G.R. No.	

Paper Code: P119-133 (ESE)

DECEMBER 2019 / ENDSEM

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

COURSE NAME: Machine Learning

COURSE CODE: CSPA11183A

(PATTERN 2018:R1)

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) Discuss machine learning applications in following areas? [3 marks]

1. Image Recognition
2. Speech recognition
3. Medical Diagnosis

OR

b) Explain in brief Underfitting and overfitting? [3 marks]

Q.2) a) Explain in short what is Gaussian Mixture Model? [3 marks]

OR

b) Write short notes on K-Means? [3 marks]

Q.3) a) What is the purpose of Apriori Algorithm ? [2 marks]

OR

b) Explain in detail Correlation? [2 marks]

Q.4) What is Systemic Machine Learning and challenges in Systemic Machine Learning? Discuss the Reinforcement ML and Systemic ML? [14 marks]

OR

Q.5) Explain in detail Reinforcement Learning with its Real World Applications? [14 marks]

Q. 6) Explain in detail Multiperspective Decision Making and Multiperspective Learning with an real time example of Market scenario and relationship between marketing budget, product price, cost and profit? [14 marks]

OR

Q.7) Explain in detail Dynamic systems and their learning framework also discuss adaptive dynamic programming with real world examples? [14 marks]

Q.8) Explain in detail Incremental Unsupervised learning and Incremental Clustering? [14 marks]

OR

Q.9) Define Adaptive learning? Discuss the following two case studies with respect to Adaptive Learning:

a) Text-based Adaptive Learning

b) Adaptive learning for Document Mining [14 marks]

(*) Course coordinator can change instructions as per course requirement