

9. Explain the following with examples :

- (a) Architecture of an expert system
- (b) Applications of expert system in education 8,8

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Roll No. : .....

Total No. of Questions : 9 ]

[ Total No. of Pages : 4

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**B.C.A. 6th Semester (Reappear)  
Examination, March-2021**

**ARTIFICIAL INTELLIGENCE**

Paper-BCA-308

Time : Three Hours ]

[ Maximum Marks : 80

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :-** Question No. 1 is compulsory. Attempt four more questions, selecting *one* question from each Unit.

1. Answer the following questions briefly :

- (a) What is AI ?
- (b) List two major applications of problem reduction.
- (c) Explain best first search with an example.

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- (d) Discuss logic with an example.
- (e) Describe knowledge acquisition in few lines.
- (f) Differentiate between knowledge base and database.
- (g) Write the use and advantages of NLP.
- (h) Explain applications of explanation based learning. 2×8=16

**Unit-I**

- 2. (a) Define Hill climbing. How is it useful and used ? Discuss with examples.
- (b) Discuss problem reduction technique with an example. 8,8
- 3. Explain the following briefly with suitable examples :
  - (a) Problem characteristics
  - (b) Issues in design of search problem
  - (c) Use of AI in problem solving
  - (d) Constraint satisfaction 4×4=16

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- Unit-II**
- 4. (a) Define Predicate Logic. How is it useful and used ? Explain with an example.
  - (b) Explain the various issues in knowledge representation with examples. 8,8
  - 5. Describe the following with examples :
    - (a) Knowledge representation schemes
    - (b) Representing simple facts in logic 8,8

**Unit-III**

- 6. (a) What is Semantic Processing ? How is it used and useful ? Explain with examples.
- (b) Explain induction based learning with examples. 8,8

- 7. Explain the following with examples :
  - (a) Pragmatic processing
  - (b) Learning in problem solving 8,8

**Unit-IV**

- 8. (a) What are expert systems ? How are these used and useful ? Discuss with examples.
- (b) Explain forward chaining with suitable examples. 8,8

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