

Etapă județeană / a sectoarelor municipiului București a olimpiadelor naționale școlare – 2025

**Probă scrisă
Limba engleză**

CLASA a XII-a - SECȚIUNEA B

- Toate subiectele sunt obligatorii.
- Nu se acordă puncte din oficiu.
- Timpul efectiv de lucru este de 3 ore.

SUBIECTUL A – USE OF ENGLISH (40 points)

I. Read the paragraph below and do the tasks that follow.

10 points

Is Prince William related to Shakespeare?

Is Prince William an **embryonic** bard? A research team in Germany claim they have found evidence that he is descended from Shakespeare and may thus have inherited literary genius.

Frustrated by a lack of first-hand evidence, researchers trying to piece together details of the Bard's life have long turned to his sonnets as the only words of his that might be autobiographical. For centuries, academics have been trying to solve the **tantalising** riddle of the 'Dark Lady', the mystery person to whom Shakespeare addressed his sonnets. Those involved in the most recent detective hunt have come up with some evidence that the Bard's bloodline is linked to the youngest generation of the royal family.

This bold claim is supported by clues hidden in paintings of a previously unidentified noblewoman, to be named by a German academic team as Shakespeare's dark-haired lover. They were assisted by forensic experts from the German police.

But who was the Dark Lady? So many rival theories have been advanced that some scholars have abandoned the search. In fact, the answer may be staring us in the face. According to one eminent academic, a portrait of the mystery woman is on show in Hampton Court Palace in London, where it is known as *The Persian Lady*. She argues that the pregnant woman depicted there is Elizabeth Vernon, a lady-in-waiting to Queen Elizabeth, who, after an **illicit** affair with Shakespeare, went on to marry his patron. It seems that this woman, Elizabeth, third Countess of Southampton, bore Shakespeare a daughter, Penelope, who grew up to marry William, second Baron Spencer, and their descendant was the father of Diana, Princess of Wales and grandfather of Prince William.

So far, Prince William's talents have shown themselves in the sports field. But who knows? His uncle, Earl Spencer, did after all receive world-wide acclaim for his address at the funeral of his sister.

(adapted from an article by N. Hellen and C. Gascoigne in *The Sunday Times*)

A. Choose the right synonym for the words given below, according to their meaning in the text.

3 points

- | | | | | |
|-----------------------|---------------|---------------|------------------|-----------------|
| 1. embryonic | a. emblematic | b. developing | c. infant | d. elementary |
| 2. tantalising | a. inciting | b. wearying | c. disheartening | d. exciting |
| 3. illicit | a. implicit | b. corrupt | c. illiberal | d. illegitimate |

B. Rephrase the following sentences so as to preserve the meaning. Use the word given WITHOUT changing it.

3 points

1. A research team in Germany claim they have found evidence that he is descended from Shakespeare. **TO**
Evidence a research team in Germany.

2. Frustrated by a lack of first-hand evidence, researchers trying to piece together details of the Bard's life have long turned to his sonnets. **BEEN**
If researchers trying to piece together details of the Bard's life to his sonnets.

3. It seems that this woman, Elizabeth, third Countess of Southampton, bore Shakespeare a daughter. **TO**
This woman, Elizabeth, third Countess of Southampton,

C. Four words have been removed from the summary of the text above. Choose the right words to fill in the summary. There are four extra words which you do not need to use. 4 points

improbable speculative bondage cited lineage alleged certain ascertained

A German research team claims Prince William may be a descendant of William Shakespeare, possibly inheriting his literary talent. The theory connects Shakespeare to the royal family through his 1 ____ affair with Elizabeth Vernon, identified as the "Dark Lady" of his sonnets. They suggest she bore Shakespeare a daughter who married into the Spencer family, linking him to Princess Diana. A painting at Hampton Court Palace, *The Persian Lady*, is 2 ____ as evidence. While 3 ____, the claim highlights a possible literary 4 ____ in the royal family.

II. For questions 1-5, think of one word only which can be used appropriately in all three sentences. Write only the missing word on your answer sheet. 10 points

1. The hotel will guests an additional fee for parking.
The prosecutor dropped the against the innocent young man.
The knight will bravely into the heart of the fierce battle.
2. Advertisements ... other companies' products down are banned in some countries.
The new production system should be up and ... by the end of January.
That play must have been ... for at least thirty years now.
3. She was seen to her weight uncomfortably, waiting for the long meeting.
His work begins at six every weekday without exception.
They tried to responsibility for the mistake onto me.
4. I think she's now working in a restaurant in the Chinese ... of the town.
You're lucky to have such a big office; mine's about a ... the size of yours.
The company's results are expected to improve in the final ... of this year.
5. The championship lasted for hours and thrilled every spectator watching intently.
Her dress is a perfect for the formal occasion.
His impressive skills the requirements listed in the job description.

III. For questions 1-10, read the text below and look carefully at each line. Some of the lines are correct and some have a word that should not be there. If a line is correct, put a tick (✓) by the number on your answer sheet. If a line has a word which should not be there, write the word down next to the number on your answer sheet.

10 points

- | | | |
|----|-------------------|---|
| 0 | <u>of</u> | Daylight saving time involves setting of the clocks one hour |
| 00 | <u>✓</u> | ahead of standard time for a given period of time so that night |
| 1 | <u> </u> | falls down one hour later and there is an extra hour of daylight in |
| 2 | <u> </u> | the evening. It is observed by the majority of the states in the USA, |
| 3 | <u> </u> | even although some states may remain with standard time for the |
| 4 | <u> </u> | daylight saving time period, which begins on the first Sunday in |
| 5 | <u> </u> | April and ends on the last of Sunday in October. The USA being |
| 6 | <u> </u> | a too vast country, some states straddle more than one time zone |
| 7 | <u> </u> | and, in this case, may be use daylight saving time in one time |
| 8 | <u> </u> | zone and standard time in the other. As the main |
| 9 | <u> </u> | one reason for the system is the conservation of energy |
| 10 | <u> </u> | by reducing the need to use some lighting in the evening, it has, |
| | | not surprisingly, often been adopted during wartime. |

II. Translate the following text into English.

10 points

Timp de mai multe minute Ștefan își încordă atenția să audă și să-și dea seama ce își spuneau toți acești oameni când râdeau, când arătau uimiți, încântați sau când expresiile chipurilor lor deveneau sarcastice. La început își spuse că nimic neobișnuit... Despre cunoștințe comune, despre afaceri sau aluzii la afaceri, despre întâmplări cunoscute numai de ei (și asta le stârnea cel mai adesea râsul)... totuși o pânză sau parcă un zid de vată se punea între urechea lui și cuvintele lor. Erau aceleași cuvinte, dar ele reflectau o viață care îi scăpa, lumea lor de bucureșteni, legați prin fire invizibile și prin timpul pe care îl trăiseră împreună, chiar dacă ei înșiși nu se cunoșteau toți unii pe alții... Le era însă de ajuns un cuvânt, un nume și legătura se făcea imediat...

Ștefan renunță și simți că în realitate el nici n-a plecat din sat, sau mai bine zis el n-o cunoaște aici decât pe Luchi; dădu pe gât mai multe cupe de șampanie și îi șopti fetei la ureche că o iubește. Ea, amestecată ca și el de murmurul care se întetise din această grădină, îi zâmbi și îi strânse mâna... [...]

Fie că suntem bogați sau săraci, puternici pe această lume sau umili pe scara ierarhiilor, toți simțim însă (și asta ne face egali) că singurul lucru care ne poate face fericiți este contopirea cu ora miraculoasă a tinereții.

(Marin Preda, *Delirul*)

SUBIECTUL B – INTEGRATED SKILLS (60 points)

I. Five paragraphs have been removed from the following text. Choose from the paragraphs A-F the one which fits each gap 1-5. There is one extra paragraph which you do not need to use. Write your answer on your answer sheet.

10 points

AI could soon be making major scientific discoveries. A machine could even win a Nobel Prize one day

It may sound strange, but future Nobel Prizes, and other scientific achievement awards, one day might well be given out to intelligent machines. It could come down just to technicalities and legalities. Swedish chemist Alfred Nobel established the prestigious prizes in his will, written in 1895, a year before his death. He created a fund whose interests would be distributed annually “to those who, during the preceding year, have conferred the greatest benefit to humankind”. Nobel explained how to divide those interests in equal parts, to be given, “one part to the person who made the most important discovery or invention in the field of physics... the most important chemical discovery... the most important discovery within the domain of physiology or medicine”. [1.....]

The Nobel peace prize can be awarded to institutions and associations, so could it include other non-human entities, such as an AI system? Whether an AI is entitled to legal personhood is one important question in all this. Another is whether intelligent machines can make scientific contributions worthy of one of Nobel's prestigious prizes.

I do not consider either condition to be impossible and I am not alone. A group of scientists at the UK's Alan Turing Institute has already set this as a grand challenge for AI. They have said: “We invite the community to join us in developing AI systems capable of making Nobel quality scientific discoveries.” According to the challenge, these advances by an AI would be made “highly autonomously at a level comparable, and possibly superior, to the best human scientists by 2050”. [2.....] There is a whole spectrum in between these two conditions, which is already being explored.

In a few weeks, the computer scientists Demis Hassabis and John Jumper of Google DeepMind will be presented with their Nobel medals for chemistry. The prize was awarded for the development of AI that can predict the structures of proteins from the order, or sequences, of their molecular building blocks, called amino acids. This had been a notoriously difficult problem in biology, with a history going back to at least the 1970s. But, in 2020, Hassabis and Jumper unveiled an AI system called AlphaFold2, which has enabled researchers to predict the structures of virtually all the 200 million proteins that have so far been identified.

The success of AlphaFold2 is no isolated case; there are analogous situations in other sciences. [3.....] It concluded that “AI-assisted researchers discover 44% more materials, resulting in a 39% increase in patent filings and a 17% rise in downstream product innovation”. The study found that these new materials possess relatively novel chemical structures and lead to more radical inventions. There is even recent evidence that drug candidates discovered by AI may be of better quality than those discovered by traditional means.

Should we consider these as “scientific contributions”? AI generally makes such discoveries through a process of systematic screening of different possibilities. It is a highly structured process that is just the kind of thing we would assume machines are good at. [4.....] These also led to Nobel prizes. So we should remember that tasks such as screening can make important contributions to science and are not something carried out only by machines.

So, can we imagine a machine going one step further, generating scientific hypotheses with a high degree of autonomy? Hypotheses are preliminary explanations for natural phenomena that can be tested by means of experiments. A hypothesis is a key stage in the scientific method, a kind of educated guess pending evidence from real testing. Furthermore, could the AI then go on to test its hypothesis and present the results to us in our own language? [5.....]

It seems very likely that AI will one day take an active part in scientific investigations. But will it be able to compete for Nobel prizes, perhaps as junior partners to humans? That remains to be seen. Even if a machine could one day win one of the science prizes, the literature prize should remain safely in the hands of humans. Or will it too be opened up to artificial intelligence? A recent scientific study compared human reactions to poetry generated by machines and poetry produced by humans. Its main finding was that people cannot distinguish between them, and “AI-generated poems were rated more favourably in qualities such as rhythm and beauty”. If there is a limit to what AI can achieve in what had been exclusively human fields of endeavour, we are currently struggling to find it.

- A. While some argue that AI-generated art lacks genuine creativity, its ability to augment human imagination is undeniable. Artists increasingly collaborate with AI, transforming the creative process into a dynamic interplay between human intuition and computational precision, redefining modern art.
- B. It may surprise you to know that this has been attempted already, within the domain of computer science research. In August, an international research group demonstrated an AI system that was able to carry out a scientific investigation, and even write a scientific paper describing the results.
- C. He also created prizes for the person responsible for the most outstanding work of literature and to the person who did most to advance fellowship among nations, oppose war and promote peace (the peace prize). What should we draw from the use of the term “person” in Alfred Nobel’s will?
- D. Such a milestone may be closer than we think. But it will depend on what we are prepared to consider as worthy scientific contributions. These can range from standard data analysis to generating whole new scientific explanations for observed phenomena.
- E. In 2023, researchers from the Massachusetts Institute of Technology (MIT) used AI to discover a novel class of compounds that can kill drug-resistant bacteria. Then, in 2024, major archaeological discoveries – in South America and in the Arabian Peninsula – were made using machine intelligence. Also this year, a study at Massachusetts Institute of Technology (MIT) tested the impact of AI in materials science research.
- F. But humans come up with scientific breakthroughs through the kind of innate creativity that a machine cannot emulate, right? Well, without trying to diminish the roles of great scientists, systematic screening – this time carried out by humans – was involved in the discovery of artemisinin as an important antimalarial treatment, and the discovery of prontosil – a crucial antibiotic.

II. You have participated in a classroom discussion about the potential applications of AI in education. Following this, your English teacher has asked you to write a proposal for the school head teacher suggesting three concrete ways in which AI could be used by students to enhance learning in three different school subjects, either during lessons or at home, mentioning in each case the benefits for the students. (250-280 words) 50 points