University of Mumbai

Examination 2020 under cluster 4 (PCE)

Program: BE Electronics and Telecommunication Engineering
Curriculum Scheme: Rev2016
Examination: Final Year Semester VII
Course Code: ECCDLO7031 and Course Name: Neural Network & Fuzzy Logic

Time: 1 hour   Max. Marks: 50

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

Q1.	Signal transmission at synapse is a
Option A:	Physical process
Option B:	Chemical Procees
Option C:	Biological process
Option D:	Activation
Q2.	What are dendrites?
Option A:	Nuclear projections
Option B:	Fibres of nerve
Option C:	other name for nucleus
Option D:	Soma
Q3.	How to identify the network given is supervised or unsupervised
Option A:	if error is given
Option B:	If desired output is given
Option C:	if actual ouput is given
Option D:	if learning constant is there
Q4.	Positive sign of weight indicates?
Option A:	Excitatory input
Option B:	Inhibitory input
Option C:	can be either excitatory or inhibitory as such
Option D:	Possible weight
Q5.	Which activation function used in perceptron Learning rule
Option A:	Binary
Option B:	Continuous
Option C:	both
Option D:	independent of both
Q6.	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
Q7.	Which of the following learning rule is unsupervised
Option A:	Perceptron
Option B:	Delta
Option C:	Correlation

Option D:	Hebbian
Q8.	The network that involves backward links from output to the input and hidden layers is called _____
Option A:	Self organizing map
Option B:	Perceptrons
Option C:	Recurrent neural network
Option D:	Multi layered perceptron
Q9.	What is unsupervised learning?
Option A:	weight adjustment based on deviation of desired output from actual output
Option B:	weight adjustment based on desired output only
Option C:	weight adjustment based on local information available to weights
Option D:	weight variation
Q10.	How are input layer units connected to second layer in competitive learning networks?
Option A:	feedforward manner
Option B:	feedback manner
Option C:	feedforward and feedback
Option D:	feedforward or feedback
Q11.	How is weight vector adjusted in basic competitive learning?
Option A:	such that it moves towards the input vector
Option B:	such that it moves away from input vector
Option C:	such that it moves towards the output vector
Option D:	such that it moves away from output vector
Q12.	In hopfield network with symmetric weights, energy at each state may?
Option A:	increase
Option B:	decrease
Option C:	decrease or remain same
Option D:	decrease or increase
Q13.	Automated vehicle is an example of which type of learning
Option A:	Supervised learning
Option B:	Unsupervised learning
Option C:	Active learning
Option D:	Reinforcement learning
Q14.	In character recognition which type of network architecture is used?
Option A:	single layer feed forward
Option B:	Multilayer feed forward
Option C:	Single layer feedback
Option D:	Multilayer feedback network
Q15.	Which is the most direct application of neural networks?
Option A:	vector quantization

Option B:	pattern mapping
Option C:	pattern classification
Option D:	control applications
Q16.	Three main basic features involved in characterizing membership function are
Option A:	Core, Support , Boundary
Option B:	Fuzzy Algorithm, Neural network, Genetic Algorithm
Option C:	Intution, Inference, Rank Ordering
Option D:	Weighted Average, center of Sums, Median
Q17.	A fuzzy set 'A' in Z is characterized by a _____ that associates with element of Z, a real number in the interval [0, 1].
Option A:	Grade of membership
Option B:	Membership function
Option C:	Generic element
Option D:	Degree of truthness
Q18.	The Student is Tall.Here the Tall (linguistic variable) can be represented by
Option A:	Fuzzy relation
Option B:	Fuzzy Set
Option C:	Crisp set Logic
Option D:	Crisp Relation
Q19.	Fuzzy relation R is symmetric if _____
Option A:	$\mu R(x_i,x_j)=\mu R(x_j,x_i)$
Option B:	$\mu R(x_i,x_i)=1$
Option C:	$\mu R(x_j,x_i)=\mu R(x_j,x_i)$
Option D:	$\mu R(x_i,x_i)=\mu R(x_j,x_j)$
Q20.	Fuzzy logic is usually represented as _____
Option A:	Both IF-THEN-ELSE rules & IF-THEN rules
Option B:	IF-THEN rules
Option C:	For rules
Option D:	IF-THEN-ELSE rules
Q21.	Complement of Fuzzy set A is given by
Option A:	$1+\mu A(x)$
Option B:	$1/\mu A(x)$
Option C:	$2*\mu A(x)$
Option D:	$1-\mu A(x)$
Q22.	A robot is a _____
Option A:	Machine that thinks like a human
Option B:	Type of virtual reality device that takes the place of humans in adventures
Option C:	Machine that replaces a human by performing complex mental processing tasks
Option D:	Computer-controlled machine that mimics the motor activities of living things
Q23.	Fuzzy logic is

Option A:	A new programming language used to program animation
Option B:	Used to respond to questions in a humanlike way
Option C:	The result of fuzzy thinking
Option D:	A term that indicates logical values greater than one
Q24.	While designing Fuzzy Logic Machine steps are performed in which sequence?
Option A:	Fuzzification->Rule Evaluation ->Defuzzification
Option B:	Defuzzification->rule Evaluation->Fuzzification
Option C:	Rule Evaluation->Fuzzification->Defuzzification
Option D:	Fuzzification->Defuzzification->Rule Evaluation
Q25.	following not example of fuzzy controller
Option A:	Washing machine
Option B:	Air conditioner
Option C:	Train
Option D:	Mixer

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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	B
Q2.	B
Q3.	B
Q4	A
Q5	A
Q6	B
Q7	D
Q8.	C
Q9.	C
Q10.	A
Q11.	A
Q12.	C
Q13.	A
Q14.	B
Q15.	C
Q16.	A
Q17.	B
Q18.	B
Q19.	A
Q20.	B
Q21.	D
Q22.	D
Q23.	B
Q24.	A
Q25.	D