

DUAT02 Model Question Paper

M.Sc. Computer Science / Data Analytics / Cyber Security / Artificial Intelligence / Data Science Programmes

Model Set - 10 MCQs

Instructions: Choose the most appropriate answer from the four options given.

1. A bag contains 6 red balls, 5 blue balls, and 4 green balls. If one ball is drawn at random, what is the probability that it is not blue?

- A. $\frac{1}{3}$
- B. $\frac{2}{3}$
- C. $\frac{5}{15}$
- D. $\frac{4}{15}$

2. In how many ways can 5 different books be arranged in a row?

- A. 25
- B. 60
- C. 100
- D. 120

3. Find the missing term in the series: 7, 14, 28, 56, ____, 224

- A. 84
- B. 98
- C. 112
- D. 128

4. If $A = \{1, 2, 3, 4, 5\}$ and $B = \{4, 5, 6, 7\}$, then $A \cap B$ is:

- A. $\{1, 2, 3\}$
- B. $\{4, 5\}$
- C. $\{6, 7\}$
- D. $\{1, 2, 3, 4, 5, 6, 7\}$

5. What is the determinant of the matrix $\begin{bmatrix} 3 & 2 \\ 6 & 4 \end{bmatrix}$?

- A. 0
- B. 6
- C. 8
- D. 12

6. If $P(A) = 0.5$, $P(B) = 0.3$, and A and B are independent events, then $P(A \cap B)$ is:

- A. 0.08
- B. 0.15
- C. 0.20
- D. 0.80

7. The slope of the line passing through the points (2, 3) and (6, 11) is:

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

8. Which of the following is the main memory of a computer?

- A. Hard disk
- B. RAM

- C. Pen drive
- D. DVD

9. The binary equivalent of the decimal number 13 is:

- A. 1010
- B. 1011
- C. 1101
- D. 1110

10. Which component of the CPU performs arithmetic and logical operations?

- A. Control Unit
- B. Arithmetic Logic Unit
- C. Cache Memory
- D. Input Unit