SAIVA BHANU KSHATRIYA COLLEGE

(Aruppukottai Nadargal Uravinmurai Pothu Abi Viruthi Trustuku Pathiyapattathu)

ARUPPUKOTTAI

DEPARTMENT OF COMMERCE CA

QUESTION BANK

Name of the Department :	Commerce with Computer Application	UG / PG :	UG
Semester (UG - III & V; PG - III) :	UG- **III**	Subject Code :	CCAJC33
Name of the Subject :	Business Statistics		

Section A (Multiple Choice Questions)

Unit I: (Introduction to Statistics)

1. Primary data as compared to secondary data are
   a)less reliable b)more reliable c)not reliable d)equally reliable
2. Random sampling is also referred to as
   a)Probability sampling b)Non-Probability sampling c)Judgement sampling d)Quota sampling
3. In chronological classification data are classified on the basis of
   a)attributes b)class interval c)time d)quality
4. The science of collection, presentation, analysis and interpretation of numerical data is called
   a)commerce b)management c)statistics d)mathematics
5. Geographical classification means classification of data according to
   a)attributes b)quality c)location d)quantity

Unit II: (Arithmetic Mean & Range)

6. This is one of the measures of central tendency
   a)mean deviation b)median c)range d)correlation
7. The difference between the highest and the lowest value is
   a)range b)mode c)harmonic mean d)geometric mean
8. This is the reciprocal of the mean of the reciprocals of the values
   a)arithmetic mean b)geometric mean c)harmonic mean d)mean deviation
9. Which of the following is the measures of dispersion?
   a)range b)standard deviation c)quartile deviation d)all of these
10. Square of standard deviation is known as
    a)co-efficient of variation b)mean deviation c)variation d)variance

Unit III: (Skewness & Correlation)

11. Karl Pearson's co-efficient of Skewness
    a)is always positive. b)is always negative. c)is always zero d)can be positive, negative or zero
12. Bowley's co-efficient of Skewness lies between
    a)-1 and 1. b)1 and 2. c)3 and -3. d)0 and 3
13. The rank correlation coefficient was developed by
    a)Karl Pearson. b)Spearman. c)Bowley. d)Rank
14. The co-efficient of correlation
    a) cannot be positive. b)cannot be negative. c) cannot be either positive or negative d)more than 2
15. When co-efficient of Skewness is zero the distribution is
    a)J-shaped. b) U-shaped. c) symmetrical. d)L-shaped

Unit IV: (Regression Analysis)

16. The term regression was first used by
    a)Sir Francis Galton. b)Karl Pearson. c) Spearman. d)Bowley
17. The ratio of the average deviation is called
    a) correlation. b) Skewness. c) regression. d) Kurtosis
18. When the regression lines cut each other at right angle the variables are
    a)correlated. b)highly correlated. c)uncorrelated. d)none of these
19. The variable, we are trying to predict, is called the
    a) independent variable b) dependent variable. c) variable. d)none of these
20. When one regression co-efficient is negative, the other regression co-efficient would be
    a) negative. b) positive. c) zero. d)none of these

Unit V: (Time Series Analysis)

21. A time series consists of data arranged
    a) chronologically. b) geographically. c) serially. d) alphabetically
22. Secular trend refers to the
    a)short term movement b)long term movement. c) seasonal movement. d) social movement
23. A variation in a time series that repeats over a period of one year is known as
    a) secular trend. b) seasonal variation. c) cyclical variations. d) Irregular variation
24. Which of the following is not a component of a time series
    a) secular trend. b) seasonal variation. c) cyclical variations. d) coefficient of variation
25. The most widely used method of measuring seasonal variation is
    a) ratio method. b) ratio to moving average method. c) ratio to trend method. d) ratio to link relative method

Section B (7 mark Questions)

Unit I: (Introduction to Statistics)

26. What are the methods of collecting secondary data?
27. Represent the following data in a pie diagram.

Items	Expenditure (in Rs.)
Food	87
Clothing	24
Recreation	11
Education	13
Rent	25
Miscellaneous	20

28. .In a survey of 30 families in a village, the number of children per family was recorded and the following data are obtained.

1	0	2	3	4	5	6	7	2	3
4	0	2	5	8	4	5	6	3	4
3	7	6	5	3	3	7	5	9	2

29. What are the functions of statistics?
30. Explain briefly the nature of Statistics.

Unit II: (Arithmetic Mean & Range)

31. Calculate the Arithmetic mean for the wages of workers in a Factory

Wages in	4	6	8	10	15	16

Rs.						
ssssWorkers	5	15	6	7	8	2

32. Compute the median for the following distribution of weekly wages of 65 employees at the xyz company:

Weekly wages in Rs.	55	65	75	85	95	105	115
No of employees	8	10	16	14	10	5	2

33. Find out the value of quartile deviation and its coefficient from the following data:

X	26	28	32	35	29	24
Y	6	7	9	10	7	6

34. calculate standard deviation from the following data:

Marks(x)	10	20	30	40	50	60
No.of students (f)	8	12	20	10	7	3

35. Doctors X and Y measured the systolic blood pressure of two groups of men all of the same age and the results were:

	No.of Men	Mean systolic blood pressure	Standard deviations
Doctors X	113	159mm	22.4mm
Doctors Y	121	149mm	20 mm

Find the mean and the standard Deviation of the two groups taken taken together.

Unit III：(Skewness & Correlation)

36. Calculate Karl Pearson's coefficient of skewness

Wages	12	15	20	25	30	40	50
Workers	10	25	40	70	32	13	10

37. From the following data calculate the rank correlation coefficient after making adjustment for tied ranks:

X	48	33	40	9	16	16	65	24	16	57
Y	13	13	24	6	15	4	20	9	6	19

38. Calculate the co-efficient of concurrent deviation from the following data:

X	65	50	45	60	40	55	30	40	60	60	55
Y	70	55	50	70	60	85	50	40	70	55	55

39. For a moderately skewed data, the arithmetic mean is 200, the co-efficient of variation is 8 and Karl Pearson's Co-efficient of skewness is 0.3. Find the mode and median.
40. Write the formula for Pearson's coefficient of correlation. Give an example

Unit IV：(Regression Analysis)

41. State the uses of regression analysis.
42. .Find the regression lines

X	3	5	6	8	9	11
Y	2	3	4	6	5	10

43.

	X	Y
Arithmetic mean	36	85
Standard Deviation	11	8

Correlation co-efficient between X and Y is 0.66.Find two regression equations.

44. Explain the methods of regression analysis.
45. How would you find out the regression equations?

Unit V：(Time series Analysis)

46. What are the components of time series?
47. What are the merits of moving average method?
48. Explain the least square.
49. Draw a trend line by the method of semi averages

Year	2015	2016	2017	2018	2019	2020
Sales in units(in thousand)	60	77	82	120	116	130

50. Find the three yearly moving average from the following time series data:

Year	2011	2012	2013	2014	2015	2016	2017	2018
Sales(in tonnes)	30.1	45.4	39.3	41.4	42.2	46.4	46.6	49.2

Section C (10 mark Questions)

Unit I: (Introduction to statistics)

51. Explain the scope of statistics in business and industry
52. .Discuss the methods of collecting primary data.

Unit II: (Arithmetic Mean & Range)

53. .Find the standard deviation from the following data:

Class	0-10	10-20	20-30	30-40	40-50
Frequency	5	8	15	16	6

54. Find the coefficient of mean deviation from mean for the following data:

Age in years	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No.of persons	20	25	32	40	42	35	10	8

Unit III: (Skewness & Correlation)

55. Calculate coefficient of correlation from the following data

X	100	101	102	102	100	99	97	98	96	95
Y	98	99	99	97	95	92	95	94	90	91

56. From the data given below calculate Bowley's co-efficient of skewness

Age in years	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60
No.of persons	50	70	80	180	150	120	70	50

Unit IV: (Regression Analysis)

57. What are the features of regression equation?
58. Compute two regression lines

X	78	77	85	88	87	82	81	77	76	83	97	93
Y	84	82	82	85	89	90	88	92	83	89	98	99

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Unit V：(Time series Analysis)

59. Fit a straight line trend by the method of least squares for the following data and estimate the earning for the year 2022

Year	2013	2014	2015	2016	2017	2018	2019	2020
Earning(Rs.in lakhs)	38	40	65	72	69	60	87	95

60. Briefly explain the various methods of estimating the trend components.