F.Y.B.Sc. (Computer Science) Semester - I
Regular Semester-End Examination
Session : Nov. 2022

Subject : Descriptive Statistics **Subject Code : USCSST-111**

Time : 2 Hrs. **Total Marks 35**

Instructions : (1) All questions are compulsory.
(2) Figures to the right indicate full marks.
(3) Use of statistical tables and calculator is allowed.
(4) Symbols have their usual meanings.

Q.1 Choose the correct alternative for the followings. **5*1=5**

(i) For given set of observations mode is -----.
(a) Most Frequent Value (b) Minimum Value
(c) Maximum Value (d) Middle most value

(ii) With three attributes the total number of ultimate class frequencies -----.
(a) 4 (b) 6 (c) 8 (d) 2

(iii) If $\mu_3 = -8$ and $\mu_2 = 3$ the distribution is -----.
(a) Positively skewed (b) Negatively skewed
(c) Platykurtic (d) Symmetric

(iv) Pie chart represents the components of a factor by -----.
(a) Percentages (b) Angles (c) Sectors (d) Circles

(v) The median of the variate values 48, 35, 36, 40, 42, 54, 58, 60 is -----.
(a) 40 (b) 41 (c) 44 (d) 45

Q.2 Attempt any two. **5*2=10**

(i) Describe the construction of stem and leaf chart with one example.

(ii) For a distribution the mean is 10. Standard deviation is 3, $\beta_1=1$ and $\beta_2=3.5$. Find first four central moments.

(iii) Given the following frequencies (A) = 90, (AB) = 40, N = 150 and (β) = 80. Find remaining frequencies.

Q.3 Attempt any Two. **5*2=10**

(i) For set of 90 observations the means and standard deviation are 59 and 9 respectively. For 40 observations selected from these 90 observations the mean and standard deviation are 54 and 6 respectively.
Find mean and standard deviation of remaining observations.

(ii) Explain the concept of skewness for a frequency distribution. State any two measures of skewness.

(iii) Explain graphical method for determining mode.

Q.4 Attempt any Two. **5*2=10**

(i) Define Kurtosis. Explain different types of Kurtosis.

(ii) In a certain interview there were 126 candidates of which 70 were boys. 36 candidates were successful, among them 20 were boys. Obtain the coefficient of association between success and attribute boy.

(iii) For two firms A and B belonging to same industry the following details are available.

	Firm A	Firm B
No. of Employees	100	200
Average Wage per month	240 Rs.	170 Rs.
Standard deviation of the wage	6 Rs.	8 Rs.

(a) Find Combined Standard deviation.

(b) Which firm shows greater consistency?

★ ★ ★