



Avinashilingam Institute for Home Science and Higher Education for Women

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD (now MoE)

Re-accredited with 'A++' Grade by NAAC. CGPA 3.65/4, Category I by UGC

Coimbatore - 641 043, Tamil Nadu, India

Continuous Internal Assessment II, April 2025

VI Semester

**Class : III UG
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. What is "unification" in first-order logic? CO3K1
 - a) A process of solving constraint satisfaction problems
 - b) A method to make two logical statements identical by substituting variables
 - c) A search algorithm used in artificial intelligence
 - d) A technique for pruning search trees

2. The primary goal of knowledge representation CO3K2
 - a) To store large amounts of data
 - b) To represent knowledge in a form that can be used for reasoning
 - c) To optimize machine learning models
 - d) To generate random outputs

3. Explanation-based learning focuses on CO4K2
 - a) Memorizing past experiences
 - b) Learning by analyzing and justifying examples
 - c) Ignoring data patterns
 - d) Randomly selecting solutions

4. Decision trees are commonly used in CO4K2
 - a) Symbolic A
 - b) Probabilistic inference
 - c) Supervised learning
 - d) Unsupervised learning

5. Syntactic analysis focuses on CO5K2
 - a) Meaning of words and sentences
 - b) Logical reasoning
 - c) Structure and rules of sentence formation
 - d) Data compression

6. Formal grammar for a fragment of English is useful for CO5K2
 - a) Data compression
 - b) Language processing and parsing
 - c) Game development
 - d) Random sentence generation

Part B
Answer ALL questions
Each answer should not exceed 400 words or two pages

3 x 6 = 18

- | | | |
|--|------|-------|
| 7. a. Define First order logic in brief. | (or) | CO3K2 |
| 7.b. Explain the concept of unification and lifting. | | CO3K2 |
| 8.a. Describe the Inductive learning. | (or) | CO4K3 |
| 8.b. What is Explanation based learning? | | CO4K1 |
| 9.a. Define Communication as action with an example. | (or) | CO5K2 |
| 9.b. Explain the Augmented grammars in brief. | | CO5K2 |

Part C
Answer ALL questions
Each answer should not exceed 800 words or four pages

3 x 12 = 36

- | | | |
|---|------|-------|
| 10.a. Describe Knowledge engineering in first order logic. | (or) | CO3K3 |
| 10.b. Differentiate between Forward chaining and Backward chaining with examples. | | CO3K4 |
| 11. a. Describe the Ensemble Learning with use cases. | (or) | CO4K3 |
| 11.b. Explain the Statistical Learning methods in detail. | | CO4K2 |
| 12.a. Explain Semantic Interpretation with an example. | (or) | CO5K2 |
| 12.b. Illustrate the Syntactic analysis in detail with example. | | CO5K3 |

Number of Students: 55 - campus I & 65 - campus II

Staff in charge: Dr. P. Subashini

S.Abinaya

A 58
S 66