



Tribhuvan University
Faculty of Humanities & Social Sciences
OFFICE OF THE DEAN
2025

Bachelor in Computer Applications
Course Title: Artificial Intelligence
Code No: CACS 410
Semester: VII

Full Marks: 60

Pass Marks: 24

Time: 3 hours

Candidates are required to answer the questions in their own words as far as possible.

Group B

Attempt any SIX questions.

[6×5 = 30]

2. Define Artificial intelligence. Explain its components
3. Solve the given crypto arithmetic problems TWO+TWO =FOUR.
4. What is an agent? List the different types of agents use in AI
5. What is an expert system? Explain the stages of expert system development.
6. Explain breadth-first search and depth-first search with example.
7. Differentiate between inference and reasoning. Why is probabilistic reasoning important in AI?
8. What is learning in neural networks? Explain types of neural network.

Group C

Attempt any TWO questions.

[2×10 = 20]

9. Compare A* algorithm and greedy algorithm to show how it uses heuristic cost to generate optimum solutions with an example. **[5+5]**
10. What do you mean by frame and semantic net? Convert the given FOPL in semantic net
 - a) A person is a mammal
 - b) Sandip is a person
 - c) Person has a nose
 - d) Sandip is in the Nepali team.
 - e) Uniform color of Sandip is red/blue. **[5+5]**
11. Differentiate between forward and backward propagation networks, and describe the situations in which forward propagation networks are better and the situations in which backward propagation networks are better. **[3+7]**