



BRAINWARE UNIVERSITY
Term End Examination 2020 - 21
Programme – Master of Computer Applications
Course Name – Artificial Intelligence
Course Code - MCA304

Semester / Year - Semester III

Time allotted : 75 Minutes

Full Marks : 60

[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 60=60

1. *(Answer any Sixty)*

(i) Which is not a property of representation of knowledge?

- | | |
|----------------------------------|------------------------------|
| a) Representational Verification | b) Representational Adequacy |
| c) Inferential Adequacy | d) Inferential Efficiency |

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

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

(iii) 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 |

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

- | | |
|------------------------------------|---------------------------------|
| a) Strong Artificial Intelligence | b) Weak Artificial Intelligence |
| c) Applied Artificial Intelligence | d) All of these |

(v) Which particular generation of computers is associated with artificial intelligence?

- | | |
|-----------|-----------|
| a) Second | b) Fourth |
|-----------|-----------|

c) Fifth

d) Third

(vi) The factors affecting the performance of learner system do not include?

a) Representation scheme used

b) Training scenario

c) Type of feedback

d) Good data structures

(vii) An algorithm A is admissible if

a) It is not guaranteed to return an optimal solution when one exists

b) It is guaranteed to return an optimal solution when one exists

c) It returns more solutions, but not an optimal one

d) It guarantees to return more optimal solutions

(viii) An Artificial Intelligence technique that allows computers to understand associations and relationships between objects and events is called:

a) heuristic processing

b) cognitive science

c) relative symbolism

d) pattern matching

(ix) The field that investigates the mechanics of human intelligence is:

a) history

b) cognitive science

c) psychology

d) sociology

(x) What is the name of the computer program that simulates the thought processes of human beings?

a) Human logic

b) Expert reason

c) Expert system

d) Personal information

(xi) What is the name of the computer program that contains the distilled knowledge of an expert

a) Database management system

b) Management information System

c) Expert system

d) Artificial intelligence

(xii) A computer program that contains expertise in a particular domain is called an:

- a) intelligent planner
- b) automatic processor
- c) expert system
- d) operational symbolizer

(xiii) What is the term used for describing the judgmental or common-sense part of problem solving

- a) Heuristic
- b) Critical
- c) Value based
- d) Analytical

(xiv) What was originally called the “imitation game” by its creator?

- a) The Turing Test
- b) LISP
- c) The Logic Theorist
- d) Cybernetics

(xv) What is a Cybernetics?

- a) Study of communication between two machines
- b) Study of communication between human and machine
- c) Study of communication between two humans
- d) Study of communication between logic circuits.

(xvi) An Artificial Neural Network Is based on

- a) Strong Artificial Intelligence approach
- b) Weak Artificial Intelligence approach
- c) Cognitive Artificial Intelligence approach
- d) Applied Artificial Intelligence approach

(xvii) A completely automated chess engine (Learn from previous games) is based on

- a) Strong Artificial Intelligence approach
- b) Weak Artificial Intelligence approach
- c) Cognitive Artificial Intelligence approach
- d) Applied Artificial Intelligence approach

(xviii) A basic line following robot is based on

- a) Strong Artificial Intelligence approach
- b) Strong Artificial Intelligence approach
- c) Cognitive Artificial Intelligence approach
- d) Applied Artificial Intelligence approach

(xix) The following task/tasks Artificial Intelligence could not do yet

- a) Understand natural language robustly
- b) Web mining
- c) Construction of plans in real time dynamic systems
- d) All of these

(xx) 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

(xxi) 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

(xxii) 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) None of these

(xxiii) Which is not a Goal-based agent?

- a) Inference
- b) Search
- c) Planning
- d) Conclusion

(xxiv) What is meant by agent's percept sequence?

- a) Used to perceive the environment
- b) Complete history of actuator
- c) Complete history of perceived things
- d) None of these

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

- a) Simple-action rule
- b) Condition-action rule
- c) Simple & Condition-action rule
- d) None of these

(xxvi) In which agent, the problem generator is present?

- a) Learning agent
- b) Observing agent
- c) Reflex agent
- d) None of these

(xxvii) Which action sequences are used to achieve the agent's goal?

- a) Search
- b) Plan
- c) Retrieve
- d) Both Search & Plan

(xxviii) Which element in agent is used for selecting external actions?

- a) Perceive
- b) Performance
- c) Learning
- d) Actuator

(xxix) The performance of an agent can be improved by

- a) Learning
- b) Observing
- c) Perceiving
- d) None of these

(xxx) External actions of the agent are selected by

- a) Perceive
- b) Performance
- c) Learning
- d) Actuator

(xxxii) The action of the Simple reflex agent completely depends upon

- a) Perception history
- b) Current perception
- c) Learning theory
- d) Utility functions

(xxxii) What among the following is/are the example of the intelligent agent/agents?

- a) Human
- b) Robot

- c) Autonomous Spacecraft
- d) All of these

(xxxiii) What are the compositions for agents in artificial intelligence?

- a) Program
- b) Architecture
- c) Both Program & Architecture
- d) None of these

(xxxiv) In which agent, the problem generator is present?

- a) Learning agent
- b) Observing agent
- c) Reflex agent
- d) None of these

(xxxv) Which element in agent are used for selecting external actions?

- a) Perceive
- b) Performance
- c) Learning
- d) Actuator

(xxxvi) Agents behaviour can be best described by

- a) Perception sequence
- b) Agent function
- c) Sensors and Actuators
- d) Environment in which agent is performing

(xxxvii) What is rational at any given time depends on?

- a) The performance measure that defines the criterion of success
- b) The agent's prior knowledge of the environment
- c) The actions that the agent can perform
- d) All of these

(xxxviii) 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

(xxxix) Which search method takes less memory?

- a) Depth-First Search
- b) Breadth-First search

c) Both Depth-First Search & Breadth-First search
d) Linear Search

(xl) 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
- d) All of these

(xli) A* algorithm is based on

- a) Breadth-First-Search
- b) Depth-First –Search
- c) Best-First-Search
- d) Hill climbing

(xlii) Which is the best way to go for Game playing problem

- a) Linear approach
- b) Heuristic approach
- c) Random approach
- d) Optimal approach

(xliii) 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.

(xliv) The problem space of means-end analysis has

- a) An initial state and one or more goal states
- b) One or more initial states and one goal state
- c) One or more initial states and one or more goal state
- d) One initial state and one goal state

(xlv) The process of removing detail from a given state representation is called

- a) Extraction
- b) Abstraction
- c) Information Retrieval
- d) Mining of data

(xlvi) A problem solving approach works well for

- a) 8-Puzzle problem
- b) 8-queen problem
- c) Finding an optimal path from a given source to a destination
- d) Mars Hover (Robot Navigation)

(xlvii) In which touring problem, each city must be visited exactly once? The aim is to find the shortest tour.

- a) Finding shortest path between a source and a destination
- b) Travelling Salesman problem
- c) Map coloring problem
- d) Depth first search traversal on a given map represented as a graph

(xlviii) Web Crawler is a/an

- a) Intelligent goal-based agent
- b) Problem-solving agent
- c) Simple reflex agent
- d) Model based agent

(xlix) 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 these

(l) 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

(li) Which is the best way to go for Game playing problem?

- a) Linear approach
- b) Heuristic approach (Some knowledge is stored)
- c) Random approach
- d) An Optimal approach

(lii) Which is not Familiar Connective in First Order Logic?

- a) and
- b) iff
- c) or
- d) not

(lii) Given a sound clip of a person or people speaking, determine the textual representation of the speech.

- a) Text-to-speech
- b) Speech-to-text
- c) All of these
- d) None of these

(liv) In linguistic morphology _____ is the process for reducing inflected words to their root form.

- a) Rooting
- b) Stemming
- c) Text-Proofing
- d) Both Rooting & Stemming

(lv) What is full form of NLG?

- a) Natural Language Generation
- b) Natural Language Genes
- c) Natural Language Growth
- d) Natural Language Generator

(lvi) What is the field of Natural Language Processing (NLP)?

- a) Computer Science
- b) Artificial Intelligence
- c) Linguistics
- d) All of these

(lvii) In a rule-based system, what is the form of procedural domain knowledge?

- a) production rules
- b) rule interpreters
- c) meta-rules
- d) control rules

(lviii) Two literals are complementary if _____

- a) They are equal
- b) They are identical and of equal sign
- c) They are identical but of opposite sign
- d) They are unequal but of equal sign

(lix) Visual clues that are helpful in computer vision include

- a) color and motion
- c) height and weight

- b) depth and texture
- d) color and motion, depth and texture

(lx) Computers normally solve problem by breaking them down into a series of yes-or-no decisions represented by 1s and 0s. What is the name of the logic that allows computers to assign numerical values that fall somewhere between 0 and 1?

- a) Human logic
- c) Boolean logic

- b) Fuzzy logic
- d) Operational logic