

# **AE-826**

M.Sc. (Final)  
Term End Examination, 2016-17

## **COMPUTER SCIENCE**

Artificial Intelligence and Expert System

*Time : Three Hours] [Maximum Marks : 100*  
*[Minimum Pass Marks : 36*

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**Note** : Answer **all** questions. All questions carry equal marks.

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- 1.** (a) What is artificial intelligence ? Explain the history of artificial intelligence.  
(b) Write short notes on the following :
  - (i) Breadth First Search
  - (ii) Knowledge Representation  
(c) Explain A\* algorithm in detail.
  
- 2.** (a) Explain the difference between procedural and declarative knowledge.

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(b) Write short notes on the following :

- (i) Frame
- (ii) Semantic Net

(c) What is Reasoning ? Explain the difference between forward and backward reasoning.

3. Write short notes on any **two** of the following :

- (a) Introduction to LISP
- (b) Predicate Function
- (c) PROLOG
- (d) Simple program in LISP

4. (a) What is Natural Language Processing ? Explain the role of knowledge in language understanding.

(b) What are the steps in Natural Language Processing ? Explain in detail.

(c) Write short notes on the following :

- (i) Semantic Analysis
- (ii) Components of a Planning System

(3)

5. (a) Define Expert System. Explain in detail the components of Expert System.

(b) Explain non-production system architecture.

(c) Write short notes on the following :

(i) Knowledge Acquisition

(ii) Blackboard Architecture

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