MRD-XI-18 (A) P-399

STATISTICS (Part-I)

(Fresh/New Course)

Total Time: 3:00 Hours | Total Marks: 75

Note: There are three sections in this paper i.e. Section A, B & C. **VERSION : A**

Time Allowed: 20 Minutes | **"Section-A"** | Marks: 15

INSTRUCTIONS:
- Attempt this section on the MCQs Answer Sheet only.
- Use black ball point or marker for shading only one circle for correct option of a question.
- No mark will be awarded for cutting, erasing, over writing and multiple circles shading.

Q. 1:- Choose the correct option i.e. A,B,C, or D.

1. The average score of a cricket player is an example of.....
   (A) Descriptive Statistics (B) Inferential Statistics (C) Bothe A & B (D) None
2. Classification on the basis of attributes/qualitative characteristics is called.....classification.
   (A) Numerical (B) Descriptive (C) Chronological (D) Bothe A & B
3. Midpoint of the class 3.5 – 10.5 is.....
   (A) 3.5 (B) 10.5 (C) 14 (D) 7
4. The sum of deviations from mean is always.....
   (A) Mean (B) Zero (C) Median (D) 1
5. Median of 2,4,8,6,10 is.....
   (A) 2 (B) 8 (C) 10 (D) 6
6. ..... is the measure of dispersion.
   (A) Mean (B) GM (C) Median (D) Range
7. The variance of 5,5,5,5,5,5, is.....
   (A) Zero (B) 5 (C) 25 (D) 6
8. For mesokurtic distribution, the value of b_2 is.....
   (A) 0 (B) 1 (C) 3 (D) None
9. Coefficient of variation CV is infinite if ..... is zero.
   (A) S.D (B) Variance (C) $\bar{X}$ (D) None
10. The index number for base period is always equal to .....
    (A) 0 (B) 100 (C) 1 (D) None
11. In .....price index number the base period quantities are used as weights.
    (A) Laspeyre's (B) Paasche's (C) Marshall (D) None
12. Any subset of the sample space is called.....
    (A) Population (B) Parameter (C) Event (D) None
13. If A and B are independent events then $P(A \cap B)$ =.....
    (A) P(A) + P(B) (B) P(A) (C) P(B) (D) P(A). P(B)
14. P(S) = ...
    (A) 1 (B) 0 (C) Infinity (D) 1.5
15. For a discrete probability distribution the sum of all probabilities is equal to .....
    (A) 1 (B) 0 (C) Bothe A & B (D) None

"Section-B"

Marks: 40

Q. 2:- Write short answers of any TEN (10) of the following parts. Each part carries equal marks.

(i) Differentiate with example between Descriptive and Inferential statistics.

(ii) Differentiate between the primary and secondary data.

(iii) Define Arithmetic mean. Also write the formula for calculating AM by step deviation method.

(iv) Compute median of the data 2,3,7,10,5,13,0

(v) In a certain factory a unit work is completed by A in 10 minutes, by B in 12 minutes and by C in 15 minutes. What is the H.M of their working?

(vi) Define quartile deviation and coefficient quartile deviation.

(vii) Find the coefficient of variation for x = 2,7,9

(viii) Find skewness and kurtosis by using m1=0, m2=2.5, m3=0.7 and m4=18.75

(ix) Define index number and consumer price index number.

(x) Define sample space, event and mutually exclusive events.

(xi) The probability that three men A, B and C will hit the target are 1/4, 1/3 and 1/6 respectively. Find the probability that all will hit the target.

(xii) Construct probability distribution when a coin is tossed two times.

(xiii) Find the value of "K" so that the function f(x) may be a density function
$f(x) = kx$ for $0<x<2$ and $f(x) = 0$ other wise

"Section-C"

Marks: 20

Note:- Answer any TWO (2) questions. Each question carries equal marks.

Q. 3:- Compute standard deviation and coefficient of variation from the following data.

Age in years	10-20	20-30	30-40	40-50	50-60	60-70
No. of students	7	6	10	8	4	2

Q. 4:- (a) Compute the link relatives from the following data.

Marks	10-20	20-30	30-40	40-50	50-60	60-70
No. of students	4	6	10	12	9	7

(b) Compute consumer price index number by the method of aggregate expenditure method.

Item	Quantity	Price in 1999	Price in 2001
Wheat	20 kg	7	10
Ghee	7 kg	40	60
Rice	5 kg	12	15

Q. 5:- (a) A can solve 80% of the problems in a book while B can solve 60% of the problems. What is the probability that A and B can solve a problem chosen at random.

b) Find $E(x)$ and $E(x^2)$ from the following probability distribution.

x	-2	3	1
f(x)	1/3	1/2	1/6