

212126

Kamballa

Avinashilingam Institute for Home Science and Higher Education for Women
Deemed to be University Estd.u/s 3of UGC Act 1956, Category A by MHRD [now MoE]
Re-accredited with an A++ Grade by NAAC CGPA 3.65/4, Category I by UGC
Coimbatore-641043, Tamil Nadu, India

Continuous Internal Assessment I –February -2026
VI Semester

Class : III UG
Major : Computer Science

Time : 2 Hours
Max. Marks: 60

23BCSC11 Artificial Intelligence

Course Outcomes:

- CO1:** Acquire a comprehensive understanding of Artificial Intelligence
CO2: Get familiar with knowledge representations and its other logics
CO3: Explore the concepts of statistical reasoning
CO4: Get familiar with the concept of game playing and planning
CO5: Familiarize with Natural Language Processing and learning techniques.

Part A

6 x 1 = 6

Choose the Correct Answer

1. What is the main purpose of a control strategy in a production system? CO1K1
a) To store facts b) To select and apply rules c) To define constraints d) To generate heuristics
2. In Artificial Intelligence, a problem is defined by initial state, goal state, and _____. CO1K1
a) Constraints b) Operators c) Rules d) Variables
3. Predicate logic is also known as _____. CO2K1
a) Propositional logic b) First Order Logic c) Boolean logic d) Modal logic
4. The relationship between a class and its subclass is represented using _____. CO2K1
a) Instance b) Attribute c) ISA d) Predicate
5. Statistical reasoning in AI mainly deals with _____. CO3K1
a) Exact reasoning b) Reasoning under uncertainty c) Deterministic reasoning d) Logical inference
6. Semantic Networks represent knowledge using _____. CO3K1
a) Tables b) Rules c) Graphs d) Scripts

Part B

3 x 6 = 18

Answer ALL questions

Answer should not exceed 400 words or two pages

7. a. What are the fundamental characteristics of a problem in Artificial Intelligence. CO1K2
(or)
7. b. What is a heuristic function? Explain its role in problem solving. CO1K2
8. a. Differentiate between Depth First Search (DFS) and Breadth First Search (BFS). CO1K3
(or)
8. b. Discuss the issues involved in knowledge representation. CO2K2
9. a. Explain in brief the approaches to knowledge representation. CO2K2
(or)
9. b. Write a short note on the basic concepts of Dempster–Shafer theory. CO3K2

Part C

3 x 12 = 36

Answer ALL questions

Answer should not exceed 800 words or four pages

10. a. Explain Production Systems, their components, characteristics, and control strategies. CO1K2
(or)
10. b. Discuss the Generate-and-Test method and Hill Climbing technique in detail. Explain their advantages and disadvantages. CO1K2
11. a. Explain the knowledge representation using predicate logic. CO2K2
(or)
11. b. Compare logical and structured knowledge representation techniques highlight its advantages and disadvantages. CO2K3
12. a. Describe Bayesian Networks, their components, construction, and applications. CO3K2
(or)
12. b. Explain statistical reasoning in Artificial Intelligence. Discuss probability theory and Bayes' theorem in detail. CO3K2

Number of copies: 60+57

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