

Bright Stars High School

leeja

THIS IS AN EXAM

SET

D

Questions: 20

Duration: 45min

Section A: General Knowledge

This section covers a broad range of topics including history, geography, literature, and science. Answer all 10 questions.

1. Evaluate the following statement:

Statement:

The Great Wall of China is the only man-made structure visible from the Moon with the naked eye.

Based on the statement, is the claim true or false?

A. True

B. False

2. What is the chemical symbol for the element Gold?

A. Ag

B. Au

C. Pb

D. Fe

3. Which of the following is not a primary color in the additive color model (RGB)?

A. Yellow

B. Green

C. Blue

D. Red

4. What is the capital city of Australia?

A. Perth

B. Sydney

C. Canberra

D. Melbourne

5. Read the following passage about the Renaissance and answer the question below.

The Renaissance was a fervent period of European cultural, artistic, political, and economic 'rebirth' following the Middle Ages. Generally described as taking place from the 14th century to the 17th century, the Renaissance promoted the rediscovery of classical philosophy, literature, and art. One of the major catalysts for this movement was the invention of the printing press around 1440 by Johannes Gutenberg, which allowed for the wide dissemination of ideas and knowledge at an unprecedented scale.

According to the passage, what was a key driver of the Renaissance?

- A. The invention of the printing press.
- B. A series of major military victories.
- C. The decline of the Roman Empire.
- D. The discovery of new continents.

6. Consider the following statements about the planet Jupiter:

I:

It is the largest planet in our Solar System.

II:

It is a terrestrial planet, like Earth and Mars.

III:

The Great Red Spot is a massive, long-lasting storm in its atmosphere.

Which of the above statements is/are correct?

- A. I and III only
- B. I only
- C. I and II only
- D. I, II, and III

7. The ancient city of Rome was built on how many hills?

- A. Nine
- B. Seven
- C. Five
- D. Three

8. Match the author in Column A with their famous work in Column B.

- | | |
|------------------------|----------------------------|
| 1. George Orwell | - A. The Great Gatsby |
| 2. J.R.R. Tolkien | - B. To Kill a Mockingbird |
| 3. F. Scott Fitzgerald | - C. 1984 |
| 4. Harper Lee | - D. The Lord of the Rings |

- | | |
|-----------------------|-----------------------|
| A. 1-D, 2-C, 3-B, 4-A | B. 1-C, 2-A, 3-D, 4-B |
| C. 1-C, 2-D, 3-A, 4-B | D. 1-A, 2-B, 3-C, 4-D |

9. Which artist is famous for painting the Mona Lisa?

- | | |
|------------------|----------------------|
| A. Michelangelo | B. Vincent van Gogh |
| C. Pablo Picasso | D. Leonardo da Vinci |

10. In what year did the Titanic sink?

- | | |
|---------|---------|
| A. 1912 | B. 1918 |
| C. 1921 | D. 1905 |

Section B: Science and Technology

This section tests your knowledge of fundamental and modern concepts in science and technology.

11. Read the following paragraph and answer the question.

A blockchain is a decentralized, distributed, and oftentimes public, digital ledger consisting of records called blocks that is used to record transactions across many computers so that any involved block cannot be altered retroactively, without the alteration of all subsequent blocks. This allows the participants to verify and audit transactions independently and relatively inexpensively. A blockchain database is managed autonomously using a peer-to-peer network and a distributed timestamping server.

What is the primary function of a blockchain as described in the passage?

- A. To speed up computer processing.
- B. To store large video files.
- C. To act as a centralized authority for financial institutions.
- D. To provide a secure and immutable record of transactions.

12. Analyze the following statement about physics.

- A. The statement is incorrect because the law applies to objects in motion too.
- B. The statement is incorrect because the force must be unbalanced.
- C. The statement is correct.
- D. The statement is incorrect because it is Newton's Second Law.

13. From the list below, identify the item that is NOT a type of web browser.

Google Chrome
Mozilla Firefox
Microsoft Excel
Apple Safari

- | | |
|--------------------|--------------------|
| A. Google Chrome | B. Apple Safari |
| C. Microsoft Excel | D. Mozilla Firefox |

14. Match the technology company in Column A with its primary cloud computing platform in Column B.

- | | |
|--------------|----------------------------------|
| 1. Amazon | - A. Azure |
| 2. Microsoft | - B. Google Cloud Platform (GCP) |
| 3. Google | - C. Amazon Web Services (AWS) |

- | | |
|------------------|------------------|
| A. 1-C, 2-B, 3-A | B. 1-A, 2-C, 3-B |
| C. 1-B, 2-A, 3-C | D. 1-C, 2-A, 3-B |

15. What is considered the 'powerhouse' of the cell?

- | | |
|------------------|------------------|
| A. Mitochondrion | B. Cell Membrane |
| C. Nucleus | D. Ribosome |

16. In computer science, which data structure operates on a 'First-In, First-Out' (FIFO) principle?

- | | |
|----------|----------|
| A. Array | B. Stack |
| C. Tree | D. Queue |

17. Which layer of the OSI model is responsible for routing and forwarding IP packets?

- A. Layer 1 (Physical Layer)
- B. Layer 2 (Data Link Layer)
- C. Layer 4 (Transport Layer)
- D. Layer 3 (Network Layer)

18. What does the acronym 'HTTP' stand for?

- A. HyperText Transfer Protocol
- B. Hyperlink Text Transfer Protocol
- C. High-Tech Transfer Protocol
- D. HyperText Transmission Process

19. Which planet is known as the 'Red Planet'?

- | | |
|------------|----------|
| A. Jupiter | B. Mars |
| C. Saturn | D. Venus |

20. Which of the following is a renewable energy source?
- A. Solar

B. Natural Gas

C. Nuclear

D. Coal

* * * * **END** * * * *