SE – 204

II Semester B.Com. Examination, June/July 2025
(SEP Scheme)
COMMERCE
COM 2.4 : Business Data Analysis

Time : 3 Hours Max. Marks : 80

Instruction : *Answer* ***should*** *be written completely in* ***English*** *or* ***Kannada.***

SECTION – A

Answer **any seven** out of 10 questions. **Each** question carries **2** marks. **(7×2=14)**

1. a) Write the meaning of sampling.
   b) What do you mean by secondary data ?
   c) What are the methods of collecting primary data ?
   d) Find the arithmetic mean of the following series :
      10, 35, 40, 100, 125, 200
   e) If mean = 80, median = 88, calculate mode.
   f) Give the meaning of tabulation.
   g) If r = 0.6 and N = 64, find out the probable error of the coefficient of correlation.
   h) Calculate 'r' if $b_{xy} = -0.36$ and $b_{yx} = -1.38$.
   i) Give the meaning of time series forecasting.
   j) Name the components of time series.

SECTION – B

Answer **any three** out of five questions. **Each** question carries **8** marks. **(3×8=24)**

2. The marks scored by 50 students in an examination are given below :

30	45	48	55	39	32	31	22
21	18	54	59	61	33	34	44
10	38	19	62	74	43	73	41
46	33	51	37	85	85	71	29
22	62	29	58	55	63	64	44
43	27	32	43	52	31	47	64
18	51						

   Prepare a frequency table with a class interval of 10-20, 20-30 and so on.....

P.T.O.

3. Find mode by using grouping and analysis tables from the data given below :

Marks	20	30	40	50	60	70	80	90
No. of Students	40	50	70	90	85	91	89	65

4. Draw a histogram and find mode from the following :

x	10-15	15-20	20-25	25-30	30-40	40-60	60-80
f	5	15	23	13	12	12	8

5. The data about the sales and advertisement expenditure of a firm are given below :

	Sales(in crores of ₹)	**Advertisement Expenses (in crores of ₹)**
Mean	40	6
Standard deviation	10	1.5
Coefficient of correlation	0.9	

Calculate two regression equations.

6. Fit a straight line to the following data by the method of least squares.

Year	2016	2017	2018	2019	2020	2021
Sales in '000 units	28	32	30	26	30	34

SECTION – C

Answer **any three** out of five questions. **Each** question carries **14** marks. **(3×14=42)**

7. a) In 2010, out of the total 2,000 customers visiting a hotel, 750 were non-vegetarian and 1250 were vegetarian customers. In total there were 550 male non-vegetarian customers and 300 female vegetarian customers. In 2011, the total number of customers increased by 25%, while non-vegetarian customers increased by 20%. In all there were 1700 male customers, among whom 650 were non-vegetarians in 2011. Present the above information in a suitable statistical table.

b) Draw the multiple bar diagram from the following data :

Year	Humanities	Commerce	Science
2023	550	350	200
2024	650	450	300
2025	400	500	400

8. a) Calculate arithmetic mean.

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No. of Students	1	4	3	2	10	10	10

b) Calculate median from the following :

Height(cms)	161-167	167-173	173-179	179-185	185-191
No. of Students	79	92	60	20	9

9. Following are the records of two players in a series of cricket matches :

Player A	48	50	55	60	65	45	63	70
Player B	33	35	80	70	100	15	42	25

a) Who has scored more on an average ?

b) Who is more consistent in scoring ?

10. Calculate Spearman's coefficient of rank correlation for the following data :

X	59	53	98	81	95	75	61	55
Y	47	37	25	39	45	30	32	40

11. Given below are the figures of demand for a commodity :

Year	2016	2017	2018	2019	2020	2021	2022
Demand ('000 units)	73	85	74	75	80	52	58

i) Fit a straight line by Least Squares method ;

ii) Show the actual and trend line on a graph sheet ; and

iii) Estimate the demand for the year 2023.

ವಿಭಾಗ – ಎ

ಹತ್ತು ಪ್ರಶ್ನೆಗಳ ಪೈಕಿ ಯಾವುದಾದರೂ **7** ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ. ಪ್ರತಿ ಪ್ರಶ್ನೆ **2** ಅಂಕಗಳನ್ನು ಹೊಂದಿರುತ್ತದೆ.

(7×2=14

1. a) ಮಾದರೀಕರಣದ ಅರ್ಥವನ್ನು ಬರೆಯಿರಿ.

b) ದ್ವಿತೀಯಕ ಡೇಟಾ ಎಂದರೆ ಏನು ?

c) ಪ್ರಾಥಮಿಕ ಡೇಟಾವನ್ನು ಸಂಗ್ರಹಿಸುವ ವಿಧಾನಗಳು ಯಾವುವು ?

d) ಈ ಕೆಳಗಿನ ಶ್ರೇಣಿಯ ಅಂಕಿಅಂಶಗಳಿಗೆ ಗಣಿತ ಸರಾಸರಿ ಲೆಕ್ಕಹಾಕಿ.

10, 35, 40, 100, 125, 200

e) ಸರಾಸರಿ = 80, ಮಧ್ಯಕ = 88, ಮೋಡ್ ಅನ್ನು ಲೆಕ್ಕಹಾಕಿ.

f) ಟ್ಯಾಬುಲೇಷನ್ ಎಂದರೇನು ?

g) $r = 0.6$ ಮತ್ತು $N = 64$ ಇದ್ದರೆ ಸಹಸಂಬಂಧ ಗುಣಾಂಕದ ಸಾಧ್ಯತೆಯ ದೋಷವನ್ನು ಕಂಡುಹಿಡಿಯಿರಿ.

h) $b_{xy} = -0.36$ ಮತ್ತು $b_{yx} = -1.38$ ಇದ್ದರೆ 'r'ಅನ್ನು ಲೆಕ್ಕಹಾಕಿ.

i) ಕಾಲಮಾಲಿಕೆಯ ಮುನ್ಸೂಚನೆಯ ಅರ್ಥವನ್ನು ತಿಳಿಸಿ.

j) ಕಾಲಮಾಲಿಕೆಯ ಘಟಕಗಳನ್ನು ಹೆಸರಿಸಿ.