(6 pages) **Reg. No. :** .....

Code No. : 20726 **Sub. Code : GMBA 12**

B.B.A (CBCS) DEGREE EXAMINATION, NOVEMBER 2012.

First Semester

Business Administration –Main

BUSINESS STATISTICS

(For those who joined in July 2012 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Data originally collected for an investigation are known as ————.
   (a) Primary data (b) Secondary data
   (c) Both (a) and (b) (d) None of these

2. Sampling method is used to collect data when the complete enumeration is ————.
   (a) Impossible (b) Very difficult
   (c) Not necessary (d) All the above

3. The sum of deviations taken from ———— is minimum.
   (a) Median (b) Mode
   (c) Arithmetic mean (d) Geometric mean

4. Central tendency includes ————.
   (a) Mode (b) Mean
   (c) Median (d) All the above

5. If $Q_1 = 25$, $Q_3 = 32$ then Q.D is given by ————.
   (a) 3.5 (b) 7.0
   (c) 5.0 (d) 0

6. Mean deviation is least when deviation is taken from ————.
   (a) Mean (b) Median
   (c) Mode (d) All the above

7. Correlation referees to ———— relationship.
   (a) Casual (b) Scalar
   (c) Positive (d) Negative

8. When $b_{xy} = 0.5$, $\sigma_x = 2.5$ and $\sigma_y = 4.0$, the co - efficient of correlation is .
   (a) 0.4 (b) 0.8
   (c) 0.5 (d) 1.0

9. Fisher's index is given by ———.

(a) $L \times P$ (b) $\sqrt{L \times P}$

(c) $L + P$ (d) None of these

10. The estimated trend values are ——— to the actual values.

(a) Equal (b) Closer

(c) Farther (d) None of these

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Define statistics. List out the functions of statistics.

Or

(b) Examine the significance of sampling.

12. (a) Distinguish between classification and tabulation.

Or

(b) Point out the significance of diagrams and graphs in the presentation of data.

13. (a) Distinguish between absolute and relative measure of dispersion.

Or

(b) Define co- efficient of variation. Calculate the same if mean = 21.089 and $\sigma = 13.55$.

14. (a) What is correlation? Describe the significance of correlation.

Or

(b) From the following data, obtain the two regression equations.

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

15. (a) Write a note on time reversal test and factor reversal test.

Or

(b) Discuss the role of time series in business forecasting.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b).

16. (a) Describe the methods employed in the collection of primary data.

Or

(b) Discuss the meaning, utility and limitations of diagrammatic representation of data.

17. (a) Why do we tabulate data? Give the format of a table.

Or

(b) The weight of 100 tomato fruits are given below. Find the mean, median and mode.

Weights(gm)	No. of fruits
10	18
20	22
30	40
40	10
50	7
60	3

18. (a) Compute the quartile deviation and coefficient of quartile deviation for the data given :

No. of flowers	5	6	7	8	9	10	11	12	13	14
No. of plants	2	3	1	2	3	4	2	1	1	1

Or

(b) Calculate mean deviation from mean and median from the following data:

x	20	30	40	50	60	70	80
y	3	61	132	123	140	51	5

19. (a) The following table shows the years of service and efficiency rating of 10 persons in an organization:

Person	A	B	C	D	E	F	G	H	I
Year of service	26	22	30	16	23	27	25	29	28
Efficiency rating	67	65	60	84	89	78	90	95	65

Find out the Co- efferent of correlation.

Or

(b) Explain the addition and multiplication theorems of probability with suitable examples.

20. (a) Calculate Fisher's Index number for the data given below:

	Base year		Current year	
Commodity	Price (Rs.)	Quantity (Kg)	Price (Rs.)	Quantity (Kg)
A	6	50	10	56
B	2	100	2	120
C	4	60	6	60
D	10	30	12	24

Or

(b) Explain the different components of time series analysis in detail.

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