MCA 3rd Semester Current Scheme with new notes

Maximum Marks Scheme 80

Examination, December–2015

ARTIFICIAL INTELLIGENCE AND EXPERT SYSTEM

Paper–MCA-303

Time allowed : 3 hours] *[Maximum marks : 80*

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

1. Answer the following questions briefly :

(a) Explain role of AI in an expert system.

(b) Discuss two major applications of PROLOG.

(c) Explain two advantages of fuzzy logic.

(d) Discuss fuzzy expert system briefly.

(e) Explain knowledge engineer.

(f) Define semantic net.

(g) Write the use and advantages of problem solving with AI.

(h) Explain artificial neural network. 8×2=16

Unit–I

2. (a) Define best first search ? How is it useful and used? Discuss its applications with examples. 8

(b) Discuss problem reduction process with an example. 8

3. Explain the followin ly with suitable examples :
   (i) Problem chara ics
   (ii) Knowledge rol pert systems
   (iii) Hill climbing
   (iv) Expert system a ations. 4 each

II

4. (a) What is inferer gine ? How is it useful and used ? Explain n example. 8
   (b) Discuss formal with suitable examples. 8

5. Describe the followi h examples :
   (i) Cognitive beha
   (ii) Knowledge rep ation
   (iii) Prototype cons on
   (iv) Problem select 4 each

I II

6. (a) What is fuzzy oller ? How is it used and useful ? Explai examples. 8
   (b) Discuss applica f biological neural networks with examples. 8

7. Explain the followin examples :
   (i) Differentiate be fuzzy logic and fuzzy subset
   (ii) Learning in neu works. 8 each

Unit–IV

8. (a) What are string operations ? How these are used and useful in PROLOG ? Discuss with examples. 8
   (b) What is recursion ? Discuss its advantages through PROLOG code segments. 8

9. Explain the following with PROLOG code segments :
   (i) File operations
   (ii) Input predicates
   (iii) Arithmetic operations
   (iv) Fail and cut predicates 4 each