

A

(20123)

Roll No.

B.Sc.(Hons.) Com. Sc.-V Sem.

NS-3376

B. Sc. (Hons.) Examination, Dec. 2022

COMPUTER SCIENCE

Introduction to Artificial Intelligence

(BHCS-503)

Time : Three Hours]  *[Maximum Marks : 75.*

Note : Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Type Questions)

Attempt all the *five* questions. Each question carries 3 marks. Very short answer is required.

$3 \times 5 = 15$

1. What do you mean by AI?

(2)

2. Explain Breadth first search.
3. What is inference in first order logic ?
4. Explain disjunction with example.
5. What is Script ?

Section-B

(Short Answer Type Questions)

Attempt any ~~two~~  acedca.in questions out of the following three questions. Each question carries $7\frac{1}{2}$ marks.

Short answer is required.

$$7\frac{1}{2} \times 2 = 15$$

6. Discuss the various properties and approaches for knowledge representation.
7. What is Artificial Intelligence ? Discuss three problems which have been solved by AI.
8. Explain the effect of overestimation and underestimation of it on A* Algorithm.

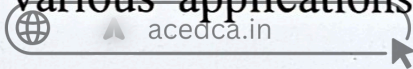
(3)

Section-C

(Detailed Answer Type Questions)

Attempt any *three* questions out of the following five questions. Each question carries 15 marks.

Answer is required in detail. $15 \times 3 = 45$

9. What is the difference between supervised and unsupervised learning ? Describe any one algorithm of supervised learning.
10. What are the various applications of Artificial Intelligence ?

11. Write notes on the following :
 - (a) Naive Bayes models
 - (b) EM Algorithms
 - (c) Reinforcement learning.
12. Discuss the "Knowledge-Based System". Describe the basic components of a knowledge-based system. Also mention the various levels of knowledge representation.

(4)

13. How problem characteristics help in selection of AI techniques ? Explain these characteristics with possible examples.

