

MYMENSINGH GIRLS’ CADET COLLEGE  
TEST EXAMINATION - 2025  
CLASS: XII  
MULTIPLE CHOICE QUESTIONS  
STATISTICS  
SECOND PAPER  
[According to the Syllabus of 2026]  
TIME – 25 minutes  
FULL MARKS – 25

Subject Code: 

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Set: 

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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. What is the probability that at least one item in a sample space will occur?  
(a) 0 (b) 0.5 (c) 1 (d) Undefined
2. 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

Answer the next two questions based on the following information

For two comprehensive events  $A$  and  $B$ ,  $P(A) = 0.8$ , and  $P(B) = 0.6$ ;

3. What is the value of  $P(A \cap B)$ ?  
(a) 0.1 (b) 0.2 (c) 0.3 (d) 0.4
4. The events  $A$  and  $B$  are –  
i. independent  
ii. dependent  
iii. non-disjoint
- Which one is correct?  
(a) i and ii (b) i and iii (c) ii and iii (d) i, ii and iii
5. Which one is an example of a discrete random variable?  
(a) The amount of liquid in a glass (b) Temperature readings at noon  
(c) Number of defective items in a batch (d) Exact age in years

Answer the next TWO questions based on the following information

X	0	1	2	3
P(X)	$\frac{1}{4}$	m	$\frac{1}{3}$	$\frac{1}{6}$

6. What is the value of m?  
(a)  $\frac{1}{3}$  (b)  $\frac{5}{12}$  (c)  $\frac{1}{4}$  (d)  $\frac{1}{6}$
7. Find  $F(2)$ .  
(a)  $\frac{1}{2}$  (b)  $\frac{3}{4}$  (c)  $\frac{5}{6}$  (d)  $\frac{2}{3}$
8. If  $y = ax + b$ , what is the value of  $V(y)$ ?  
(a)  $aV(X)$  (b)  $a^2V(X)$  (c)  $V(X)$  (d)  $a^2$
9. If  $P(x) = \frac{1}{n}; x = 1, 2, 3, \dots, n$ , what is the value of  $E(X)$ ?  
(a)  $\frac{n}{2}$  (b)  $\frac{n-1}{2}$  (c)  $\frac{n+1}{2}$  (d)  $n + 1$
10. If  $E(X^2) = 13$  and  $V(X) = 4$ , what is  $E(X)$ ?  
(a) 2 (b) 3 (c) 4 (d) 5
11. What is the Variance of Binomial Distribution?  
(a) np (b) npq (c) nq (d)  $\sqrt{npq}$

12. **The characteristics of binomial distribution–**

- i.  $E(X) > V(X)$
- ii.  $E(X) = V(X)$
- iii.  $E(X) = np$

**Which one is correct?**

- (a) i and ii                      (b) i and iii                      (c) ii and iii                      (d) i, ii and iii

13. **X is a Poisson variate.  $P(2) = P(4)$ . What is the value of the parameter?**

- (a) 12                      (b) 3.46                      (c) 3.6                      (d) 4

14. **Mean of a Poisson variate is a. What is its standard deviation?**

- (a) 0                      (b) a                      (c)  $a^{\frac{1}{2}}$                       (d)  $a^2$

15. **What is the probability of a certain value of the Normal distribution?**

- (a) 0                      (b) 1                      (c) 0.5                      (d) 0.1

16. **What is the probability of a certain value of the Normal distribution?**

- (a) 0                      (b) 1                      (c) 0.5                      (d) 0.1

“You can have data without information, but you cannot have information without data.”  
- Daniel Keys Moran