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CBCS SCHEME

USN

17EC834

Eighth Semester B.E. Degree Examination, Feb./Mar. 2022 Machine Learning

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

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	Module-1	
1	a. List four successful applications of Machine Learning.	(04 Marks)
1	b. Describe the steps in designing Learning system.	(06 Marks)
	c. Describe the Inductive bias of Candidate Elimination Algorithm with relevant dia	1
	C. Begerioe the industry of the of Canada Linear Control of the Control of Canada Linear Control	(10 Marks)
	OR	
2		(10 Marks)
2	a. Brief the perspectives in Machine Learning with example.b. List any five issues in Machine Learning.	(10 Marks)
	U. List any five issues in Machine Learning.	(10 Marks)
	Module-2	
3	a. What is the Gradient descent algorithm for training a linear unit?	(10 Marks)
	b. Describe the ID ₃ algorithm for decision tree training with example.	(10 Marks)
	OR	
4	a. What is decision tree and discuss the use of decision tree for classification proble	m?
•		(10 Marks)
	b. What is Reduced error pruning and Rule post pruning?	(10 Marks)
	Module-3	
5		n Network
3	a. List features of Baysian learning and explain Gradient Ascent Training of Baysia:	(10 Marks)
	b. Show that maximum likelihood (Baysian learning) can be used in any learning	
	that are used in minimize the squared error between actual output hypothesis ar	
	output hypothesis.	(10 Marks)
	OR	
6		(10 Marks)
O	a. What is the Brute Force Map Learning Algorithm? Explain briefly.b. Briefly describe Minimum Description length principle.	(10 Marks)
		(To Marks)
	Module-4	
7	a. What is the K – nearest neighbour learning? Explain briefly.	(07 Marks)
	b. Define the following: i) Regression ii) Residual iii) Kernal function.	(03 Marks)
	c. What is Case based Reasoning? Explain with example.	(10 Marks)
	OR	
8	a. What is the general to Specific Beam Search? Explain briefly?	(10 Marks)
	b. Explain briefly the Weighted Linear Regression.	(10 Marks)
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9	a. Explain FOCL algorithm with an example.	(10 Marks)
9	a. Explain FOCL algorithm with an example.b. Explain Reinforcement learning problem with necessary diagram.	(10 Marks)
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	OR	
10	a. Explain the remarks on Explanation based.	(10 Marks)
	b. Explain briefly the Hypothesis Space Search.	(10 Marks)

Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.

2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.