M.E.S. VASANT JOSHI COLLEGE OF ARTS AND COMMERCE, ZUARINAGAR – GOA

B.Com. (NEP) III Semester End (Regular & Repeat) Assessment, November, 2024

Minor – BUSINESS STATISTICS - I (COM-213)

Instructions: i*) All questions are compulsory.*

ii) Figures to the right indicate full marks.

iii) Use of simple (non-scientific) calculator is allowed.

Time: 02 Hours Total Marks: 80

Q 1. Answer each of the following: **$08 \times 02 = 16$ Marks**

i. Define Primary data.

ii. Write the characteristics of Ordinal scale.

iii. Define Cluster sampling.

iv. Define Systematic sampling.

v. Write any two merits of Arithmetic mean.

vi. Write a short note on Kurtosis.

vii. Write any two significance of correlation.

viii. State the four components of time series.

Q 2. A. Prepare a frequency distribution table for the following data. Find cumulative frequency of less than type, greater than type and relative frequency. 2, 7, 8, 3, 5, 8, 6, 2, 10, 9, 4, 6, 8, 7, 7, 3, 1, 4, 8, 8, 9, 10, 3, 10, 8, 2, 6, 7, 4, 3. Define Secondary data and write the sources of secondary data. **(12 Marks)**

OR

Q 2. B. In a survey it was found that 64 families bought milk in the following quantities(liters) in a particular week. 19, 16, 22, 9, 22, 12, 39, 19, 14, 23, 6, 24, 16, 18, 7, 17, 20, 25, 28, 18, 10, 24, 20, 21, 10, 7, 18, 28, 24, 20, 14, 23, 25, 34, 22, 5, 33, 23, 26, 29, 13, 36, 11, 26, 11, 37, 30, 13, 8, 15, 22, 21, 32, 21, 31, 17, 16, 23, 12, 9, 15, 27, 17, 21. Using Sturge's rule, convert the above data into a frequency distribution by Inclusive method. $(\log_{10} 64 = 1.8062)$ **(12 Marks)**

Q 2. C. Explain the role of questionnaire and types of questions asked. **(4 Marks)**

Q 3. A. What is sampling? Explain Census and Sample enumeration. Also describe Stratified sampling and multistage sampling. **(12 Marks)**

Q 3. B. Draw a Subdivided bar diagram from the following data: **(4 Marks)**

Years	2018	2019	2020
Mathematics	250	250	275
English	350	320	350
Economics	470	400	425

OR

Q 3. C. Represent the following data by a histogram: **(4 Marks)**

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of students	8	12	25	35	40	55	60	40

Q 4. A. Calculate Bowley's coefficient of skewness from the following data: **(12 Marks)**

variable	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
frequency	12	16	26	38	22	15	7	4

Q 4. B. Find linear regression from the following data: (**4 Marks**)

X	1	2	3	4	5	6	7	8
y	3	7	10	12	14	17	20	24

OR

Q 4. C. Calculate the 3-yearly moving averages of the production figures given below: (**4 Marks**)

Year	2014	2015	2016	2017	2018	2019	2020
Production	15	21	30	36	42	46	50

Q 5. A. Calculate Karl Pearson's coefficient of correlation from the following data: (**12 Marks**)

Roll No. of Students	1	2	3	4	5
Marks in Accountancy	48	35	17	23	47
Marks in Statistics	45	20	40	25	45

Q 5. B. Calculate the 3rd Decile from the following data: (**4 Marks**)

Central Value	0-5	5-10	10-15	15-20	20-25
frequency	7	18	25	30	20

OR

Q 5. C. The weight of five items in Kg is given by 30, 40, 45, 50, 55. Find the deviation from the median. (**4 Marks**)