

**B.M.S COLLEGE FOR WOMEN, AUTONOMOUS**  
**BENGALURU – 560004**  
**SEMESTER END EXAMINATION – JANUARY/FEBRUARY 2023**

**B.Com. Business Data Analytics - I Semester**

**BUSINESS STATISTICS-1**  
**(NEP Scheme 2021-22 onwards)**

**Course Code: BBDA1DSC03**

**Duration: 2 ½ Hours**

**QP Code: 1041**

**Max. Marks: 60**

**Instructions: 1. Simple/Scientific calculator may be used.**  
**2. Graphs sheets and Statistical tables will be supplied on request.**

**SECTION-A**

**1. Answer any FIVE of the following questions. Each question carries TWO Marks. (5x2=10)**

- Explain any two functions of Statistics.
- Describe the main areas of Business where Statistics is extensively used.
- List out the differences between classification and tabulation.
- Write any two utilities of ogives.
- There are 50 labourers working in a factory out of them 30 were male labourers. The daily average wages paid to male and female labourers were Rs. 750 and Rs. 500 respectively. Find combined daily average wages of the labourers.
- The sum and difference of the third and first quartiles are 325 and 200 respectively. Obtain the coefficient of quartile deviation.
- If  $r = 0.7$  and  $N = 200$ , find out the probable error of the coefficient of correlation.

**SECTION- B**

**Answer any FOUR of the following questions. Each question carries FIVE Marks. (4x5=20)**

- Define sampling. Explain the different types of sampling.
- Draw deviation bar diagram for the following data showing the sales and net profit/loss of a private industrial company.

Year	Sales	Net profit/loss
2019-20	30%	20%
2020-21	18%	15%
2021-22	5%	-2%

4. An aeroplane covers the four sides of a square at speeds of 1000, 2000, 3500 and 5000 Km./hour respectively. What is the average speed of the plane in its flight around the square?
5. The mean and standard deviation of a set of 100 observations were worked out as 60 and 5 respectively. But by mistake a value 45 was taken in place of 70 for one of the observation. Calculate the correct mean and correct standard deviation.
6. Find Bowley's coefficient of skewness for the following frequency distribution and comment on the result.

<b>No. of children /family</b>	0	1	2	3	4	5
<b>No. of families</b>	12	25	35	20	5	2

### SECTION- C

**Answer any TWO of the following questions. Each question carries TWELVE Marks. (2x12=24)**

7. Compute mode for the following frequency distribution by grouping method.

<b>X</b>	10	20	30	40	50	60	70
<b>f</b>	7	28	14	25	27	20	30

8. Calculate mean deviation from mean and median for the following frequency distribution.

<b>C.I.</b>	0-20	20-40	40-60	60-80	80-100	100-120
<b>f</b>	3	10	25	30	24	8

9. Compute Karl Pearson's coefficient of correlation for the following bivariate data and comment on the result.

	<b>Y</b>			
<b>X</b>	1000	2000	3000	4000
50	-	3	4	-
100	2	5	-	10
150	-	-	12	15
200	3	-	-	20
250	4	6	-	-

**SECTION- D**

**Answer any ONE of the following questions, carries SIX Marks.**

**(1x6=6)**

10. The following data relates to the marks scored by 50 students in an examination. Prepare a frequency distribution table by using exclusive C.I. and taking equal width as 20.

45	37	0	59	48	87	95	66	8	70
25	55	18	60	41	20	74	60	63	90
89	74	84	58	98	74	42	89	75	79
63	29	63	56	6	76	99	84	53	95
84	68	74	62	79	96	53	77	72	67

11. The following data relates to the prices of shares (in Rs.) of two companies for 6 days. Which companies share prices are more consistent?

<b>Price/share</b>	<b>Company A</b>	25.60	20.30	32	30	31.50	36
	<b>Company B</b>	22	27.50	45	26.60	40	32.75

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