



BRAINWARE UNIVERSITY

Term End Examination 2023

Programme – MCA-2018/MCA-2019/MCA-2020/MCA-2021

Course Name – Artificial Intelligence

Course Code - MCA304/MCA302

(Semester III)

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) A constructive approach in which no commitment is made unless it is necessary to do so is

- a) Least commitment approach
- c) Nonlinear planning

- b) Most commitment approach
- d) Opportunistic planning

(ii) What is the intentional exchange of information brought about by production and perception?

- a) Hearing
- c) Speech

- b) Communication
- d) None of these

(iii) What is the goal of artificial intelligence?

- a) To solve real-world problems
- c) To explain various sorts of intelligence

- b) To solve artificial problems
- d) To extract scientific causes

(iv) Which of the following could be an approach to Artificial Intelligence?

- a) Strong Artificial Intelligence
- c) Applied Artificial Intelligence

- b) Weak Artificial Intelligence
- d) All of these

(v) The first AI programming language was called:

- a) BASIC
- c) IPL (Inductive logic programming)

- b) FORTRAN
- d) LISP

(vi) What is the rule of simple reflex agent?

- a) Simple-action rule
- c) Simple & Condition-action rule

- b) Condition-action rule
- d) None of these

(vii) What is the composition for agents in artificial intelligence?

- a) Program
- c) Both Program & Architecture

- b) Architecture
- d) None of these

(viii) Which agent deals with happy and unhappy states?

- a) Simple reflex agent

- b) Model based agent

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- c) Learning agent
d) Utility based agent
- (ix) Which search uses the problem specific knowledge beyond the definition of the problem?
a) Informed search
b) Depth-first search
c) Breadth-first search
d) Uninformed search
- (x) Which is true regarding BFS (Breadth First Search)?
a) BFS will get trapped exploring a single path
b) The entire tree so far been generated must be stored in BFS
c) BFS is not guaranteed to find a solution if exists
d) BFS is nothing but Binary First Search
- (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) How many types are there in machine learning?
a) 1
b) 2
c) 3
d) 4
- (xiii) Deep learning is type of
a) Robotics
b) Machine Learning
c) Searching
d) none of these
- (xiv) Which of the following is an application of NN (Neural Network)?
a) Sales forecasting
b) Data validation
c) Risk management
d) All of these
- (xv) 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

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Differentiate between L1 & L2 regularization. (3)
3. Differentiate between NLP and Text mining (3)
4. Differentiate Statistical Reasoning (3)
5. Define hyperparameters in Deep Neural Networks (3)
6. Differentiate between Deterministic vs Stochastic. (3)

OR

Differentiate between supervised and unsupervised machine learning. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Explain some real-world applications of AI (5)
8. Establish the problems in Hill Climbing Algorithm with solution. (5)
9. Conclude adversarial Search. (5)
10. Classify Decision Tree algorithm (5)
11. Define the intelligent agent in AI, and where are they used? (5)
12. Explain uniform cost search algorithm (5)

OR

Explain with diagram Utility-based agents and Learning Agents. (5)

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