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

Code No. : 12920 **Sub. Code : JMBA 12**

B.B.A. (CBCS) DEGREE EXAMINATION, NOVEMBER 2016.

First Semester

Business Administration – Main

BUSINESS STATISTICS

(For those who joined in July 2016 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Data collected from published sources are generally in ———— form.

(a) unorganised (b) organised

(c) analysed (d) interpreted

2. ———— have a great memorizing effect.

(a) Diagrams (b) Graphs

(c) Both (a) & (b) (d) None of these

3. In ———— classification, data are classified on the basis of sex, colour of hair, literacy etc.

(a) quantitative (b) qualitative

(c) chronological (d) geographical

4. ———— is a measure of central tendency.

(a) mean (b) median

(c) mode (d) all the above

5. Since the measure of ———— give an average of the differences of various items from an average, they are also called as averages of second order.

(a) dispersion (b) correlation

(c) regression (d) probability

6. The relative measure of standard deviation is called ————.

(a) variance

(b) arithmetic mean

(c) co-efficient of variation

(d) none of these

7. If the amount of change in one variable tends to bear constant ratio to the amount of change in the other variable then the correlation is said to be ________.

(a) negative (b) positive

(c) linear (d) non-linear

8. The scale of probability extends from zero to ________.

(a) one (b) two

(c) three (d) four

9. Laspeyre's index considers ________ quantity as weights.

(a) base year

(b) current year

(c) both base and current years

(d) none of these

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

(a) equal (b) closer

(c) farther (d) smaller

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) What are the different stages in a statistical investigation?

Or

(b) Describe the general rules for constructing diagrams.

12. (a) Write a note on :

(i) Histogram and

(ii) Ogive curves.

Or

(b) From the following distribution of wages of 50 workers, find the Modal wage :

Daily Wage(Rs.) :	30	40	50	60	70	80	90	100	110
No. of wage earners :	2	3	2	6	10	11	12	3	1

13. (a) From the following observations find the Quartile Deviation.

10, 15, 16, 5, 18, 11, 9, 25, 19, 23, 17, 13, 22, 8, 26, 7, 12, 24, 28

Or

(b) What are the properties of a good Measure of Variation?

14. (a) Distinguish between correlation and regression.

Or

(b) A Salesman has a 60 % chance of making a sale to each customer. The behavior of successive customers is independent. If two customers A and B enter, what is the probability that the salesman will make a sale to A or B?

15. (a) Explain the procedure involved in the construction of index numbers.

Or

(b) Calculate 4 yearly moving averages for the following time series :

Year :	2002	2003	2004	2005	2006	2007	2008
Profit (Rs. '000) :	24	26	27	30	32	33	36

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) What are the different kinds of data? Explain their relative merits and demerits.

Or

(b) Explain the sampling methods.

17. (a) Discuss the methods of graphic representation of frequency distribution.

Or

(b) From the data given below, find the mean and median.

Class	Frequency
0-5	15
5-10	9
10-15	11
15-20	20
20-25	30
25-30	18
30-35	17

18. (a) Define range. State the uses, merits and limitations of range.

Or

(b) Compute the standard deviation and coefficient of variation for the data given below :

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

19. (a) Calculate the Karl Pearson's correlation co-efficient between advertisement cost and sales from the following data :

Advertisement cost in '000 Rs. :	39	65	62	90	82
Sales in Lakhs Rs. :	47	53	58	86	62
Advertisement cost in '000 Rs. :	75	25	98	36	78
Sales in Lakhs Rs. :	68	60	91	51	84

Or

(b) A company has two plants to manufacture scooters. Plant I manufactures 70% of the scooters and Plant II manufactures 30%. At plant I, 80% of the scooters rated as standard quality and at plant II, 90% of scooters are rated standard quality. A scooter is picked up at random and is found to be of standard quality. What is the chance that it has come from plant I or plant II?

20. (a) Describe the different tests of consistency of Index numbers.

Or

(b) Based on the given data, fit a trend using the Method of Least Squares.

x:	2011	2012	2013	2014	2015
y:	170	385	395	215	230

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