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| Code: **21P03601 SR21 SET-1** | | | | |
| **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 is the primary focus of Artificial Intelligence (AI)? [ ]**

a) Developing robots that can perform physical tasks

b) Creating machines that can exhibit human-like intelligence

c) Designing software programs for entertainment

d) Analyzing large datasets for business purposes

**2. Which of the following is NOT a characteristic of AI systems?**  **[ ]**

a) Recognizing speech

b) Understanding language

c) Performing manual labor

d) Making decisions

**3. How do AI systems typically make decisions or predictions?**  **[ ]**

a) By following pre-programmed rules

b) By processing large amounts of data and identifying patterns

c) By using intuition and emotions

d) By relying on human input

**4. What is machine learning?**  **[ ]**

a) A type of AI that focuses on creating robots

b) A type of AI that allows machines to learn from data

c) A type of AI that can only perform simple tasks

d) A type of AI that is only used in research labs

**5. Which of the following is an example of AI in everyday life?**  **[ ]**

a) A traditional car

b) A coffee maker

c) A voice assistant like Siri or Alexa

d) A manual typewriter

**6. What is the Turing Test designed to evaluate? [ ]**

a) A machine's ability to perform complex calculations

b) A machine's ability to exhibit human-like intelligence

c) A machine's ability to learn from data

d) A machine's ability to recognize objects

**7. When did the field of AI officially begin? [ ]**

a) 1940s b) 1950s c) 1960s d) 1970s

**8. What was the main reason for the "AI Winter"? [ ]**

a) Rapid progress in AI research

b) Increased funding and support for AI

c) Limited capabilities of early AI systems

d) Ethical concerns about AI

**9. What is Deep Learning?**  **[ ]**

a) A type of AI that uses rule-based systems

b) A type of AI that uses machine learning with neural networks

c) A type of AI that can only solve simple problems

d) A type of AI that is still in its early stages

**10. Which of the following is NOT a real-world application of AI?**  **[ ]**

a) Self-driving cars

b) Voice assistants

c) Time travel

d) Medical diagnosis

**11. What is a logical agent? [ ]**

A) A system that learns from experience  
B) A system that makes decisions using logic  
C) A system that reacts to stimuli without reasoning  
D) A system that randomly selects actions

**12. What is the main characteristic of a logical agent? [ ]**

A) It stores vast amounts of raw data  
B) It uses predefined rules to react to the environment  
C) It makes decisions based on logical inference  
D) It does not require a knowledge base

**13. Which type of logic is commonly used in logical agents? [ ]**

A) Fuzzy Logic  
B) Propositional and First-Order Logic  
C) Genetic Algorithms  
D) Evolutionary Logic

**14. What is a knowledge base (KB) in logical agents? [ ]**

A) A physical database of facts  
B) A collection of algorithms  
C) A set of sentences in a formal language  
D) A learning model

**15. How does a logical agent derive new information? [ ]**

A) By memorizing past experiences  
B) By applying inference rules to known facts  
C) By trial and error  
D) By using only machine learning techniques

**16. What is inference in logical reasoning? [ ]**

A) A process of randomly selecting a fact  
B) A process of deriving new facts from known facts  
C) A method of storing facts in memory  
D) A technique of deleting irrelevant information

**17. Which of the following is NOT a type of logic used in AI? [ ]**

A) Propositional Logic  
B) First-Order Logic  
C) Relational Logic  
D) Arithmetic Logic

**18. What is modus ponens? [ ]**

A) A method for deleting knowledge from a KB  
B) An inference rule: If P → Q and P is true, then Q is true  
C) A process of learning new rules from experience  
D) A statistical method for making predictions

**19. Which type of agent uses a knowledge base and inference mechanisms? [ ]**

A) Reactive agent  
B) Logical agent  
C) Learning agent  
D) Reflex agent

**20. What is a sentence in a knowledge base? [ ]**

A) A command to the agent  
B) A formal representation of knowledge  
C) A user query  
D) A random statement