

S. 14 \_\_\_\_\_

Code No: 9A05605/R09

III B.Tech. II Semester Regular & Supplementary Examinations

April/May -2013

**ARTIFICIAL INTELLIGENCE**  
( Computer Science and Engineering )

**Set - 3**

Time: 3 Hours

Max. Marks: 70

*Answer any FIVE Questions*  
*All Questions carry equal marks*

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1. (a) What properties an AI technique ought to process? Explain.  
(b) Discuss production system characteristics.

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2. Prove that uniform-cost search and breadth first search with constant step costs are optimal when used with the GRAPH\_SEARCH algorithm.

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3. Describe efficient algorithms for propositional inference based on model checking.

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4. (a) Discuss the inference rules for quantifiers.  
(b) Explain the models of first order logic.

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5. What is description logic? Explain the language of "CLASSIC".

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6. (a) Explain about degree of belief and probability theory.  
(b) Explain the concept of independence and show that the three forms of independence are equivalent.  
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7. (a) Explain the terms pruning and cross-validation.  
(b) Explain ensemble learning.

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8. (a) Name different fuzzy set operations. Explain them.  
(b) Explain sectional view of a fuzzy room cooler.