

**FACULTY OF MANAGEMENT**  
**MBA (CBCS) I Semester (Backlog) Examination, August 2023**  
**Subject: Statistics for Management**  
**Paper Code – MB104**

Time: 3 Hours

Max. Marks: 80

**PART – A****Note: Answer all the questions.****(5 x 4 = 20 Marks)**

1. Measures of Central Tendency
2. Discrete Probability
3. Hypothesis
4. Test for Goodness of fit
5. Moving averages

**PART – B****Note: Answer all the questions.****(5 x 12 = 60 Marks)**

6. a) Calculate Mean, Median and Mode for the following data

Weight	50 - 54	55-59	60-64	65-69	70-74	75-79	80-84
Frequency	10	15	20	25	18	8	4

**(OR)**

- b) Explain Bayes' theorem and its applications.

7. a) For a Normal curve having
- $m=20$
- and
- $s=10$
- , find the area between
- $x_1=15$
- and
- $x_2=40$
- .

**(OR)**

- b) The following table gives the number of days, in a 50 day period during which automobile accidents occurred in a certain part of the city. Fit a Poisson distribution to the following data.

No of Accidents:	0	1	2	3	4
No of days:	19	18	8	4	1

8. a) The mean weight of 200 male students in a college is 62 kgs with a standard deviation of 4 kgs . Test the hypothesis that the mean weight in the population is greater than 58 kgs. Use
- $\alpha=1\%$
- .

**(OR)**

- b) When do you use large sample tests? What are the advantages of using large sample tests?

9. a) Three fertilizers A, B, and C are given to different number of plots of uniform area and their yields in Kilograms are as given below. Test whether average of three different fertilizers is same at  $\alpha=5\%$ . LOS?

Fertilizers	Yields				
A	7	11	9	--	--
B	4	6	8	5	2
C	10	8	6	8	--

(OR)

- b) Five coins are tossed 3200 times and the number of heads appearing each time is noted at the end the following results were obtained:

No of heads	0	1	2	3	4	5
frequency	80	570	1100	900	500	50

Test the goodness of fit to determine whether the coins are unbiased?

10. a) Calculate Karl Pearson's Coefficient of Correlation and Comment.

X	3	5	7	5	6	7	9	4	8	6
Y	6	9	12	10	14	12	14	8	15	10

(OR)

- b) Fit a linear trend line to the following data using least squares principle and estimate the sales volume for the year 2005.

Year	1994	1995	1996	1997	1998	1999	2000	2001
Sales Volume	425	378	298	390	468	456	575	660

\* \* \*