19CAP35A

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MCA DEGREE EXAMINATION MAY 2022
(Fifth Semester)

Branch – **COMPUTER APPLICATIONS**

DISCIPLINE SPECIFIC ELECTIVE – III: ARFTIFICIAL INTELLIGENCE

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 x 1 = 10)

1. 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 seaech tree to see if one is better than the other is
   d. All the mentioned

2. Who is the father of Artificial Intelligence?
   a. Fisher Ada b. John McCarthy
   c. Allen Newell d. Alan Turning

3. First order logic is also known as _____.
   a. First order predicate calculus b. Quantification Theory
   c. Low order calculus d. All of the mentioned

4. How many possible sources of complexity are there in forward chaining?
   a. 1 b. 2
   c. 3 d. 4

5. Choose from the following that are decision tree nodes?
   a. Decision Nodes b. End Nodes
   c. Chance Nodes d. All of the Mentioned

6. What is Neuro software?
   a. software used to analyze neurons b. Designed to aid experts in real world
   c. It is powerful and easy neural networks d. It is software used by neuro surgeons

7. What is the study of how the language sounds?
   a. Speechology b. Biology
   c. Trilogy d. Phonology

8. What is the field of natural language processing (NLP)?
   a. Computer Science b. Artificial Intelligence
   c. Linguistics d. All of the mentioned

9. Which of the following terms refers to the use of compressed gasses to derive (power) therobot device?
   a. Pneumatic b. Hydraulic
   c. Piezoelectric d. Photosensitive

10. 10. If a robot can alter its own trajectory in response to external conditions, it is considered to be _____.
    a. Intelligent b. Mobile
    c. Open loop d. Non-servo

Cont...

SECTION - B (25 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 x 5 = 25)

11 a Analyze the real world problem.

OR

b Show how the Greedy best-first search explores information.

12 a Illustrate simple forwarded-chaining algorithms.

OR

b Explain backward chaining Algorithm.

13 a Explain broadening the applicability of decision tree.

OR

b Sketch the units in neural networks.

14 a Show the implementation in IR Systems.

OR

b Discuss machine translation systems.

15 a Illustrate skeletonization methods.

OR

b Explain Dynamics and control.

SECTION -C (40 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 x 8 = 40)
Question no. 16 is compulsory

16 Construct a search mechanism using breadth-first search and depth-first search and explain how they expand nodes.

17 a Elucidate numbers, sets and lists.

OR

b Construct an account on unification and lifting.

18 a Enumerate single layer feed-forward neural networks.

OR

b Produce a survey on multilayer feed-forward neural networks.

19 a Recommend information formation's importance.

OR

b Elucidate early image processing operation in artificial intelligence.

20 a Determine robotic software architectures.

OR

b Present a survey on primary application domains for robotic technology.

Z-Z-Z END