

[5254] - 100

B.E. (Electronics) (Elective - IV)

ARTIFICIAL INTELLIGENCE

(2008 Pattern) (Semester - II)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates :

- 1) *Attempt Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6 from Section I and Q.7 or Q.8, Q.9 or Q.10, Q.11 or Q.12 from Section II.*
- 2) *Answer to the two sections should be written in separate books.*
- 3) *Neat diagrams must be drawn whenever necessary.*
- 4) *Figures to the right indicate full marks.*
- 5) *Assume suitable data, if necessary.*

SECTION - I

Q1) a) Discuss the various definitions of Artificial Intelligence. Explain the applications of AI. [10]

b) Compare the different uninformed search techniques. [8]

OR

Q2) a) Explain the architecture of typical agent. What is a rational agent? [10]

b) Explain "Simple Reflex based agents" with the help of schematic diagram. [8]

Q3) a) Explain different parameters on which performance of searching algorithm is measured. [8]

b) Explain minmax search algorithm with suitable example. [8]

OR

Q4) a) Explain A* algorithm with suitable example. [8]

b) Explain hill climbing algorithm with plateau, ridge. [8]

P.T.O.

- Q5) a)** Explain the different types of Neural Network architectures. [8]
b) Explain the unification algorithm in detail [8]

OR

- Q6) a)** Explain the different types of learning methods with suitable examples.[8]
b) State the rules and steps for converting given well predicate logic statements to clausal form. [8]

SECTION - II

- Q7) a)** Explain the decision tree algorithm with suitable example. [10]
b) Explain in detail the architecture of artificial neural network. [8]

OR

- Q8) a)** What are different learning methods? Explain in detail. [10]
b) How the performance of learning algorithm can be accessed explain with suitable example. [8]

- Q9) a)** Give the detailed Architecture of Expert system. [8]
b) Explain Waltz algorithm with example and comment on it's limitations.[8]

OR

- Q10)a)** Explain perception confined to vision and speech recognition system.[8]
b) What is the difference between expert system and traditional system? Comment on the advantages and disadvantages of export system. [8]

- Q11)a)** What is NLP? Explain all phases of NLP. [8]
b) Explain the syntatic Analysis with suitable examples. [8]

OR

- Q12)a)** Parse each sentences using top-down and bottom-up approach. [8]
i) Mary wanted the plants.
ii) The Brown dog ate the bone.
b) Explain the steps in Natural language processing. [8]

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