QP CODE: 24000575

24000575

Reg No : .....

Name : .....

B.Sc / BCA DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, MARCH 2024

Sixth Semester

CHOICE BASED CORE COURSE - CS6CBT03 - SOFT COMPUTING TECHNIQUES

Common for B.Sc Information Technology Model III, Bachelor of Computer Applications & B.Sc Computer Applications Model III Triple Main

2017 Admission Onwards

B4090440

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. What is called stochastic learning?
2. What are linearly separable tasks?
3. Define backpropagation.
4. Define learning rules.
5. What are the advantages of back propagatoion algorithm?
6. Define power of a fuzzy set.
7. Define cartesian product of two sets in fuzzyset theory.
8. Verify whether ((P=>Q)^(Q=>P)=(P=Q) is a tautology or not.
9. Explain the term Generalized Modus Ponens.
10. Explain Mean of Maxima for defuzzification.
11. State boltzmann selection used in genetic algorithms.
12. Explain benefits of genetic algorithm.

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Differentiate between soft computing and hard computing.
14. Explain the model of an articial neuron with a diagram.

15. Explain model of multilayer perceptron.

16. Explain the concept of backpropagation learning.

17. What is fuzzy set?Explain with an example?

18. Explain the common operations over crisp relations.

19. Write predicate logic statement for 'Ram likes all kinds of food'.

20. What are the advantages of genetic algorithms?

21. Explain the concept of convergence of genetic algorithms.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Define artificial neural networks and explain different classes of them.

23. What do you mean by crisp sets? Explain the operations and characteristics of crisp set theory.

24. Let X={a,b,c,d}, Y={1,2,3,4} and A={(a,0)(b,0.8)(c,0.6),(d,1)} B={(1,0.2)(2,1)(3,0.8)(4,0)} C={(1,0)(2,0.4)(3,1)(4,0.8)} Determine the implication relations (i) IF x is A THEN y is B. (ii) IF x is A THEN y is B ELSE y is C.

25. Explain the different types of cross over techniques in genetic algorithms.

(2×15=30)