AI Quiz Model paper

Multiple Choice Questions (MCQs)

1. What is intelligence primarily defined as in the context of AI?
   a) The ability to process information quickly
   b) A property of mind to interact with the world
   c) The capacity to store large amounts of data
   d) The ability to perform mathematical calculations

2. Which of the following is NOT mentioned as a characteristic of intelligence?
   a) Reasoning
   b) Problem-solving
   c) Learning
   d) Telepathy

3. Artificial Intelligence is best defined as:
   a) Making computers think like humans
   b) Creating robots that look like humans
   c) Modeling human cognition using computers
   d) Developing faster computer processors

4. The Turing Test, proposed in 1950, was designed to test:
   a) Computer processing speed
   b) Intelligent behavior in machines
   c) Human typing speed
   d) Computer memory capacity

5. Which program, developed in the mid-1960s, was one of the first to converse in English and pass the Turing test?
   a) ELIZA
   b) WATSON
   c) SIRI
   d) ALEXA

6. Which of the following is NOT mentioned as a foundation of AI in the provided material?
   a) Uncertainty handling
   b) Boolean logic
   c) Fuzzy logic
   d) Quantum computing

7. The study of how the brain works in relation to AI is part of which foundation?
   a) Control Theory
   b) Linguistics
   c) Neuroscience
   d) Probability

8. What are the three typical components of AI systems mentioned in the PDF?
   a) Input, Processing, Output
   b) Learning, Reasoning, Memory
   c) Perception, Reasoning, Action
   d) Data, Algorithm, Hardware

9. What is a knowledge base in an AI system?
   a) A large computer memory
   b) A collection of facts and rules
   c) A neural network
   d) A type of search algorithm

10. Which characteristic of knowledge is NOT mentioned in the PDF?

a) Voluminous nature
b) May be incomplete and imprecise
c) May keep changing (dynamic)
d) Always perfectly accurate

11. What is the role of inferencing in an AI system?
    a) To store data
    b) To search through the knowledge base and derive new knowledge
    c) To input new information
    d) To delete outdated information

12. In problem-solving, what does "decomposable" mean?
    a) The problem can be broken down
    b) The problem is unsolvable
    c) The problem is too complex
    d) The problem is easily solved

13. What is an example of a non-decomposable problem mentioned in the PDF?
    a) Water jug problem
    b) Block world problem
    c) Traveling salesman problem
    d) 8-puzzle game

14. In real-life problem-solving, which type of problem allows solution steps to be ignored?
    a) Ignorable
    b) Recoverable
    c) Irrecoverable
    d) Solvable

15. Which problem-solving approach is described as being able to undo steps if they prove unwise?
    a) Ignorable
    b) Recoverable
    c) Irrecoverable
    d) Permanent

16. In the context of AI problem-solving, what is a Production System?
    a) A manufacturing process
    b) A formulation for structuring AI programs
    c) A type of neural network
    d) A hardware component

17. What are production rules in an AI system?
    a) Rules for manufacturing AI hardware
    b) Guidelines for programming AI
    c) Set of rules that describe actions and their applicability
    d) Rules for data input in AI systems

18. What is the primary advantage of using a Production System in AI?
    a) It makes the AI system faster
    b) It allows for easy addition of new rules without disturbing the rest of the system
    c) It reduces the need for a knowledge base
    d) It eliminates the need for inferencing

19. In the water jug problem, what does the state (X, Y) represent?
    a) The size of the jugs
    b) The amount of water in the 4-gallon and 3-gallon jugs respectively
    c) The number of steps taken to solve the problem
    d) The coordinates of the jugs' locations

20. Which search strategy explores all nodes at the present depth before moving to the next level?
    a) Depth-First Search
    b) Breadth-First Search
    c) Best-First Search
    d) A* Search

One-liner Subjective Questions

1. Define Artificial Intelligence in your own words[1].

2. Explain the concept of the Turing Test and its significance in AI[1].

3. What is the role of neuroscience in the development of AI[1]?

4. Describe the three main components of an AI system as mentioned in the PDF[1].

5. What is a knowledge base and why is it important in AI systems[1]?

6. Explain the difference between decomposable and non-decomposable problems in AI[1].

7. What is the significance of control strategies in AI problem-solving[1]?

8. Define a Production System in the context of AI[1].

9. Explain the water jug problem and how it relates to AI problem-solving[1].

10. What is the difference between Breadth-First Search and Depth-First Search in AI[1]?