

Total No. of Questions : 8]

SEAT No. :

PA-1451

[Total No. of Pages : 2

[5926]-67

**T.E. (Computer Engineering)**  
**ARTIFICIAL INTELLIGENCE**  
**(2019 Pattern) (Semester - II) (310253)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) *Attempt Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Assume suitable data, if necessary.*

**Q1)** a) Explain Min Max and Alpha Beta pruning algorithm for adversarial search with example. [9]

b) Define and explain Constraints satisfaction problem. [9]

OR

**Q2)** a) Explain with example graph coloring problem. [9]

b) How AI technique is used to solve tic-tac-toe problem. [9]

**Q3)** a) Explain Wumpus world environment giving its PEAS description. [9]

b) Explain different inference rules in FOL with suitable example. [8]

OR

**Q4)** a) Write an propositional logic for the statement, [10]

i) "All birds fly"

ii) "Every man respect his parents"

b) Differentiate between propositional logic and First order logic. [7]

**P.T.O.**

- Q5)** a) Explain Forward chaining algorithm with the help of example. [9]  
b) Write and explain the steps of knowledge engineering process. [9]

OR

- Q6)** a) Explain Backward chaining algorithm with the help of example [9]  
b) Write a short note on : [9]  
i) Resolution and  
ii) Unification

- Q7)** a) Write a short note on planning agent, state goal and action representation. [6]  
b) Explain different components of planning system. [6]  
c) Explain the components of AI. [5]

OR

- Q8)** a) What are the types of planning? Explain in detail. [6]  
b) Explain Classical Planning and its advantages with example. [6]  
c) Write note on hierarchical task network planning. [5]

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