

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER - 2024**

**ARTIFICIAL INTELLIGENCE**

[Maximum Marks:75]

[Time: 3 Hours]

**PART - A**

**I. Answer all the following questions in one word or one sentence. Each question carries 'one' marks.**

**( 9 x 1 = 9 Marks)**

Module Outcome Cognitive level

1	Define Artificial Intelligence.	M1.01	R
2	The..... is a method of inquiry in artificial intelligence for determining whether or not a computer is capable of thinking like a human being.	M1.03	R
3	Write short notes on Knowledge base.	M2.01	U
4	A propositional formula which is always true is called.....	M2.03	U
5	Which strategy is also called as blind search?	M3..01	R
6	Hill climbing sometimes called.....because it grabs a good neighbor state without thinking ahead about where to go next.	M3.03	R
7	What is Divide and Conquer approach?	M3.06	U
8	List the features of expert system.	M4.04	U
9	Which are the two expert system tools.	M4.06	U

**PART - B**

**II. Answer any eight questions from the following. Each question carries 'Three' marks.**

**( 8 x 3 = 24 Marks)**

Module Outcome Cognitive level

1	Explain Speech Recognition.	M1.02	U
2	Explain the Turing Test.	M1.03	U
3	Write short notes on Agents and Environment.	M1.04	U
4	Define Ontologies.	M2.01	U

5	Explain Knowledge Representation and Reasoning.	M2.01	U
6	Write short notes on Uninformed search.	M3.01	U
7	Explain about the Rule based systems.	M3.05	U
8	Explain Branch and Bound algorithm.	M3.04	U
9	Write short notes on forward and backward search.	M4.01	U
10	What are the characteristics of an Expert system?	M4.04	U

**PART - C**

**Answer all the questions from the following. Each question carries 'seven' marks.**

**(6 x 7 = 42 Marks)**

**Module Outcome Cognitive level**

III.	Explain any 4 applications of AI. <b>OR</b>	M1.02	U
IV.	Explain Tower of Hanoi Problem.	M1.04	U
V.	Describe the representation and reasoning about objects, events, actions and relations. <b>OR</b>	M2.02	U
VI.	Explain Propositional Logic.	M2.03	U
VII.	Explain Breadth first search. <b>OR</b>	M3.02	U
VIII.	Describe Hill Climbing algorithm.	M3.03	U
IX.	Explain Minimax algorithm. <b>OR</b>	M3.06	U
X.	Explain AlphaBeta algorithm.	M3.06	U
XI.	Explain Goal Stack Planning. <b>OR</b>	M4.02	U
XII.	Explain Expert system and its architecture.	M4.04	U
XIII.	Describe knowledge representation in expert systems. <b>OR</b>	M4.05	U
XIV.	Explain Expert system tool - MYCIN.	M4.06	U

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