(8 pages)

Reg. No.: ....

Code No. : 22205 E   Sub. Code : JMBA 12/
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B.B.A (CBCS) DEGREE EXAMINATION,
NOVEMBER 2019.

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. Statistical data must be collected in a
————————manner
   (a) Statistian   (b) Mathematician
   (c) Systematic   (d) Unsystematic

2. The primary data can be collected from
   (a) Questionnaire   (b) Publications
   (c) Annual report   (d) All

3. Ogive curve can be used to find out
————
   (a) Mean   (b) Median
   (c) Mode   (d) All of the above

4. Bar diagram is a —————————
   (a) One dimensional   (b) Tow dimensional
   (c) Three dimensional   (d) Four dimensional

5. Range is ————————
   (a) Maximum value –Minimum value
   (b) Minimum value –Maximum value
   (c) Maximum value^2
   (d) Maximum value × minimum value

6. ———————— is not a measure of dispersion
   (a) Mean   (b) Median
   (c) Mode   (d) All of the above

7. For quantitative measurement of the degree of relationship between two variables is given by
————————
   (a) Bowley   (b) Disney
   (c) Karl Pearson   (d) None

8. Rank correlation coefficient is given by
   (a) Karl Pearson   (b) Spearman
   (c) Bowley   (d) None

Page 2   Code No. : 22205 E

9. _____ is a summary measure that states a relative comparison between groups of related items.

(a) Time series

(b) Index number

(c) Average

(d) Mode

10. _____ method is used to measure short–term fluctuations in a time series data influenced by trend.

(a) Average method

(b) Moving average methods

(c) Trend analysis

(d) Seasonal index

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Define "Statistics" and bring out its characteristics.

Or

(b) What is primary data? Enlist the methods of collecting primary data.

12. (a) Calculate the A.M for the following data

Age:	8	10	12	15	18
No.of workers:	5	7	12	6	10

Or

(b) Find out the median of the following frequency distribution.

Daily wages in ₹. 100s:	5	10	15	20	25	30
No. of persons:		7	12	37	25	22	11

13. (a) Find out standard deviation (σ), from the following calculated figures $\sum fd = 23 ; \sum fd^2 = 91 ; N = 50 ; C = 10$.

Or

(b) Calculate the coefficient of variation, if the $\overline{X} = ₹.87.30$ and $S.D. = ₹.12.69$.

14. (a) Find out the coefficient of correlation?

X:	5	4	3	2	1
Y:	1	2	3	4	5

Or

(b) If $y = 0.95x + 16.75$, then find out the value of y when the x is 6.2

15. (a) The sales of a commodity in tonnes varied from January 2018 to December 2018 as follows:

280 300 280 280 270 240

230 230 220 200 210 200

Fit a trend line by the method of semi–average.

Or

(b) Brief on the different methods of determining Index number.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Describe the scope and limitation of statistics.

Or

(b) Distinguish between primary data and secondary data.

17. (a) From the following data draw a suitable diagram:

	Production (000 units)		
Year	X	Y	Z
2013	47	55	73
2014	32	60	79
2015	50	75	85
2016	55	87	98
2017	62	96	110

Or

(b) Calculate mean, median and mode from the following data relating to the production of a factory for 12 months:

Months	Production	Months	Production
Jan	273	July	220
Feb	54	Aug	340
Mar	79	Sept	300
Apr	138	Oct	290
May	56	Nov	150
June	89	Dec	70

18. (a) Calculate standard deviation from the data given below:

Class intervals	Frequency
0-5	14
5-10	26
10-15	32
15-20	45
20-25	39
25-30	12
30-35	9
35-40	2

Or

(b) Compute quartile deviation from the following data:

Marks	15	25	35	45	55	65	75
No.of.students	3	2	7	9	12	6	3

19. (a) Calculate coefficient of correlation from the data given below: [between Education and Employment]

Village	1	2	3	4	5	6	7
% of educated	55	45	65	80	75	60	70
% of employed	30	25	20	40	35	25	45

Or

(b) From the following data obtain two regression equations:

x:	6	9	12	5	8	14
y:	5	20	15	12	9	11

20. (a) Calculate price index number through fisher's ideal method from the following data:

	2017		2018	
Commodity	Price	Quantity	Price	Quantity
A	21	15	20	17
B	70	10	75	12
C	60	14	62	15
D	32	10	30	10
E	36	12	38	8

Or

(b) Calculate five yearly moving averages from the following data:

Year	2008	09	10	11	12	13
Income (in 500 rupees)	161	127	152	143	144	167

Year	14	15	16	17	18
Income (in 500 rupees)	182	179	152	163	159

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