Progressive Education Society's
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16
Autonomous
End Semester Examination: Jan.2022
Faculty: Science and Technology

Program: :(BScComp05) **Semester: I** **SET: C**
Program (Specific): BSc (Computer Science) **Course Type: CC**
Class: F.Y.B.Sc.(Comp.Sci.) **Max.Marks: 35**
Name of the Course: Descriptive Statistics-I
Course Code: 22-CSST-111
Time: 2Hr
Paper: I
Instructions to the candidate:

1) ***There are 4 sections in the question paper. Write each section on separate page.***
2) ***All Sections are compulsory.***
3) ***Figures to the right indicate full marks.***
4) ***Draw a well labelled diagram wherever necessary.***
5) ***Use of statistical tables and scientific calculators are allowed.***

SECTION: A

Q1. Choose the correct option in each of the following: **[1x5]**

1) Which limit is excluded in case of exclusive method of classification?
   a) lower limit b) upper limit
   c) Both upper and lower limit d) mid-point

2) Which of the following is not measure of Central tendency?
   a) Mean b) Median
   c) Mode d) Variance

3) Quartile divides data in _____ equal parts.
   a) One b) Two c) Three d) Four

4) In case of positively skewed data:
   a) Mean=median=mode b) Mean < median < mode
   c) Mean > median > mode d) Mean=2*median

5) If Yule's coefficient of skewness is 0 then attributes A and B are:
   a) Independent b) Positively associated
   c) Negatively associated d) Perfectly Positively associated

Q2) Attempt any four from the following: **[1X4]**

1) Define mode for ungrouped frequency distribution.

2) Describe frequency polygon.

3) Define Inclusive classification.

4) If $\mu_2 = 4$ and $\mu_4 = 20$ then find coefficient of kurtosis.

5) Explain association between qualitative variable

6) Define Quartile deviation.

SECTION: B

Q3) Attempt any four from the following: **[2X4]**

1) Define: a) Class Mark b) Class width

2) Is the following information consistent? Justify your answer:
(A) = 30, (B) = 40, (AB) = 35, N= 100.

3) Compute the variance and S.D for the data given below:

5, 20, 90, 76, 102, 90, 6

4) State Merits and Demerits of mode

5) Given that (AB) = 256, (αB) = 768, (Aβ) = 48, (αβ) = 144. check whether A and B are independent.

6) The first four raw moments of a frequency distribution are 4, 30, 50, 300 then compute third central moments and comment on the nature of skewness.

SECTION: C

Q4) Attempt any four from the following: **[2x4]**

1) Draw less than cumulative frequency curve for the following frequency distribution of marks in Chemistry:

Marks in chemistry	0-20	20-40	40-80	60-80	80-100
No.of Students	2	18	42	28	5

2) The variance of a mesokurtic distribution is 9. Find the value of μ_4.

3) Calculate mode and mean for the given data: 54, 51, 61, 72, 64, 61, 63.

4) Explain Combined Variance.

5) Write a note on Attributes.

6) Describe cumulative frequency and relative frequency.

SECTION: D

Q5) Attempt any two from the following: **[5x2]**

1) Using coefficient of variation find which of the following batsman is more consistent in scoring:

Score of A	42	115	6	73	7	19
Score of B	47	12	76	42	4	51

2) Compute μ_2, μ_4 for the following frequency distribution and comment on kurtosis.

Marks	0-20	20-40	40-60	60-80	80-100
No. of students	2	18	42	28	5

3) Calculate Quartile Deviation for the following data:

Marks	0-20	20-40	40-60	60-80	80-100
No. of students	2	18	42	28	5

4) Represent the following data using Histogram. Also state the value of mode graphically.

Weekly Wages	0-20	20-40	40-60	60-80	80-100
No. of workers	41	51	64	38	7

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