Charotar University of Science and Technology
Devang Patel Institute of Advance Technology and Research
Department of Computer Science & Engineering
Subject: CS341 Artificial Intelligence
Unit Test - 1

Semester: 5th (B. Tech.)　　　　　　　　　　**Maximum Marks: 30**
Date: 26/8/2021, Thursday　　　　　　　　　**Time: 03:30 pm to 04:30 pm**

Instructions:
(i) Attempt *all* the questions.
(ii) Figures to the right indicate *full* marks.
(iii) Make suitable assumptions and draw neat figures wherever required.

Section : 1

Sr. No	Questions	Marks	CO	BL
1	Select the most appropriate situation for that a blind search can be used. A. Real-life situation B. Small Search Space C. Complex game D. All of the above	1	1	U
2	Among the given options, which search algorithm requires less memory? A. Optimal Search B. Depth First Search C. Breadth-First Search D. Linear Search	1	1	U
3	If a robot is able to change its own trajectory as per the external conditions, then the robot is considered as the __ A. Mobile B. Non-Servo C. Open Loop D. Intelligent	1	1	A

4	In state-space, the set of actions for a given problem is expressed by the_____. A. Intermediate States B. Successor function that takes current action and returns next state C. Initial States D. None of the above	1	2	R
5	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	1	2	U
6	What is the major component/components for measuring the performance of problem solving? A. Completeness B. Optimality C. Time and Space complexity D. All of the mentioned	1	2	U
7	A production rule consists of _____ A. A set of Rule B. A sequence of steps C. Set of Rule & sequence of steps D. Arbitrary representation to problem	1	2	A
8	In a rule-based system, procedural domain knowledge is in the form of: A. Production rules B. Rule interpreters C. Meta-rules D. Control rules	1	2	U

9	What is the term used for describing the judgmental or commonsense part of problem solving? A. Heuristic B. Critical C. Value based D. Analytical	1	2	R
10	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. All of the above	1	1	U
11	A strong AI is labeled as _____. A. Artificial general intelligence B. Artificial generate intelligence C. Artificial general intro D. Art general intelligence	1	1	R
12	Weak AI 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. None of the above	1	1	U
13	The area of AI that investigates methods of facilitating communication between people and computers is: A. Natural language processing B. Symbolic processing C. Decision support D. Robotics	1	1	A

14	The time and space complexity of BFS is (For time and space complexity problems consider b as branching factor and d as depth of the search tree.) A. O(bd+1) and O(bd+1) B. O(b2) and O(d2) C. O(d2) and O(b2) D. O(d2) and O(d2)	1	2	E
15	A heuristic is a way of trying A. To discover something or an idea embedded in a program B. To search and measure how far a node in a search tree seems to be from a goal C. To compare two nodes in a search tree to see if one is better than the other is D. All of the mentioned	1	2	R
16	Hidden layer is use to add non – linearity in the Artificial Neural Network. 　A. True 　B. False	1	3	R
17	If I have Input image of size 7*7 and filter size is 3*3 what v resultant matrix size? 　A. 5*5 　B. 6*6 　C. 7*7 　D. 8*8	1	3	E
18	If we add 10 or more hidden layer in artificial neural Network then Vanishing Gradient problem occur. 　A.　　True 　B.　　False	1	3	A

19	Amongst this which is not the Learning type A. Semi Supervised Learning B. Supervised Learning C. Reinforcement Learning D. Unsupervised Learning E. None of the Above	1	3	R
20	Perceptron is used to classify the non- linearly separable pa A. True B. False	1	3	U
21	Which is not Activation function? A. Step B. Linear C. Sigmoid D. Non-Linear	1	3	U
22	Full form of RELU A. Rectified Linear Unit B. Recurrent Linear Unit C. Recursive Linear Unit	1	4	R
23	In convolution process Padding is use to retain the size of origina A. True B. False	1	4	U
24	If Learning rate in neural network is too high then neural network will reach to minima very quickly. A. True B. False	1	4	U

25	If learning rate is too low then neural network will reach to the minima very quickly. A. True B. False	1	3	U
26	Full form of BPNN A. Bidirectional Neural Network B. Backpropagation Neural Network C. Bipolar Neural Network	1	4	R
27	Which is the correct equation to update the weight A. Wnew=Wold+ delta(E)*learning rate B. Wnew=Wold- delta(E)*learning rate	1	3	E
28	In CNN we can only use 2 Fully connected layer A. True B. False	1	3	U
29	Convolution Neural Network have combination of Concolutional layer, Pooling layer and Fully Connected Layer A. True B. False	1	3	U
30	Which is not the pooling method A. Max B. Average C. Standard Deviation	1	3	A

Note:
CO – Course Outcomes
BL – Bloom's Taxonomy Level