Roll No. | | | | | | | | . | |

Total No. of Pages: 2

Total No. of Questions: 10

MBA, Semester-1st

QUANTITATIVE TECHNIQUES

Subject Code: 25C2BAP-103/MBA 103-18

M.Code: 96540/75404

Date of Examination: 11-05-2026

Time: 3 Hrs. **Max. Marks: 60**

INSTRUCTIONS TO CANDIDATES:

1. **SECTION-A is COMPULSORY consisting of EIGHT questions carrying TWO marks each.**
2. **SECTION-B consists of FOUR subsections: Units-I, II, III & IV. Each subsection contains TWO questions, each question carrying EIGHT marks and student has to attempt any ONE question from each subsection.**
3. **SECTION-C is COMPULSORY and consists of ONE Case Study carrying TWELVE marks.**

Q. No.	Question	CO	BL
SECTION-A			
1.	Answer briefly:		
a.	List any two features of statistics.	CO 1	L1
b.	Explain statistics in the plural sense.	CO 1	L2
c.	Define decile as partition value.	CO 2	L1
d.	Explain the multiplication law of probability with an example.	CO 3	L2
e.	State any two properties of Normal Distribution.	CO 4	L1
f.	Classify probability approaches into classical, relative, and subjective.	CO 4	L2
g.	How is estimated time calculated in project scheduling?	CO 5	L1
h.	Outline the ODD's Method.	CO 5	L2
	SECTION-B		
	UNIT-I		
2.	Inspect the properties of Standard Deviation and test for its usefulness in measuring variability within a given dataset.	CO 1	L4
3.	A company collected the following data.	CO 2	L5

Class	Frequency
0 - 400	14
400 - 800	22
800 - 1200	?
1200 - 1600	124
1600 - 2000	?
2000 - 2400	32
2400 - 2800	15
2800 - 3200	5

Total Frequency (N) is 360 and mode is 1376.
Estimate the missing frequency.

	UNIT-II		
4.	Apply the addition law of probability (mutually exclusive event) to solve: P(A) = 0.3, P(B) = p, P(A+B) = 0.5. Find p.	CO3	L3
5.	Distinguish between correlation and regression.	CO3	L4

	UNIT-III		
6.	In a small town, there are only two stores, ABC and XYZ, that handle sundry goods. The total number of customers is equally divided between the two, because the price and the quality of goods sold are equal. Both stores have good reputation in the community, and they render equally good customer service. Assume that a gain of customers by ABC is a loss to XYZ and vice versa. Both stores plan to run annual pre-Diwali sales during the first week of November. Sales are advertised through a local newspaper, and through radio and television. With the aid of an advertising firm store, ABC constructed the game matrix given below. (Figures in the matrix represent a gain or loss of customers).	CO4	L5

Strategy of XYZ	Strategy of ABC		
	Newspaper	Radio	Television
Newspaper	30	40	-80
Radio	0	15	-20
Television	90	20	50

Determine the optimal strategies for both ABC and XYZ.

7.	Distinguish between games of pure strategies and games of mixed strategies.	CO4	L4
	UNIT-IV		
8.	A small project is composed of 7 activities and the time duration of each activity is given.	CO 5	L3

Activity	Estimated duration in days		
	Optimistic	Most Likely	Pessimistic
1-2	2	2	8
1-3	4	10	16
1-4	1	7	13
2-5	5	8	11
3-5	2	8	14
4-6	6	9	12
5-6	4	7	10

(a) Construct the network diagram.
(b) Identify the critical path.

9.	Distinguish Transportation Problem & Assignment problem giving examples.	CO5	L4
	SECTION-C		
10.	A statistician was given the following data regarding marks obtained by the students in Mathematics and English:	CO3	L5

Marks in Mathematics	29	28	17	15	20	26	27	25	34	19
Marks in English	31	22	25	29	42	15	43	32	20	40

(a) Determine the relationship between students' rankings in Mathematics and English using Spearman's rank correlation method.
(b) Evaluate the degree of relationship.

NOTE: Disclosure of Identity by writing Mobile No. or Making of passing request on any p Answer Sheet will lead to UMC against the student.

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