

Q1. Who is widely recognized as the father of Artificial Intelligence?

- A. Alan Turing
- B. John McCarthy
- C. Charles Babbage
- D. Marvin Minsky

Answer: B

John McCarthy coined the term "Artificial Intelligence" in 1956 at the Dartmouth Conference.

Q2. Which of the following is a primary goal of Artificial Intelligence?

- A. To solve mathematical problems only
- B. To extract scientific data
- C. To simulate human intelligence in machines
- D. To create better computer hardware

Answer: C

AI aims to create systems that can perform tasks that usually require human intelligence, such as reasoning and learning.

Q3. What is the name of the test used to determine if a machine can think like a human?

- A. Turing Test
- B. Babbage Test
- C. Analytical Test
- D. McCarthy Evaluation

Answer: A

The Turing Test, proposed by Alan Turing, assesses a machine's ability to exhibit intelligent behavior indistinguishable from a human.

Q4. Which AI search algorithm expands the node that is closest to the goal?

- A. Breadth-First Search
- B. Depth-First Search
- C. Greedy Best-First Search
- D. Uniform Cost Search

Answer: C

Greedy Best-First Search uses a heuristic to expand the node it estimates to be closest to the goal.

Q5. Which of the following is an example of Narrow AI?

- A. A robot that can do anything a human can
- B. A self-aware machine
- C. Siri or Alexa voice assistants
- D. A system with general human consciousness

Answer: C

Narrow AI (Weak AI) is designed to perform specific tasks, such as voice recognition or recommendation systems.

Q6. In AI, what does the 'Agent' interact with?

- A. The Human
- B. The Environment
- C. The Database
- D. The Operating System

Answer: B

An AI agent perceives its environment through sensors and acts upon it using actuators.

Q7. Which programming language is most commonly used for AI development?

- A. C++
 - B. Java
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- C. Python
- D. PHP

Answer: C

Python is preferred due to its simplicity and extensive libraries like TensorFlow, PyTorch, and Scikit-learn.

Q8. What does "NLP" stand for in the context of AI?

- A. Number Language Process
- B. Native Logic Programming
- C. Natural Language Processing
- D. Neural Logic Protocol

Answer: C

NLP is a branch of AI that helps computers understand, interpret, and manipulate human language.

Q9. Which search algorithm is guaranteed to find the shortest path if edge costs are constant?

- A. Depth-First Search
- B. Breadth-First Search
- C. Hill Climbing
- D. Depth Limited Search

Answer: B

BFS explores all neighbors at the current depth before moving to the next level, ensuring the shortest path in unweighted graphs.

Q10. A state space search that explores the deepest node first is known as:

- A. Breadth-First Search
- B. Depth-First Search
- C. A* Search
- D. Bidirectional Search

Answer: B

DFS uses a stack-based approach to go as deep as possible into a branch before backtracking.

Q11. What is the heuristic function used for in AI search?

- A. To find the exact solution immediately
- B. To estimate the cost to reach the goal
- C. To store the path history
- D. To reset the agent

Answer: B

A heuristic function provides an informed guess or estimate to speed up the search process toward a goal.

Q12. Which AI technique is modeled after the biological neurons in the human brain?

- A. Decision Trees
- B. Genetic Algorithms
- C. Artificial Neural Networks
- D. Expert Systems

Answer: C

Artificial Neural Networks (ANNs) consist of interconnected nodes that process information like biological neurons.

Q13. In which type of learning does the machine learn from labeled data?

- A. Unsupervised Learning
- B. Reinforcement Learning
- C. Supervised Learning
- D. Semi-supervised Learning

Answer: C

Supervised learning involves training a model on a dataset where the input and the correct output are both provided.

Q14. Which algorithm is best known for finding the optimal path in a graph using both cost and heuristics?

- A. BFS
- B. DFS
- C. A* Algorithm
- D. Kruskal's Algorithm

Answer: C

A* search combines the actual cost from the start and the estimated cost to the goal ($f(n) = g(n) + h(n)$).

Q15. What type of AI focuses on a reward-based system?

- A. Supervised Learning
- B. Unsupervised Learning
- C. Reinforcement Learning
- D. Deep Learning

Answer: C

Reinforcement learning trains agents to make decisions by rewarding desirable actions and punishing undesirable ones.

Q16. Which of these is a popular application of Computer Vision?

- A. Spam filtering
- B. Facial recognition
- C. Sentiment analysis
- D. Weather prediction

Answer: B

Computer Vision enables machines to identify and process visual information like faces or objects.

Q17. What is the "state space" in an AI problem?

- A. The physical area where the robot moves
- B. The set of all possible configurations of the problem
- C. The memory used by the algorithm
- D. The final solution

Answer: B

State space is the complete set of all possible states that can be reached from the initial state.

Q18. Which AI concept is used to find a solution to a problem by mimicking the process of natural selection?

- A. Neural Networks
- B. Genetic Algorithms
- C. Expert Systems
- D. Bayesian Networks

Answer: B

Genetic algorithms use crossover, mutation, and selection to evolve solutions over generations.

Q19. An AI system that attempts to mimic the decision-making ability of a human expert is a/an:

- A. Neural Network
- B. Expert System
- C. Decision Tree
- D. Linear Regression

Answer: B

Expert systems use a knowledge base and inference rules to solve complex problems in specific domains.

Q20. What is a 'percept' in AI terminology?

- A. The output of an agent
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- B. The agent's sensory input at any given instant
- C. The internal memory of the agent
- D. The goal of the agent

Answer: B

A percept is the raw data received by an AI agent from its environment via its sensors.

Q21. Which search method is also known as blind search?

- A. Informed Search
- B. Uninformed Search
- C. Heuristic Search
- D. Local Search

Answer: B

Uninformed search algorithms (like BFS/DFS) have no additional information about the goal state beyond the problem definition.

Q22. In a Decision Tree, what do the leaf nodes represent?

- A. Feature names
- B. Decision rules
- C. Classification outcomes or class labels
- D. Root values

Answer: C

Leaf nodes in a decision tree represent the final classification or predicted value after all conditions are met.

Q23. Which of the following is used to handle uncertainty in AI?

- A. Boolean Logic
- B. Probability and Bayesian Networks
- C. Deterministic Algorithms
- D. Depth-First Search

Answer: B

Probability allows AI to reason and make decisions when information is incomplete or uncertain.

Q24. What is the main drawback of the Hill Climbing algorithm?

- A. It is too slow
- B. It uses too much memory
- C. It can get stuck in local maxima
- D. It cannot handle numbers

Answer: C

Hill climbing often stops at a local peak that is higher than its neighbors but lower than the global maximum.

Q25. Which AI subfield allows computers to understand handwritten text?

- A. Robotics
- B. Optical Character Recognition (OCR)
- C. Knowledge Representation
- D. Automated Reasoning

Answer: B

OCR is a form of AI/Computer Vision that converts images of text into machine-encoded text.

Q26. Which type of agent acts based on the current percept, ignoring the history?

- A. Model-based reflex agent
- B. Simple reflex agent
- C. Goal-based agent
- D. Utility-based agent

Answer: B

Q27. What is the process of removing unnecessary details from a problem to make it solvable?

- A. Selection
- B. Generalization
- C. Abstraction
- D. Normalization

Answer: C

Abstraction involves simplifying a complex reality by creating a model that focuses on relevant features.

Q28. Which of the following is a component of an Expert System?

- A. Actuator
- B. Inference Engine
- C. Web Browser
- D. Compiler

Answer: B

The inference engine applies logical rules to the knowledge base to deduce new information.

Q29. What is the function of an "Actuator" in AI?

- A. To sense the environment
- B. To store data
- C. To perform actions in the environment
- D. To compute mathematical equations

Answer: C

Actuators are the mechanisms by which an agent acts on its environment, such as wheels or robotic arms.

Q30. Which term refers to a machine's ability to improve its performance based on experience?

- A. Programming
- B. Machine Learning
- C. Execution
- D. Perception

Answer: B

Machine Learning is the study of algorithms that improve through data and experience without being explicitly programmed.

Q31. Which algorithm is commonly used for solving the 8-Queens problem?

- A. Backtracking
- B. Linear Search
- C. Binary Search
- D. Bubble Sort

Answer: A

Backtracking is an AI technique used to find solutions by exploring and discarding paths that fail to meet constraints.

Q32. In AI, "Backpropagation" is primarily used in:

- A. Decision Trees
- B. Neural Networks
- C. Support Vector Machines
- D. Naïve Bayes

Answer: B

Backpropagation is an algorithm used to train neural networks by updating weights to reduce the error.

Q33. Which of the following is a logic-based AI programming language?

- A. Python
- B. PROLOG
- C. Fortran
- D. C#

Answer: B

PROLOG (Programming in Logic) is a language based on symbolic logic and is widely used in AI research.

Q34. What is the "Initial State" in problem-solving?

- A. The goal state
- B. The starting point of the search
- C. The middle state
- D. The state after a move

Answer: B

The initial state is the configuration where the agent begins its search for a solution.

Q35. Which of the following is an example of an AI game-playing algorithm?

- A. Kruskal's Algorithm
- B. Minimax Algorithm
- C. Prim's Algorithm
- D. Dijkstra's Algorithm

Answer: B

Minimax is a decision-making algorithm used in two-player games like chess to minimize potential loss.

Q36. What is the purpose of Alpha-Beta Pruning?

- A. To make the search deeper
- B. To reduce the number of nodes evaluated in a game tree
- C. To increase the search time
- D. To add more nodes to the tree

Answer: B

Alpha-beta pruning is an optimization technique for Minimax that stops evaluating branches that cannot affect the final decision.

Q37. Which AI task involves identifying the category to which a new observation belongs?

- A. Regression
- B. Clustering
- C. Classification
- D. Optimization

Answer: C

Classification is a supervised learning task where data points are assigned to predefined classes.

Q38. What does "Weak AI" refer to?

- A. AI that is poorly programmed
- B. AI designed for a single specific task
- C. AI that lacks a database
- D. AI that cannot use sensors

Answer: B

Weak AI or Narrow AI is specialized to perform one task, like playing chess or recommending movies.

Q39. Which of these is a popular unsupervised learning algorithm?

- A. Linear Regression
 - B. K-Means Clustering
 - C. Support Vector Machine
 - D. Logistic Regression
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Answer: B

K-Means is used to group unlabeled data into clusters based on similarity.

Q40. In AI, what is a "Knowledge Base"?

- A. A list of hardware specs
- B. A collection of facts and rules used to solve problems
- C. A set of programming commands
- D. The RAM of the computer

Answer: B

The knowledge base is the central repository where an AI system stores specialized information for reasoning.

Q41. Which algorithm is used to solve constraint satisfaction problems?

- A. Backtracking search
- B. Linear search
- C. Bubble sort
- D. Quick sort

Answer: A

Constraint satisfaction problems (like Sudoku) are typically solved using backtracking combined with heuristics.

Q42. What is "Overfitting" in Machine Learning?

- A. When the model performs poorly on training data
- B. When the model performs well on training data but poorly on unseen data
- C. When the model is too simple
- D. When the model has no data

Answer: B

Overfitting occurs when a model learns noise and details in training data so much that it hurts its performance on new data.

Q43. Which of the following describes "Deep Learning"?

- A. A subset of machine learning using many-layered neural networks
- B. A way to store data in deep folders
- C. A logic-based search algorithm
- D. An AI that doesn't require electricity

Answer: A

Deep Learning utilizes multi-layered neural networks (Deep Neural Networks) to learn from vast amounts of data.

Q44. What is the primary function of the "Softmax" function in a Neural Network?

- A. To increase the speed of training
- B. To convert outputs into probabilities that sum to 1
- C. To delete unnecessary neurons
- D. To store the weights

Answer: B

Softmax is often used in the output layer of a classifier to represent the probability distribution over classes.

Q45. Which of the following is a "Local Search" algorithm?

- A. BFS
- B. DFS
- C. Simulated Annealing
- D. A* Search

Answer: C

Simulated Annealing is a local search technique used to find an approximate global optimum in a large search space.

Q46. The first AI program to beat a world chess champion was:

- A. AlphaGo
- B. Deep Blue
- C. ChatGPT
- D. Watson

Answer: B

IBM's Deep Blue defeated Garry Kasparov in 1997, marking a milestone in AI history.

Q47. What is "Fuzzy Logic" used for in AI?

- A. To make calculations faster
- B. To handle partial truths and imprecise information
- C. To encrypt data
- D. To design hardware

Answer: B

Fuzzy logic allows for values between 0 and 1, helping machines deal with concepts like "tall" or "warm."

Q48. Which AI concept uses a "Q-Table"?

- A. Supervised Learning
- B. Reinforcement Learning (Q-Learning)
- C. Natural Language Processing
- D. Expert Systems

Answer: B

A Q-table stores values (rewards) for state-action pairs in reinforcement learning algorithms.

Q49. What is a "Tautology" in logic?

- A. A statement that is always false
- B. A statement that is always true
- C. A statement that is neither true nor false
- D. A variable

Answer: B

In logic, a tautology is a formula that is true under every possible interpretation of its components.

Q50. Which of these is a widely used library for Deep Learning?

- A. NumPy
- B. Matplotlib
- C. PyTorch
- D. Pandas

Answer: C

PyTorch (developed by Meta) is a popular open-source library for deep learning and neural network research.

Q51. What is the 'Frame Problem' in AI?

- A. The problem of video lagging
- B. The difficulty of representing what remains unchanged when an action is performed
- C. The size of the monitor
- D. The structure of a neural network layer

Answer: B

The frame problem involves describing the effects of actions without having to describe all the things that don't change.

Q52. Which type of search is BFS?

- A. Informed Search
 - B. Uninformed Search
 - C. Heuristic Search
 - D. Optimal Search
-

Answer: B

Breadth-First Search is an uninformed search as it has no knowledge of the goal location.

Q53. Which AI field deals with "Sentence Parsing"?

- A. Computer Vision
- B. Robotics
- C. NLP
- D. Expert Systems

Answer: C

Natural Language Processing uses parsing to analyze the grammatical structure of sentences.

Q54. A robot's ability to determine its own position in an environment is called:

- A. Perception
- B. Localization
- C. Mapping
- D. Actuation

Answer: B

Localization is the process of a robot or agent finding its location relative to its environment.

Q55. In First-Order Logic, what does the ' $\forall$ ' symbol represent?

- A. There exists
- B. For all (Universal Quantifier)
- C. Not equal to
- D. If and only if

Answer: B

The symbol $\forall$ is used to denote that a property holds for all elements in a domain.

Q56. What is the 'Wumpus World' in AI?

- A. A social media platform
- B. A toy problem used to illustrate knowledge-based agents
- C. A hardware architecture
- D. A deep learning framework

Answer: B

Wumpus World is a classic grid-based environment used in AI textbooks to teach reasoning and logic.

Q57. Which of the following is a "Generative AI" model?

- A. GANs (Generative Adversarial Networks)
- B. Decision Trees
- C. K-Nearest Neighbors
- D. Linear Regression

Answer: A

GANs are used to generate new data, such as images or music, that resemble the training data.

Q58. What is "Stemming" in NLP?

- A. Adding new words to a dictionary
- B. Reducing a word to its base or root form
- C. Translating words to another language
- D. Counting the number of words

Answer: B

Stemming removes suffixes from words (e.g., "running" becomes "run") to simplify text analysis.

Q59. Which of these is a measure of the disorder or randomness in a dataset?

- A. Variance
- B. Entropy
- C. Bias
- D. Precision

Answer: B

In AI and Information Theory, entropy measures the impurity or randomness of a set of examples.

Q60. What is a "Single-Layer Perceptron"?

- A. A complex deep learning model
- B. The simplest type of artificial neural network
- C. A type of hardware processor
- D. A database management system

Answer: B

A perceptron is a linear classifier and is the fundamental building block of neural networks.

Q61. Which AI technique is used to solve the Traveling Salesman Problem?

- A. Linear Search
- B. Genetic Algorithms
- C. Binary Search
- D. Bubble Sort

Answer: B

Genetic Algorithms are effective for finding near-optimal solutions to NP-hard problems like TSP.

Q62. What does the 'I' in 'AI' stand for?

- A. Internet
- B. Intelligence
- C. Interface
- D. Integration

Answer: B

AI stands for Artificial Intelligence.

Q63. Which type of search is 'A*' search?

- A. Uninformed Search
- B. Informed Search
- C. Random Search
- D. Depth-first Search

Answer: B

A* search uses a heuristic to guide its path, making it an informed search algorithm.

Q64. What is 'Computer Vision'?

- A. A way to repair computer monitors
- B. AI that enables machines to see and interpret visual data
- C. A high-resolution screen technology
- D. A type of computer virus

Answer: B

Computer Vision is a field of AI that trains computers to interpret and understand the visual world.

Q65. Which of these is a real-world application of Reinforcement Learning?

- A. Predicting house prices
 - B. Email spam detection
-

- C. Training robots to walk
- D. Grouping news articles

Answer: C

Reinforcement learning is ideal for robotics where an agent learns through trial and error rewards.

Q66. What is the 'Utility' of an agent?

- A. The number of sensors it has
- B. A measure of how 'happy' or successful the agent is in a state
- C. The battery life of the robot
- D. The speed of processing

Answer: B

Utility functions allow agents to compare different states and choose actions that maximize their performance.

Q67. Which logic system allows for 'True', 'False', and values in between?

- A. Propositional Logic
- B. Fuzzy Logic
- C. First-Order Logic
- D. Boolean Logic

Answer: B

Fuzzy logic handles the concept of partial truth, where the truth value may range between 0 and 1.

Q68. What is 'Backtracking' in the context of AI search?

- A. Moving forward only
- B. Returning to a previous state when a path fails
- C. Repeating the same action
- D. Ending the search

Answer: B

Backtracking is a depth-first search strategy that reverts to the last decision point when a dead end is reached.

Q69. Which of the following is NOT an AI technique?

- A. Machine Learning
- B. Deep Learning
- C. Natural Language Processing
- D. Manual Data Entry

Answer: D

Manual data entry is a human task and does not involve artificial intelligence or automated reasoning.

Q70. In an AI agent, what are 'Sensors'?

- A. Things the agent uses to act
- B. Things the agent uses to perceive the environment
- C. The agent's memory
- D. The agent's processor

Answer: B

Sensors allow the agent to receive input from its surroundings, like cameras or microphones.

Q71. What is an 'Artificial Neuron'?

- A. A biological cell
- B. A mathematical function in an ANN
- C. A physical wire
- D. A type of computer screen

Answer: B

An artificial neuron is a mathematical model that takes multiple inputs and produces an output after applying weights and an activation function.

Q72. Which AI subfield focuses on the interaction between humans and computers using natural language?

- A. Robotics
- B. NLP
- C. Perception
- D. Planning

Answer: B

Natural Language Processing (NLP) is dedicated to bridging the communication gap between humans and machines.

Q73. What is 'Strong AI'?

- A. AI that can lift heavy weights
- B. AI with the ability to perform any intellectual task a human can
- C. AI used in video games
- D. AI that uses a lot of power

Answer: B

Strong AI (Artificial General Intelligence) refers to machines with human-level consciousness and multi-domain reasoning.

Q74. Which of these is a famous AI assistant?

- A. Windows XP
- B. Linux
- C. Alexa
- D. Chrome

Answer: C

Alexa is an AI-powered voice assistant developed by Amazon using NLP and speech recognition.

Q75. What is 'Data Mining' in the context of AI?

- A. Digging for gold using robots
- B. Discovering patterns in large datasets
- C. Deleting old files
- D. Encrypting passwords

Answer: B

Data mining uses AI and statistics to find hidden patterns and insights within large volumes of data.

Q76. Which algorithm is used in self-driving cars for path planning?

- A. Bubble Sort
- B. A* Search
- C. Linear Search
- D. Binary Search

Answer: B

A* search is commonly used in navigation systems and robotics for efficient pathfinding.

Q77. What is 'Symbolic AI'?

- A. AI based on neural networks
- B. AI based on high-level human-readable symbols and logic
- C. AI that uses images only
- D. AI that uses sounds only

Answer: B

Symbolic AI focuses on logic and rules to represent knowledge and solve problems.

Q78. In AI, what does 'Heuristic' mean?

- A. A mathematical constant
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- B. A rule of thumb or mental shortcut to solve a problem faster
- C. A type of hardware
- D. A programming error

Answer: B

Heuristics are strategies used to find a good enough solution when an exhaustive search is impractical.

Q79. Which of the following is a clustering algorithm?

- A. K-Nearest Neighbors
- B. K-Means
- C. Decision Tree
- D. Random Forest

Answer: B

K-Means is a popular unsupervised learning algorithm used for clustering data points into groups.

Q80. What is a 'Chatbot'?

- A. A physical robot that talks
- B. A software application that simulates human conversation
- C. A person who chats a lot
- D. A type of internet connection

Answer: B

Chatbots use NLP to interact with users through text or voice, simulating human-to-human interaction.

Q81. Which AI branch focuses on building machines that can move and interact with the physical world?

- A. NLP
- B. Robotics
- C. Logic
- D. Data Science

Answer: B

Robotics is the intersection of engineering and AI that creates machines capable of physical tasks.

Q82. What is 'Supervised Learning' primarily used for?

- A. Grouping data without labels
- B. Prediction and classification using labeled data
- C. Playing games with no rules
- D. Cleaning hard drives

Answer: B

Supervised learning maps inputs to outputs based on example input-output pairs provided during training.

Q83. Which search is more memory efficient?

- A. Breadth-First Search (BFS)
- B. Depth-First Search (DFS)
- C. Bi-directional Search
- D. All use the same memory

Answer: B

DFS generally requires less memory than BFS because it only needs to store the path from the root to the current node.

Q84. What is 'Transfer Learning' in AI?

- A. Moving a computer from one room to another
- B. Using a pre-trained model on a new, related task
- C. Teaching a human how to use AI
- D. Copying code from the internet

Answer: B

Q85. Which of these is an example of an AI 'environment'?

- A. A chessboard for a chess-playing AI
- B. The open road for a self-driving car
- C. The internet for a web-crawling bot
- D. All of the above

Answer: D

An environment is everything external to the agent where it performs its actions and receives percepts.

Q86. What is 'Bias' in Machine Learning?

- A. A type of hardware error
- B. The assumptions made by a model to simplify the learning process
- C. The speed of the algorithm
- D. The color of the computer case

Answer: B

High bias can cause an algorithm to miss relevant relations between features and target outputs (underfitting).

Q87. What is 'Backpropagation of Error'?

- A. A way to delete errors in a document
- B. A method for updating weights in a neural network to minimize loss
- C. A type of computer virus
- D. A method for sorting numbers

Answer: B

Backpropagation calculates the gradient of the loss function with respect to the weights by the chain rule.

Q88. Which of these is a challenge in Natural Language Processing?

- A. Speed of light
- B. Ambiguity in language
- C. Monitor resolution
- D. Battery life

Answer: B

Human language is often ambiguous (one word having multiple meanings), making it hard for machines to interpret correctly.

Q89. What is 'Image Segmentation'?

- A. Deleting an image
- B. Partitioning a digital image into multiple segments (sets of pixels)
- C. Taking a photo with a flash
- D. Printing an image

Answer: B

Segmentation is used in computer vision to simplify or change the representation of an image into something more meaningful.

Q90. Which of the following is a type of AI Agent?

- A. Goal-based Agent
- B. Learning Agent
- C. Utility-based Agent
- D. All of the above

Answer: D

AI agents are categorized based on their level of intelligence and the way they make decisions.

Q91. What is the 'Knowledge Representation' in AI?

- A. How data is stored on a hard drive
- B. How information is formalized for an AI to reason with it
- C. The font used in the AI software
- D. The name of the AI company

Answer: B

Knowledge representation is the study of how to represent world information so a computer system can solve complex tasks.

Q92. What is 'Naive' about the Naive Bayes algorithm?

- A. It is a very simple code
- B. It assumes features are independent of each other
- C. It doesn't use any data
- D. It was created by a beginner

Answer: B

The "naive" assumption is that every feature is independent of others, which simplifies the probability calculations.

Q93. What is an 'Optimizer' in Deep Learning?

- A. A tool to make images brighter
- B. An algorithm used to change the attributes of a neural network to reduce loss
- C. A type of CPU
- D. A software to speed up internet

Answer: B

Optimizers like Adam or SGD update the neural network's weights to improve accuracy during training.

Q94. Which of these is a time-series AI model?

- A. CNN (Convolutional Neural Network)
- B. RNN (Recurrent Neural Network)
- C. Decision Tree
- D. K-Means

Answer: B

RNNs are designed to process sequences of data, making them ideal for time-series or speech data.

Q95. What does 'Perception' in AI involve?

- A. Calculating numbers
- B. Organizing and interpreting sensory information
- C. Writing code
- D. Saving files

Answer: B

AI perception involves processing data from sensors (vision, audio) to understand the state of the world.

Q96. What is the goal of 'Clustering'?

- A. To predict a numeric value
- B. To group similar objects together in an unsupervised manner
- C. To label data manually
- D. To sort a list alphabetically

Answer: B

Clustering aims to find natural groupings in data so that items in a group are more similar to each other than those in other groups.

Q97. Which of these is used for 'Dimensionality Reduction'?

- A. PCA (Principal Component Analysis)
 - B. Linear Regression
 - C. BFS
 - D. DFS
-

Answer: A

PCA is a statistical technique used to reduce the number of variables in a dataset while keeping important information.

Q98. What is 'Sentiment Analysis'?

- A. Checking the grammar of a text
- B. Identifying the emotional tone behind a body of text
- C. Translating text
- D. Counting words in a text

Answer: B

Sentiment Analysis uses NLP to determine if a piece of writing is positive, negative, or neutral.

Q99. What is a 'Tensor' in Deep Learning?

- A. A type of emotional stress
- B. A multi-dimensional array of numbers
- C. A physical component of a robot
- D. A programming error

Answer: B

Tensors are the fundamental data structure used in deep learning libraries like TensorFlow to represent data.

Q100. Which of the following describes 'Big Data'?

- A. One very large file
- B. Datasets that are too large or complex for traditional software to handle
- C. A large hard drive
- D. A high-speed internet connection

Answer: B

Big Data refers to the massive volume, velocity, and variety of information that powers modern AI models.