S.No. : 200

NCS4202

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Following Paper ID and Roll No. to be filled in your Answer Book.

PAPER ID : 43202 Roll No. 1 2 [illegible] [illegible] 3 2 2 8 7

B. Tech. Examination, 2026

(Even Semester)

BASICS OF ARTIFICIAL INTELLIGENCE

Time : Three Hours] *[Maximum Marks : 60*

Note :– Attempt all questions.

SECTION – A

1. Attempt all parts of the following : $1 \times 8 = 8$

(a) Define Artificial Intelligence (AI).

(b) What is an Intelligent Agent?

(c) What is Bayesian Network?

(d) Mention any two applications of AI in real life.

(e) Define propositional logic.

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(f) What is Alpha-Beta Pruning?

(g) How many types of AI?

(h) Define Fuzzy Set.

SECTION – B

2. Attempt any two parts of the following. 6×2=12

(a) Explain the types of AI and the structure of Intelligent Agents with neat diagram.

(b) Explain knowledge representation and reasoning. Discuss propositional logic and first-order logic.

(c) Explain AI terminologies and basic concepts in detail.

(d) Discuss searching for solutions in AI.

SECTION – C

Note:- Attempt any two parts from each question. All part carry equal marks. 8×5=40

3. (a) Explain the structure of intelligent agents with neat diagram. Discuss types of intelligent agents.

(b) Explain probabilistic reasoning and utility theory.

(c) Explain real-world applications of Bayesian networks.

4. (a) Discuss ethical issues in Artificial Intelligence.

(b) Describe soft computing techniques. Explain introduction and operations on fuzzy sets with suitable examples.

(c) Explain adversarial search and discuss searching techniques for games. Describe the working of alpha-Beta Pruning with example.

5. (a) Describe Bayesian Networks with diagram.

(b) Define Artifical Intelligence and explain its foundation and history in detail.

(c) Explain probabilistic reasoning, utility theory, and Bayesian Networks with suitable examples.

5. (a) Explain knowledge representation techniques.

(b) Explain the future scope and impact of AI on public life.

(c) Compare informed and uninformed search strategies with examples.

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