

FACULTY OF MANAGEMENT
MBA I - Semester (CBCS) Examination, April 2022
Subject: Statistics for Management
Paper No. MB - 104

Time: 3 Hours

Max. Marks: 80

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

1. What are the Applications of Baye's theorem?
2. Explain Properties of the normal distribution
3. Explain Errors in hypothesis testing
4. Explain the Yate's correction for continuity
5. What is Scatter diagram?

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

6. What is Statistics? How do you think the knowledge of statistics is essential in management decisions. Illustrate your answer through examples.
7. From the following data of age of employees, calculate coefficient of skewness and comment on the result.

Age below (yrs)	25	30	35	40	45	50	55
No. of Employees	8	20	40	65	80	92	100

8. What is Binomial distribution? What are its features? Three perfect coins are tossed together, what is the probability of getting at least one head?
9. A work shop produces 5,000 units per day. The average weight of the units is 140 kgs with standard deviation of 8 kgs. The variable weight follows a normal distribution. Find the number of units weighing less than 145 kgs.
10. What is Sampling? Explain the importance of sampling in solving the business problems. Critically examine the well-known methods of probability sampling and non-probability sampling?
11. What is Hypothesis? Explain the process of testing a hypothesis in detail using business examples?
12. Two hundred randomly selected adults were asked whether TV shows as a whole are primarily entertaining, educational, or a waste of time. The respondents were categorized by gender. Their responses are given in the following table:

	OPINION			
GENDER	Entertaining	Educational	Waste of time	Total
Female	52	28	30	110
Male	28	12	50	90
Total	80	40	80	200

Is this evidence convincing that there is a relationship between gender and opinion in the population interest?

13. As a head of the department of a consumers research organization, you have the responsibility for testing and comparing lifetimes of four brands of electric bulbs. Suppose you test the life time of three electric bulbs of each of the four brands. The data are shown below, each entry representing the lifetime of an electric bulb, measured in hundreds of hours.

BRANDS			
A	B	C	D
20	25	24	23
19	23	20	20
21	21	22	20

Can we infer that the mean lifetimes of the four brands of electric bulbs are equal?

14. The following data related to age of employees and the number of days they reported sick in a month.

Employees	1	2	3	4	5	6	7	8	9	10
Age	30	32	35	40	48	50	52	55	57	61
Sick days	1	0	2	5	2	4	6	5	7	8

Calculate Karl Pearson's coefficient of correlation and interpret it?

15. The following table relates to the tourist arrivals (in lakhs) during 2015 to 2021 in India.

Year	2015	2016	2017	2018	2019	2020	2021
Tourists arrivals	18	20	23	25	24	28	30

Fit a straight line trend by the method of least squares and estimate the number of tourists that would arrive in the year 2025?