Reg. No. : | | | | | | | | | | | | |

Question Paper Code: U2304

M.E. DEGREE EXAMINATION, NOV 2024

Second Semester

Computer Science and Engineering

21PCS511 – INTRODUCTION TO INTELLIGENT SYSTEMS

(Regulations 2021)

Duration: Three hours | Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 20 = 100 Marks)

1.	(a)	Explain in detail about Back Propagation Networks	CO1 - U	(20)
		Or		
	(b)	Discuss in Recurrent Neural Network and its type	CO1 - U	(20)
2.	(a)	Let x={1,2,3,4,5,6} be the universe of discourse. Consider the following three fuzzy sets defined on the above universe. A={0.6/2+1/3+0.2/4} B={0.4/2+1/3+0.8/4+0.3/5} C={0.3/1+0.5/2+0.6/3+0.6/4+0.5/5+0.3/6} Determine the implication relations i) if x is in A then y is in B ii) if if x is in A then y is in B else y is in	CO2- App	(20)
		Or		
	(b)	Consider two fuzzy sets $\tilde{A}$= {1/2.0+0.65/4.0+0.5/6.0+0.35/8.0+0/10.0} $\tilde{B}$= {0/2.0+0.35/4.0+0.5/6.0+0.65/8.0+1/10.0} Find the following a) $\tilde{A} \cup \tilde{B}$ b) $\tilde{A} \cap \tilde{B}$ c) $\bar{\tilde{A}}$ d) $\bar{\tilde{B}}$ e) $\bar{\tilde{A}} \cap \bar{\tilde{B}}$ f) $\overline{\tilde{A} \cup \tilde{B}}$ g) $\bar{A} \cup B$ h) $\overline{\tilde{A} \cap \tilde{B}}$	CO2- App	(20)
3.	(a)	Describe the Informed Search Algorithms	CO1 – U	(20)
		Or		
	(b)	Explain in detail about Heuristic search methods	CO1 - U	(20)

4.	(a)	Transform the following facts into FOL and those convert into CNF. •Everyone who loves all animals is loved by someone. •Jack loves all animals. •Either Jack or Curiosity killed the cat, which is named Tuna. Did Curiosity kill the cat?	CO2- App	(20)
		Or		
	(b)	Formulate a set of first-order logic statements to represent a domain-specific problem (e.g., a knowledge base about relationships in a social network).	CO2- App	(20)
5.	(a)	(i) Derive Baye's theorem probability.(10) (ii) Illustrate with suitable example, Baye's theorem use in expert system.(10)	CO2-App	(10+10)
		Or		
	(b)	Apply Damper Shafer theory in real life Situation	CO2-App	(20)