KONERU LAKSHMAIAH EDUCATION FOUNDATION

(Deemed to be University, Estd. u/s. 3 of UGC Act 1956)

B.Tech - Even Sem : End Semester Exam

Academic Year:2021-2022

19CS3232R - MACHINE LEARNING

Set No: 4

Time: | **Max.Marks: 100**

Answer All Questions

S.NO		Choice	Options	Marks	CO
1.	Explain machine learning and each term used in the definition with some suitable example.	choice Q-2		10Marks	CO1
2.	Elaborate any 3 real life applications of machine Learning with suitable example.			10Marks	CO1
3.	a) Compare supervised and unsupervised learning. [7] b) Discuss any 2 algorithm of each category. [8]	choice Q-4		15Marks	CO1
4.	List down the advantages and disadvantages of the Decision Trees. Discuss over fitting issue.			15Marks	CO1
5.	Explain bayesian classification approach using following data Table 1 : Data set for Play Tennis S.No. | Weather | Temperature | Humidity | Wind | Play ? 1 | Sunny | Hot | High | Weak | No 2 | Cloudy | Hot | High | Weak | Yes 3 | Sunny | Mild | Normal | Strong | Yes 4 | Cloudy | Mild | High | Strong | Yes 5 | Rainy | Mild | High | Strong | No 6 | Rainy | Cool | Normal | Strong | No 7 | Rainy | Mild | High | Weak | Yes 8 | Sunny | Hot | High | Strong | No 9 | Cloudy | Hot | Normal | Weak | Yes 10 | Rainy | Mild | High | Strong | No	choice Q-6		10Marks	CO2
6.	Illustrate Brute-Force MAP learning algorith with an suitable example.			10Marks	CO2
7.	a) Illustrate Brute-Force MAP learning algorithm. [7] b) Define naive Bayes classification method with an suitable example. [8]	choice Q-8		15Marks	CO2
8.	Demonstrate Bayesian classification over following data; unseen sample is age > 40, student = yes, income = medium, and. credit rating = Fair. Age | Income | Student | Credit Rating | Buy Computer <=30 | High | No | Fair | No <=30 | High | No | Excellent | No 31....40 | High | No | Fair | Yes >40 | Medium | No | Fair | Yes >40 | Low | Yes | Fair | Yes >40 | Low | Yes | Excellent | No			15Marks	CO2
9.	Discuss the operators used in the genetic algorithm..	choice Q-10		10Marks	CO3
10.	illustrate genetic algorithm life cycle.			10Marks	CO3
11.	Describe how to represent a hypothesis in the genetic algorithm.	choice Q-12		15Marks	CO3
12.	Describe pseudocode of Back propagation algorithm			15Marks	CO3
13.	Discuss the features of the learning set rule.	choice Q-14		10Marks	CO4
14.	Explain inductive analysis and its eatures.			10Marks	CO4
15.	Discuss explanation based learning and an example of decision support system.	choice Q-16		15Marks	CO4
16.	Discuss Learn-One-Rule algorithm pseudocode.			15Marks	CO4

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