Code: 19ES1301

II B.Tech - I Semester – Regular Examinations – MARCH 2021

AI TOOLS
(Common to IT, ECE,EEE)

Duration: 3 hours   Max. Marks: 70

Note: 1. This question paper contains two Parts A and B.
2. Part-A contains 5 short answer questions. Each Question carries 2 Marks.
3. Part-B contains 5 essay questions with an internal choice from each unit. Each question carries 12 marks.
4. All parts of Question paper must be answered in one place

PART – A

1. a) What is Artificial Intelligence?
   b) Write down the applications of Reinforcement learning.
   c) List some areas of computer vision applications using Machine learning.
   d) Write down the importance of deep learning in Self driving cars.
   e) List out some applications of natural language processing using Deep learning.

PART – B
UNIT – I

2. a) Explain foundations of Artificial Intelligence.   6 M
   b) List and explain the goals of Artificial Intelligence.   6 M

OR

3. a) Outline the different real world applications of Artificial Intelligence. Discuss any two applications in detail.   6 M

b) Explain the following terms: i)Thinking rationally ii) Acting rationally.　6 M

UNIT – II

4. a) Define machine learning. Why machine learning is important? Explain it.　6 M

   b) What is reinforcement learning? Explain with any real time application.　6 M

OR

5. a) Explain supervised learning with example.　6 M

   b) What are the important challenges in machine learning?　6 M

UNIT-III

6. a) Generalize how Recurrent neural network work best for speech recognition? Explain with example.　6 M

   b) Explain decision making process by using machine learning models with example.　6 M

OR

7. a) Explain any one natural language processing based application by using machine learning models.　6 M

   b) Discuss any one computer vision based application by using machine learning.　6 M

UNIT – IV

8. a) Explain any two Deep Learning based applications.　6 M

   b) Describe different layers of Convolution neural network with an example.　6 M

OR

9. a) Define Deep learning. Differentiate between machine learning and deep learning with example.　6 M

b) What is Pooling on Convolutional Neural Network? Explain with 5X5 matrix example.　　6 M

UNIT – V

10. a) What are the pre-processing steps involved in the speech recognition? Explain with the example.　　6 M

b) Define Computer Vision. Explain any one computer vision based application by using Deep learning.　　6 M

OR

11. a) List out the real time applications of natural language processing and discuss any one application by using Deep learning models.　　6 M

b) Explain decision making process by using Deep learning models with example.　　6 M