

AI

JT- IV

AI

15/5/201

1/1

(3 Hours)

QP Code : 8440

[Total Marks : 100]

1. Question 1 is compulsory.
2. Answer any 4 out of remaining 6 questions.

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Q1)

- a) What is propositional logic? Explain with an example. (07)
- b) Explain goal based agent architecture. (07)
- c) What is reasoning? What is its role in artificial intelligence (08) C

Q2)

- a) Explain PEAS representation with example. (08)
- b) Explain MIN-MAX search with an example. (12)

Q3)

- a) Measure 5 and 2 liters of milk when jugs of size 7 and 3 are available. (12)
- b) Explain Hill Climbing. (08)

Q4)

- a) Using predicate logic find the course of Ram's liking for the following: (10)
 - i) Ram only likes interesting courses.
 - ii) Computer courses are easy.
 - iii) Electronics courses are interesting.
 - iv) DSP is an electronics course.
 - v) Programming is a computer course.
- b) Compare Forward and Backward reasoning with suitable example. (10)

Q5)

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- a) What is an expert system? Explain with example. (10)
- b) Explain AO* Algorithm. Where is it used? (10)

Q6)

- a) What is Ontology? Explain a real world example and its use. (08)
- b) Design a multilayer feed forward network of neurons to perform XNOR on 2 2-bit numbers. (12)

Q7)

Write short notes on any 4 out of the following: (20)

- a) Iterative deepening search
- b) Heuristic functions for search techniques.
- c) Blocks World Problem.
- d) Bayes Theorem.
- e) Role of NLP in AI.