C. ABDUL HAKEEM COLLEGE (AUTONOMOUS),
MELVISHARAM - 632 509.
SEMESTER EXAMINATIONS, NOVEMBER - 2018

B.B.A.,   **SEMESTER I**

U18MBA102 – BUSINESS MATHEMATICS AND STATISTICS - I

Time: Three Hours   Maximum: 75 Marks

SECTION - A (10 X 2 = 20 Marks)

Answer **ALL** Questions.

1. What are the methods used for collection of primary data?

2. The monthly income of 5 person is given: 130,140,144,136 and 148. Find Median?

3. What is mean by simple bar diagram?

4. Find the mean of the set of observation 27 , 36 , 28 , 18 , 35 , 26 , 20 , 35 , 40 ,26?

5. What is mean deviation?

6. Find the range and its coefficient.

Size	5	7	9	11	13	15
Frequency	1	5	3	9	4	2

7. Find the simple interest on the sum of Rs.500 at 10% p.a. for 2 years?

8. What is mean by present value?

9. What is a Diagram?

10. What is a Set?

11. a) List out the sources of secondary data.

SECTION - B (5 X 5 = 25 Marks)

Answer **ALL** Questions.

12. a) Calculate Arithmetic Mean for the following data.

Age in year	8	10	12	15	18
No. of Workers	5	7	12	6	10

(Or)

b) Write a note on Cumulative Law and Associative Law of set theory.

13. a) Find the mean deviation from mean for the following data:

No. of date	Less than 5	10	15	20	25	30	35	40	45
No. of Students	29	224	465	582	634	644	650	653	655

(Or)

b) Find the median for the following frequency distribution.

Class	0-5	5-10	10-15	15-20	20-25	Total
Frequency	3	5	12	6	4	20

14. a) A certain sum amounts to Rs.4,000 at the end of year at 12% p.a. interest. Find the sum.

(Or)

b) The first of two samples has 100 items with mean 15 and variance 9. If the whole group has 250 items with mean 15.6 and variance 13.44. Find the SD of the second sample:

$$n_1 = 100 \qquad n_1 + n_2 = 250 \qquad n_2 = 150$$
$$\overline{x_1} = 15 \qquad \bar{x} = 15.6 \qquad \overline{x_2} = ?$$
$$\sigma_1^2 = 9 \qquad \sigma^2 = 13.44 \qquad \sigma_2^2 = ?$$

15. a) Discuss the significance of Diagram's and Graphs.

(Or)

b) V.P. Balaraman deposits Rs.12,000 in Pandurangam associate and gets Rs.27,566.93 at the end of $3\frac{1}{2}$ Years. Find the rate of compound interest which the company pays per month.

b) Give a specimen of a Bar-Diagram, Percentage Bar Diagram and a Pie Diagram.

SECTION - C (3 X 10 = 30 Marks)

Answer **ANY THREE** Questions.

16. Explain the diagrammatic representation of data.

17. You are given the following incomplete frequency distribution, if n is known that total frequency is 100 and that the median is 44. Estimate by calculation the missing frequencies and find the value of the mode:

Value	10-20	20-30	40-50	50-60	60-70	70-80
Frequency	5	12	20	-	10	4

18. In a small town, a survey was conducted in respect of profit made by retail shops. The following results were obtained.

Profit or Loss in '000 Rs,	Number of shops
-4 to -3	4
-3 to -2	10
-2 to -1	22
-1 to 0	28
0 to 1	38
1 to 2	56
2 to 3	40
3 to 4	24
4 to 5	18
5 to 6	10

Calculate:

i) The average profit made by a retail shop

ii) Total profit by all shops and

iii) The coefficient of variation of earnings.

19. (i) Calculate the compound interest on Rs.2,500 for 4 year @ 8% p.a.

(ii) Calculate the compound interest in the above case when interest is compounded for a) half yearly b) quarterly.

20. Calculate Standard Deviation:

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	8	12	17	14	9	7	4

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