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Code No: RR310502 **RR** **Set No. 2**

III B.Tech I Semester Examinations,November 2010
ARTIFICIAL INTELLIGENCE
Computer Science And Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Describe in detail different types of controllers provided in a "ROBOT" . Explain their operation. [8]
   (b) Discuss the most important areas where "ROBOT" are better suited than human beings (the comparative advantages). [8]
2. (a) Consider the following sentences : Marcus was a man . Marcus was a Pompeian. Marcus was born in 40 AD . All men are mortal .All pompeians died the Volcano erupted in 79 AD . No mortal lives for more than 150 years. [6+4]
      i. Convert them to clause form
      ii. Answer the question ? is Marcus dead now ? in two different ways. Clearly state the assumptions made.
   (b) Describe need for computable functions and predicates in logic. [6]
3. (a) What is Artificial Intelligence? Mention some of the applications that fall within the scope of AI. [8]
   (b) Explain the state space representation of water jug problem. [8]
4. (a) Define certainty factor? What are the components of certainty factor? [8]
   (b) Explain Bayesian method of reasoning. [8]
5. (a) Discuss the problems that arise in implementing non-monotonic reasoning in problem- solving programs. [6]
   (b) List the differences between chronological back-tracking and dependency-directed backtracking. Mention the advantages of dependency-directed backtracking. [10]
6. (a) What is "unsupervised learning" in which objects are recognized through clustering. Explain why the nature of the "goal" affects the process of learning. [8]
   (b) Describe in detail, the design of a pattern Recognition program for validating "hand- writing". Discuss the inherent problems in detail. [8]
7. (a) Differentiate between hierarchical planning and opportunistic planning with suitable examples. [8]
   (b) What is" frame problem"? [6]
8. Discuss about AO* algorithm, using a suitable example. [16]

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Code No: RR310502 **RR** **Set No. 4**

III B.Tech I Semester Examinations,November 2010
ARTIFICIAL INTELLIGENCE
Computer Science And Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What is Artificial Intelligence? Mention some of the applications that fall within the scope of AI. [8]
   (b) Explain the state space representation of water jug problem. [8]
2. (a) Describe in detail different types of controllers provided in a "ROBOT" . Explain their operation. [8]
   (b) Discuss the most important areas where "ROBOT" are better suited than human beings (the comparative advantages). [8]
3. (a) What is "unsupervised learning" in which objects are recognized through clustering. Explain why the nature of the "goal" affects the process of learning. [8]
   (b) Describe in detail, the design of a pattern Recognition program for validating "hand- writing". Discuss the inherent problems in detail. [8]
4. Discuss about AO* algorithm, using a suitable example. [16]
5. (a) Consider the following sentences : Marcus was a man .Marcus was a Pompeian. Marcus was born in 40 AD All men are mortal .All pompeians died the Volcano erupted in 79 AD .No mortal lives for more than 150 years. [10]
      i. Convert them to clause form
      ii. Answer the question ? is Marcus dead now ? in two different ways. Clearly state the assumptions made.
   (b) Describe need for computable functions and predicates in logic. [6]
6. (a) Discuss the problems that arise in implementing non-monotonic reasoning in problem- solving programs. [6]
   (b) List the differences between chronological back-tracking and dependency-directed backtracking. Mention the advantages of dependency-directed backtracking. [10]
7. (a) Differentiate between hierarchical planning and opportunistic planning with suitable examples. [10]
   (b) What is" frame problem"? [6]
8. (a) Define certainty factor? What are the components of certainty factor? [8]
   (b) Explain Bayesian method of reasoning. [8]

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Code No: RR310502 **RR** **Set No. 1**

III B.Tech I Semester Examinations,November 2010
ARTIFICIAL INTELLIGENCE
Computer Science And Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Define certainty factor? What are the components of certainty factor? [8]
   (b) Explain Bayesian method of reasoning. [8]
2. (a) Discuss the problems that arise in implementing non-monotonic reasoning in problem- solving programs. [6]
   (b) List the differences between chronological back-tracking and dependency-directed backtracking. Mention the advantages of dependency-directed backtracking. [10]
3. (a) Differentiate between hierarchical planning and opportunistic planning with suitable examples. [10]
   (b) What is" frame problem"? [6]
4. (a) What is "unsupervised learning" in which objects are recognized through clustering. Explain why the nature of the "goal" affects the process of learning. [8]
   (b) Describe in detail, the design of a pattern Recognition program for validating "hand- writing". Discuss the inherent problems in detail. [8]
5. (a) Consider the following sentences : Marcus was a man .Marcus was a Pompeian. Marcus was born in 40 AD .All men are mortal .All pompeians died the Volcano erupted in 79 AD .No mortal lives for more than 150 years. [10]
      i. Convert them to clause form
      ii. Answer the question ? is Marcus dead now ? in two different ways. Clearly state the assumptions made.
   (b) Describe need for computable functions and predicates in logic. [6]
6. (a) Describe in detail different types of controllers provided in a "ROBOT" . Explain their operation. [8]
   (b) Discuss the most important areas where "ROBOT" are better suited than human beings (the comparative advantages). [8]
7. Discuss about AO* algorithm, using a suitable example. [16]
8. (a) What is Artificial Intelligence? Mention some of the applications that fall within the scope of AI. [8]
   (b) Explain the state space representation of water jug problem. [8]

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Code No: RR310502 **RR** **Set No. 3**

III B.Tech I Semester Examinations,November 2010
ARTIFICIAL INTELLIGENCE
Computer Science And Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What is "unsupervised learning" in which objects are recognized through clustering. Explain why the nature of the "goal" affects the process of learning. [8]
   (b) Describe in detail, the design of a pattern Recognition program for validating "hand- writing". Discuss the inherent problems in detail. [8]
2. (a) Consider the following sentences : Marcus was a man .Marcus was a Pompeian. Marcus was born in 40 AD .All men are mortal .All pompeians died the Volcano erupted in 79 AD .No mortal lives for more than 150 years. [10]
      i. Convert them to clause form
      ii. Answer the question ? is Marcus dead now ? in two different ways. Clearly state the assumptions made.
   (b) Describe need for computable functions and predicates in logic. [6]
3. (a) Discuss the problems that arise in implementing non-monotonic reasoning in problem- solving programs. [6]
   (b) List the differences between chronological back-tracking and dependency-directed backtracking. Mention the advantages of dependency-directed backtracking. [10]
4. Discuss about AO* algorithm, using a suitable example. [16]
5. (a) Define certainty factor? What are the components of certainty factor? [8]
   (b) Explain Bayesian method of reasoning. [8]
6. (a) What is Artificial Intelligence? Mention some of the applications that fall within the scope of AI. [8]
   (b) Explain the state space representation of water jug problem. [8]
7. (a) Differentiate between hierarchical planning and opportunistic planning with suitable examples. [10]
   (b) What is" frame problem"? [6]
8. (a) Describe in detail different types of controllers provided in a "ROBOT" . Explain their operation. [8]
   (b) Discuss the most important areas where "ROBOT" are better suited than human beings (the comparative advantages). [8]

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