CLASS: BTECH / BARCH   SEMESTER : VI
BRANCH: CIVIL/ECE/EEE/MECH/ARCH   SESSION : SP/2024

SUBJECT: CS363 ARTIFICIAL INTELLIGENCE FUNDAMENTALS

TIME: 02 Hours   **FULL MARKS: 25**

INSTRUCTIONS:
1. The question paper contains 5 questions each of 5 marks and total 25 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates

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			CO	BL
Q.1(a)	Define Intelligence. Explain nature of problems that are referred as AI problems.	[2]	CO1	BL1
Q.1(b)	Elaborate Tic – Tac- Toe problem.	[3]	CO2	BL1
Q.2(a)	Describe an agent. How does it interact with environment?	[2]	CO1	BL4
Q.2(b)	What are "Reflex" and "Learning" agent? Elaborate.	[3]	CO1	BL1
Q.3(a)	Write down the steps of problem solving by searching.	[2]	CO1	BL7
Q.3(b)	Differentiate between Brute force search and Greedy search.	[3]	CO2	BL1
Q.4(a)	Elaborate the methodology for measuring any search techniques.	[2]	CO2	BL1
Q.4(b)	What is Hill climbing technique used for. Elaborate.	[3]	CO2	BL8
Q.5	What is Genetic Algorithm? Let the fitness function be x^2 . Select four chromosomes randomly, where x is permitted to vary between 0 and 31. Use GA processes to maximize the given fitness function.	[5]	CO2	BL4

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