

G.R. No.

P118-133 (ESE)

DECEMBER 2018 / END-SEM

F. Y. M. TECH. (Computer Engineering) (SEMESTER - I)

COURSE NAME: Machine Learning

COURSE CODE: CSPA11183 - A

(PATTERN 2018)

Time: [3 Hour]

[Max. Marks: 50]

(*) Instructions to candidates:

- 1) Answer Q.1, Q.2, Q.3, Q.4 OR Q.5, Q.6 OR Q.7, Q.8 OR Q.9
- 2) Figures to the right indicate full marks.
- 3) Use of scientific calculator is allowed
- 4) Use suitable data where ever required

Q.1) a) Explain in brief different types of learning [3]

OR

Q.1 b) Identify type of learning for the following application [3]

1. Predict whether a document is related to science
2. In a Cricket match captain wins the toss and decided to bat
3. Predicting rainfall based on historical data

Q.2 a) I am the marketing consultant of a leading e-commerce website. I have been given a task of making a system that recommends products to users based on their activity on Facebook. I realize that user-interests could be highly variable. Hence I decide to [3]

a. First, cluster the users into communities of like-minded people and

b. Second, train separate models for each community to predict which product category (e.g. electronic gadgets, cosmetics, etc.) What would be the most relevant task to that community in terms of learning. Supervised and unsupervised or Unsupervised and supervised. Justify.

OR

Q.2 b) Draw the labeled diagram of neural network [3]

Q.3 a) What is a Dendrogram? Draw its graphical structure. [2]

OR

Q.3 b) Explain in brief different types of clustering techniques [2]

Q.4 a) What is a need of Reinforcement learning. [4]

b) Draw a neat labeled diagram of systematic Learning and explain any one of its type. [10]

OR

Q.5 a) State and explain in brief different methods of systematic learning [04]

b) Consider the TV channel shows, based on TRP rate explain how systematic learning model predict the impact of TV shows on marketing the product through advertisement .

Q. 6 Why there is a need of combining multi perspectives. Explain with the help of any suitable example , Consider an approach of combining features based on priority and weighted sum of feature vector. [14]

OR

Q.7 For the following scenario ,explain in detail role of multiperceptive approach [14]
i) Emotion detection for various facets of human nature
ii) Traffic controller

Q. 8 a) Differentiate incremental learning and supervised learning with respect to new data [04]
b) Justify "learning from already learned" [10]

Q 9: Short notes on [14]
1. Selective incremental learning
2. Absolute incremental learning