

Statistics**HSSC (11th) 2nd Annual 2022**

Paper : I

Subjective

Marks : 68

Roll No.

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(To be filled in by the candidate)

Time : 2:40 Hours

Note :- Section B is compulsory. Attempt any Three Questions from Section C.

SECTION - B**2. Write short answers to any Eight parts.****(8 x 2 = 16)**

- Differentiate between population and sample.
- Name the sources of primary data.
- Define Mode.
- If the sum of deviation from $X = 15$ for 10 values is 25. Find the mean.
- Write down the qualities of a good average.
- Using empirical relationship, find the values of Mode if Mean=25 and Median=20.
- Find G.M. if data set is 1,2 and 4.
- Define Percentiles.
- What is difference between fixed base and chain base method?
- Write the formula of Laspeyres's price index number.
- Given $\sum p_o q_o = 1500$ and $\sum p_n q_o = 2040$. Find price index number.
- Given Laspeyres's price index=110 and Fisher's ideal price index=111. Find Paasche's price index number.

3. Write short answers to any Eight parts.**(8 x 2 = 16)**

- Define Class Limits.
- What is frequency polygon?
- Explain and write the uses of co-efficient of variation.
- Explain the term kurtosis.
- Describe Standard Deviation.
- Fourth central moment of a symmetrical distribution is 243, find its standard deviation for which distribution is mesokurtic.
- First four moments about mean of a frequency distribution are 0, 39.25, -25.70 and 250.83, calculate b_1 and comment about its symmetry.
- Define Variance.
- If A and B are two independent events with $P(A) = 0.65$ and $P(B) = 0.45$, find $P(A \cup B)$
- Narrate conditional probability of an event.
- Define Simple Event and Compound Event.
- A card is drawn from a pack of playing cards. What is probability that it is red picture card?

4. Write short answers to any Six parts.**(6 x 2 = 12)**

- Define Random Variable.
- Given $E(X^2) = 400$, $S.D(X) = 12$ then find $E(X)$.
- Define Probability Density Function.
- Define Discrete Random Variable.
- What are the properties of probability distribution?
- Define the Binomial Probability Distribution.
- If $n = 6$ and $q = 0.40$ then find the mean and variance of binomial distribution.
- Define the Hypergeometric Probability Distribution.
- If $N = 40$, $n = 5$, $k = 4$, then find values of mean and variance of Hypergeometric distribution.

CANCELLED

(Turn Over)