

# CBCS SCHEME

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18EI/BM824

## **Eighth Semester B.E. Degree Examination, July/August 2022** **Artificial Intelligence and Machine Learning**

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### **Module-1**

- 1 a. Discuss some of the task domains of AI. (10 Marks)  
b. Write a series of three programs to play tic-tac-toe. (10 Marks)

**OR**

- 2 a. Describe the syntactic analysis and semantic analysis of natural language processing. (10 Marks)  
b. Write the morphological analysis and pragmatic analysis of natural language processing. (10 Marks)

### **Module-2**

- 3 a. Elaborate the parallelism in reasoning systems. (10 Marks)  
b. Explain about the co-ordination and co-operation of distributed reasoning systems. (10 Marks)

**OR**

- 4 a. Write a brief note on Hopfield networks. (10 Marks)  
b. Discuss the connectionist AI and symbolic AI. (10 Marks)

### **Module-3**

- 5 a. Describe the learning generalization of an input-output table. (10 Marks)  
b. Give the significance of genetic operators. (10 Marks)

**OR**

- 6 a. Write a brief note on multilayer. (10 Marks)  
b. Explain time-delay networks. (10 Marks)

### **Module-4**

- 7 a. Elaborate unsupervised learning of machine learning. (10 Marks)  
b. Give the classification of machine learning. (10 Marks)

**OR**

- 8 a. Discuss briefly about the noise of supervised learning. (10 Marks)  
b. Explain model selection and generalization of supervised learning. (10 Marks)

### **Module-5**

- 9 a. Write the introduction of dimensionality reduction. (10 Marks)  
b. Describe the subset selection of dimensionality reduction. (10 Marks)

**OR**

- 10 a. Give the introduction of Kernel machines. (10 Marks)  
b. Explain optimal separating hyper plane. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.