

# COMPUTER COMPETITIVE CHAPTER 14

## -ENG PART-2- INTRODUCTION TO AI

Total points 50/50 

**STUDENT NAME \***

VIVA

✓ 1. Which AI technique is concerned with simulating human intelligence \*1/1 by processing large amounts of data and identifying patterns?

- a) Expert Systems
- b) Machine Learning
- c) Symbolic AI
- d) Robotics



✓ 2. What is a 'chatfuel' in the context of AI? \*

1/1

- a) A fuel type for robots
- b) A platform for building chatbots
- c) A language for AI programming
- d) A type of data storage



✓ 3. Which AI technology is used to create realistic human-like faces and voices? \*1/1

- a) Computer Vision
- b) Generative Adversarial Networks (GANs)
- c) Natural Language Understanding
- d) Reinforcement Learning

✓

✓ 4. What is the primary ethical concern related to AI development? \* 1/1

- a) AI becoming too slow
- b) AI making unbiased decisions
- c) Job displacement and ethical implications of autonomous systems
- d) Lack of available data

✓

✓ 5. Which domain of AI focuses on enabling machines to learn and operate in uncertain environments? \*1/1

- a) Probabilistic Reasoning
- b) Deterministic AI
- c) Symbolic AI
- d) Rule-based AI

✓

✓ 6. What is the term for an AI system's ability to "see" and interpret medical images for diagnosis?

\*1/1

- a) Robotic Surgery
- b) Medical NLP
- c) Medical Image Analysis (Computer Vision in Healthcare)
- d) Expert System for Prescription

✓

✓ 7. Which concept describes an AI's ability to continually learn and adapt after deployment? \*1/1

- a) Static Learning
- b) Lifelong Learning / Continuous Learning
- c) Batch Learning
- d) One-shot Learning

✓

✓ 8. What is 'robotics' primarily focused on? \*

1/1

- a) Developing intelligent computer programs
- b) Designing, building, operating, and applying robots
- c) Analyzing financial data
- d) Understanding human speech

✓

✓ 9. Which AI technique involves finding the shortest path in a graph or network? \*1/1

- a) Clustering
- b) Regression
- c) Pathfinding Algorithms (e.g., A\*)
- d) Classification

✓

✓ 10. What is 'data preprocessing' in machine learning? \* 1/1

- a) The final step before deployment
- b) The process of preparing raw data for training an AI model
- c) The method of collecting data
- d) The way AI models store data

✓

✓ 11. Which AI term describes an algorithm that searches through possible solutions to find the optimal one? \*1/1

- a) Search Algorithm
- b) Random Algorithm
- c) Sorting Algorithm
- d) Hashing Algorithm

✓

✓ 12. What is a 'smart home' an example of AI in? \*

1/1

- a) Only voice assistants
- b) Automation and IoT (Internet of Things) ✓
- c) Advanced robotics
- d) Natural Language Processing

✓ 13. Which AI application helps in predicting future outcomes based on historical data? \*1/1

- a) Classification
- b) Regression (Predictive Analytics) ✓
- c) Clustering
- d) Rule-based Systems

✓ 14. What is 'backpropagation' in neural networks? \*

1/1

- a) A method for forward pass computation
- b) An algorithm for training neural networks by adjusting weights based on the error ✓
- c) A technique for data compression
- d) A way to initialize network weights

✓ 15. Which AI technique is used in spam email detection? \*

1/1

- a) Computer Vision
- b) Robotics
- c) Machine Learning (Classification)
- d) Game AI

✓

✓ 16.What is 'GAN' in deep learning? \*

1/1

- a) General Artificial Network
- b) Generative Adversarial Network
- c) Global Alignment Network
- d) Graphical Analytical Node

✓

✓ 17.What is the purpose of a 'convolutional neural network' (CNN)? \*

1/1

- a) Primarily for processing sequential data like text
- b) Highly effective for image and video processing
- c) Used for time-series forecasting
- d) Designed for symbolic reasoning

✓

✓ 18. Which AI field deals with AI systems that can adapt and improve their performance over time?

\*1/1

- a) Fixed AI
- b) Adaptive AI
- c) Static AI
- d) Pre-programmed AI

✓ 19.What is 'Reinforcement Learning' most similar to? \*

1/1

- a) Teaching a child by showing examples
- b) Teaching a child by giving rewards and punishments
- c) Organizing a child's toys
- d) Reading a book to a child

✓ 20.Which is a core component of a robot that allows it to interact with its environment? \*

1/1

- a) CPU
- b) Sensor
- c) Hard Drive
- d) Monitor

✓ 21. What is 'Machine Translation' an application of? \*

1/1

- a) Computer Vision
- b) Robotics
- c) Natural Language Processing (NLP)
- d) Expert Systems

✓

✓ 22. What is a 'bias-variance dilemma' in machine learning? \*

1/1

- a) The challenge of balancing model complexity to achieve good performance on both training and test data
- b) The problem of too much data
- c) The ethical issues in AI
- d) The speed of computation

✓

✓ 23. Which AI concept involves machines creating new and original content (e.g., art, music, text)?

\*1/1

- a) Analytical AI
- b) Generative AI
- c) Discriminative AI
- d) Predictive AI

✓

✓ 24. What is 'Computer-Aided Diagnosis' (CAD) in medicine an example of? \*1/1

- a) Robotics
- b) Machine Learning / Computer Vision
- c) NLP
- d) Expert Systems

✓

✓ 25. What is the main purpose of 'data visualization' in AI and data science? \*1/1

- a) To train models faster
- b) To make complex data understandable and reveal patterns
- c) To encrypt data
- d) To collect more data

✓

✓ 26. Which of the following is a common challenge in AI development? \* 1/1

- a) Too much computational power
- b) Lack of ethical guidelines
- c) Data scarcity and bias
- d) All of the above

✓

✓ 27. What is 'speech recognition'? \*

1/1

- a) Converting spoken words into text
- b) Converting text into spoken words
- c) Understanding the meaning of text
- d) Identifying different languages

✓

✓ 28. Which AI technique would be best suited for recommending movies \*1/1 to a user based on their past viewing history?

- a) Computer Vision
- b) Reinforcement Learning
- c) Recommender Systems (Machine Learning)
- d) Robotics

✓

✓ 29. What is 'fuzzy logic' in AI? \*

1/1

- a) A type of binary logic
- b) A form of logic that deals with approximate reasoning and uncertainty
- c) Logic used in quantum computing
- d) A technique for precise calculations

✓

✓ 30. What is the main advantage of 'deep learning' over traditional machine learning for complex tasks?

\*1/1

- a) Requires less data
- b) Can automatically learn complex features from raw data
- c) Is faster to train
- d) Is simpler to implement

✓ 31. Which of these is a widely used programming language for AI, known for its extensive libraries?

\*1/1

- a) Java
- b) C++
- c) Python
- d) PHP

✓ 32. What is a 'chatbot' often used for in customer service? \*

1/1

- a) Replacing all human agents
- b) Handling routine queries and providing instant support
- c) Analyzing customer emotions
- d) Making outbound sales calls

✓ 33. What is 'facial recognition'? \*

1/1

- a) Identifying objects in a picture
- b) Identifying or verifying a person from a digital image or video frame
- c) Generating new faces
- d) Changing facial expressions

✓

✓ 34. Which concept in AI relates to allowing machines to make decisions \*1/1 without human intervention?

- a) Manual Control
- b) Automation / Autonomy
- c) Supervised Operation
- d) Collaborative AI

✓

✓ 35. What is a 'decision tree' in machine learning? \*

1/1

- a) A type of neural network
- b) A flowchart-like structure used for classification or regression
- c) A data clustering algorithm
- d) A dimensionality reduction technique

✓

✓ 36. What is the goal of 'computer game AI' \*

1/1

- a) To make games easier to play
- b) To create intelligent and challenging non-player characters (NPCs) ✓
- c) To design game graphics
- d) To optimize game performance

✓ 37. Which AI concept involves AI systems being able to reason about knowledge and facts? \*1/1

- a) Knowledge Representation ✓
- b) Sensory Perception
- c) Motor Control
- d) Emotional Intelligence

✓ 38. What is 'Robotic Process Automation' (RPA)? \* 1/1

- a) Using physical robots in factories
- b) Using software robots to automate repetitive, rule-based tasks in business processes ✓
- c) Programming autonomous vehicles
- d) Designing human-like robots

✓ 39. What is 'data augmentation' in machine learning? \*

1/1

- a) Collecting more raw data
- b) Creating new training examples from existing data by applying transformations
- c) Cleaning noisy data
- d) Reducing the size of the dataset

✓

✓ 40. Which AI application uses AI to manage traffic flow in smart cities? \* 1/1

- a) Smart Grids
- b) Intelligent Transportation Systems (ITS)
- c) Smart Buildings
- d) Autonomous Parking

✓

✓ 41. What is 'machine ethics' in AI? \*

1/1

- a) The ethical behavior of human developers
- b) The study of how to design AI systems that behave ethically
- c) The cost of developing AI
- d) The speed of AI algorithms

✓

✓ 42. Which type of learning involves training a model with a small amount \*1/1 of labeled data and a large amount of unlabeled data?

- a) Supervised Learning
- b) Unsupervised Learning
- c) Semi-supervised Learning
- d) Reinforcement Learning

✓

✓ 43. What is a 'generative model' in machine learning? \*

1/1

- a) A model that predicts numerical values
- b) A model that learns the distribution of the data to generate new samples
- c) A model that classifies data into categories
- d) A model that only analyzes existing data

✓

✓ 44. Which AI application is used in fraud detection in banking? \*

1/1

- a) Robotics
- b) Natural Language Processing
- c) Machine Learning (Anomaly Detection/Classification)
- d) Computer Vision

✓

✓ 45.What is 'Explainable AI' (XAI)? \*

1/1

- a) AI that explains its own code
- b) AI that explains why it made a certain decision or prediction ✓
- c) AI that explains complex concepts to humans
- d) AI that can teach itself

✓ 46.Which AI concept is about giving machines the ability to learn from examples without explicit rules? \*1/1

- a) Rule-based systems
- b) Inductive learning ✓
- c) Deductive reasoning
- d) Pre-programmed intelligence

✓ 47. What is 'computer vision' often combined with in robotic applications? \*1/1

- a) Purely mechanical control
- b) Natural Language Processing
- c) Robotics (for perception and manipulation) ✓
- d) Data Management

✓ **48. Which of the following describes 'Artificial General Intelligence' (AGI)?**

\*1/1

- a) AI designed for one specific task
- b) AI with human-level cognitive abilities across a wide range of tasks
- c) AI that is only good at math
- d) AI that learns from a fixed set of rules

✓ **49. What is 'superintelligence' in AI? \***

1/1

- a) AI that is slightly smarter than a human
- b) AI that significantly surpasses human intelligence in virtually every field
- c) AI that controls all computers
- d) AI that can only perform calculations faster

✓ **50. What is the "AI winter"? \***

1/1

- A period of rapid AI advancements
- A period of reduced funding and interest in AI research
- A season when AI systems perform poorly
- A new AI programming language

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