IT - 833

B.E. VIII Semester Examination, June, 2013

Artificial Intelligence (Elective-III)

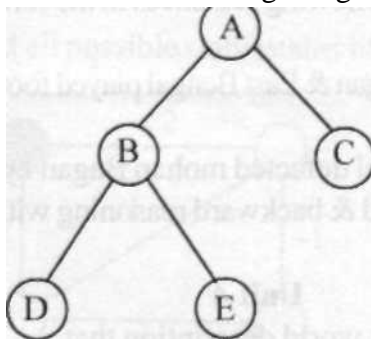Maximum Marks: 100   Time: Three Hours   Minimum Pass Marks :35

Note: i) Attempt one question from each unit.

ii) Please do not do any rough work on questions paper.

Unit 1

1. a) Define the various types of production system & give its characteristics. 10

b) Find the OPEN and CLOSED list nodes for the diagram given below.   10

OR

2. a) Suppose that we have got two jugs having capacities of 5 litres and 3 litres prove that using them we can measure 1,2, 3, 4 and 5 litres using breadth first search tree. 10

b) Explain AO* algorithm. 10 http://www.rgpvonline.com/

Unit 2

3.   a) Convert the following sentences to predicatclogic

i)   Marcus was a man

ii)   All pompcrians were Romans

iii)   No mortal lives longer than 150 years

iv)   4 is an even number

v)   All even numbers are divisible by 2. 10

b) Explain monotonic and non-monotonic reasoning with examples. 10

OR

4.   a) Explain knowledge representation & Problems associated with it with examples. 10

b)   Convert the following to clause form $\forall x \exists y P(x,y) -> Q(y.x)$. 10

Unit 3

5.   a) Give the conceptual dependency representation of Ram gave a pen to Shyam.   10

b) Explain fuzzy logic with examples.   10

OR

6.   a) Represent the following sentences in the form of Semantic Network.   10

i) Mohan Bagan & East Bengal played football with each other.

ii) East Bengal defected mohan Bagan by 2 goals to 1.

b) Explain forward & backward reasoning with examples. 10

Unit 4

5. a) Write the block world description that

i)   Block A is on the table.

ii)   Block B is on block A.

iii)   Block C is on block B.

iv)   There is no block above block C. 10

b) Explain understanding with example.   10

8. a) Explain the meaning of the following in game playing

Value = Static (Position, Player)

Minimax (Suce, Depth+1, opposite (player))   10

b) Explain natural language processor with example. 10

Unit 5

9. a) Suppose that we have got the following representation
language for cars as

Type = {Maruti, Fiat, Ambassador}

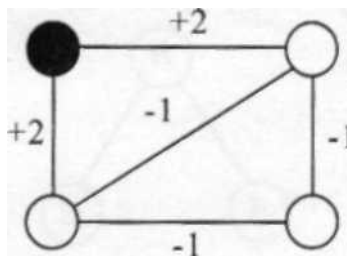Decade = {1970, 1980, 1990, 2000, 2010}

Class=(AC,Non-Ac}

Colour = {White, Red. Silver. Golden}

Represent the concept "AC Maruti car having golden colour'*. 10

b) Name the various expert systems and explain any one of them in details.   10

OR

10. a) Find all possible stablestates of the neural network. 10

b) Explain common sense with examples.   10

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