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Reg. No. :

**Code No. : 24037 E Sub. Code : AMBA 11/
AMSL 11**

B.B.A. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2020.

First Semester

Business Administration/Shipping and Logistics–Main

BUSINESS STATISTICS

(For those who joined in July 2020 onwards)

Time : Three hours

Maximum : 75 marks

PART A — ($10 \times 1 = 10$ marks)

Answer ALL questions.

Choose the correct answer :

1. Data collected from “Hindu” Newspaper is an example of
 - (a) Primary data
 - (b) Secondary data
 - (c) Primary and Secondary data
 - (d) None of these

2. Total angle of the pie-chart is
(a) 45 (b) 90
(c) 180 (d) 360
3. In chronological classification, data are classified on the basis of
(a) Attributes (b) Class interval
(c) Time (d) Locations
4. Which of the following is the most unstable average?
(a) Mode (b) Median
(c) Geometric mean (d) Harmonic mean
5. Range is _____
(a) Large value + Small value
(b) Large value – Small value
(c) Large value \times Small value
(d) Large value / Small value
6. Standard deviation is also called _____
(a) Root mean square deviation
(b) Root Deviation
(c) Sigma Square Deviation
(d) Positive Meandeviation

7. The co-efficient of correlation
- (a) cannot be positive
 - (b) cannot be negative
 - (c) can be either positive or negative
 - (d) none of these
8. The relationship between three or more variable is studies with help of _____ correlation.
- (a) Positive
 - (b) Negative
 - (c) Linear
 - (d) Multiple
9. The circular test is satisfied by
- (a) Simple aggregative index
 - (b) Passche's Index
 - (c) Laspeyre's index
 - (d) Kelly's index
10. Seasonal variations respect during a period of
- (a) One year
 - (b) Five year
 - (c) Seven year
 - (d) Three year

PART B — ($5 \times 5 = 25$ marks)

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

Each answer should not exceed 250 words.

11. (a) Discuss the functions of statistics.

Or

- (b) Describe the methods of collecting primary data.

12. (a) Explain the different types of classification.

Or

- (b) Calculate Harmonic Mean from the following data.

Size of items	6	7	8	9	10	11
Frequency	4	6	9	5	2	8

13. (a) Calculate quartile deviation and its coefficient of A's monthly earning for a year.

Month	1	2	3	4	5	6	7
Monthly earning	239	250	251	251	257	258	260

Month	8	9	10	11	12
Monthly earning	261	262	262	273	275

Or

- (b) Calculate the mean deviation from mean for the following data.

Class	2-4	4-6	6-8	8-10
internal				
Frequency	3	4	2	1

14. (a) Find out the co-efficient of correlation.

X	4	3	2	5	6
Y	1	2	3	5	4

Or

- (b) Given the following data, calculate the expected value of Y, when X = 12.

	X	Y
Average	7.6	14.8
Standard deviation	3.6	2.5

$$r = 0.99$$

15. (a)

Commodity	Price in 2014	Price in 2015
A	90	95
B	40	60
C	90	110
D	30	35

Construct an index number for 2015 taking 2014 as base.

Or

- (b) Explain the uses of time series.

PART C — ($5 \times 8 = 40$ marks)

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

Each answer should not exceed 600 words.

16. (a) Describe the scope and uses of statistics in business.

Or

- (b) Draw a multiple bar diagram for the following data.

Year	Sales (,000)	Gross profit (,000)	Net Profit (,000)
2012	100	30	10
2013	120	40	15
2014	130	45	25
2015	150	50	25

17. (a) Calculate the mode from the following series.

Size of item	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45
Frequency	20	24	32	28	20	16	34	10	8

Or

- (b) Find out the Geometric mean

Yield of wheat	7.5-10.5	10.5-13.5	13.5-16.5	16.5-19.5	19.5-22.5	22.5-25.5	25.5-28.5
No. of farms	5	9	19	23	7	4	1

18. (a) Calculate standard deviation for the following data.

Class Interval	5-10	10-15	15-20	20-25	25-30
Frequency	6	5	15	10	14

Or

- (b) Prices of a particular commodity in five years in two cities are given below.

Price in city 'A'	Price in city 'B'
20	10
22	20
19	18
23	12
16	15

From the above data find the city which more stable prices.

19. (a) Explain the different types of correlation.

Or

- (b) Calculate co-efficient of correlation from the following data.

$x :$	12	9	8	10	11	13	7
$y :$	14	8	6	9	11	12	3

20. (a) Calculate Index number through Bowley's Method form the following data.

	2016		2017	
Commodity	Price	Quantity	Price	Quantity
A	10	3	8	3.25
B	20	15	15	20
C	2	25	3	23

Or

- (b) Calculate three yearly moving average of the following data.

Year:	2006	2007	2008	2009	2010
No. of	15	18	17	20	23
Students:					

Year:	2011	2012	2013	2014	2015
No. of	25	29	33	36	40
Students:					