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Paper Code Number: 2181

2019 (S) Roll No._____

INTERMEDIATE PART-I (11th 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, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.**

Q.No.1

(1) A quantity calculated from population is:

(A) Statistic (B) Sample (C) Parameter (D) None of these

(2) The process of arranging data into rows and column is called:

(A) Classification (B) Tabulation (C) Frequency distribution (D) None of these

(3) Class interval for $4-7,\ 8-11,\ 12-15$ is:

(A) 2 (B) 3 (C) 4 (D) 11

(4) $\Sigma(x-20)=25,\ \Sigma(x-18)=0$ then Arithmetic Mean is:

(A) 18 (B) 20 (C) 25 (D) 38

(5) If any value in the data is zero, it is impossible to calculate:

(A) Mean (B) Median (C) Mode (D) Harmonic Mean

(6) The most suitable average for qualitative data is:

(A) Mean (B) Median (C) Mode (D) Geometric Mean

(7) If $SD(X)=10,\ SD(X+5)=$_____

(A) 5 (B) 10 (C) 15 (D) 50

(8) Half of the difference between third and first quartile is:

(A) Quartile Deviation (B) Standard Deviation (C) Mean Deviation (D) Variance

(9) If coefficient of Skewness is zero, then the distribution is:

(A) Positively skewed (B) Negatively skewed (C) Symmetrical (D) None of these

(10) Which is the most suitable average in chain base method?

(A) Arithmetic Mean (B) Geometric Mean (C) Harmonic Mean (D) Median

(11) Index number computed for a single variable (commodity) is:

(A) Simple (B) Composite (C) Weighed (D) Unweighted

(12) The probability of sure event is:

(A) Zero (B) One (C) n (D) Very large

(13) If two events can not occur together, they are:

(A) Not Mutually Exclusive (B) Mutually Exclusive (C) Equally Likely (D) None of these

(14) An expected value of a r.v is equal to its:

(A) Mean (B) Variance (C) Standard Deviation (D) Range

(15) A random variable is also called:

(A) Chance variable (B) Stochastic variable (C) Constant (D) Both A and B

(16) In binomial distribution, number of trials are:

(A) Fixed (B) Not fixed (C) Both A and B (D) None of these

(17) Mean of Binomial distribution is:

(A) np (B) nq (C) npq (D) pq

E ALLOWED: 2.40 Hours SUBJECTIVE MAXIMUM MARKS: 68

TE: - Write same question number and its part number on answer book, as given in the question paper.

SECTION-I

2. **Attempt any eight parts.** $8 \times 2 = 16$

(i) Define STATISTICS.

(ii) What is Discrete Variable? Give any example.

(iii) Give any two qualities of a good average.

(iv) What do you mean by Harmonic Mean?

(v) Sum of deviations of 10 values from $A = 50$ is 500, what will be the value of Arithmetic Mean?

(vi) Calculate Geometric Mean for the values 16, 1, 4.

(vii) What will be the mode if Mean = 30 and Median = 40?

(viii) Define Index Number.

(ix) Write name of base year weighted index number.

(x) What do you mean by Consumer Price Index Number?

(xi) If $\sum p_n q_0 = 294$ and $\sum p_0 q_0 = 269$, find current year weighted index number.

(xii) If $\sum IW = 16500$ and $\sum p_0 q_0 = 110$, then find consumer price index number by Family Budget Method.

3. **Attempt any eight parts.** $8 \times 2 = 16$

(i) What is meant by Frequency Polygon?

(ii) Distinguish between Histogram and Historigram.

(iii) Define Quartile Deviation and how it is calculated?

(iv) Write down only various absolute measures of Dispersion.

(v) Distinguish between Positive and Negative Skewness.

(vi) Explain Moments about Mean.

(vii) Given Mean = 50, Median = 48 and coefficient of skewness = 1. Find the value of Variance.

(viii) Given Mean = 50, Median = 48 and standard deviation = 6. Find Karl Pearson's Coefficient of skewness.

(ix) What is meant by Random Experiment?

(x) Explain the concept of dependent events.

(xi) Suppose $P(A) = \frac{1}{4}$, $P(B) = \frac{1}{3}$ and $P(A \cup B) = \frac{1}{2}$. Determine $P(A \cap B)$.

(xii) If $P(A) = 0.2$, $P(B) = 0.4$ and $P(A \cup B) = 0.375$. Find $P(A$ and $B)$.

4. **Attempt any six parts.** $6 \times 2 = 12$

(i) How can random numbers be generated?

(ii) Write two properties of Expectation.

(iii) Define Probability Distribution.

(iv) If $E(x) = 5$, find $E(-3x + 2)$

(v) If $E(x) = 3$ and $E(x^2) = 12$, then find variance of x.

(vi) Define Binomial Probability Distribution.

(vii) Write two properties of Hypergeometric Experiment.

(viii) In a binomial distribution $n = 10$ and $p = 0.6$. Find Mean and Variance of the Distribution.

(ix) Given $N = 10$, $k = 5$ and $n = 3$. Find $P(x < 1)$.

P.T.O