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(FOR THE CANDIDATES ADMITTED **22UIB3A3**

DURING THE ACADEMIC YEAR 2022 ONLY) **REG.NO. :**

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : NOVEMBER 2023

B.Com.IB(SF) **MAXIMUM MARKS: 50**

SEMESTER: III **TIME : 3 HOURS**

PART - III

22UIB3A3 – BUSINESS STATISTICS

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS (K1)

1. Which of the following is a branch of statistics?
   a. Descriptive statistics b. Inferential statistics
   c. Industry statistics d. Both a & b
2. The data classified according to some attributes is_____
   a. Geographical b. Chronological
   c. Qualitative d. Quantitative
3. Which among the following cannot be represented graphically?
   a. Mean b. Median
   c. Mode d. None of the above
4. If the values of two variables move in the same direction_____
   a. the correlation is said to be negative. b. the correlation is said to be positive.
   c. the correlation is said to be non- linear. d. the correlation is said to be linear.
5. In fitting a straight line, the value of slope 'b' remain unchanged with the change of _____
   a. Scale b. Origin
   c. Both a & b d. Neither a nor b

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES (K2)

6. Define: Statistics
7. What are the different parts of a table?
8. State the various measures of central tendency.
9. What do you mean by Regression lines?
10. Mention the components of time series analysis.

(CONT….2)

SECTION – B (5 X 3 = 15 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

(K3)

11. a) Describe the characteristics of statistics.**(OR)**

11 b) Sketch the merits of collecting primary data.

12. a) List the primary objectives in the classification of data.**(OR)**

12 b) Outline the advantages of diagrammatic and graphic presentation of data.

13. a) From the following data compute arithmetic mean by direct method:

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of students	5	10	25	30	20	10

(OR)

13 b) Blood serum cholesterol levels of 10 people are as under:

240, 260, 290, 245, 255, 288, 272, 263, 277, 251

Calculate standard deviation with the help of assumed mean.

14. a) Define: Rank Correlation. Sketch Spearman's formula for rank correlation coefficient. **(OR)**

14 b) The following table shows the ages (X) and blood pressure (Y) of 8 people:

X	52	63	45	36	72	65	47	25
Y	62	53	51	25	79	43	60	33

Obtain the regression equation of Y on X and find the expected blood pressure of a person who is 49 years old.

15. a) The following table relates to the tourist arrivals (in millions) during 2015 to 2021 in India:

Year	2015	2016	2017	2018	2019	2020	2021
Tourist arrivals (in millions)	18	20	23	25	24	28	30

Fit a straight line trend by the method of least square and estimate the number of tourists that would arrive in the year 2025. **(OR)**

15 b) Assess the application of Time Series Analysis in business forecasting**.**

SECTION – C (5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.(K4 (Or) K5)

16. a) Evaluate the utility of statistics as a managerial tool.

(OR)

16 b) Summarize the different methods of collecting data indicating the merits and demerits of each of them.

17. a) Discuss the types of data classification. **(OR)**

17 b) Categorize the various methods of graphical representation of data and explain the same.

18. a) Explain the concept of skewness. Draw the sketch of a skewed frequency distribution and show the position of the mean, median and mode when the distribution is asymmetric.(**OR)**

18 b) Find the missing frequency. If arithmetic mean is 28 of the data given below, find the median of the series later.

Profits per shop	0-10	10-20	20-30	30-40	40-50	50-60
No. of shops	12	18	27	-	17	6

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19. a) Compute Karl Pearson's coefficient of correlation from the following data and comment on its value:

X	17	19	23	35	40	42	48	54
Y	02	13	11	24	13	50	18	37

(OR)

19 b) Obtain the regression equation of Y on X and estimate Y when X = 55 from the following:

X	40	50	38	60	65	50	35
Y	38	60	55	70	60	48	30

20. a) Calculate the trend values by the method of least- square from the data given below:

Year	2015	2016	2017	2018	2019	2020	2021	2022
Sales	80	90	92	83	94	99	92	104

Plot the data showing also the trend line. **(OR)**

20 b) Critically examine the different methods of measuring the trend, pointing out their merits and demerits.

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