

Global English

Global English exists as a political and cultural reality. Many misguided theories attempt to explain why the English language should have succeeded internationally, whilst (56) _____ have not. Is it because there is (57) _____ inherently logical or beautiful about the structure of English? Does its simple grammar make it easy to learn? Such ideas are misconceived. Latin was (58) _____ a major international language, despite having a complicated grammatical structure, and English also presents learners with all manner of real difficulties, (59) _____ least its spelling system. Ease of learning, (60) _____, has little to do with it. After all, children learn to speak their mother tongue in approximately the same period of time, (61) _____ of their language. English has spread not so much for linguistic reasons, but rather because it has often found (62) _____ in the right place, at the right time. Since the 1960s, two major developments have (63) _____ to strengthening this global (64) _____. Firstly, in a number of countries, English is now used in addition to national or regional languages. As well as this, an electronic revolution has taken place. It is estimated that (65) _____ the region of 80% of worldwide electronic communication is now in English.

Your answers:

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

Part 2: For questions 66-75, read the following text and choose the correct answer A, B, C or D. Write your answers in the boxes provided. (10 points)

A popular enlightenment

Alternative medicine has never enjoyed such popularity and respect as it does today. Therapies once dubbed 'pseudoscience' or 'quackery' are now typically referred to as 'alternative', 'complementary' or 'holistic'. Practices that used to circulate on the fringes are now accepted as mainstream. But the rise of alternative medicine poses a problem for defenders of science. Many see the fight-back as a lost cause, but I cannot share this view because the factors that allow quackery to prosper can and are being harnessed for a counter-revolution in defense of science itself.

In the past, those exploring alternative lifestyles joined groups of like-minded people and subscribed to counter-cultural magazines. They now participate in online communities and surf the Internet, where they encounter alternative websites and blogs by the dozen, but also come across mainstream scientific viewpoints. In other words, the defense of science is also increasingly being undertaken by members of the public because the web has proved to be a crucial mobilising instrument for pro-science activists. Such defense was once conducted primarily by scholars; today the battle is often fought at an individual level via cut-and-thrust debate in blog postings. This social phenomenon of 'angry nerds' and 'guerrilla bloggers', dedicated to defending evidence-based medicine and challenging quackery, is important. Rather than relying on scientists to defend the boundaries of science, we are seeing a much more socially embedded struggle - a popular enlightenment project. Can such a project work? Reasserting goals of progress through reason and evidence is one thing, but whether it has any effect remains an open question. How easy is it to persuade people through factual corrections?

The answer seems to depend a great deal on the individual. For example, according to recent research, providing people who are ideologically committed to a particular view with incongruent information can backfire by causing them to dig their heels in and support their original argument even more strongly. This problem is a general one. A substantial body of psychological research suggests that humans tend to seek out and evaluate information that reinforces their existing views. The digital revolution has exacerbated the problem because, as journalist Farhad Manjoo writes, "whenever you want; seek out and discuss, in exhaustive and insular detail, the kind of news that pleases you; and indulge your political, social or scientific theories… among people who feel exactly the same way'.

I believe such pessimism goes too far, though. **[A]** However, the world has yet to enter what political scientist Michael Barkun of Syracuse in University in New York calls 'complete epistemological pluralism'. **[B]** Indeed, the fact that quacks keep trying to get the imprimatur of science for their discredited ideas, by trying to publish their work in peer-viewed journals, for examples, speaks to the continued public prestige and power of science. **[C]** Furthermore, their support base is far from fixed in stone. Some people are so committed to unorthodox views that they cannot be moved, but they are the exception. **[D]** In general, people motivated to explore the 'cultic milieu' - that fluid countercultural space in which alternative therapies and conspiracy theories flourish - are open to changing their minds.

In his seminal work on the cultic milieu, sociologist Colin Campbell of York University in the UK, stresses that it is not a space where firm opinions are held but rather a 'society of seekers' - people who 'do not necessarily cease seeking when a revealed truth is offered to them'. This creates the space

for pro-science activists to compete for attention. When they do so, the Internet becomes a tougher place for people to sequestrate themselves in a comfortable cocoon of the like-minded. This is good news for the enlightenment project. People may be biased in favour of interpretations that align with their prejudices but this does not mean that they just believe what they like. Faced with information of sufficient quantity or clarity, people do change their minds.

So the challenge for the pro-science movement is to keep an active and credible online presence. The web is an anarchic space where defense of science ranges from ridicule and banter to serious discussion about findings along with links to scientific articles and reports. It looks, in other words, like that space that used to be the preserve of the cultic milieu - but with greater informational depth. The weapons of science and reason are still very much in contention.

66. The writer expresses disapproval of scientists who

A. use pejorative language to refer to alternative medicine.

B. abandon attempts to challenge claims made by alternative medicine.

C. overlook the significance of alternative medicine.

D. embrace the ideas put forward by proponents of alternative medicine.

67. According to the passage, which of the following is NOT mentioned?

A. the transition of alternative medicine from 'quackery' to mainstream

B. the expansion of pro-science groups from academic settings to online platforms

C. the diversification of magazines into counter-culture

D. the inclusion of laypersons into supporters of science

68. Which of the following statements best clarifies the sentence **"<u>The answer seems to depend a great deal on the individual</u>**" in the passage?

A. People who have amour propre are narrow-minded and therefore unable to accept contradictory proof, unlike their open-minded counterparts.

B. Ideologues are devoid of the ability to change their mind, whereas those eager to explore the 'cultic milieu' are more susceptible to changes in opinions.

C. Those with idiocy are resistant to shifts in their opinions, but whoever motivated enough are open to leave their viewpoints changed.

D. People with an idée fixe are confined to their personal unconventional viewpoints, while those interested in a counter-cultural space are more willing to modify their opinions.

69. The use of the quote by a journalist in the passage suggests that the Internet is a meeting place for

A. users seeking reinforcement of their ideologies.

B. people with very fixed viewpoints to support each other.

C. pro-science activists attempting to defame alternative medicine.

D. amateurs desiring to corroborate their beliefs with facts.

70. According to the passage, how the Internet has assisted pro-scientists in their attempts to defend their principles?

A. It has become a place for discussions about complementary medicine held by its supporters.

B. It has tarnished the fame of alternative medicine and eased criticism levelled at science-based medicine.

C. It has engedered contradictory opinions, not just anologous ones.

D. It has fuelled passion for science in scholars and scientists alike.

71. Advocates of discredited ideas about complementary medicine

A. are consistent in the arguments they put forward.

B. take an interest in winning health professionals'approval.

C. feel that they are given a raw deal by the scientific community.

D. are inclined to ignore the evidence to the contrary produced by scientists.

72. Which of the following square brackets [A], [B], [C], or [D] best indicates where in the paragraph the sentence ***"The boundary between mainstream and alternative knowledge may have become more permeable."*** can be inserted?

A. [A] **B**. [B] **C**. [C] **D**. [D]

73. From the passage, it can be inferred that

A. Concepts behind alternative medicine have been roundly castigated by people of the public.

B. Attempts to belabor the point that complementary medicine remains 'quackery' have been to no avail.

C. The social phenomenon instigated by debates between alternative and science-based medicine has culminated in the victory for the latter.

D. The enlightenment project entails people with prejudices altering their views.

74. The writer emphasizes the need for pro-scientists to

A. cite relevant data on any discussions on the Internet.

B. avoid getting engaged in heated discussions with laypersons on the Internet.

C. maintain the integrity and exposure of scientific viewpoints on the Internet.

D. recede from any discussion which is getting more fiery.

75. It can be deduced from the passage that the author

A. takes an optimistic view of science and reasoned arguments.

B. consents to the action of retreating into a world of like-minded people.

C. yearns to avert the flourishing of science-based medicine.

D. objects to the use of the Internet for the sake of science.

Your answers:

66.	67.	68.	69.	70.
71.	72.	73.	74.	75.

Part 3. For questions 76 - 88, read the following passage and do the tasks that follow. (13 points)

WHAT DOES THE FUTURE HOLD?

The prospects for humanity and for the world as a whole are somewhere between glorious and dire. It is hard to be much more precise. By 'glorious', I mean that our descendants – all who are born on to this Earth – could live very comfortably and securely, and could continue to do so for as long as the Earth can support life, which should be for a very long time indeed. We should at least be thinking in terms of the next million years. Furthermore, our descendants could continue to enjoy the company of other species – establishing a much better relationship with them than we have now. Other animals need not live in constant fear of us. Many of those fellow species now seem bound to become extinct, but a significant proportion could and should continue to live alongside us. Such a future may seem ideal, and so it is. Yet I do not believe it is fanciful. There is nothing in the physical fabric of the Earth or in our own biology to suggest that this is not possible.

‘Dire’ means that we human beings could be in deep trouble within the next few centuries, living but also dying in large numbers in political terror and from starvation, while huge numbers of our fellow creatures would simply disappear, leaving only the ones that we find convenient – chickens, cattle – or that we can’t shake off, like flies and mice. I’m taking it to be self-evident that glory is preferable.

Our future is not entirely in our own hands because the Earth has its own rules, is part of the solar system and is neither stable nor innately safe. Other planets in the solar system are quite beyond habitation, because their temperature is far too high or too low to be endured, and ours, too, in principle could tip either way. Even relatively unspectacular changes in the atmosphere could do the trick. The core of the Earth is hot, which in many ways is good for living creatures, but every now and again, the molten rock bursts through volcanoes on the surface. Among the biggest volcanic eruptions in recent memory was Mount St Helens, in the USA, which threw out a cubic kilometre of ash – fortunately in an area where very few people live. In 1815, Tambora (in present-day Indonesia) expelled so much ash into the upper atmosphere that climatic effects seriously harmed food production around the world for season after season. Entire civilisations have been destroyed by volcanoes.

Yet nothing we have so far experienced shows what volcanoes can really do. Yellowstone National Park in the USA occupies the caldera (the crater formed when a volcano collapses) of an exceedingly ancient volcano of extraordinary magnitude. Modern surveys show that its centre is now rising. Sometime in the next 200 million years, Yellowstone could erupt again, and when it does, the whole world will be transformed. Yellowstone could erupt tomorrow. But there’s a very good chance that it will give us another million years, and that surely is enough to be going on with. It seems sensible to assume that this will be the ease.

The universe at large is dangerous, too: in particular, we share the sky with vast numbers of asteroids, and every now and again, they come into our planet’s atmosphere. An asteroid the size of a small island, hitting the Earth at 15,000 kilometres an hour (a relatively modest speed by the standards of heavenly 6 bodies), would strike the ocean bed like a rock in a puddle, send a tidal wave around the world as high as a small mountain and as fast as a jumbo jet, and propel us into an ice age that could last for centuries. There are plans to head off such disasters (including rockets to push approaching asteroids into new trajectories), but in truth it’s down to luck. On the other hand, the archaeological and the fossil evidence shows that no truly devastating asteroid has struck since the one that seems to have accounted for the extinction of the dinosaurs 65 million years ago. So again, there seems no immediate reason for despair. The Earth is indeed an uncertain place, in an uncertain universe, but with average luck, it should do us well enough. If the world does become inhospitable in the next few thousand or million years, then it will probably be our own fault. In short, despite the underlying uncertainly, our own future and that of our fellow creatures is very much in our own hands.

Given average luck on the geological and the cosmic scale, the difference between glory and disaster will be made, and is being made, by politics. Certain kinds of political systems and strategies would predispose us to long-term survival (and indeed to comfort and security and the pleasure of being alive), while others would take us more and more frenetically towards collapse. The broad point is, though, that we need to look at ourselves – humanity – and at the world in general in a quite new light. Our material problems are fundamentally those of biology. We need to think, and we need our

politicians to think, biologically. Do that, and take the ideas seriously, and we are in with a chance. Ignore biology and we and our fellow creatures haven't a hope.

For questions 76-81, decide whether the following statements are True (T), False (F) or Not Given (NG). Write your answers in the boxes provided.

76. It appears that man and a vast number of species of animals will co-exist comfortably in the next millennia.

77. There is more likelihood that human beings will survive another million years due to the nature of the Earth and human biology.

78. An eruption by Yellowstone is less likely to be more destructive than previous volcanic eruptions.

79. There is a greater chance of the Earth being bit by small asteroids than by large ones.

80. If the world becomes uninhabitable, it is likely to be as a result of a natural disaster.

81. Seemingly, politicians currently in power will not change their way of thinking.

For questions 82-87, write NO MORE THAN THREE WORDS taken from the passage to complete the following paragraph. Write your answers in the corresponding numbered boxes provided.

The Earth could become uninhabitable, like other planets, through a major change in the **(82)** _____. Volcanic eruptions of **(83)** _____ can lead to shortages of **(84)** _____ in a wide area. An asteroid hitting the Earth could create a **(85)** _____ that would result in a new **(86)** _____. Plans are being made to use **(87)** _____ to deflect asteroids heading for the Earth.

88. ***Choose the correct letter, A, B, C or D. Write your answer in the corresponding numbered boxes provided. What is the writer's purpose in the reading passage?***

A. to present a range of opinions currently held by scientists

B. to argue the need for a general change in behaviour

C. to propose a new theory about the causes of natural disasters

D. to prove that generally held beliefs about the future are mistaken

Your answers:

76.	77.	78.	79.	80.
81.	82.	83.	84.	85.
86.	87.	88.		

Part 4: In the passage below, seven paragraphs have been removed. For questions 89-95, read the passage and choose from the paragraphs A-H the one which fits each gap. There is ONE extra paragraph which you do not need to use. Write your answers in the corresponding numbered boxes provided. (7 points)

Mathematical Games

The majority of video games designed to provide mathematics learning fail educationally for one of two reasons. One of these is that the designers know how to design and create video games but know little about mathematics education (in particular, how people learn mathematics) and in many cases don't seem to know what maths really is. The second is that they have a reasonable sense of

mathematics and have some familiarity with the basic principles of mathematics education, but do not have sufficient education in video game design.

89. _____

To create an engaging game that also supports good mathematics learning requires a great deal more: a complete understanding of what mathematics is, how and why people learn and do mathematics, how to get and keep them engaged in their learning and how to represent the mathematics on the platform on which the game will be played. That too demands much more than just superficial knowledge.

90. _____

Following the tradition of textbook publishing, that figure does not include any payment to the authors who essentially create the entire pedagogic framework and content. Nor does it take into account the money required for the fees payable to the project's academic advisory board, without whom the project is unlikely to succeed.

91. _____

Though this term is specific to this context, its concept has been well known in maths education circles for over twenty years and is recognised as the biggest obstacle to practical mastery of middle school mathematics. To understand the precise implication of what the term entails and appreciate how pervasive it is, it is necessary to examine the role symbolic expressions play in mathematics.

92. _____

But just how essential are those symbols? Perhaps this question can best be answered through a comparison with music. Until the invention of recording devices, symbolic musical notation was the only way to store and distribute music, yet no one ever confuses music with a musical score. In the same way as music is created and enjoyed within the mind, mathematics is created and carried out in the mind. At its heart, mathematics is a mental activity and one that throughout human history has proved to be highly beneficial to life and society.

93. _____

So, why is it that many people believe mathematics itself is symbolic manipulation? And if the answer is that it results from our classroom experiences, why is mathematics taught that way? The answer to that second question is that mathematics is taught symbolically because for many centuries symbolic representation has been the most effective way to record mathematics and pass on mathematical knowledge to others.

94. _____

While it is true to say that people sometimes scribble down symbols when they do everyday maths in a real-life context, for the most part, what they write down are the facts needed to start with, perhaps the intermediate results along the way and, if they get far enough, the final answer at the end. But the actual mathematical part is primarily a thinking process as even when people are asked to 'show all their work'; the collection of symbolic expressions they write down is not necessarily the same as the process that goes on in their minds when they do the maths correctly. In fact, people can become highly skilled at doing mental mathematics and yet be hopeless at its symbolic representations.

95. _____

It is simply not the case that ordinary people cannot do everyday maths. Rather, they cannot do symbolic everyday maths. From this observation, it can be concluded that the symbol barrier is huge and pervasive. For the entire history of organised mathematics instruction, where there has been no alternative to using static, symbolic expressions on flat surfaces to store and distribute mathematical knowledge, that barrier has prevented millions of people from becoming proficient in a cognitive skill set on a par in importance with the ability to read and write.

Missing paragraphs:

A. So, given the effort and expense to make a maths game, is it worth pursuing? From an educational perspective, it certainly is. That being said, it must be acknowledged that the vast majority of maths video games on the market essentially capitalise on just one educationally important aspect of video games - their power to fully engage players in a single activity for long periods of time. Only a fraction of them take advantage of another educationally powerful feature of the medium - their ability to overcome the 'symbol barrier'.

B. With routine mathematics, the symbolic barrier emerges. In their 1993 book Street Mathematics and School Mathematics Terezinha Nunes, David William Carraher and Analucia Dias Schliemann describe research conducted in the street markets of Recife, Brazil. This and other studies have shown that when people are regularly faced with everyday mathematics in their daily lives, they master it to an astonishing 98 per cent accuracy. Yet when faced with the very same problems (from a mathematical perspective) presented in the traditional symbols, their performance drops to a mere 35 to 40 per cent accuracy.

C. In both these subjects, the symbols are merely static representations on a flat surface of dynamic mental processes. Just as the trained musician can look at a musical score and hear the music come alive in his or her head, the trained mathematician can look at a page of symbolic mathematics and have that mathematics come alive in the mind.

D. In other words, designing and building a good mathematics educational video game, whether it is a massively multiplayer online game (MMO) or a single smartphone app, requires a team of experts from several different disciplines. That means it takes a lot of time and a substantial budget. For a simple-looking, casual game that runs on an iPad, it can take about nine months from start to finish and cost upwards of a quarter of a million.

E. Yet tens of thousands of years of evolution have produced the most adaptive device on the planet: the human brain. Trying to design a computer system to adapt to human cognitive activity is like trying to build a cart that will draw a horse. It can be done, but it will not work nearly as well as building a cart that a horse can pull.

F. To build a successful video game requires an understanding, at a deep level, of what constitutes a game, how and why people play games, what holds their attention, and how they interact with the different platforms on which the game will be played. That is a lot of deep knowledge.

G. By and large, the public identifies doing maths with writing symbols, often obscure symbols. Why do people readily make this identification? A large part of the explanation is that much of the time they spent in the school mathematics classroom was devoted to the development of correct symbolic manipulation skills, and symbol-filled books are the standard way to store and distribute mathematical knowledge. So we have become used to the fact that mathematics is presented by way of symbolic expressions.

H. Still, given the comparison with music, is it possible to break free of that historical legacy? It would appear that it is, as long as a distinction is made between the advanced mathematics used by scientists and engineers and the kind of maths important to ordinary people. Advanced mathematics, on the other hand, is intrinsically symbolic, whereas everyday maths is not and such activities as counting, proportional reasoning and problem solving can be done mentally.

Your answers:

89.	90.	91.	92.	93.	94.	95.

Part 5. For questions 96-105, you are going to read an article about the future of genetic engineering. Choose from the sections (A-E) the correct answer to each of the question. The sections may be chosen more than once. Write your answers in the corresponding boxes provided. (15 points)

GENETIC ENGINEERING - THE WAY OF THE FUTURE?

To examine the issue, we've asked the opinions of six experts

A. Dr Robert Rodriguez – bioethics lecturer

Is it so surprising that there is widespread public suspicion and mistrust? Incidentally, the public's negative view of GM cannot be attributed to ignorance because mistrust tends to increase with education on the topic. This is despite an ever-growing body of research that can find no evidence of harm. Of course, this doesn't mean there isn't any, even if we assume the best intentions of the people involved; it's a subject that is not completely understood. Anyway why should the public assume that best intentions are behind the research? Look at the past. Look what happened with BSE, better known as mad cow disease. Agricultural practices did not protect the public, it endangered them. Look back further to the pesticide DDT. We do not have a track record that encourages public confidence.

B. Dr Lisa Khan – geographer

There is no doubt that people are starving today in many parts of the world. And with global population growth projections – we seem set to add a billion people every twelve to fifteen years – there is absolutely no debate that we will be unable to feed the population in the future unless things change fundamentally. Genetically modifying crops is certainly one way to achieve this change. But it is not the only way, and it may not be the most effective. Take, for comparison, the "green revolution" of the 1950s, which greatly increased productivity by using new strains of crops, new mechanical tools and petrochemical pesticides and fertilizers; it has created its own set of problems. People may starve because of lack of food, but the food is there; other things – social or economic issues – stand in the way of it getting where it needs to be.

C. Dr Sylvia Johnson – doctor

I would like to point out that GM organisms have made very important contributions to medicine. I'm not talking about GM foods; that is a separate issue. But if we consider insulin being produced in tobacco plants, there is a tremendous benefit. A difficult to obtain substance is made available safely at a lower cost. The plants are cultivated in a greenhouse, under controlled circumstances, the product they synthesise is purified in a stringent process, and the modified plants are destroyed; there is very little risk involved. The potential for creating a wide range of difficult- to- produce and life-saving proteins and pharmaceuticals, even vaccines, at costs low enough for third world utilization should not be ignored.

D. Dr Gary Wilson – population geneticist

These days there is little question about gene flow. If you plant GM crops, the genes will end up in non-GM crops, in wild weed populations, in soil bacteria; they cannot be contained. They will move; they have moved. There are studies that prove it. In the early research, they were citing probabilities of pollination events or gene transfer events that were miniscule; these studies were used to support the

cause of GM. But if you have enough chances, if you cultivate enough acres, the improbable will happen. And it has. And it will continue to. For a population geneticist there is no surprise here. At the risk of being incendiary, I will say the conclusions drawn from this early research could be considered an example of willful misinterpretation, of statistical probability. Well, it has become a profitable industry.

E. Dr. Daphne Alexander – ecologist

I would like to mention the monarch butterfly. This insect carries out a unique migration from the Northern US and Canada all the way to Mexico, and is reliant on a range of environmental and temporal patterns throughout this whole geographic area. It came out a while ago that one strain of GM corn that was engineered to contain a toxin, originally from bacteria, to kill any insect that attempted to eat its leaves, also expressed this toxin in its pollen. It was not supposed to do this, other strains did not. And this pollen was falling on the leaves of the milkweed plants, on which the monarch larvae are dependent for a food source, killing or stunting the larvae. This is an example of the kind of unintended consequence that is impossible to foresee.

F. Dr. Andrew Wright – lawyer

In the EU, by law, food products that contain GM ingredients must be labeled. But it is not quite as simple as that. In fact, it is not simple at all; it is unbelievably convoluted. Tomato sauce made from GM tomatoes is simple; but it must be labeled. But what about meat, milk, cheese, or eggs produced from animals fed GM corn or soya in their feed? The feed must be labeled, but not the final product. And what about enzymes, like those used to make cheese for example, that have been produced by GM microorganisms? Furthermore, there can legally be up to 9 percent contamination with GM products, with no labeling required, as long as the producer can prove it was accidental and unavoidable! I would urge everyone to read widely; there is no other way to keep informed and a lot has already transpired, while most of us were unaware.

Which person gives each of the following opinions about genetic engineering?

96. _____ There being no proof, what the authorities say is incredible.

97. _____ Unintentional presence of GM items in food is not regulated.

98. _____ A problem can be dealt with in several ways.

99. _____The drawbacks are clearly overshadowed by the benefits in certain situations.

100. _____GM genes are already present in wild populations.

101. _____ Some people may have misled others when they did not interpret data correctly.

102. _____Current research might be incorrect.

103. _____Developments have not been taken notice of.

104. _____Even unlikely events happen.

105. _____It is impossible to account for all the possible effects in advance.

Your answers:

96.	97.	98.	99.	100.	101.	102.	103.	104.	105.

IV. WRITING (60 points)

Part 1. Read the following extract and use your own words to summarize it. Your summary should be between 100 and 120 words. (15 points)

NATIONALISM

Until about 1800, people in most of the world were loyal to the places where they and their families lived. Most did not see themselves as part of a larger state or nation. But the rise of industry and the need to raise armies prompted rulers to try to inspire a sense of national identity and common cause. This drive toward lifting the interests of the nation above those of individuals or groups became known as nationalism. Many historians date modern nationalism from the French Revolution in the late 1700s. The French monarchy was replaced by a republic, in which the citizens no longer were expected to see themselves as subjects of the king. Rather, they found their identity in the abstract concept of France as their mother country. The process was repeated throughout Europe during the next century.

The philosophical basis of nationalism is that the nation is the most important unit of social and economic life to which all other human activities and desires must yield. Helping to secure national pride are flags, foods, sports, traditions, histories, folk tales, music, literature, and culture. There may even be a national religion. Nationalists point to criteria that distinguish nations from each other, such as a common language, culture, and value. These traits are often represented by a single ethnic group to which almost all citizens of a nation belong. Many nations, however, host different ethnic groups side by side, sometimes with violent or politically disruptive results.

Some ethnic groups refuse to recognize their nation, seeking to secede in order to rule themselves. Separatist movements in Quebec, Canada, and in the Basque region of Spain have been active for many years but have not yet succeeded.

Requiring that all speak the same language has been an important means of enforcing national identity. New nations often attempt to outlaw minority languages. The national language tends to be the one spoken by the upper classes, resulting in the high-status language replacing the low-status ones.

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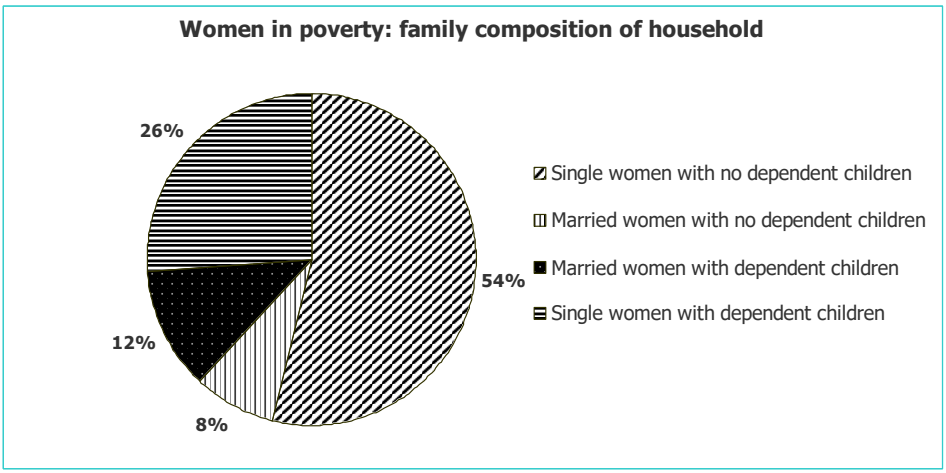
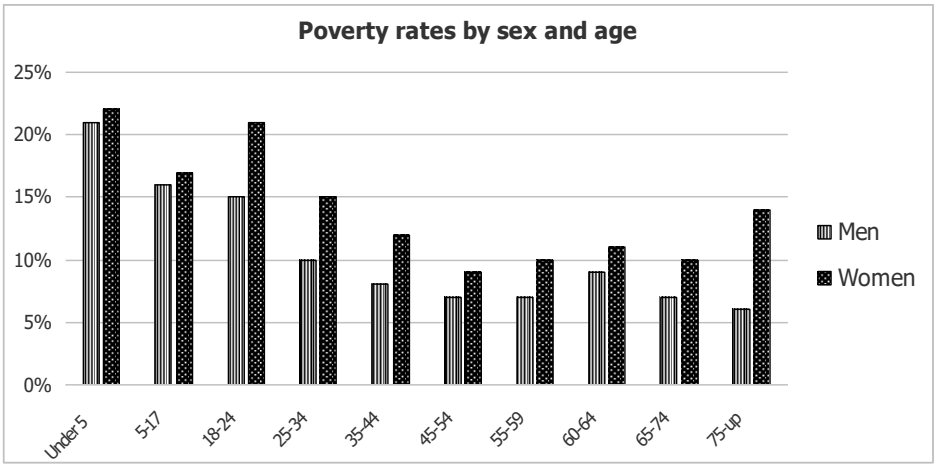
Part 2. The pie chart shows the percentage of women in poverty and the bar chart shows poverty rates by sex and age. They are from the United States in 2010.

Summarize the information by selecting and reporting the main features, and make comparisons where relevant. Write at least 150 words.





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Part 3. **Essay writing (30 points)**

Write an essay of about 350 words on the following topic.

Some people think that using traditions as attractions for money-making will destroy our culture, but others think that there is nothing wrong with attracting tourists that way.

Discuss both views and give your own opinion.

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(Thí sinh không được sử dụng tài liệu. Cán bộ coi thi không giải thích gì thêm.)

Họ và tên thí sinh:.....Số báo danh: .....