23.85

CODE: COSC 423
ALLOTTED TIME: 40Mins

COURSE TITLE: Artificial Intelligence and Applications
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STUDENT INFORMATION – Please select and fill in accordingly

Computer Science – Group A ☐   Computer Science – Group B ☐   Computer Information Systems ☐

Computer Technology ☐   Software Engineering – Group A ☑   Software Engineering – Group B ☐

CLASS NUMBER: 31   MATRIC NUMBER: 19/1153

INSTRUCTIONS
(i) Answer all questions (ii) Checkboxes are used for questions that may have multiple answers (iii) Think carefully and avoid alterations (iv) All forms of randomness are grossly disallowed and will attract stiff sanctions. (v) There is no typographic error in the questions

1. The ability of agents to filter their actions in a bid to actualize defined goals is referred to as
   a. ☐ Filtering
   b. ☐ Trade-off
   c. ☑ Abstraction
   d. ☐ Distraction
   e. ☐ Autonomy

2. The agent that "keeps track of the world" refers to the ___
   a. Simple reflex agents
   b. (Model-based agents)
   c. Goal-based agents
   d. Utility-based agents
   e. General Learning Agent

3. _____ is to Problem Domain as _____ is to Knowledge Domain
   a. Dentistry and Gynecology
   b. Masonry and Carpentry
   c. Ophthalmology and Medicine
   d. Pathology and Surgery
   e. (None of the mentioned)

4. Which is used to improve the agent's performance?
   a. Perceiving
   b. (Learning)
   c. Observing
   d. Listening
   e. None of the mentioned

5. Which action sequences are used to achieve an agent's goal?
   a. ☑ Search
   b. ☑ Plan   0.5
   c. ☑ Retrieve
   d. ☐ Sync
   e. ☐ Persuasion

6. An algorithm is complete if
   a. ☑ It terminates with a solution when one exists
   b. ☐ It starts with a solution
   c. ☐ It does not terminate with a solution
   d. ☐ It has a loop
   e. ☐ It has a decision parameter.

7. What kind of environment is a crossword puzzle?
   a. (Static)
   b. Dynamic
   c. Semi-dynamic
   d. Episodic
   e. None of the mentioned

8. Which is used to provide feedback to the learning element?
   a. (Critic)
   b. Actuators
   c. Sensor
   d. Performance standard
   e. None of the mentioned

9. Knowledge and reasoning also play a crucial role in dealing with a _____ environment.
   a. Completely Observable
   b. (Partially Observable)
   c. Largely observable
   d. Limited
   e. Favourable

10. The easiest environment below is
    a. Stochastic, dynamic, and fully observable
    b. (Deterministic, fully observable, and static)
    c. Stochastic, static, and partially observable
    d. Stochastic, dynamic, and partially observable
    e. Deterministic, fully observable, and episodic

11. Casuality as a limitation of Expert Systems simply suggests that
    a. Cause and effect is indeed a reality
    b. (Improvisation for machines is quite a difficult task)
    c. Newtonian law of action and reaction is still real today
    d. Morality for intelligent agents is still a problem
    e. None of the mentioned

12. The most difficult environment below is
    a. Stochastic, dynamic, fully observable
    b. Deterministic, static, fully observable
    c. Stochastic, static, partially observable
    d. (Stochastic, dynamic, partially observable)
    e. Dynamic, static, fully observable

13. The best treatment chosen by a doctor for a patient for a disease should be based on
    a. ☐ Only current symptoms
    b. ☑ Current symptoms plus some knowledge from the textbooks plus experience
    c. ☑ Factual and Tacit knowledge
    d. ☑ Implicit and Explicit Knowledge
    e. ☐ Current symptoms plus some knowledge from the textbooks

14. _____ agent program type is to strong AI as _____ agent program type is to weak AI.
    a. Simple reflex and general learning
    b. Model-based and goal-based
    c. General learning and simple-reflex
    d. General learning and Utility-based
    e. None of the mentioned

15. In the movie Ex Machina, Caleb acted as _____ based on the structure prescribed by the Turing test.
    a. ☑ human interrogator
    b. ☐ machine interrogator
    c. ☑ human respondent
    d. ☐ machine respondent
    e. ☐ AI system

16. Which of the following is a pivotal event in the history of Artificial Intelligence?
    a. 1949, Donald O, The organization of Behavior,
    b. 1950, Computing Machinery and Intelligence.
    c. 1956, Dartmouth University Conference Organized by John McCarthy
    d. 1961, Computer and Computer Sense.
    e. All the mentioned

17. A critical component of the general learning agent that is structurally external to it is the _____.
    a. critic
    b. learning element
    c. problem generator
    d. performance standard
    e. performance element

18. What is rational at any given time depends on
    a. ☑ The agent's prior knowledge of the environment
    b. ☑ The actions that the agent can perform
    c. ☑ The agent's precept sequence to date
    d. ☐ The Vice-Chancellor's opinion is always final
    e. ☑ The performance measure that defines the criterion for success

19. A component of the general learning agent that is responsible for eliciting new solutions to improve what it already knows is the _____.
    a. critic
    b. learning element
    c. problem generator
    d. performance standard
    e. performance element

20. Causality as a limitation of Expert Systems does not suggest that
    a. ☑ cause and effect is indeed a reality
    b. ☐ improvisation for machines is quite a difficult task
    c. ☑ Newtonian law of action and reaction is still real today
    d. ☑ every action is triggered by a corresponding condition
    e. ☐ thinking outside the box is challenging to applications of AI

21. When a conclusion is stated as a probability rather than an exact binary fact, it is known as:
    a. An expert system
    b. A database
    c. Pattern recognition
    d. Fuzzy logic
    e. Predicate logic

22. The Turing machine showed that you could use a/an _____ system to program any algorithmic task.
    a. Binary
    b. Electrochemical
    c. Recursive
    d. Semantic
    e. All the mentioned

23. In the movie Ex Machina, which possible array of intelligence attributes was Ava's capability tested against?
    a. ☑ self-awareness
    b. ☑ consciousness   0.25
    c. ☐ autonomy
    d. ☑ creativity
    e. ☐ reflection

24. Diagnosis and prognosis which are activities associated with the medical world are instances of ....and ....respectively
    a. ☐ Backward Chaining and Forward Chaining
    b. ☐ Forward Chaining and Backword Chaining
    c. ☑ Facts-driven method and Goal-driven method
    d. ☐ Completeness and Optimality
    e. ☐ Goal-driven method and Facts-driven method

25. _____ is an agent program type with the ability to select from an array of available options by describing the associated degree of happiness it can derive from its selection.
    a. Simple reflex agent
    b. Model-based agent
    c. General learning agent
    d. Utility-based agent
    e. Goal-based agent

26. The following agent program type(s) can be implemented without internal states _____
    a. ☑ Simple reflex agents
    b. ☐ Model-based agents
    c. ☐ Goal-based agents
    d. ☐ Utility-based agents
    e. ☐ General Learning Agent

27. Output segments of AI programming would likely contain _____.
    a. Printed language and synthesized speech
    b. Manipulation of a physical object
    c. Locomotion
    d. Speech response
    e. All the mentioned

28. The ability of agents to resolve conflicting goals by adopting the most preferred of the said goals is referred to as
    a. ☐ Filtering
    b. ☑ Trade-off
    c. ☐ Abstraction
    d. ☐ Distraction
    e. ☐ Autonomy

29. If the environment does not change with the passage of time but the agent's performance score does, then we say the environment is
    a. Static
    b. Continuous
    c. Dynamic
    d. Semi-dynamic
    e. Sequential

30. The following have served as democratically elected vice-president and president of Nigeria respectively
    a. ☐ Goodluck Jonathan & Shehu Shagari
    b. ☐ Olusegun Obasanjo & Namadi Sambo   0-5
    c. ☐ Muhammadu Buhari & Yemi Osinbajo
    d. ☐ Goodluck Jonathan & Namadi Sambo
    e. ☑ Atiku Abubakar & Goodluck Jonathan