

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2022**  
**INFORMATION TECHNOLOGY**  
**THIRD SEMESTER**

**COURSE : CORE**

**PAPER : ARTIFICIAL INTELLIGENCE**

**TIME : 1 1/2 HOURS**

**MAX. MARKS: 50**

**SECTION – A**

**ANSWER ALL THE QUESTIONS:**

**(5x2=10)**

1. What is an AI technique?
2. Write the following statements using predicate logic
  - a. Marcus was a man.
  - b. Marcus was a Pompeian.
  - c. All Pompeians were Romans.
  - d. Caesar was a ruler.
  - e. Also, All Pompeians were either loyal to Caesar or hated him.
  - f. Everyone is loyal to someone.
  - g. People only try to assassinate rulers they are not loyal to.
  - h. Marcus tried to assassinate Caesar.
3. What are the causes of spelling error? Mention the types of spelling error.
4. What is analogy? What are the two methods of analogical problem solving.
5. What is an expert system? Mention few typical tasks of expert systems.

**SECTION – B**

**ANSWER ANY FOUR QUESTIONS:**

**(4x5=20)**

6. Explain the key dimensions to analyze in order to choose the Heuristic search for a problem solving.
7. Illustrate the different techniques to represent knowledge.
8. What is distributed reasoning system? Explain the different approaches in coordinating the actions of the individual agents.
9. Write short note on the components of the natural language understanding process.
10. Elucidate the different ways of learning.
11. Explain the architecture of expert system.

**SECTION – C**

**ANSWER ANY TWO QUESTIONS:**

**(2x10=20)**

12. What is Hill Climbing? Explain its types with algorithm.
13. Write short note on the following
  - a. Forward and backward reasoning (5 marks)
  - b. MYCIN rules (2 marks)
  - c. Baye's theorem (3 marks)
14. Explain the following algorithms
  - a. MinMax search procedure
  - b. AlphaBeta Procedure