BRAINWARE UNIVERSITY

Term End Examination 2022
Programme – BCA-2019/BCA-2020
Course Name – Artificial Intelligence
Course Code - BCAD502B
(Semester V)

Full Marks : 60   **Time : 2:30 Hours**
[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)   1 x 15=15

1.   *Choose the correct alternative from the following :*

(i)   Which of the following is an application of NN (Neural Network)?

   a) Sales forecasting   b) Data validation
   c) Risk management   d) All of these

(ii)   The network that involves backward links from output to the input and hidden layers is called

   a) Self organizing maps   b) Perceptron
   c) Recurrent neural network   d) Multi layered perceptron

(iii) Which is used to choose among multiple consistent hypotheses?

   a) Razor   b) Ockham razor
   c) Learning element   d) None of these

(iv)   What will happen if the hypothesis space contains the true function?

   a) Realizable   b) Unrealizable
   c) Both Realizable & Unrealizable   d) None of these

(v)   What are taken into account of state-space search?

   a) Postconditions   b) Preconditions
   c) Effects   d) Both Preconditions & Effects

(vi)   How many ways are available to solve the state-space search?

   a) 1   b) 2
   c) 3   d) 4

(vii) Which is not the commonly used programming language for AI?

   a) PROLOG   b) Java
   c) LISP   d) Perl

(viii) A problem in a search space is defined by which one of these states?

   a) Initial state   b) Last state
   c) Intermediate state   d) All of these

(ix)   What is the main task of a problem-solving agent?

   a) Solve the given problem and reach to goal   b) To find out which sequence of action will get it to the goal state

c) All of these　　　　　　　　　　d) None of these

(x) How many types of agents are there in artificial intelligence?

a) 1　　　　　　　　　　b) 2
c) 3　　　　　　　　　　d) 4

(xi) What is a heuristic function?

a) A function to solve mathematical problems

b) A function which takes parameters of type string and returns an integer value

c) A function whose return type is nothing

d) A function that maps from problem state descriptions to measures of desirability.

(xii) _____ number of informed search method are there in Artificial Intelligence.

a) 4　　　　　　　　　　b) 3
c) 2　　　　　　　　　　d) 1

(xiii) What is the other name of informed search strategy?

a) Simple search　　　　　　　　　　b) Heuristic search
c) Online search　　　　　　　　　　d) None of the mentioned

(xiv) How many things are concerned in the design of a learning element?

a) 1　　　　　　　　　　b) 2
c) 3　　　　　　　　　　d) 4

(xv) How many types are there in machine learning?

a) 1　　　　　　　　　　b) 2
c) 3　　　　　　　　　　d) 4

Group-B
(Short Answer Type Questions)　　　　　　3 x 5=15

2. Write the difference between Static and Dynamic Environment (3)
3. Explain the KNN Algorithm (3)
4. What are Regular Expressions? (3)
5. What is a Neural Network? (3)
6. Identify the between Fully observable & Partially Observable. (3)

OR

Briefly describe different types of intelligent agents in AI (3)

Group-C
(Long Answer Type Questions)　　　　　　5 x 6=30

7. Classify Supervised and unsupervised machine learning. (5)
8. Explain the applications area of Deep learning. Explain with a proper diagram (5)
9. Write down the steps of the A* search algorithm (5)
10. Explain Hill Climbing Algorithm in AI and give an example. (5)
11. What is NLP? What are the various components of NLP? (5)
12. Define how Artificial intelligence, Machine Learning, and Deep Learning differ from each other. (5)

OR

What is the need for Artificial Intelligence? (5)

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