



**Mid Term (Even) Semester Examination March 2025**

Roll no. 2492525

Name of the Course and semester: BCA Semester: II

Name of the Paper: Foundations of Artificial Intelligence

Paper Code: TBD203

Time: 1.5 hour

Maximum Marks: 50

**Note:**

- (i) Answer all the questions by choosing any one of the sub questions
- (ii) Each question carries 10 marks.

Q1. (10 Marks)  
a. Discuss about Artificial Intelligence with suitable examples, highlighting its benefits and limitations  
[CO1]

OR

b. Describe the evolution of Artificial Intelligence from its inception in the 1950s to its current state.  
[CO1]

Q2. (10 Marks)  
a. Describe supervised, unsupervised, and reinforcement learning in the context of AI, emphasizing their key differences.  
[CO1]

OR

b. Explain the characteristics and differences between Narrow AI, General AI, and Superintelligent AI.  
[CO1]

Q3. (10 Marks)  
a. Describe the different types of AI based on its functionalities.  
[CO1]

OR

b. Define an intelligent agent. Explain the key characteristics that differentiate an intelligent agent from a simple program.  
[CO2]

Q4. (10 Marks)  
a. Compare and contrast simple reflex agents and model-based reflex agents, providing examples to illustrate their differences. Discuss their decision-making processes, limitations, and how they handle different environments.  
[CO2]

OR

b. Differentiate between a goal-based agent and a utility-based agent. Explain which type of agent demonstrates greater efficiency in decision-making.  
[CO2]

Q5. (10 Marks)  
a. Explain the various types of environments in which an agent can function. Support your answer with examples for each type.  
[CO2]

OR

b. Describe knowledge-based agents and discuss their significance.  
[CO3]