MBHC-1.4

Sl. No.

I Semester M.B.A. Degree Examination, December - 2023
MANAGEMENT
Statistics and Optimization Techniques
(CBCS Scheme)

Time : 3 Hours **Maximum Marks : 80**

Instructions to Candidates : **All sections are compulsory.**

SECTION - A

Answer any **FIVE** questions. Each question carries **FIVE** marks. **(5×5=25)**

1. Differentiate between descriptive and inferential statistics.

2. State the relationship between mean, median and mode.

3. Why scatter diagram is used?

4. What are the characteristics of Poisson distribution?

5. List the assumptions in game theory.

6. How do you interpret 'r' value in correlation?

7. Explain the scope of operations research.

SECTION - B

Answer any **FOUR** questions. Each question carries **TEN** marks. **(4×10=40)**

8. Calculate mean, median and mode for the following distribution.

Pay Scale	**No.of employees**
0 - 2000	04
2000 - 3000	5
3000 - 4000	7
4000 - 5000	9
5000 - 6000	7

9. Calculate the rank correlation Co-efficient between equity share price and preference share price.

Year	1971	1972	1973	1974	1975	1976	1977
Equity share	97.5	99.4	98.6	95.2	95.1	98.4	97.1
Preference share	75.1	95.9	77.1	78.2	79.0	74.8	76.2

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10. Average yield of a certain crop was found to be 20.5 Kgs per plot with standard deviation 3.2 Kgs Assuming normal distribution.

i) How many plots out of 1000 will have a yield of 25 Kgs.

ii) What percentage of Plots will yield between 17.3 kgs and 26.9 kgs.

11. Solve the below game

	A	B	C	D	E
A	4	4	2	-4	6
B	8	6	8	-4	0
C	10	2	4	10	12

12. What are the advantages of regression Analysis? Explain different types of regression models.

13. Explain the validity of statement "An average when published should be accompanied by a measure of dispersion for significant interpretation.

SECTION - C

14. CASE (Compulsory) **(1×15=15)**

Draw the network of a project whose duration of activities are given below. Find critical path, estimate early start time, late start time of each went and project completion.

Activity	Duration	Activity	Duration
1-2	3	6-7	2
2-3	4		
2-4	4		
3-7	4		
4-5	2		
4-7	2		
5-6	2		
6-7	2		