JSN							20		15	SEC834	
		Fighth	Semes	ter B.E.	Degree F	vamin	ation	Aug /Se	nt 2020		
		Eighti	Semes		chine L		4	rug. se	pt.2020		
									à		
Tin	ne: 3	3 hrs.						¢	Max. Mark	s: 80	
Not				nts: Answer							
	ii)	For Arrean	Student	s : Answer		ull questi	ions, cho	osing ONI	E full quest	ion	
				from euc	ch module.		6	9			
1	9	Define ma	hine lear	ning Descri	be the steps		ning lear	ning system	m ((8 Marks	
1	a. b.									(08 Marks) (08 Marks)	
2	a. Describe FIND-S algorithm. Explain it by considering the training instance of Enjoy S given in Table.Q2(a).										
		Example	Sky	Air Temp.	Humidity	Wind	Water	Forecast	Enjoy spor	rt	
		1	Sunny	Warm	Normal	Strong	Warm	Same	Yes		
		2	Sunny	Warm Cold	High High	Strong Strong	Warm Warm	Same Change	Yes No	-	
		4	Rainy Sunny	Warm	High	Strong	Cool	Change	Yes	-	
					Table.Q		0			0 Marks	
					learning pro	onem		~ "	((6 Marks	
3	-	(iii) A rol With the he	oot drivin elp of an o	ig learning p example, des	roblem. <u>Modul</u> scribe ID3 a	e-2 lgorithm			arning. (0)8 Marks)	
3	a. b.	(iii) A rol With the he	oot drivin elp of an o	ig learning p	roblem. <u>Modul</u> scribe ID3 a	e-2 lgorithm			arning. (0)6 Marks))8 Marks))8 Marks)	
3	-	(iii) A rol With the he What is dee For the tran	oot drivin elp of an o cision tree isaction s	ng learning p example, dea e? Describe shown in the	roblem. <u>Modul</u> scribe ID3 a its use for c Table.Q4(a	<u>e-2</u> lgorithm lassificati), compu	ion with te:	an example	arning. ((e. (()8 Marks))8 Marks)	
	b.	(iii) A rolWith the heWhat is deeFor the tran(i) Entrop	bot drivin elp of an o cision tree nsaction s y of the c	example, des e? Describe shown in the collection of	roblem. <u>Modul</u> scribe ID3 a its use for c Table.Q4(a transaction	<u>e-2</u> Igorithm lassificati), compu records o	ion with te: of table w	an example	arning. ((e. ((98 Marks) 98 Marks) ation.	
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	b.	(iii) A rolWith the heWhat is deeFor the tran(i) Entrop	bot drivin elp of an o cision tree insaction s y of the c ire the infinitian Instar a ₁	example, des e? Describe shown in the collection of formation ga nce 1 2 T T T class + +	roblem. <u>Modul</u> scribe ID3 a its use for c Table.Q4(a transaction in of a_1 and <u>3 4 5</u> <u>T F F</u> <u>F F T</u>	e-2 lgorithm lassification), compunities records of a_2 relative 6 7 F F F T F F T F F T F F T F T F T F T F T F T F T F T F T F T F T F T F T F T F T F T F T F T F T T F T T F T T T T T T T T	ion with te: of table w ve to the $\overline{8 9}$ T F	an example	arning. ((e. () to classific: s of the tabl)8 Marks))8 Marks) ation.	
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		Exploin Naïve Bayes classifier and Bayseian belief networks. (10 Ma	arte)									
6	a.	Explain Naive Dayes classifier and Dayseran benet needs										
	b.	Show that how maximum likelihood (Bayesian learning) can be used in any lear	ning									
		algorithms that are used to minimize the squared error between actual output hypothesis	and									
		predicted output hypothesis. (06 Ma	arks)									
		Module-4										
7	a.	Explain CADET system using case based reasoning. (08 Ma	arks)									
	b.	Explain K-nearest neighbor algorithm. (05 Ma	arks)									
	с.	Define the following terms with respect to K-nearest neighbor learning:										
		(i) Regression										
		(ii) Residual										
		(iii) Kernel function (03 M	arks)									
8	a.	Explain FOIL algorithm. (08 M	arks)									
0	а. b.	Briefly describe locally weighted regression. (04 M	arks)									
		Explain radial basis functions. (04 M	arks)									
	c.	Explain ladial basis functions.	,									
Module-5												
			arks)									
9	a.	Explain I OCE algorithm with an example.										
	b.	Explain reinforcement learning problem with necessary diagram. (06 M	arksj									
		A										
10	a.	Explain Q-learning algorithm assuming deterministic reward and action with example.	(

b. List the reinforcement problem characteristics.

(10 Marks) (06 Marks)

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