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Sardar Patel University
S.Y.B.Sc.(Semester-III) Examination
Subject:-Foundation of statistics-I

Paper Code:-US03FSTA01

Date:-16/06/2022, Thursday

Time:- 11:00 p.m. to 02:00 p.m.

Marks:-70

Q.1. Multiple Choice Questions: -

- 1 The main aim of sample survey is to get reliable information about the _____ in less time.
(a) sample (b) population (c) both (a) & (b) (d) None of these.
- 2 In _____ type of sampling, the sample survey is the only way out.
(a) constructive (b) destructive (c) both (a) & (b) (d) None of these.
- 3 A qualitative characteristic under study is called _____.
(a) variable (b) attribute (c) constant (d) None of these
- 4 Primary data are the _____ hand information collected, compiled and published by origination for some purpose.
(a) first (b) second (c) Both (a) & (b) (d) None of these.
- 5 A qualitative characteristics under study is called _____.
(a) variable (b) attribute (c) both (a) & (b) (d) None of these.
- 6 _____ note must be given at the bottom of the table, if secondary data is used.
(a) Source (b) Foot (c) Head (d) None of these
- 7 _____ is the process of arranging data into different groups or classes according to the similarities or common characteristics.
(a) classification (b) Tabulation (c) both (a) & (b) (d) None of these.
- 8 _____ note must be given at the bottom of the table, if secondary data is used.
(a) Source (b) Foot (c) Head (d) None of these
- 9 A sample of 5 body weights (in pounds) is as follows: 116, 168, 124, 132 and 110. The sample median is _____.
(a) 124 (b) 116 (c) 132 (d) None of these.
- 10 The arithmetic mean of 1, 2, 3, ..., n is
(a) $(n-1)/2$ (b) $(n+1)/2$ (c) $n/2$ (d) None of these

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Q.2. Fill in the blanks: -

- 1 In a village of 3000 population, 60% constitutes Hindu, 20% Muslims, 10% Sikhs and 10% Christians. We want to take a sample of 10% of the population to study the eating habits of this population. The best method would be _____.
(Simple Random Sampling; Stratified Random Sampling)
- 2 With reference to systematic sampling k is called _____.
(Sample Interval ; Sample fraction)
- 3 _____ is a media of communication between investigator and respondents.
(personal enquiry; Questionnaire)
- 4 _____ can best be described as a categorical variable.(religion; age)
- 5 The _____ is the part of the tabulation.(schedule; body)
- 6 The quality characteristic under study is called _____(qualitative ;quantitative)
- 7 The mean is the measurement of _____.(dispersion; central tendency)
- 8 A sample of five body weight (in pounds) is given below.
168, 110, 116, 132, 124. Then the median is _____.(116; 124)

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Q.3. Short Questions: - (Attempt any Ten)

- 1 Give the definition of statistics.
- 2 Explain about the Lottery method for drawing the sample from the population.

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(P.T.O)

- 3 What is the stratified random sampling.
- 4 What is the secondary data?
- 5 State the precaution while using secondary data.
- 6 State the source of secondary data.
- 7 Define ordinal data and nominal data. Give two examples of each.
- 8 What is the Tabulation?
- 9 What is the classification?
- 10 What is central tendency? State the different measures of central tendency with their formula.
- 11 What do you mean by Dispersion? List out the various measures of Dispersion.
- 12 Explain the concept of positive and negative skewness by sketching diagram.

Q.4. Long Questions: - (Attempt any four)

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- 1 Name the method of sampling that can be used when population is homogeneous. Explain it.
- 2 State the applications of statistics. Describe any four of them.
- 3 State the different method of collecting primary data. Describe any one of them.
- 4 What do you mean by questionnaire? State essential points to be remembered in drafting a questionnaire. State the main difference between Primary data and secondary data.
- 5 Table below gives the availability of the hydro-electricity in Rajasthan from various sources.

Source	Available hydro-electricity (MW)
Bhakra Nangal	195.27
Beas Unit-1	132.00
Beas Unit-2	140.0
Gandhi Sagar	57.50
Rana Pratap Sagar	86.00
Jawahar Sagar	49.50

- 6 Display the supply of Electricity data by Pie-chart. Show the complete calculations. State the types of Bar chart. Explain any one of them.
- 6 Blood cholesterol levels were recorded for 50 persons sampled in a medical study group and the following data were obtained.

233	212	249	227	249	258	265	256	286	258
161	195	233	199	282	286	195	299	310	286
210	301	357	195	226	355	234	195	195	355
179	174	281	154	196	163	297	330	258	163
205	227	223	244	176	218	284	245	249	218

- 7 Construct frequency distribution table. Write all the calculations clearly Calculate (i) Mean (ii) Median (iii) Mode (iv) Standard deviation (v) Coefficient of variation (vi) coefficient of skewness from the data given below:
The heart rates (beats/ minute) of the 18 patients upon admission to the hospital are listed below:

167	150	125	150	150	140	136	120	150
150	167	145	145	136	120	125	152	142

- 8 The following table shows the distribution of the life time (in hours) of 200 bulbs

Life-time (in hours)	100-150	150-200	200-250	250-300	300-350	350-400	400-450
No. of bulbs	6	18	73	65	12	22	4

Calculate (i) Mean (ii) Median (iii) Mode (iv) Standard deviation (v) Coefficient of variation (vi) coefficient of skewness.

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