

Program: Master of Computer Applications

Curriculum Scheme: MCA 2 year Course

Examination: MCA First Year SEMESTER 2

Course Code: MCA22 and Course Name: Artificial Intelligence and Machine Learning

Time: 2 HRS

Max. Marks: 80

Section I - MCQS (40 Marks) – 40 Minutes

Section II – Subjective (40 Marks) – 80 Minutes

The timings

Section I – 2:00 pm – 2:40 pm

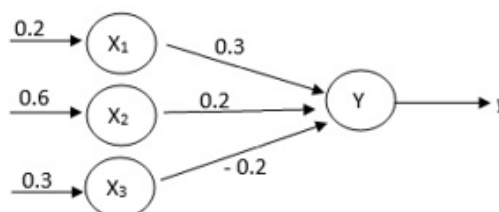
Section II – 2:40 pm – 4:00 pm

=====

SECTION II

Q2. Solve any two questions out of three which carry 10 marks each respectively. 20 marks

- A. Describe the environment of the Agent? Discuss the types of Agents.
- B. Explain in detail the working of Depth First Search technique.
- C. Discuss in detail the Perceptron Networks and calculate the net input (y_{in}) of the given network.



Q3. Solve any two questions out of three which carry 10 marks each respectively. 20 marks

- A. Explain in detail Linear Regression with suitable example.
- B. Discuss in detail Support Vector Machine.
- C. Apply the Naive Bayes Classifier on a given Training Dataset and identify the given data (X) belongs to the class Buys Computer = Yes or Buys Computer = No.

Data to be classified:

X= (Age \leq 20, Income = Max, Student = Yes, Credit Rating = Very Good)

Training Dataset:

Age	Income	Student	Credit Rating	Buys Computer
<=20	Max	No	Fair	No
<=20	Max	No	Very Good	No
21 to 25	Max	No	Fair	Yes
>25	Medium	No	Fair	Yes
>25	Min	Yes	Fair	Yes
>25	Min	Yes	Very Good	No
26 to 35	Min	Yes	Very Good	Yes
<=25	Medium	No	Fair	No
<=25	Min	Yes	Fair	Yes
>35	Medium	Yes	Fair	Yes
<=25	Medium	Yes	Very Good	Yes
26 to 35	Medium	No	Very Good	Yes
26 to 35	Max	Yes	Fair	Yes
>35	Medium	No	Very Good	No