PRN:		Course Code:	UST556

Third Year **B. Tech** End Semester Examination Summer 2024

Business Intelligence 000276

Day and Date: Tue 26 NOV 2024 Max Marks: **100**

Time : 10:30AM To 01:30PM Duration: **03** hrs

Instructions: All questions are compulsory.

			Marks	Bloom's Level	CO
Q.1		**Attempt the following**			
	a)	Explain the architecture of Business Intelligence with a neat diagram.	08	L2	CO1
	b)	Assess the significance of ethics in business intelligence.	08	L5	CO3
		OR			
	b)	Analyze the relationships between data, knowledge, and information within a business intelligence framework. How do they interact?	08	L4	CO3
Q.2		**Attempt the following**			
	a)	Illustrate the phases of the decision-making process.	08	L2	CO2
	b)	Interpret the components of a decision-support system.	08	L2	CO4
		OR			
	b)	Examine a modern classification of decision-support systems (DSS).	08	L4	CO3
Q.3		**Attempt any two of the following**			
	a)	How to build a model-driven DSS?	08	L1	CO1
	b)	Name and briefly explain any three types of model-driven DSS.	08	L2	CO1
	c)	Give a concise summary of decision-making in scenarios involving certainty and uncertainty.	08	L2	CO3
Q.4		**Attempt any two of the following**			
	a)	Define the Expert system and its application	08	L1	CO4
	b)	How does an expert system work?	08	L1	CO4
	c)	Outline the general steps involved in developing an expert system.	08	L2	CO4
Q.5		**Attempt any Two of the following**			
	a)	How is the structure of a mathematical model organized?	09	L1	CO2
	b)	Define mathematical model and explain its types.	09	L2	CO2
	c)	Explain the following a) Predictive models; b) Pattern recognition and learning models; c) Optimization models;	09	L2	CO2
Q.6		**Attempt any Two of the following**			
	a)	Assess the effectiveness of using a multi-class classification approach for a problem that could potentially be framed as a series of binary classifications. What are the pros and cons?	09	L5	CO1
	b)	Given a dataset, demonstrate how you would apply both K-means and K-medoids to cluster the data. What steps would you	09	L3	CO2

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take?

Dataset:

Point	Feature 1 (x)	Feature 2 (y)
A	1.0	2.0
B	1.5	1.8
C	5.0	8.0
D	6.0	9.0
E	1.0	0.6

c) Demonstrate partition method in detail with an example. 09 L2 CO4

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