



*R. Sambath*

**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**  
**Semester VI**

**Class : III UG** *Refer*  
**Major : Computer Science**

**Time : 2 Hours**  
**Max. Marks: 60**

**21BCSC28-Artificial Intelligence**

**Course Outcomes:**

- CO1:**Develop computer applications based on perception & Learning.  
**CO2:** Simulate intelligence for reasoning and Learning.  
**CO3:** In depth Understanding to tackle any AI problem  
**CO4:** Representing knowledge appropriately  
**CO5:** Distinguishing ambiguity in grammars

**Part A**

**6 x 1 =6**

**Choose the Correct Answer**

- 1 . Artificial Intelligence is best defined as \_\_\_\_\_ CO1K1  
a) Natural intelligence b) Making machines intelligent c) human psychology d) Programming languages  
2 . The Turing Test was proposed by \_\_\_\_\_ CO1K1  
a) John McCarthy b) Alan Turing c) Herbert Simon d) Marvin Minsky  
3 . Which algorithm is an example of local search? CO2K1  
a) Breadth First Search b) Hill Climbing c) depth first Search d) Uniform Cost Search  
4 . Alpha–Beta pruning improves the efficiency of \_\_\_\_\_ CO2K1  
a) Depth First Search b) Breadth First Search c) Minimax algorithm d) Hill Climbing algorithm  
5. Which quantifier in First Order Logic represents “for all”? CO3K1  
a)  $\exists$  b)  $\forall$  c)  $\Rightarrow$  d)  $\neg$   
6. Which of the following is the formula in FOL? CO3K2  
a)  $\forall x$  (Human(x)  $\rightarrow$  Mortal(x)) b)  $\forall$  (Human  $\rightarrow$  Mortal) c) Human(x  $\rightarrow$  Mortal) d)  $\forall x$  Human  $\rightarrow$  Mortal

**Part B**

**3 x 6 = 18**

**Answer ALL questions**

**Answer should not exceed 400 words or two pages**

7. a. Write a note on Artificial Intelligence and explain its goals. CO1K2  
(or)  
7. b. Explain problem solving in AI and list the steps of problem solving. CO1K2  
8. a. Explain the nature of environments in AI. CO1K2  
(or)  
8 .b. What is a heuristic function? Explain in brief its role in informed search strategies. CO2K2  
9. a. Write a short note on local search for CSPs. CO2K2  
(or)  
9 .b. Describe the basic components of First Order Logic with suitable examples. CO3K2

**Part C**

**3 x 12 = 36**

**Answer ALL questions**

**Answer should not exceed 800 words or four pages**

10. a. Explain Intelligent Agents in detail. Discuss agent types and environments. CO1K2  
(or)  
10. b. Explain searching for solutions in AI. Describe uninformed search strategies in detail. CO1K2  
11 .a. Explain informed search strategies in detail. Discuss A\* search and the role of heuristic functions. CO2K2  
(or)  
11. b. Explain adversarial search in detail. Describe the Minimax algorithm with an example. CO2K2  
12 .a. Discuss Constraint Satisfaction Problems (CSPs) in detail. Explain backtracking search and local search techniques for CSPs CO2K2  
(or)  
12 .b. Explain First Order Logic representation in detail. Discuss its syntax and semantics with suitable examples. CO3K2