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| SỞ GD&ĐT PHÚ THỌ  **TRƯỜNG THPT CHUYÊN**  **HÙNG VƯƠNG**  *(Đề gồm: 06 trang)* | **ĐỀ KHẢO SÁT CHẤT LƯỢNG LẦN 2, NĂM HỌC 2024 - 2025**  **LỚP: 12; MÔN: TIẾNG ANH**  **Ngày 11 tháng 1 năm 2025**  *Thời gian làm bài: 50 phút.*  *(40 câu TNKQ)* |

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| Họ và tên: ............................................................................ | Số báo danh: ....... | **Mã đề 721** |

***Read the following passage about smart energy and mark the letter A, B, C or D on your answer sheet to indicate the best answer to each of the following questions.***

The human brain, a complex and intricate organ, remains a source of fascination and mystery. While we understand its basic functions, the **intricate** workings of intelligence continue to elude us. A recent study by neuroscientists at the University of Würzburg, published in the journal PNAS Nexus, sheds new light on this complex topic, suggesting that intelligence is not confined to specific brain regions, but rather emerges from the interconnectedness of the entire brain.

The researchers utilized data from the Human Connectome Project, a large-scale initiative that maps brain connections using fMRI scans. They analyzed the communication pathways between different brain regions in over 800 individuals, both at rest and during cognitive tasks. **Their** analysis focused on predicting intelligence scores based on the strength of these connections. While previous studies have achieved some success in predicting intelligence from brain connectivity, the Würzburg team sought to move beyond mere prediction and delve deeper into the underlying neural processes.

Their research identified three distinct types of intelligence: fluid intelligence, which involves problem-solving and abstract thinking; crystallized intelligence, which encompasses acquired knowledge and skills; and general intelligence, a combination of the two. **The study found that general intelligence was most accurately predicted from brain connectivity, followed by crystallized and then fluid intelligence**.

**[I]** The most significant finding was the importance of brain-wide connections in predicting intelligence. **[II]** Howerver, the Würzburg team proved that the strongest predictor of intelligence was the distribution of connections across the entire brain. **[III]** This suggests that intelligence is not a localized function but rather a global property of the brain, **originating in** the complex interplay of numerous interconnected regions. **[IV]**

These findings also challenge established theories of intelligence, which often focus on specific brain areas like the prefrontal cortex. The Würzburg study demonstrates that intelligence is a more complex phenomenon, involving a wider network of brain regions than previously thought. This research opens new avenues for understanding the neural basis of intelligence and highlights the importance of considering the whole brain in future investigations.

*(Adapted from Science Daily)*

**Question 1.** The word **intricate** in paragraph 1 is OPPOSITE in meaning to \_\_\_\_\_\_.

**A.** tricky **B.** simple **C.** difficult **D.** complex

**Question 2.** Which of the following best summarizes the second paragraph?

**A.** It explains how the researchers developed new intelligence tests to measure brain activity during rest.

**B.** The paragraph highlights how participants' cognitive performance shaped intelligence scores.

**C.** The second paragraph explains the study’s method, including fMRI scans and brain pathway analysis.

**D.** It primarily discusses the importance of crystallized intelligence in understanding brain functions.

**Question 3.** The word **Their** in paragraph 2 refers to \_\_\_\_\_\_.

**A.** the researchers **B.** Human Connectome Project

**C.** 800 individuals **D.** communication pathways

**Question 4.** Which sentence best paraphrases the underlined sentence in paragraph 3?

**A.** The study revealed that fluid intelligence is the best indicator of brain connectivity, while general and crystallized intelligence show weaker connections when examined.

**B.** Brain connectivity is a strong predictor of general intelligence, while crystallized and fluid intelligence can be used to predict for more accurate results.

**C.** Among the three types of intelligence, general intelligence had the strongest prediction accuracy based on brain connectivity, and fluid intelligence had the weakest.

**D.** Crystallized intelligence emerged as the strongest predictor of brain connectivity, while general and fluid intelligence followed in that order in term of accuracy.

**Question 5.** The word **originating in** in paragraph 4 can be best replaced by \_\_\_\_\_\_.

**A.** according to **B.** leading to **C.** emerging from **D.** engaging in

**Question 6.** Where in paragraph 4 does the following sentence best fit?

**“In earlier research, intelligence was demonstrated by examining the precise locations of individual connections.”**

**A.** [II] **B.** [I] **C.** [IV] **D.** [III]

**Question 7.** What can be inferred from the passage about future research on intelligence?

**A.** Researchers will shift towards analyzing intelligence by isolating individual brain regions.

**B.** The role of brain-wide connectivity will be increasingly important in understanding intelligence.

**C.** Future studies are likely to focus solely on the prefrontal cortex to predict intelligence.

**D.** The importance of brain connectivity will decrease as more specific areas are identified.

**Question 8.** Which of the following was the primary goal of the Würzburg research team beyond predicting intelligence?

**A.** To find the exact brain region responsible for general intelligence.

**B.** To develop new types of intelligence tests focusing on fluid.

**C.** To explore the neural processes underlying intelligence.

**D.** To compare brain activity during rest and physical activity.

**Question 9.** Which of the following is TRUE according to the passage?

**A.** Previous studies suggested intelligence could be linked to specific brain regions.

**B.** The Würzburg team worked for the Human Connectome Project at first.

**C.** Intelligence can be predicted solely by examining activity in the prefrontal cortex.

**D.** Data from over 800 individuals while working were analyzed in the study.

**Question 10.** Which of the following best summarises the passage?

**A.** The study suggests that intelligence is not limited to specific brain regions but arises from the overall connectivity of the brain, challenging previous theories.

**B.** A recent study highlights that general intelligence plays a more significant role in predicting overall intelligence than crystallized intelligence.

**C.** The Würzburg study focuses on understanding how brain scans during rest provide the most accurate measurements of intelligence.

**D.** Researchers at the University of Würzburg have found that intelligence can be accurately predicted by analyzing the prefrontal cortex through fMRI scans.

***Read the following passage about online dating and mark the letter A, B, C or D on your answer sheet to indicate the best answer to each of the following questions.***

The people of the longhouse lived in fortified villages in elevated areas that were easy to defend and were located near a water supply. Twenty-foot **palisades** surrounded a group of longhouses and acted as a defensive wall that also kept forest animals from foraging within the village.

The longhouse was the typical housing unit within the stockade. A number of families were housed within each longhouse, which varied in size from 20 by 16 feet to huge multiple-family structures of 60 by 18 feet. In the more populous villages, longhouses could be more than 300 feet long. **The longhouse was more than just a shelter; it was the basic unit upon which the entire society was constructed**.

In building the longhouse, a row of forked poles was placed in the ground, between four and five feet apart. Cross poles were lashed to the forked uprights to **construct** an arched roof. Slender poles or rafters were then secured to the roof frame, and traverse poles were added to further strengthen the overhead structure. Large pieces of bark were then tied to the frame. Elm, ash, fir or spruce trees were the usual sources of bark. An outer set of poles kept the bark in place on the sides and roof. Smoke holes were built into the roof at about twenty-foot intervals. Two families shared the stone-lined hearth beneath each smoke hole.

At each end of the longhouse was a door with a covering of animal hide or hinged bark **that** could be lifted up for entering and exiting. Along each inside wall were bunks that served as beds at night and benches in the day. Corn, dried fish, and other foods hung from overhead. The dwelling was compartmentalized to accommodate each family. At the front of the longhouse, over the door, carved images of clan symbols represented the families living there.

**Question 11.** The word “**palisades**” in paragraph 1 could be best replaced by \_\_\_\_\_\_.

**A.** ponds **B.** roads **C.** bridges **D.** fences

**Question 12.** Which of the following best paraphrases the underlined sentence in paragraph 2?

**A.** The largest longhouses could provide shelter to everyone who was a member of the society.

**B.** Everyone in the society had a role in building the longhouse because a variety of construction skills were needed.

**C.** The longhouse not only provided housing for families but also formed the foundation of the whole society.

**D.** The longhouse was basically a shelter that also served important functions related to the defense of the village.

**Question 13.** The word “**construct**” in paragraph 3 is OPPOSITE in meaning to \_\_\_\_\_\_.

**A.** distribute **B.** develop **C.** compose **D.** destroy

**Question 14.** Which of the following tree is NOT mentioned as one of the sources of bark?

**A.** palm **B.** elm **C.** spruce **D.** ash

**Question 15.** The word “**that**” in paragraph 4 refers to \_\_\_\_\_\_.

**A.** hinged bark **B.** covering **C.** door **D.** longhouse

**Question 16.** According to the passage, all of the following statements are true EXCEPT \_\_\_\_\_.

**A.** The longhouse was like an apartment building.

**B.** Each longhouse was a separate village.

**C.** People cooked and stored food in a longhouse.

**D.** The people of the longhouse belonged to clans.

**Question 17.** In which paragraph does the writer mention the dimensions of longhouses?

**A.** Paragraph 4 **B.** Paragraph 3 **C.** Paragraph 1 **D.** Paragraph 2

**Question 18.** In which paragraph does the writer mention the location of longhouses?

**A.** Paragraph 3 **B.** Paragraph 4 **C.** Paragraph 2 **D.** Paragraph 1

***Mark the letter A, B, C or D on your answer sheet to indicate the best arrangement of utterances or sentences to make a meaningful exchange or text in each of the following questions.***

**Question 19.**

1. Lily: That’s awesome! I’ve started buying more eco-friendly products too, like bamboo toothbrushes and reusable shopping bags. But I think the biggest change we can make is shifting to renewable energy sources. Have you thought about getting solar panels for your home?
2. Jake: I have actually! It’s something I’ve been researching. It’s not cheap upfront, but the long-term savings are huge. Plus, it feels good knowing you’re using clean energy. It’s a win-win situation.
3. Lily: Jake, I’ve been reading a lot about sustainability lately. It really makes me wonder how much we can do to protect our environment, you know?
4. Lily: Exactly! I feel like if more people started thinking about sustainability like that, we could make a real impact. And it's not just about energy – it's about how we consume resources, what we eat, and how we dispose of waste.
5. Jake: I totally agree, Lily. It’s crazy how little changes in our daily lives can make a big difference. I’ve been trying to reduce plastic use by carrying a reusable water bottle and avoiding single-use plastic bags. Every small step counts.

**A.** a-b-c-d-e **B.** c-e-d-b-a **C.** c-e-a-b-d **D.** e-b-a-c-d

**Question 20.**

1. However, social media can also create echo chambers, where users only encounter information that supports their beliefs. This can lead to polarization, as people become less exposed to differing viewpoints.
2. Despite its benefits, social media also spreads misinformation, which can mislead the public. It's important for users to critically assess the information they encounter online.
3. Social media plays a crucial role in shaping public opinion today. Platforms like Facebook, Twitter, and Instagram allow people to share news, opinions, and ideas instantly, making them powerful tools for influencing how we view the world.
4. One key way social media impacts public opinion is by spreading news quickly. Citizen journalism and viral posts often reach a wider audience faster than traditional media, shaping how people perceive events.
5. On the positive side, social media has become a platform for activism. Movements like #MeToo and Black Lives Matter gained momentum through online campaigns, highlighting social issues and driving change.

**A.** c-b-a-e-d **B.** c-d-a-e-b **C.** c-a-d-b-e **D.** c-e-a-d-b

**Question 21.** Dear Sophia,

1. I think I’m going to dedicate some time next weekend to going out and taking pictures. Who knows? Maybe I’ll even take some shots of the landscapes near your area!
2. I’ve always thought that if I had the time, I’d probably give it a shot. It’s fantastic that you’ve found a hobby that brings you joy and helps you unwind.
3. It was so great to hear from you! Your letter truly made me smile. I’m so happy to hear that you’ve discovered something you love. Painting, huh? That sounds amazing!
4. As for me, I have been thinking about photography a lot lately. You’re right—I’ve been so caught up in work and life that I haven’t had time to pick up my camera. But reading your letter made me realize how important it is to have something outside of work that brings me peace.
5. Thanks for the inspiration, Sophia. I can’t wait to hear more about your painting adventures.

Take care, LK

**A.** d-a-c-b-e **B.** a-b-c-d-e **C.** e-b-d-c-a **D.** c-b-a-d-e

**Question 22.**

1. Ben: Absolutely! I think traveling to a place where the culture is totally new would be amazing. It gives you a chance to step out of your comfort zone and learn so much. There’s always something new to discover.
2. Anna: Definitely! For me, I’ve always wanted to visit Japan. The blend of tradition and modernity there is so fascinating. I mean, where else can you visit ancient temples in the morning and shop in a futuristic city in the afternoon?
3. Anna: Hey, Ben, have you ever thought about traveling to a country that’s completely different from anything you've experienced before?

**A.** a-c-b **B.** a-b-c **C.** c-a-b **D.** c-b-a

**Question 23.**

1. One of the main benefits is having access to healthier food. Growing your own vegetables and herbs reduces the need for store-bought products, which are often sprayed with chemicals. It’s also more affordable in the long run.
2. Additionally, it helps improve the environment. Plants in cities can cool down the surroundings, absorb rainwater, and reduce pollution. This makes urban gardening an eco-friendly way to make cities more sustainable.
3. Finally, urban gardening brings communities together. People share tips and produce in community gardens, fostering social connections and collaboration. It’s a simple way to make urban living more enjoyable and connected.
4. Urban gardening is becoming popular in cities where space is limited. People are transforming balconies, rooftops, and windowsills into small gardens to grow their own food. This trend allows city dwellers to enjoy fresh, homegrown produce right at home.
5. Urban gardening is also great for mental health. Spending time with plants can reduce stress and help people relax. It provides a peaceful escape from the busy city life and gives a sense of achievement when plants grow successfully.

**A.** b-d-e-a-c **B.** e-a-b-d-c **C.** a-b-d-e-c **D.** d-a-e-b-c

***Read the following advertisement and mark the letter A, B, C or D on your answer sheet to indicate the option that best fits each of the numbered blanks.***

**The Extraordinary Life of Marie Curie: A Trailblazer in Science and Humanity**

* Marie Curie, the first woman to win a Nobel Prize and the only person to ever win Nobel Prizes in two different scientific fields, remains a beacon of **(24) \_\_\_\_\_\_** and brilliance. Her groundbreaking work with radioactivity not only revolutionized science but also **(25) \_\_\_\_\_\_** the way for advancements in medicine, energy, and countless other fields. Her legacy continues to inspire scientists and dreamers around the world, proving that passion, courage, and dedication can defy all odds.
* Curie’s discoveries and pioneering spirit broke barriers in a male-dominated field, establishing her as a global icon. Her **(26) \_\_\_\_\_\_** and medical breakthroughs have shaped the course of modern science.
* Curie spent years researching radioactive materials, **(27) \_\_\_\_\_\_** the course of scientific history. Her discoveries have provided invaluable knowledge about the nature of matter and energy tohumanity.
* Marie Curie was truly ahead **(28) \_\_\_\_\_\_** her time, her revolutionary ideas changing not only science but society’s understanding of gender and achievement. Curie’s work was about challenging conventional ideas and **(29) \_\_\_\_\_\_** new knowledge that could improve human lives.

**Question 24. A.** perseverance **B.** persevere **C.** perseverant **D.** perseveringly

**Question 25. A.** drove **B.** paved **C.** took **D.** made

**Question 26.**

**A.** achievements remarkable science **B.** remarkable science achievements

**C.** remarkable achievements science **D.** science remarkable achievements

**Question 27. A.** was change **B.** changing **C.** which changed **D.** changed

**Question 28. A.** with **B.** for **C.** of **D.** about

**Question 29. A.** seeking **B.** to seeking **C.** seek **D.** to seek

***Read the following leaflet and mark the letter A, B, C or D on your answer sheet to indicate the option that best fits each of the numbered blanks.***

**SMALL CHOICES, BIG IMPACT**

* Green living is more than just a buzzword—it's a movement that's **(30) \_\_\_\_\_\_** how we interact with the world. While other people might focus on reducing their energy consumption, **(31) \_\_\_\_\_\_** choose to make eco-friendly decisions in every part of their lives, from the food they eat to the products they buy.
* You don’t have to start big to make a difference. Just by **(32) \_\_\_\_\_\_** on plastic, you can reduce your environmental footprint. Whether you opt for reusable straws, carry your own coffee cup, or simply avoid single-use plastics, these small changes add up over time.
* At the core of green living is **(33) \_\_\_\_\_\_**, which means protecting our planet's most precious resources. Think of it like saving money in a bank—by saving water, energy, and natural habitats, we ensure that we have enough for the future.
* We often talk about personal responsibility, but **(34) \_\_\_\_\_\_** what we do individually, communities and businesses must also act.
* Sadly, a **(35) \_\_\_\_\_\_** of waste still ends up in our landfills and oceans every day, much of it due to packaging. But if we switch to a circular economy model—where products are designed to be reused or recycled—we can drastically reduce this waste and its harmful effects on the environment.

**Question 30. A.** transforming **B.** converting **C.** transferring **D.** conserving

**Question 31. A.** the others **B.** another **C.** other **D.** others

**Question 32. A.** cutting down **B.** getting off **C.** running out **D.** breaking in

**Question 33. A.** afforestation **B.** regeneration **C.** sustainability **D.** conservation

**Question 34. A.** in place of **B.** in addition to **C.** on account of **D.** with respect to

**Question 35. A.** vast amount **B.** large number **C.** large quantities **D.** high level

***Read the following passage about typhoon Yagi and mark the letter A, B, C or D on your answer sheet to indicate the option that best fits each of the numbered blanks.***

While many organisations put a considerable amount of effort into conservation projects, it is just not enough. Many of these efforts are effective short-term, but in the long term they simply do not work, due to a number of factors. Whilst there remains a demand for exotic animals in society, **(36) \_\_\_\_\_\_**. Poachers often target larger animals - animals which take a long time to repopulate, such as rhinos and elephants. The poachers are clever and use methods **(37) \_\_\_\_\_\_**. A recent case involved 300 elephants being killed in Zimbabwe's largest nature reserve. Poachers put poison in the water holes, **(38) \_\_\_\_\_\_**.

Captive breeding is perhaps the most effective method of protecting animals from extinction, but this also has its problems. First, **(39) \_\_\_\_\_\_**. Secondly, after several generations in captivity, species could become less able to survive in the wild. Would they know how to hunt for food? Or how not to be killed by other animals? However, the biggest problem **(40) \_\_\_\_\_\_**. Although conservation measures have helped to prevent humans from completely destroying all natural habitats, human invasion will always be one of the greatest risks to threatened species.

**Question 36.**

**A.** poachers and hunters will always hunt and endanger species in risk

**B.** endangered animals are always in danger of hunting and stealing

**C.** species that are endangered will still risk hunting or poaching

**D.** endangered species will always be at risk of being hunted and poached

**Question 37.**

**A.** that are sometimes not easy to detect all of them

**B.** of which are easily spotted and avoided

**C.** which is sometimes not possible to find out

**D.** which are sometimes completely undetectable

**Question 38.**

**A.** killing hundreds of elephants and destroying an entire ecosystem

**B.** that killed hundreds of elephants and broke their whole habitat

**C.** kill many elephants and destroy entirely their natural system

**D.** many elephants were killed and the whole ecosystem broke down

**Question 39.**

**A.** introducing diseases into wild populations when animals are released from captive environments

**B.** releasing animals from captive environments could introduce diseases into wild populations

**C.** wild populations could get diseases from animals while being released from captivity

**D.** captive animals could introduce diseases into wild environments when they are releasing

**Question 40.**

**A.** endangered species faced is the increase in human population

**B.** for endangered species are the growing human population

**C.** species are endangered because human population is rising

**D.** facing endangered species is the increasing human population

***------ THE END ------***