

STATE BOARD OF TECHNICAL EDUCATION AND TRAINING  
TELANGANA  
DIPLOMA EXAMINATION (C-21)  
AUG-24  
SEMESTER V, MID-I EXAM  
CCB/CPS/CS/ES  
**CS-575/ES-574**  
Artificial Intelligence



**PCODE**  
**15043**

Exam Date: 13-08-2024  
Duration: 1 Hour (02:00 PM To 03:00 PM)

Session: AN  
[Total Marks: 20]

**PART-A**

**Instructions:** 1. Answer the following questions. 4 X 1 = 4  
2. Each question carries ONE mark.

1. List any two applications of Artificial Intelligence
2. Define Depth-first search (DFS)
3. Give any one example of forward chaining in AI.
4. Define First order logic.

**PART-B**

**Instructions:** 1. Answer the following questions. 2 X 3 = 6  
2. Each question carries THREE marks.

- 5(a). Write about the Act Humanly Approaches to Artificial Intelligence  
--- OR ---
- 5(b). Write about state space graph
- 6(a). Give the disadvantages of backward chaining algorithm.  
--- OR ---
- 6(b). List any three requirements for knowledge representation system.

**PART-C**

**Instructions:** 1. Answer the following questions. 2 X 5 = 10  
2. Each question carries FIVE marks.

- 7(a). Explain about state space graph.  
--- OR ---

- 7(b). Explain State space search
- 8(a). List and Explain types of Propositions in Propositional logic.  
--- OR ---
- 8(b). Explain briefly about PSAT problem.

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**PCODE**  
**15043**

Exam Date: 27-09-2024  
Duration: 1 Hour [01:30 PM To 02:30 PM]

Session: AN  
[Total Marks: 20]

**PART-A**

**Instructions:** 1. Answer the following questions. 4 X 1 = 4  
2. Each question carries **ONE** mark.

1. List the process of generating plans.
2. List the applications of Probabilistic inference.
3. What is false positive?
4. What is Supervised Learning?

**PART-B**

**Instructions:** 1. Answer the following questions. 2 X 3 = 6  
2. Each question carries **THREE** marks.

- 5(a). List the difficulties in reasoning with uncertain information.  
— OR —
- 5(b). State uncertain evidence.
- 6(a). Explain version space learning.  
— OR —
- 6(b). List the three types of learning

**PART-C**

**Instructions:** 1. Answer the following questions. 2 X 5 = 10  
2. Each question carries **FIVE** marks.

- 7(a). Explain various difficulties in reasoning with uncertain information.  
— OR —

- 7(b). Explain how reasoning can be done on states and actions
- 8(a). Explain decision tree Terminologies.  
— OR —
- 8(b). Explain about version space Learning.

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Artificial Intelligence



**PCODE**  
**15043**

Exam Date: 14-11-2024  
Duration: 2 Hours [11:30 AM To 01:30 PM]

Session: FN  
[Total Marks: 40]

**PART-A**

**Instructions:** 1. Answer the following questions. 8 X 1 = 8  
2. Each question carries **ONE** mark.

1. List any two Approaches to Artificial Intelligence
2. What is false positive?
3. List any three applications of AI
4. Why do we use predicate logic?
5. Define morpheme
6. List two uses of Natural language processing
7. When are fully autonomous AI-driven cars expected to be available?
8. What are some popular applications of AI-based drones?

**PART-B**

**Instructions:** 1. Answer the following questions. 4 X 3 = 12  
2. Each question carries **THREE** marks.

- 9(a). Write a short notes on Semantics.  
— OR —
- 9(b). Define POS tagging and write its use
- 10(a). What is Probabilistic inference and write any two applications.  
— OR —
- 10(b). List some Challenges involved in implementing AI in computer applications.
- 11(a). Explain Transition Networks  
— OR —
- 11(b). Explain Word Sense Disambiguation with an example

- 12(a). Discuss the impact of using AI-based robotics in workforce.  
— OR —
- 12(b). Compare different models used in speech recognition.

**PART-C**

**Instructions:** 1. Answer the following questions.  
2. Each question carries **FIVE** marks.

4 X 5 = 20

- 13(a). Explain the need for Artificial Intelligence  
— OR —
- 13(b). Explain Parsing a sentence with an example
- 14(a). Explain about Conditional probability.  
— OR —
- 14(b). How does AI contribute to the medical field?
- 15(a). Write the differences between semantics and pragmatic  
— OR —
- 15(b). Explain different forms of ambiguity
- 16(a). Discuss in detail about the significance of AI in observing the universe.  
— OR —
- 16(b). Explain the role of AI in military applications.