Unit 9 - Week 7

Week 7 Assignment 7

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-03-18, 23:59 IST.

1) Which of the following MOEA algorithm is based on the concept of **elitism**? 1 point

a. MOGA
b. NPGA
c. NSGA
d. NSGA-II

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
d.

2) Which of the following logic cannot be modeled with a single neuron? 1 point

a. $3 - AND$
b. $3 - XOR$
c. NOT
d. All can be easily modelled

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

3) An ANN learn quickly if η, the learning rate assumes the following value(s). 1 point

a. $\eta = 1$
b. $\eta < 1$
c. $\eta > 1$
d. $\eta = 0$

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
c.

4) Which of the following is true for neural networks? 1 point

i. The error calculation which is followed in "Back-propagation algorithm" is the steepest descent method.
ii. XOR problem is linearly separable problem.
iii. A problem whose output is linearly separable can also be solved with MLFFNN.
iv. The output of the perceptron with hard limit transfer function is more accurate than it is defined with any sigmoid transfer function.

a. i and iii are true
b. i and ii are true
c. ii and iv are true
d. all are true

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.

5) A possible neuron specification to solve the AND problem requires a minimum of 1 point

a. Single neuron
b. Two neurons
c. Three neurons
d. Four neurons

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.

6) $\varphi(I) = \frac{e^{aI} - e^{-aI}}{e^{aI} + e^{-aI}}$ is a _____ transfer function. 1 point

a. Linear
b. Log-sigmoid
c. Hard-limit
d. Tan-sigmoid

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
d.

7) Time complexity of NSGA is 0 points

a. $O(mn^2)$
b. $O(mnlog_2 n)$
c. $O(\log(mn))$
d. None of these.

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.

8) For problems, with error calculation, we solve using 1 point

a. Recurrent neural networks
b. Single layer feed forward neural network
c. Multilayer feed forward neural network
d. All of the above

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
d.

9) Application of Neural Network includes 1 point

a. Pattern Recognition
b. Classification
c. Clustering
d. All of the above

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
d.

10) If an individual x_i is dominated by p_i individuals in the current generation, then $rank(x_i)$ is 1 point

a. 0
b. p_i
c. 1
d. $1 + p_i$

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
d.

11) What is perceptron in Neural network 1 point

a. It is an auto-associative neural network
b. It is a double layer auto-associative neural network
c. It is a single layer feed-forward neural network with pre-processing
d. It is a neural network that contains feedback

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
c.

12) Neural Networks are complex _____ with many parameters 1 point

a. Linear Functions
b. Nonlinear Functions
c. Discrete Functions
d. Exponential Functions

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.

13) To create mating pool, NSGA follows 1 point

a. Stochastic remainder selection
b. Crowding Tournament selection
c. Roulette wheel selection
d. Canonical Selection

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.

14) The range of hard-limit transfer function is 1 point

a. -1 to 1
b. 0 to 1
c. $-\infty$ to $+\infty$
d. None of the above

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

15) To make the solution diverse, NSGA II follows which strategy? 1 point

a. Niche sharing
b. Do_sharing
c. Crowding distance
d. Fitness sharing

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
c.