I PUC MID-TERM EXAMINATION OCT/NOV-2024

SUBJECT : STATISTICS (31)

Time : 3 Hours **Max Marks : 80**

Instructions :

i) Statistical tables and Graph sheets will be supplied on request.

ii) Scientific calculators are allowed.

iii) All working steps should be clearly shown.

iv) For Section-A only the first written answers will be considered for evaluation.

SECTION-A

I Choose the correct answer from the choices given: **5x1=5**

1) The branch of applied statistics which deals with the study of human population is :
   a) Biometry b) Psychometry c) Demography d) Stylometry

2) The persons from whom the information will be collected is :
   a) Enumerator b) Respondents c) Investigator d) Correspondents

3) If the data are arranged over a different period of time, then the type of classification is called:
   a) Chronological classification b) Geographical classification
   c) Qualitative classification d) Quantitative classification

4) The graph which is suitable to locate partition values :
   a) Histogram b) Frequency polygon c) Frequency curve d) Ogive

5) Which one is positional average from the following averages
   a) Arithmetic mean b) Median c) Geometric mean d) Harmonic mean

II Fill in the blanks by choosing the appropriate answer from those given in the brackets : **5x1=5**

(Multiple bar diagram, class limits, Quantitative data, Inter-quartile range, simple bar diagram, primary data)

6) Numerically expressed data are called _____.

7) The data which is also called first hand data _____.

8) The lowest and the highest values which are taken to define the boundaries of a class are _____.

9) _____ are used to represent various sets of inter linked data.

10) _____ is the difference between upper quartile and lower quartile.

III Match the following : **5x1=5**

11)	a) Statistics as statistical methods	i) Mode
	b) Actual value – Estimated value	ii) F/N
	c) Relative Frequency	iii) Absolute error
	d) Histogram	vi) Plural sense
	e) Lack of symmetry	v) Skewness
		vi) Singular sense

IV Answer the following questions: **5x1=5**

12) Define Attribute.

13) What is Strata ?

14) Which part of a table contains numerical data ?

15) Give an example for a two-dimensional diagram.

16) Which average would be suitable for "Average rate of growth of population per decade"?

(P.T.O.)

SECTION-B

V Answer any FIVE of the following questions : 5x2=10

17) Define population and sample.

18) What is a questionnaire and a schedule ?

19) Mention any two types of tables.

20) Mention any two objectives of tabulation.

21) State any two uses of representing statistical data by diagrams and graphs.

22) The mean marks scored by 30 girls of a class is 44%. The mean for 50 boys is 42%. Find the mean for the whole class.

23) If the sum of the upper and the lower quartiles is 44 and the difference is 6, find the co-efficient quartile deviation.

24) Mention the properties of symmetric distribution.

SECTION-C

VI Answer any FOUR of the following questions : 4x5=20

25) Write down the characteristics of Statistics.

26) State Croxton and Cowden definition of Statistics, and mention any four limitations of Statistics.

27) What is primary data ? Mention the methods of collecting primary data.

28) Define census enumeration. Write the merits of census enumeration.

29) Prepare a blank table to represent the distribution of daily commuters in 'Namma Metro' according to :

i) Gender : Male, Female.

ii) Route : Purple line, Green line

iii) Age group : Below 20, 20-40, 40-60, 60 and above.

30) The following table gives details of monthly expenditures (in %) of two families A and B. Represent the data by percentage Bar diagram.

Item	Food	Rent	Fuel	Misc.	Savings	Total
Family A	28	24	14	20	14	100
Family B	20	20	10	20	30	100

31) Find mean, median and mode of the following distribution of 'Number of students present in the class' on different days.

No. of students :	73	74	75	76	77	78	79	80
No. of days :	2	14	29	36	43	38	34	29

VII Answer any TWO of the following questions : 2x5=10

32) A rupee spent on 'Khadi' is distributed as follows :

Components	Farmer	Carder and spinner	Weaver	Dyer and Printer	Administrative agency
Amount (Paise)	19	35	28	08	10

Represent the data by pie diagram.

33) Draw a histogram and frequency polygon for the data given below :

Length of rods (metre)	6-7	7-8	8-9	9-10	10-11
No. of rods	5	12	20	6	1

(P.T.O.)

34) From the following data, find the missing frequency if median value given as 26.

Marks Scored	0-10	10-20	20-30	30-40	40-50
No. of Students	4	7	15	-	6

35) Calculate mean deviation from the Mode and its coefficient from the following data.

Age (in years)	5	15	25	35	45	55	65
No. of persons	5	7	12	18	16	10	5

SECTION-D

VIII Answer any TWO of the following questions : **2x10=20**

36) a) An election conducted in a public sector for the year 2000 and 2005 gave the following results :

In the year 2000, 46% voted for candidate A, 35% for B and rest for C.

In the year 2005, there was an increase by 10% for candidate A and reduction of 6% for candidate C. Present the information in a tabular form.

b) The following data gives ages of 32 individuals in a locality. Form a continuous frequency distribution using exclusive type of class intervals of width 10 each.

23 46, 08, 13, 29 36, 28 01 19, 28, 33, 11
20 28, 10, 59, 30, 43, 39, 30, 21, 40, 33, 36
29, 21, 40, 16, 41, 19, 20, 31

37) The following data represents the runs scored by two batsman A and B in 10 innings.

Find i) Who is better scorer ?

ii) Who is more consistent ?

A : 100 31 0 37 91 50 9 5 75 10

B : 25 60 18 63 9 20 75 40 10 180

38) Calculate Bowley's of skewness and comment for the following data.

Marks	0-10	10-20	20-30	30-40	40-50
No. of students	12	20	28	10	8

SECTION-E

(For visually challenged students only)

30) Write the procedure of constructing percentage Bar diagram

32) Write the procedure of constructing Pie chart.

33) What is Histogram ? Explain the procedure of constructing Histogram.

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