

SYLHET CADET COLLEGE

PRE-TEST EXAMINATION - 2023

CLASS: XII

MULTIPLE CHOICE QUESTIONS

STATISTICS SECOND PAPER

TIME – 25 minutes

FULL MARKS – 25

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Subject Code:

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[N.B. – Answer all the questions. Each question carries ONE mark. Block fully, with a black ball- point pen, the circle of the letter that stands for the correct/best answer in the “Answer sheet” for the Multiple Choice Questions Examination.]

Candidates are asked not to leave any mark or spot on the question paper.

1. **Three objects can be placed in 2 positions in – ways.**
(a) 3 (b) 4 (c) 6 (d) 8
2. **A die is thrown twice. This is called –**
(a) An experiment (b) sample space (c) A random experiment (d) A trial
3. **A coin is thrown thrice. How many outcomes are generated?**
(a) 3 (b) 4 (c) 8 (d) 9
4. **10 out of each 100 people in a city walk to the office. If one is picked randomly, what is the probability s/he does not walk to the office?**
(a) 0.95 (b) 0.10 (c) 0.90 (d) 0.01

Answer the next three questions using the following information

$$P(A) = \frac{1}{3}, P(B) = \frac{1}{2} \& P(A \cup B) = \frac{7}{12}$$

5. $P(A \cap B) = ?$
(a) $\frac{5}{12}$ (b) $\frac{1}{2}$ (c) $\frac{1}{4}$ (d) $\frac{15}{16}$
6. $P(A \cap \bar{B}) = ?$
(a) $\frac{1}{4}$ (b) $\frac{3}{4}$ (c) $\frac{5}{6}$ (d) $\frac{1}{12}$
7. **What is the probability that B occurs or A does not occur?**
(a) $\frac{3}{4}$ (b) $\frac{7}{12}$ (c) $\frac{5}{12}$ (d) $\frac{11}{12}$
8. **Possible value of probability**
i. -1 ii. 0.5 iii. 0
Which one is correct?
(a) i and ii (b) i and iii (c) ii and iii (d) i, ii and iii
9. **A set of sample points tabulated along with their respective probabilities is an example of –**
(a) Probability distribution (b) Probability function
(c) Frequency distribution (d) Marginal probability distribution

10. **Which one is a property of marginal probability density function?**

(a) $\int_x f(x^2) dx = 1$ (b) $\int_x f(x^2) dx = 0.5$ (c) $\int_x f(x) dx = 1$ (d) $P(x \geq 1)$

11. **Integrated value of $\frac{1}{4}x^4 -$**

(a) $\frac{1}{20}x^5$ (b) $\frac{1}{20}x^5 + c$ (c) $\frac{1}{5}x^4$ (d) $\frac{5}{4}x^5$

12. **Which one is NOT an example of a continuous random variable –**

(a) Weight (b) Height (c) Time (d) Size of television

Answer the next THREE questions using the following information

$$P(x) = \frac{x+1}{k}; x = 1, 2, 3, 4$$

13. **What is the value of k?**

(a) 10 (b) 11 (c) 14 (d) 15

14. $F(2) = -$

(a) $\frac{2}{14}$ (b) $\frac{3}{11}$ (c) $\frac{5}{14}$ (d) $\frac{5}{11}$

15. $P(x)$ **is a –**

(a) Joint probability distribution (b) Cumulative probability distribution
(c) Probability mass function (d) Probability Density function