Paper Code : 21327

F–427

B. C. A. (Sixth Semester)
- EXAMINATION, 2016
(New Course)
Paper No. BCA–N–602

ARTIFICIAL INTELLIGENCE

Time : Three Hours] [*Maximum Marks : 70*

Note : Attempt any *five* questions. All questions carry equal marks. Symbols used have their usual meanings.

1. (a) What is the concept of Artificial intelligence ? What are the most important areas where Artificial intelligence is applied ?

   (b) Define Expert system. Explain the operation of an Expert system with the help of block diagram. Also explain MYCIN expert system.

2. (a) Indentify and describe two good application areas for expert system within a university environment.

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   (b) What is the difference between declarative and procedural knowledge ? Briefly describe the meaning of knowledge representation.

3. (a) What are different advanced programming techniques that are used in PROLOG ? Also discuss control strategies of PROLOG.

   (b) What do you understand by Natural Languages ? Also explain context free and transformational grammars ?

4. (a) What do you understand by the term pattern Recognition ? Also explain the structured description and symbolic description.

   (b) What is heuristic search ? Explain the problem characteristics of heuristic search.

5. (a) What do you understand by the term production rule knowledge base and Forward and Backward Deduction ? Explain.

   (b) What is predicate logic ? Explain resolution in predicate logic.

6. (a) What do you understand by terms transition nets and augmented transitions nets ? Explain their differences ? http://www.mjpruonline.com

   (b) What are the problems in Natural language understanding ? What are their applications ? Also explain automated reasoning ?

7. (a) What is grammar free analyzers ? Also explain sentence generation and translation ?

(b) What is LISP ? What are the advantages of LISP ? How LISP functions are used in Artificial intelligence ?

8. Write short notes on the following :

(i) Case Grammar theory

(ii) Semantic Nets

(iii) Expertise Transfer

(iv) Fillmore's grammars