

Master of Science (M.Sc.) Fourth Semester (CBCS) (Computer Science) Examination
ARTIFICIAL INTELLIGENCES & EXPERT SYSTEM
Compulsory Paper—2
Paper—II

Time : Three Hours]

[Maximum Marks : 80

N.B. :— (1) **ALL** questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagram wherever necessary.

EITHER

1. (A) What is Artificial Intelligence ? Explain water jug problem. 8
- (B) Explain the following :
 - (i) Constraint satisfaction
 - (ii) Mean-ends-analysis. 8

OR

- (C) What is production system ? Explain a process for solving problem using production system. 8
- (D) Write the AO* algorithm for problem reduction. 8

EITHER

2. (A) What is Knowledge Representation ? Explain issues in Knowledge Representation. 8
- (B) What is predicate logic ? Explain resolution in predicate logic. 8

OR

- (C) Explain the following :
 - (i) Control knowledge
 - (ii) Expert system. 8
- (D) Explain representations and mapping. 8

EITHER

3. (A) Discuss minimax search procedure in game playing. 8
- (B) Explain hierarchical planning in detail. 8

OR

- (C) Explain the following :
 - (i) Alpha-beta cut offs
 - (ii) Goal task planning. 8
- (D) What is planning ? Explain the component of planning system. 8

EITHER

4. (A) What is understanding ? Explain understanding as constraint satisfaction. 8
- (B) What is distributed reasoning systems ? Explain its advantages. 8

OR

- (C) Write notes on :
 - (i) Unification grammar
 - (ii) Pattern recognition. 8
- (D) Explain steps in the process of language of natural understanding. 8
5. (A) Explain AI techniques. 4
- (B) What is computable functions and predicates ? 4
- (C) What is game playing ? 4
- (D) Explain psychological modeling. 4