

T.YBSC.CS IT–Sem –V  
Examination Oct 2020  
Subject –Artificial Intelligence

Note:1. Attempt any 40 from given 50 Question  
60 Marks

Total

2. Each correct question Carry 1.5 marks

1 hour

1 \_\_\_\_\_ is the characteristics of agent environment?

- A. stochastic
- B. sensor
- C. Machine
- D. Game

2 Strong Artificial Intelligence is

- A. the embodiment of human intellectual capabilities within a computer
- B. a set of computer programs that produce output that would be considered to reflect intelligence if it were generated by humans

C. the study of mental faculties through the use of mental models implemented on a computer

D. study of mind

3 In which of the following situations might a blind search be acceptable?

A. real-life situation

B. complex game

C. small search space

D. simple game

4 Which search method takes less memory?

A. Depth-First Search

B. Breadth-First search

C. Optimal search

D. Linear Search

5 \_\_\_\_\_ is also called as heuristics search

A. Informed

B. Uninformed

C. Interchange

D. function

6 Which is not a property of representation of knowledge?

A. Representational Verification

B. Representational Adequacy

C. Inferential Adequacy

D. Inferential Efficiency

7 A.M. turing developed a technique for determining whether a computer could or could not demonstrate the artificial Intelligence, Presently, this technique is called

A. Turing Test

B. Algorithm

C. Boolean Algebra

D. Logarithm

8 A Personal Consultant knowledge base contain information in the

form of

A. parameters

B. contexts

C. production rules

D. points

9 Which approach to speech recognition avoids the problem caused by the variation in speech patterns among different speakers?

- A. Continuous speech recognition
- B. Isolated word recognition
- C. Connected word recognition
- D. Speaker-dependent recognition

10 Which of the following, is a component of an expert system?

- A. model
- B. knowledge base
- C. character
- D. user

11 A computer vision technique that relies on image templates is

- A. edge detection
- B. binocular vision
- C. model-based vision
- D. robot vision

12 DARPA, the agency that has funded a great deal of American Artificial Intelligence research, is part of the Department of

- A. Defense
- B. Energy

C. Education

D. Justice

13 Which of these schools was not among the early leaders in Artificial Intelligence research?

A. Dartmouth University

B. Harvard University

C. Massachusetts Institute of Technology

D. Stanford University

14 Who is the “father” of artificial intelligence?

A. Fisher Ada

B. John McCarthy

C. Allen Newell

D. Alan Turning

15 A process that is repeated, evaluated, and refined is

called

A. diagnostic

B. descriptive

C. interpretive

D. iterative

16 Visual clues that are helpful in computer vision

include

A. color and motion

B. depth and texture

C. height and weight

D. color and motion, depth and texture

17 General games involves

A. Single-agent

B. Multi-agent

C. Neither Single-agent nor Multi-agent

D. Only Single-agent and Multi-agent

18. \_\_\_\_ is one of the application of AI

A. Machine Translation

B. Radio Transmission

C. Non Automated car

D. Color Translation

19. \_\_\_\_\_ agent is called as rational agent

- A. Who always act correct
- B. Who always act incorrect s
- C. Sometimes correct
- D. D. sometimes incorrect

20.If the the sensor can observe everything in an environment we called it as \_\_\_\_\_

- A. Fully
- B. Partially
- C. Deterministic
- D. Stochastic

21.The optimality of Breadth First Search over Depth First Search

- A. Greater
- B. Less
- C. Equal
- D. Average

22.The optimality of Depth First Search over Breadth First Search

- A. Greater
- B. Average
- C. Less
- D. Equal

23.The search algorithm which works on minimal path cost finding

- A. Uniform Cost Search
- B. Bidirectional Search
- C. IDDFS
- D. Local Search

24.Which feature is not supported in simple hill climbing

- A. Finding Successors
- B. Heuristics
- C. Backtracking
- D. Local Maxima

25.The online search makes use of \_\_\_\_\_ strategy

- A. Breadth First Search
- B. Depth First Search
- C. Unidirectional Search
- D. Astar Sarch

26.The environment for Online Search agent is \_\_\_\_\_

- A. Fully observable
- B. Partially observable

C. No observable

D. Dynamic

27. What is state space?

A. The whole problem

B. Your Definition to a problem

C. Problem you design

D. Representing your problem with variable and parameter

28. A search algorithm takes \_\_\_\_\_ as an input and returns \_\_\_\_\_ as an output.

A. Input, output

B. Problem, solution

C. Solution, problem

D. Parameters, sequence of actions

29. A problem in a search space is defined by one of these state.

A. Initial state and Goal state

B. Better state

C. Intermediate state

D. Last state

30. The Set of actions for a problem in a state space is formulated by a \_\_\_\_\_

A. Intermediate states

B. Initial state

C. Successor function, which takes current action and returns next immediate state

D. Numeric Function

31. The process of removing detail from a given state representation is called \_\_\_\_\_

A. Extraction

B. Abstraction

C. Information Retrieval

D. Mining of data

32. What is back propagation?

A) It is another name given to the curvy function in the perceptron

B) It is the transmission of error back through the network to adjust the inputs

C) It is the transmission of error back through the network to allow weights to be adjusted so that the network can learn

D) None of the mentioned

33. Which of the following is not the promise of artificial neural network?

A) It can explain result

B) It can survive the failure of some nodes

C) It has inherent parallelism

D) It can handle noise

34. The network that involves backward links from output to the input and hidden layers is called \_\_\_\_\_

A) Self organizing maps

- B) Perceptrons
  - C) Recurrent neural network
  - D) Multi layered perceptron
35. A \_\_\_\_\_ is a decision support tool that uses a tree-like graph or model of decisions and their possible consequences, including chance event outcomes, resource costs, and utility.
- A) Decision tree
  - B) Graphs
  - c) Trees
  - D) Neural Networks
36. What is Decision Tree?
- A) Flow-Chart
  - B) Structure in which internal node represents test on an attribute, each branch represents outcome of test and each leaf node represents class label
  - C) Flow-Chart & Structure in which internal node represents test on an attribute, each branch represents outcome of test and each leaf node represents class label
  - D) Nodes
37. Decision Nodes are represented by \_\_\_\_\_
- A) Disks
  - B) Squares
  - c) Circles
  - D) Triangles
38. The explanation facility of an expert system may be used to \_\_\_\_\_
- A) construct a diagnostic model
  - B) expedite the debugging process
  - C) explain the system's reasoning process
  - D) explain the system's reasoning process & expedite the debugging process
39. Where does the degree of belief is applied?
- A) Propositions
  - B) Literals
  - C) Variables
  - D) Statements
40. What is meant by probability density function?
- A) Probability distributions
  - b) Continuous variable
  - C) Discrete variable
  - D) Probability distributions for Continuous variables
41. What is Unsupervised learning?
- A) All data is unlabelled and the algorithms learn to inherent structure from the input data
  - B) All data is labelled and the algorithms learn to predict the output from the input data
  - C) It is a framework for learning where an agent interacts with an environment and receives a reward for each interaction
  - D) Some data is labelled but most of it is unlabelled and a mixture of supervised and unsupervised techniques can be used.
42. What is Semi-Supervised learning?
- A) All data is unlabelled and the algorithms learn to inherent structure from the

input data

B) All data is labelled and the algorithms learn to predict the output from the input data

C) It is a framework for learning where an agent interacts with an environment and receives a reward for each interaction

D) Some data is labelled but most of it is unlabelled and a mixture of supervised and unsupervised techniques can be used.

43. What is Reinforcement learning?

A) All data is unlabelled and the algorithms learn to inherent structure from the input data

B) All data is labelled and the algorithms learn to predict the output from the input data

C) It is a framework for learning where an agent interacts with an environment and receives a reward for each interaction

D) Some data is labelled but most of it is unlabelled and a mixture of supervised and unsupervised techniques can be used.

44. Sentiment Analysis is an example of:

1)Regression,

2)Classification

3)Clustering

4)Reinforcement Learning

Options:

A). 1 Only

B). 1 and 2

C). 1 and 3

D). 1, 2 and 4

45. Upper confidence bound is a

A) Reinforcement algorithm

B) Supervised algorithm

C) Unsupervised algorithm

D) Semi supervised algorithm

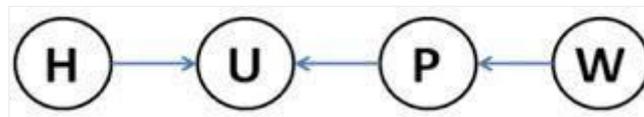
46. You have a task which is to show relative ads to target users. Which algorithm you should use for this task?

- A. K means clustering
- B. Naive Bayes
- C. Support vector machine
- D. Upper confidence bound

47. The multi-armed bandit problem is a generalized use case for-

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

48. Which of the following is the joint probability of H, U, P, and W described by the given Bayesian Network? [note: as the product of the conditional probabilities]



- a)  $P(H, U, P, W) = P(H) * P(W) * P(P) * P(U)$
- b)  $P(H, U, P, W) = P(H) * P(W) * P(P | W) * P(W | H, P)$
- c)  $P(H, U, P, W) = P(H) * P(W) * P(P | W) * P(U | H, P)$
- d)  $P(H, U, P, W) = P(H) * P(W) * P(P | W) / P(W | H, P)$

49. Different learning methods does not include?

- A) Memorization
- B) Analogy
- C) Deduction
- D) Introduction

50. Which of the factors affect the performance of learner system does not include?

- A) Representation scheme used
- B) Training scenario
- C) Type of feedback
- D) Good data structures

