Code:: **21P03601** **SR21** **SET-3**

SRINIVASA INSTITUTE OF ENGINEERING AND TECHNOLOGY

UGC – Autonomous Institution

III B.Tech II Semester I MID Examinations, FEBRUARY – 2025

ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

MECH

Time : **20 Mins**	Max. Marks:**20**			Date: 24-**02.2025**
Roll No:	Sign of the Student:			Marks Obtained:
Name:	Sign of invigilator:			Sign of Valuator:
CO	CO 1	CO 2		Marks Obtained:
UNIT	I	II		Total Marks

1. What does "rationality" mean for an AI agent? **[ ]**

a) Making the best decision possible based on the available information

b) Always achieving the desired outcome

c) Being able to explain its reasoning process

d) Having human-like emotions

2. What is a "fully observable" environment in AI? **[ ]**

a) An environment where the agent can see everything

b) An environment where the agent can only see part of the surroundings

c) An environment where the agent cannot see anything

d) An environment where the agent can see into the future

3. What is a "deterministic" environment in AI? **[ ]**

a) An environment where the outcome of actions is predictable

b) An environment where the outcome of actions is unpredictable

c) An environment where the agent has full control

d) An environment where the agent has no control

4. What is the purpose of sensors in an AI agent? **[ ]**

a) To allow the agent to take actions

b) To allow the agent to observe its environment

c) To provide the agent with goals

d) To store the agent's knowledge

5. What is the purpose of actuators in an AI agent? **[ ]**

a) To allow the agent to take actions

b) To allow the agent to observe its environment

c) To provide the agent with goals

d) To store the agent's knowledge

6. Which of the following is NOT a key characteristic of an intelligent agent? **[ ]**

a) Autonomy

b) Adaptability

c) Reactivity

d) Pre-programmed behavior

7. What is the main difference between an agent and an intelligent agent? **[ ]**

a) An agent can learn and adapt, while an intelligent agent cannot

b) An intelligent agent can learn and adapt, while an agent cannot

c) There is no difference between the two

d) Intelligent agents are only used in research labs

8. Why is it important for an AI agent to be adaptable? **[ ]**

a) To be able to learn and improve from experience

b) To be able to follow pre-programmed rules c) To be able to perform physical tasks d) To be able to replace human workers

9. What is the role of AI in innovation? **[ ]**

a) To hinder progress and maintain the status quo

b) To discover new ideas and solutions

c) To create art and entertainment

d) To automate repetitive tasks

10. How is AI expected to evolve in the future? **[ ]**

a) It will become less intelligent and less capable

b) It will become more specialized and limited in its applications

c) It will become more intelligent and more integrated into our lives

d) It will disappear completely

11. What is unification in First-Order Logic? **[ ]**

A) A process of making variables identical
B) A method for deleting knowledge
C) A way of negating rules
D) A statistical technique

12. What is meant by resolution in logical reasoning? **[ ]**

A) A method for proving theorems using refutation
B) A way to memorize facts
C) A statistical prediction technique
D) A process for increasing storage capacity

13. Which of the following best describes a predicate in First-Order Logic?

A) A function that defines properties of objects
B) A variable used in logic
C) A statistical measure
D) A mathematical equation

14. What is the purpose of a logical inference engine? **[ ]**

A) To apply rules to a knowledge base and derive conclusions
B) To delete irrelevant knowledge
C) To translate natural language into code
D) To generate random responses

15. What is a contradiction in logic? **[ ]**

A) A statement that is always false
B) A true statement
C) A rule for deriving knowledge
D) A positive assertion

16. How do logical agents handle uncertainty? **[ ]**

A) By using probability-based logic
B) By ignoring uncertain data
C) By using only deterministic rules
D) By memorizing previous actions

17. Which logical technique is used for AI planning? **[ ]**

A) Satisfiability (SAT) solving
B) Simple reflex reasoning
C) Genetic algorithms
D) Neural networks

18. What is default reasoning? **[ ]**

A) Making conclusions when complete information is unavailable
B) A way to discard old knowledge
C) A learning algorithm
D) A type of memorization

19. Which logical approach is best for reasoning about time-based events? **[ ]**

A) Temporal logic
B) Propositional logic
C) Genetic algorithms
D) Reinforcement learning

20. Which logic is used in expert systems? **[ ]**

A) Rule-based logic
B) Neural networks
C) Statistical logic
D) Genetic algorithms