

00282

MCA (III YEAR)
Term-End Examination
June, 2011

CS-14 : INTELLIGENT SYSTEMS

Time : 3 hours

Maximum Marks : 75

Note : Question number 1 is compulsory. Attempt any three from remaining four questions.

1. Answer following questions briefly :

- (a) What is Turing Test ? How Turing Test helps to know the intelligence of the system ? Explain with example. 5
- (b) What is MIN-MAX strategy ? What is Alpha-beta pruning and how does it improve the efficiency of game playing ? 5
- (c) What is Truth Maintenance System (TMS) ? Explain with example. 5
- (d) What are the Heuristics Search Techniques ? How they are different from that of non-heuristics search techniques ? Explain the following with one example for each : 15
 - (i) Depth First Search
 - (ii) Hill Climbing

2. (a) What is a Frame ? Present a brief frame representation for Computer Centre. 7
- (b) What is Conceptual Dependency (CD) ? Represent the sentence "Jimsy took a book from Library" in CD ? 8
3. (a) Represent the following facts in First Order Predicate Logic (FOPL). 10
- (i) Ramni was a doctor.
- (ii) All doctors were nygerian.
- (iii) Eliza was a nurse.
- (iv) All nurses were either loyal to a doctor or hated him.
- (v) Every one is loyal to some one.
- (b) Convert all the above five facts (of part (a)) into Conjunctive Normal Form (CNF). 5
4. (a) Write a LISP Programme called "last-element" that takes a list as its argument and returns the last element of the list. 5
- (b) What is an Expert System ? What are its different components ? Briefly discuss the Expert System Development Life Cycle (ESDLC). 10
5. Write short notes on any THREE of the following : 3x5=15
- (a) Declarative Vs. Procedural knowledge.
- (b) Production System.
- (c) Semantic Network as a tool for knowledge representation.
- (d) Fuzzy Logic.