قائمة الاسئلة

امتحان نهاية الفصل الدراسي الثاني - للعام الجامعي 1446 هـ - الموافق -2025/2024مـكلية الحاسوب وتكنولوجيا المعلومات :: اساسيات الذ

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1) What is the primary goal of artificial intelligence (AI)?
   1) - To entertain humans with games and activities.
   2) - To replace humans in all aspects of life.
   3) + To have machines solve problems that are challenging for people (humans).
   4) - To develop autonomous robots for kill himself.
2) What is the primary focus of narrow AI?
   1) - To develop human-like emotions and empathy
   2) + To solve a specific problem using an intelligent agent.
   3) - To replace all human jobs with automation.
   4) - To create general intelligence that can perform any task.
3) To achieve the “AGI”, we have to make machines:
   1) - Think like a human
   2) - Act like a human.
   3) - Think rationally and Act rationally
   4) + Think like a human,Act like a human,Think rationally and Act rationally
4) What is AGI (Artificial General Intelligence)?
   1) - A type of AI that can only perform tasks it has been specifically programmed to do.
   2) + An intelligent agent that can understand or learn any intellectual task that a human being can
   3) - A hypothetical concept that refers to machines that can only solve simple problems.
   4) - A specialized AI designed for financial trading.
5) What is Optical Character Recognition (OCR) used for?
   1) - Enhancing the color and quality of digital images.
   2) + Reading license plates for autonomous cars and recognizing handwriting for mail sorting.
   3) - Detecting human faces in photos and videos.
   4) - Identifying and categorizing different types of objects in images.
6) What is an agent?
   1) - A software that only processes data without interaction.
   2) - A machine that solely relies on human input to function.
   3) + A system that perceives its environment through sensors and acts upon that environment through actuators.
   4) - An entity that can perform tasks without any environmental input.
7) How does a vacuum cleaner that senses dirt and moves to clean it function?
   1) - It randomly moves without sensing the environment.
   2) + It senses the location and status of the environment and performs actions like left, right, suck, and noOp.
   3) - It only moves in a straight line and stops when it encounters an obstacle.
   4) - It cleans the entire environment without stopping, regardless of whether the area is clean or dirty.
8) What does it mean that rationality is often bounded?
   1) - Rationality is unlimited and can solve any problem without constraints.
   2) + Rationality is often limited by factors such as available memory, computational power, and available sensors.
   3) - Rationality only applies to human decision-making and not to machines.
   4) - Rationality can overcome any limitation with sufficient time.
9) What does PEAS stand for?
   1) - Performance evaluation, Environment, Algorithms, Sensors

2) + Performance measure, Environment, Actuators, Sensors
3) - Performance analysis, Ecosystem, Actuators, Simulations
4) - Performance monitoring, Environment, Automation, Sensors

10) What is the difference between fully observable and partially observable environments?
1) + Fully observable means an agent's sensors give it access to the complete state of the environment at each point, while partially observable means the agent cannot see all aspects of the environment.
2) - Fully observable means the agent can see through walls, while partially observable means it can only detect obstacles.
3) - Fully observable means an agent's sensors give it access to only a small part of the environment, while partially observable means the agent has complete access.
4) - Fully observable and partially observable are the same and refer to the agent's ability to interact with the environment.

11) What is the difference between deterministic, stochastic, and strategic environments?
1) + Deterministic environments are completely determined by the current state and the agent’s action, stochastic environments involve randomness, and strategic environments are stochastic and adversarial, with actions chosen to harm the agent.
2) - Deterministic environments involve random changes, stochastic environments are predictable, and strategic environments are non-adversarial.
3) - Deterministic environments have no changes, stochastic environments have partial changes, and strategic environments have complete changes.
4) - Deterministic environments are adversarial, stochastic environments are friendly, and strategic environments are neutral.

12) What is the difference between dynamic and static environments?
1) - Dynamic environments remain unchanged while the agent deliberates, and static environments change during deliberation
2) + Dynamic environments change during deliberation (e.g., autonomous driving), and static environments are fixed while the agent deliberates (e.g., puzzles).
3) - Both dynamic and static environments change constantly without any pattern.
4) - Dynamic and static are the same

13) What should a rational agent do to maximize its expected performance measure?
1) - Select an action that randomly changes the environment.
2) - Choose an action that minimizes the expected performance measure.
3) + Select an action that maximizes its expected performance measure
4) - Avoid taking any action to prevent changes in the environment.

14) Which of the following is NOT a type of agent?
1) - Utility-Based Agents
2) - Goal-Based Agents
3) - Model-Based Reflex Agents
4) + Random-Based Agents

15) What does a Utility-Based Agent use to evaluate the desirability of each possible state?
1) - A random number generator.
2) - A predefined set of rules.
3) + A utility function.
4) - A simple reflex mechanism.

16) is the process of looking for a sequence of actions that reaches the goal
1) - Agent
2) + Search
3) - AI

17) : is the state of all possible states of the environment and some states are marked as goal state.
    1) + The state space
    2) - Search
    3) - AI
    4) - Agent
18) is the sequence of actions (or a sequence of states) that gives the lowest path cost for reaching the goal.
    1) - The worst solution
    2) - The bad solution
    3) + The optimal solution
    4) - The unoptimal solution
19) Is a simple strategy in which the root node id expanded first, them all successors of the root are expanded next (it explores all possible options at the current depth level before moving on to options at the next level.
    1) - A* algorithm
    2) - Depth first search(DFS)
    3) - Uniform-Cost Search (UCS)
    4) + Breadth-First Search (BFS)
20) Expand the deepest node in the current frontier of the search tree(it goes as deep as possible down one path before backtracking and trying another path).
    1) - A* algorithm
    2) + Depth first search(DFS)
    3) - Uniform-Cost Search (UCS)
    4) - Breadth-First Search (BFS)
21) Is a type of search strategy that uses additional information (called heuristic) to guide the search process
    1) - A* algorithm
    2) + Heuristic Search
    3) - Uniform-Cost Search (UCS)
    4) - uninformed search
22) Is a common informed search algorithm that tries to expand the node that is closest to the goal, on the grounds that this is likely to lead to a solution quickly (it chooses the path that seems closest to the goal based on the heuristic.
    1) - BFS
    2) - DFS
    3) - A* algorithm
    4) + Greedy Best-First search
23) What is the key difference between rationality and omniscience in AI?
    1) - Rationality means knowing everything and making perfect decisions.
    2) + Rationality means making the best decision based on available information. Omniscience means knowing the actual outcomes of actions, which is impossible in reality.
    3) - Rationality and omniscience are the same, both requiring perfect knowledge.
    4) - Rationality means making random decisions. Omniscience involves guessing without information.
24) Why might rational agents make mistakes in decision-making?
    1) - Rational agents always make perfect decisions regardless of their percepts and knowledge.
    2) + Rational agents can make mistakes if their percepts and knowledge do not provide enough information to make a good decision.
    3) - Rational agents intentionally make mistakes to learn and improve.
    4) - Rational agents never rely on their percepts and knowledge when making decisions.
25) What is the main difference between rationality and perfection in AI?
    1) - Rationality means maximizing actual performance; perfection means maximizing expected

performance.

2) - Rationality and perfection are the same, both aiming for the best actual outcome
3) + Rationality means maximizing expected performance; perfection means maximizing actual performance
4) - Rationality involves random decisions; perfection involves calculated decisions

26) What is the definition of artificial intelligence (AI)?
1) + A computer system that can simulate tasks that require human intelligence, such as learning, problem-solving, and decision-making.
2) - A computer system that performs tasks without any need for human-like intelligence or decision-making.
3) - A system that only simulates physical tasks and does not involve learning or problem-solving
4) - A system that mimics human emotions and feelings without any capability for learning or decision-making

27) Which of the following fields are typically involved in the study of artificial intelligence (AI)?
1) - Philosophy
2) - Linguistics
3) - Mathematics
4) + Philosophy, Linguistics,Economics and Mathematics

28) What is the primary purpose of Machine Learning (ML) in artificial intelligence?
1) - Creating physical robots that can perform manual tasks.
2) + Learning from data to make predictions or decisions
3) - Simulating human emotions and feelings
4) - Generating random data without any purpose.

29) Which of the following example of Supervised Learning in the context of machine learning?
1) + classification
2) - clustering
3) - robot navigation
4) - anomaly detection

30) Which of the following example of unsupervised Learning in the context of machine learning?
1) + classification
2) - clustering
3) - robot navigation
4) - regression

31) Which of the following are not example of Deep Learning architectures?
1) - Convolutional Neural Networks (CNNs)
2) - Recurrent Neural Networks (RNNs)
3) - Transformers
4) + Decision Trees

32) What is the primary goal of Natural Language Processing (NLP) in artificial intelligence?
1) + Enabling machines to understand, generate, and interpret human language.
2) - Enabling machines to perform physical tasks without human intervention.
3) - Enabling machines to operate vehicles autonomously.
4) - Enabling machines to process numerical data exclusively.

33) What is the primary goal of Computer Vision in artificial intelligence?
1) + Extracting and interpreting information from images and videos.
2) - Performing data analysis on numerical datasets.
3) - Simulating human emotions and interactions.
4) - Managing and organizing text-based documents.

34) What is the primary function of Expert Systems in artificial intelligence?

1) - Facilitating physical tasks through robotic automation.
2) - Managing and organizing large text-based datasets.
3) + Decision-making based on knowledge representation and reasoning.
4) - Simulating human conversations and interactions.

35) Which of the following are examples of Expert Systems in artificial intelligence?
1) + Rule-Based Systems
2) - Genetic Algorithms
3) - Decision Trees
4) - Clustering Algorithms

36) What is the primary goal of Knowledge Representation and Reasoning in artificial intelligence?
1) - Managing physical tasks through robotic automation.
2) + Storing and reasoning about information.
3) - Simulating human conversations and interactions.
4) - Performing numerical data analysis.

37) What is the primary goal of Neural Networks and Deep Learning in artificial intelligence?
1) - Performing physical tasks without any need for decision-making.
2) + Mimicking human brain structures to solve problems.
3) - Simulating random data without any specific purpose.
4) - Managing and organizing text-based documents.

38) What is the primary goal of Data Mining and Predictive Analytics in artificial intelligence?
1) - Managing physical tasks through robotic automation.
2) + Extracting patterns and making predictions from data.
3) - Simulating human emotions and interactions.
4) - Organizing and managing text-based documents.

39) What is the primary goal of Cognitive Computing in artificial intelligence?
1) - Performing physical tasks without any need for decision-making.
2) + Simulating human thought processes.
3) - Generating random data without any specific purpose.
4) - Managing and organizing text-based documents.

40) What is the primary goal of Multi-Agent Systems (MAS) in artificial intelligence?
1) - Simulating random data without any specific purpose.
2) - Managing physical tasks without collaboration.
3) + Collaboration and competition among intelligent agents.
4) - Performing numerical data analysis exclusively.