

Paper Code

2019 (A)

Roll No.

Number: 2181

INTERMEDIATE PART-I (11<sup>th</sup> CLASS)

STATISTICS PAPER-I (NEW SCHEME)

TIME ALLOWED: 20 Minutes

OBJECTIVE

MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Methods of organizing, summarizing and presenting data in an informative way is called:
  - (A) Descriptive Statistics (B) Inferential Statistics (C) Applied Statistics (D) All these
- (2) Frequency distribution is often constructed with the help of:
  - (A) Entry table (B) Tally sheet (C) Both A and B (D) Neither A nor B
- (3) A pie diagram is represented by a:
  - (A) Rectangle (B) Circle (C) Triangle (D) Square
- (4) The sample mean  $\bar{X}$  is calculated by the formula:
  - (A)  $\frac{\sum f x}{\sum f}$  (B)  $A + \frac{\sum f D}{\sum f}$  (C)  $A + \frac{\sum f U}{\sum f} \times h$  (D) All these
- (5) Which of the following statements is always correct for symmetric distribution?
  - (A) Mean = Median = Mode (B) Arithmetic mean = Geometric mean = Harmonic mean
  - (C) Median =  $Q_2 = D_4 = P_{50}$  (D) Mode = 2 Median - 3 Mean
- (6) The averages are effected by change of:
  - (A) Origin (B) Scale (C) Both A and B (D) None of these
- (7) Given  $X_1 = 20$  and  $X_2 = -20$  the arithmetic mean will be:
  - (A) Zero (B) Infinity (C) Impossible (D) Difficult to tell
- (8) If  $Y = ax \pm b$ , where  $a$  and  $b$  are any two numbers but  $a \neq 0$ , then  $M.D(Y)$  is equal to:
  - (A)  $M.D(X)$  (B)  $M.D(X) \pm b$  (C)  $|a| M.D(X)$  (D)  $M.D(Y) + M.D(X)$
- (9) If the maximum value in a series is 25 and its range is 15, the minimum value of the series is:
  - (A) 10 (B) 15 (C) 25 (D) 35
- (10) In chain base method, base period is:
  - (A) Fixed (B) Not fixed (C) Constant (D) Zero
- (11) Consumer price index are obtained by:
  - (A) Paasche's formula
  - (B) Fisher's ideal formula (C) Marshall Edge Worth formula (D) Family budget method formula
- (12) Two coins are tossed. Probability of getting head on the first coin is:
  - (A)  $\frac{2}{4}$  (B) 1 (C) Zero (D) 4
- (13) Given of  $P(\bar{A} \cap \bar{B}) = \frac{3}{10}$  then  $P(A \cup B)$  is:
  - (A)  $\frac{7}{10}$  (B)  $\frac{1}{10}$  (C)  $\frac{3}{10}$  (D) 1
- (14)  $E[X - E(X)]^2$  is:
  - (A)  $E(X)$  (B)  $E(X^2)$  (C)  $Var(X)$  (D)  $S.D(X)$
- (15) A variable which can assume finite or countably infinite number of values, is known as:
  - (A) Continuous Variable (B) Discrete Variable (C) Qualitative Variable (D) None of these
- (16) In a binomial experiment the successive trials are:
  - (A) Dependent (B) Independent (C) Mutually exclusive (D) Fixed
- (17) In a Hypergeometric distribution  $N = 6$ ,  $n = 4$  and  $K = 3$  then the mean is equal to:
  - (A) 2 (B) 4 (C) 6 (D) 24



Roll No.	P - 1301 - / 000	Inter (Composite)
STATISTICS (Practical)	(1 <sup>st</sup> A. Exam. 2023)	
Time : 03 : 00 Hrs.	Group - V	Total Marks : 30

Attempt one question from each section. Five marks are reserved for note book and 5 for Viva Voice.

#### Section I

Question no 1. Given the prices of four commodities construct price index number by using (10)

Years	Price relative				
	A	B	C	D	E
1960	81	77	119	55	27
1961	62	54	128	52	23
1962	104	87	113	100	28
1963	93	75	154	96	30
1964	60	43	165	88	37
1965	89	56	145	98	49

Compute Average of relative index number using geometric mean as average.

Question no 2. Given the data below (10)

Groups	40-50	50-60	60-70	70-80	80-90	90-100	100-110	110-120	120-130
Frequency	12	36	56	78	110	105	97	34	10

- Calculate arithmetic mean by coding method  $A=45$  and  $h=10$ .
- Also plot histogram to check the symmetry of the data.

#### Section II

Question no 3. In a normal distribution  $\mu = 70$  and  $\sigma^2 = 25$ , then find (10)

- A point that has 87.9% of the area below it.
- Two points containing the middle 98% of the area.
- Find the fourth moment about mean.

Question no 4. The population given below has  $N=5$  i.e., 4, 8, 8, 12, 16. (10)

- Draw all possible samples of size 2 with replacement and compute sample mean.
- Construct sample distribution of sample mean and compute mean and variance of sampling distribution.

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