Reg. No.												

Question Paper Code	11568

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022

Sixth Semester

Information Technology

IT8601 - COMPUTATIONAL INTELLIGENCE

(Regulations 2017)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks, K-Level, CO
1.	Define Artificial Intelligence	*2,K1,CO1*
2.	List the criteria to measure the performance of different search strategies.	*2,K1,CO1*
3.	Identify how predicate logic ishelpful in knowledge representation.	*2,K1,CO2*
4.	Define Unification.	*2,K1,CO2*
5.	Define Neural Networks	*2,K1,CO3*
6.	What is Fuzzy Logic? What is its use?	*2,K1,CO3*
7.	State the support vector in SVM.	*2,K1,CO4*
8.	Infer what Reward Function is in Reinforcement learning.	*2,K2CO4*
9.	List out the advantages of NLP.	*2,K1,C05*
10.	Infer parse tree and give example.	*2,K2CO5*

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	(i) List the advantages and limitations of Genetic Algorithm. State the taxonomy of the crossover operator.	*8,K2,CO1*
		(ii) Explain in detail admissibility of A* Algorithm.	*5,K2,CO1*
		OR	
	b)	Write short notes on Expert system tools and expert system shell.	*13,K2,CO1*
12.	a)	Explain the term logic. What is the role of logic in Artificial Intelligence? Compare Propositional logic with First order logic (Predicate Calculus).	*13,K2,CO2*
		OR	
	b)	Describe Unification algorithm in brief with an example.	*13,K2,CO2*

13. a) Define Fuzzy Set? Explain in brief about Fuzzy set operations? *13,K2,CO3*

OR

b) Identify the different key issues with respect to non-monotonic reasoning system? *13,K2,CO3*

14. a) Describe briefly about the Regression and Classification with Linear Models. *13,K2,CO4*

OR

b) Identify Various Types of Reinforcement Learning Techniques. *13,K2,CO4*

15. a) Describe about NLP? Write in details about various application of NLP. *13,K2,CO5*

OR

b) Express the basic concept of Machine Translation System with a schematic diagram. *13,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Case study: Find the algorithm that is capable of learning to recognize the handwritten digits and squeezing every last drop of predictive performance out of them. *15,K3,CO6*

OR

b) (i) Illustrate probabilistic models for information extraction. *7,K3,CO6*

(ii) Express conditional random fields for information extraction. *8,K3,CO6*