



Dr. Bhanu Singh Charitable Trust's (Dr. Bhanu Singh)

THAKUR COLLEGE OF ENGINEERING & TECHNOLOGY

Autonomous College Affiliated to University of Mumbai

Approved by All India Council for Technical Education (AICTE) and Government of Maharashtra (GOM)

Conferred Autonomous Status by University Grants Commission (UGC) for 10 years viz. A.T. 2019-20

Awardee Top 200 Colleges in the Country, Ranked 195th in 2018 India Ranking 2019 in Engineering College category

• ISO 9001:2015 Certified • Programmes Accredited by National Board of Accreditation (NBA), New Delhi

• Institute Accredited by National Assessment and Accreditation Council (NAAC), Bangalore

IN-SEMESTER EXAMINATION (ISE-II) March, 2023

ST (Semester-IV) CBCGS-HME 2020

INTRODUCTION TO ARTIFICIAL INTELLIGENCE

Branch: AI&DS

Div.: A

Duration: 60 Minutes

Instructions –

1. All questions are compulsory.
2. Assume suitable data wherever necessary and state the assumptions made.
3. Diagrams / sketches should be given wherever necessary.
4. Figures to the right indicate full marks.

Date: 29 / 03 / 2023

Timing: 10 am to 11 am

Maximum Marks: 20

Q.1

Solve any 5 Questions.

Marks CO LO

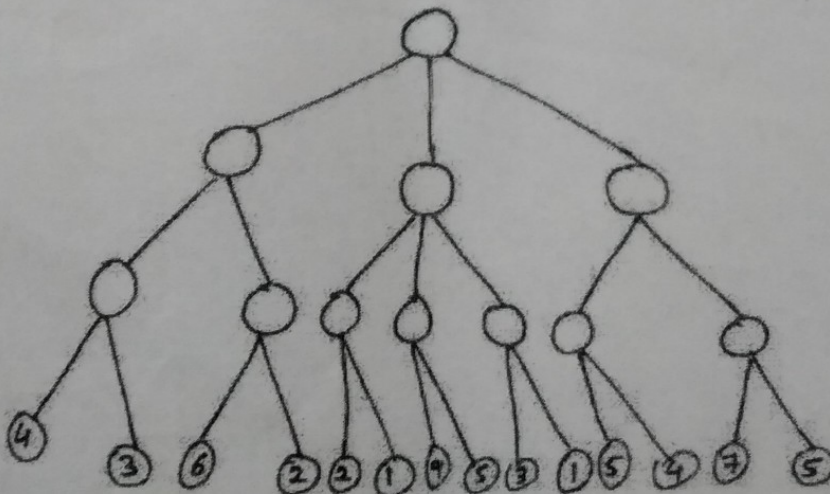
- a. Explain properties and limitation of Minmax search. 02 4 R
- b. Explain Move Ordering in Alpha-Beta pruning 02 3 U
- c. Explain different varieties of constraints in CSPs. 02 4 U
- d. Describe the ways to counter the Horizon effect ? 02 3 R
- e. Solve using cryptarithmic: SUN + FUN = SWIM 02 4 A
- f. Explain in brief: The Horizon Effect. 02 3 U
- g. Explain the representation of CSP. Write 2 real world example of CSP. 02 3 U

Q.2.

- a. Maximize the function $f(x) = X^2 + 2X$ with x in interval $[0, 31]$. 05 3 A
(Take X as 6, 14, 19, 23, 27)

OR

- b. Solve the given tree by using Alpha – beta Pruning and find the optimum path for the same. 05 3 A



- Q.3 a. Solve using cryptarithmic: SOME + TIME = SPENT 05 4 A

OR

- b. Explain Minimax Search algorithm with an example 05 4 A

2025/1/26 22:00