Program: BE Computer Engineering

Curriculum Scheme: Revised 2012

Examination: Final Year Semester VII

Course Code: CPE7025 and Course Name: Soft Computing

Time: 1 hour   Max. Marks: 50

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	What are the 2 types of learning
Option A:	Improvised and unimprovised
Option B:	supervised and unsupervised
Option C:	Layered and unlayered
Option D:	Structured and Unstructured
Q2.	Hard computing is based not based on:
Option A:	Crisp set
Option B:	binary logic
Option C:	fuzzy logic
Option D:	numerical analysis
Q3.	Unsupervised learning is
Option A:	learning without computers
Option B:	problem based learning
Option C:	learning from environment
Option D:	learning from teachers
Q4.	In supervised learning
Option A:	classes are not predefined
Option B:	classes are predefined
Option C:	classes are not required
Option D:	classification is not done
Q5.	Find the order of evolution of ANN.. 1.Backpropogation 2.Perceptron 3.Macculloch Pitt Model 4.Deep Learning
Option A:	3214
Option B:	3124

Option C:	1234
Option D:	2134
Q6.	In feature maps, when weights are updated for winning unit and its neighbor, which type learning it is known as?
Option A:	Kernman learning
Option B:	karnaugt learning
Option C:	kohonen's learning
Option D:	boltzman learning
Q7.	In which ANN, loops are allowed?
Option A:	FeedBack ANN
Option B:	FeedForward ANN
Option C:	FeedForward ANN and Feedback ANN
Option D:	Not FeedForward ANN and Feedback ANN
Q8.	A 4-input neuron has weights 1, 2, 3 and 4. The binary bipolar activation function. The inputs are 4, 3, 2 and 1 respectively. What will be the output?
Option A:	-1
Option B:	20
Option C:	0
Option D:	1
Q9.	The network that involves backward links from output to the input and hidden layers is called _____
Option A:	Perceptrons
Option B:	Self organizing map
Option C:	Recurrent neural network
Option D:	Multi layered perceptron
Q10.	In Membership function graph x-axis represent?
Option A:	degrees of discourse
Option B:	Universe of membership
Option C:	universe of discourse
Option D:	degrees of membership in the [0, 1] interval

Q11.	Three main basic features involved in characterizing membership function are
Option A:	Fuzzy Algorithm, Neural network, Genetic Algorithm
Option B:	Weighted Average, center of Sums, Median
Option C:	Core, Support , Boundary
Option D:	Intution, Inference, Rank Ordering
Q12.	A fuzzy set whose membership function has at least one element x in the universe whose membership value is unity is called
Option A:	convex fuzzy set
Option B:	normal fuzzy set
Option C:	sub normal fuzzy sets
Option D:	concave fuzzy set
Q13.	A fuzzy set has a membership function whose membership values are strictly monotonically increasing or strictly monotonically decreasing or strictly monotonically increasing than strictly monotonically decreasing with increasing values for elements in the universe
Option A:	Non concave Fuzzy set
Option B:	concave fuzzy set
Option C:	Non convex Fuzzy set
Option D:	convex fuzzy set
Q14.	_____ is/are the way/s to represent uncertainty.
Option A:	Fuzzy Logic
Option B:	Probability
Option C:	Entropy
Option D:	Entity
Q15.	What Is Another Name For Fuzzy Inference Systems?
Option A:	Fuzzy Expert System
Option B:	Fuzzy Modelling
Option C:	Fuzzy Logic Controller
Option D:	Fuzzy Modular controller
Q16.	What Is Fuzzy Inference Systems?
Option A:	The process of formulating the mapping from a given input to an output using fuzzy logic
Option B:	Changing the output value to match the input value to give it an equal balance

Option C:	Having a larger output than the input
Option D:	Having a smaller output than the input
Q17.	.-------------exhibit non-linear functions to any desired degree of accuracy
Option A:	neuro –fuzzy
Option B:	neuro-genetic
Option C:	fuzzy –genetic
Option D:	fuzzy System
Q18.	What are the main cons of hill-climbing search?
Option A:	Terminates at local optimum & Does not find optimum solution
Option B:	Terminates at global optimum & Does not find optimum solution
Option C:	Does not find optimum solution & Fail to find a solution
Option D:	Fail to find a solution
Q19.	What are the two main features of Genetic Algorithm?
Option A:	Fitness function & Crossover techniques
Option B:	Crossover techniques & Random mutation
Option C:	Individuals among the population & Random mutation
Option D:	Random mutation & chromosome
Q20.	Mutating a strain is:
Option A:	Changing all the genes in the strain.
Option B:	Removing one gene in the strain
Option C:	Randomly changing one gene in the strain.
Option D:	Removing the strain from the population.
Q21.	What helps SA get out of local minima?
Option A:	The acceptance threshold is established probabilistically
Option B:	The exponential form of the Metropolis condition, i.e., that p is less than exp (-DE/kT) where DE is the change in energy, T the temperature, and k is a constant.
Option C:	Annealing follows a declining temperature schedule
Option D:	Positive energy changes are not discarded automatically
Q22.	Which among following is not a Feature selection method
Option A:	Rank Selection
Option B:	Tournament Selection

Option C:	Random Selection
Option D:	Range Selection
Q23.	Selection of individual in Genetic algorithm is through measuring value of _____
Option A:	Fitness function
Option B:	Heuristic function
Option C:	Cost function
Option D:	Path cost
Q24.	---------------- of bit involves changing bits from 0 to 1 and 1 to 0.
Option A:	Mutation
Option B:	Crossover
Option C:	Inversion
Option D:	Segregation
Q25.	In --------------, every chromosomes is a string of numbers
Option A:	hexadecimal encoding
Option B:	octal encoding
Option C:	Permutation encoding
Option D:	binary encoding