Name: **Enrolment No:**	

UPES

End Semester Examination, May 2023

Course: Knowledge Engineering and Expert Systems **Semester: II**

Program: MCA **Time : 03 hrs.**

Course Code: CSAI7014P **Max. Marks: 100**

Instructions:

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q1	What is an expert system? How is it different from AI?	**4**	**CO1**
Q2	What is meant by the term knowledge engineering? Discuss the role of a knowledge engineer.	**4**	**CO1**
Q3	What is meant by the term logic? Differentiate between formal and informal logic.	**4**	**CO2**
Q4	Differentiate between Non-monotonic and monotonic reasoning with suitable examples.	**4**	**CO3**
Q5	List the types of errors that might contribute to uncertainty in an expert system.	**4**	**CO4**
	SECTION B **(4Qx10M= 40 Marks)**		
Q6	Describe the architecture of an Expert System. Give examples of few expert systems.	**10**	**CO1**
Q7	What is meant by knowledge? Discuss any 4 different types of knowledge.	**10**	**CO2**
Q8	Draw a semantic network to represent the following knowledge. "Every living things need oxygen to live. Every human is a living thing. Ram is human. Answer the query Ram is living thing and Ram needs oxygen to live using inheritance."	**10**	**CO2**
Q9	Describe the following with appropriate examples. i) Lattice ii) Hasse Diagram	**10**	**CO3**
	SECTION-C **(2Qx20M=40 Marks)**		
Q10	Discuss the characteristics of an inference engine? Describe backward and forward chaining mechanism used by an inference engine.	**20**	**CO3**
Q11	Write short notes on any four of the following: (A) Markov Chain Process	**20**	**CO4**

	(B) Temporal Reasoning (C) Inference Net (D) Bayes' Theorem (E) Propagation of Probabilities		