Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

End - Term Examinations – MAY 2025

Date: 24-05-2025 **Time:** 01:00 pm –04:00 pm

School: SOC	**Program:** BBB, BAV, BBA, BBD	
Course Code : SOC2003	**Course Name:** Business statistics	
Semester: II	**Max Marks**: 100	**Weightage**:50%

CO - Levels	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Marks	**25**	**44**	**41**	**48**	

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2 marks. **10Q x 2M=20M**

1.	Describe the frequency distribution.	**2 Marks**	**L1**	**CO2**
2.	Define Median.	**2 Marks**	**L1**	**CO2**
3.	Outline the merits of arithmetic mean.	**2 Marks**	**L1**	**CO2**
4.	Label the formula to find Range for individual series.	**2 Marks**	**L1**	**CO3**
5.	Label the formula for co-efficient of variation.	**2 Marks**	**L1**	**CO3**
6.	Define Regression.	**2 Marks**	**L1**	**CO4**
7.	Label the formula to calculate rank correlation.	**2 Marks**	**L1**	**CO4**
8.	List-out the methods of data presentation.	**2 Marks**	**L1**	**CO1**
9.	Differentiate betweeen grouped data and ungrouped data	**2 Marks**	**L1**	**CO1**
10.	From the Following Data Compute Arithmetic Mean: X: 9, 6, 5, 4, 8, 5, 3, 2, 7	**2 Marks**	**L1**	**CO2**

Part B

Answer ALL the Questions. Each question carries 7 Marks. **Total Marks 35M**

<table>
<tr><td>11.</td><td>a.</td><td>Find the average income(Mean value) of households with given data.
<table><tr><td colspan="10">Table 1.8a. Income distribution of people</td></tr><tr><td>Income Class</td><td>0-100000</td><td>100000-200000</td><td>200000-300000</td><td>300000-400000</td><td>400000-500000</td><td>500000-600000</td><td>600000-700000</td><td>700000-800000</td><td>800000-900000</td></tr><tr><td>Number of Households</td><td>3476</td><td>4994</td><td>9857</td><td>12890</td><td>7894</td><td>4129</td><td>8864</td><td>4365</td><td>1243</td></tr></table></td><td>07 Marks</td><td>L3</td><td>CO 2</td></tr>
<tr><td colspan="6">Or</td></tr>
<tr><td>12.</td><td>a.</td><td>Tabulate the following :

Out of a total number of 10,000 candidates who applied for jobs in a government department, 6,854 were males, 3,146 were graduates and others, non-graduates. The number of candidates with some experience was 2,623 of whom 1,860 were males. The number of male graduates was 2,012. The number of graduates with experience was 1,093 that includes 323 females.</td><td>07 Marks</td><td>L3</td><td>CO 1</td></tr>
<tr><td>13.</td><td>a.</td><td>From the Following Data Compute Median:
<table><tr><th>Marks</th><th>No. of students</th></tr><tr><td>45-50</td><td>10</td></tr><tr><td>40-45</td><td>15</td></tr><tr><td>35-40</td><td>26</td></tr><tr><td>30-35</td><td>30</td></tr><tr><td>25-30</td><td>42</td></tr><tr><td>20-25</td><td>31</td></tr><tr><td>15-20</td><td>24</td></tr></table></td><td>07 Marks</td><td>L3</td><td>CO 2</td></tr>
<tr><td colspan="6">Or</td></tr>
<tr><td>14.</td><td>a.</td><td>Discuss the different methods for presenting data with an example.</td><td>07 Marks</td><td>L2</td><td>CO 1</td></tr>
<tr><td>15.</td><td>a.</td><td>Calculate the mean and standard deviation from the following data :
<table><tr><td>Value</td><td>30-39</td><td>40-49</td><td>50-59</td><td>60-69</td><td>70-79</td><td>80-89</td><td>90-99</td></tr><tr><td>Frequency</td><td>2</td><td>12</td><td>22</td><td>20</td><td>14</td><td>4</td><td>1</td></tr></table></td><td>07 Marks</td><td>L3</td><td>CO 3</td></tr>
<tr><td colspan="6">Or</td></tr>
</table>

16. a. The following data shows the students in millions on rolls at school/university stage in India according to different class groups and sex for the year 1970-71 as on 31st March.

Represent the data by Multiple bar diagram.

Stage	**Boys**	**Girls**	**Total**
Class I to V	35·74	21·31	57·05
Class VI to VIII	9·43	3·89	13·32
Class IX to XI	4·87	1·71	6·58
University/ College	2·17	0·64	2·81

07 Marks | **L3** | **CO 1**

17. a. **Compute mode for the given distribution.**

Class	20-30	30-40	40-50	50-60	60-70	70-80	80-90
No of observations	15	12	8	11	8	14	3

07 Marks | **L3** | **CO 2**

Or

18. a.

X	32	35	49	60	43	37	49	10	20
Y	40	30	70	30	50	72	60	45	25

From the following data, calculate the coefficient of rank correlation between x and y.

07 Marks | **L3** | **CO 4**

19. a. Find out the the Median in the following series

Size (below)	5	10	15	20	25	30	35
Frequency	1	3	13	17	27	36	38

07 Marks | **L3** | **CO 2**

Or

20.	**a.**	Explain the types of Skewness with graph.	**07 Marks**	**L2**	**CO 4**

Part C

Answer any Three Questions. Each question carries 15 marks **3Q x 15M=45M**

21. **a.** **Calculate the mean deviation and mean from the following data :** — **15 Marks** | **L3** | **CO 3**

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No of Students	6	5	8	15	7	6	3

22. **a.** **For the following distribution of marks obtained, find the arithmetic mean, the standard deviation and the coefficient of variation.** — **15 Marks** | **L3** | **CO 3**

Marks	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40
No of Students	2	5	7	13	21	16	8	3

23. **a.** **Calculate Karl Pearson's coefficient of correlation from the following data, using 20 as the working mean for price and 70 as the working mean for demand:** — **15 Marks** | **L3** | **CO 4**

Price	14	16	17	18	19	20	21	22	23
Demand	84	78	70	75	66	67	62	58	60

24. **a.** **From the following data, obtain the two regression equations :** — **15 Marks** | **L3** | **CO 4**

Sales	91	97	108	121	67	124	51	73	111	57
Purchases	71	75	69	97	70	91	39	61	80	47