

A

(20322)

Roll No.

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

NS-3376(CV-III)

B. Sc. (Hons.) Examination, Dec. 2021

COMPUTER SCIENCE

Introduction to Artificial Intelligence

(BHCS-503)

Time : 1½ Hours]



acedca.in

[Maximum Marks : 75

Note : Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Type Questions)

Answer any *two* questions out of the following five questions. Each question carries 7½ marks.

Very short answer is required.

7½×2=15

1. Define AI.

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2. Represent the following sentence using preposition logic :

Everyone is loyal to someone.

3. Explain Depth First Search.
4. Define natural language processing.
5. Explain knowledge representation.



(Short Answer Type Questions)

Answer any *one* question out of the following three questions. Each question carries 15 marks.

Short answer is required.

15×1=15

6. Explain the various characteristics of production system in detail.
7. Discuss the important issues in design of a search problem.

8. Discuss weak slot and filer structures.

Section-C

(Detailed Answer Type Questions)

Answer any *two* questions out of the following five questions. Each question carries $22\frac{1}{2}$ marks.

Answer is required in detail. $22\frac{1}{2} \times 2 = 45$

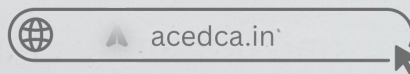
9. Explain the difference between the following :
- (a) Forward and backward chaining
 - (b) Deductive and inductive chaining
 - (c) PCA (Principal component analysis) and LDA (Linear discriminant analysis).
10. Write notes on the following :
- (a) Nearest neighbour (NN) rule
 - (b) Bayes classifier support vector machine (SVM)
 - (c) K-means clustering.
11. Explain the difference between informed and uninformed search. Explain best first search algorithm with example.

(4)

12. What is adversarial search ? Explain game playing in A. I. with the help of an example.
13. What are the various areas where A. I. is applicable ? Discuss in detail.

$$5 \times 3 = 15$$

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Q1-5