Unit 6 - Week 4 :

Assignment 4

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

Due on 2019-03-27, 23:59 IST.

1) The performance of a fuzzy reasoning tool depends on its

   a. Data base (DB) only.
   b. Rule base (RB) only.
   c. both DB as well as RB.
   d. neither DB nor RB.

   (a)  
   (b)  
   (c)  
   (d)  

No, the answer is incorrect.

Score: 0

Accepted Answers: (c)

2) Let us assume that half base-width $(d)$ of an isosceles triangle is represented by a binary string 10100011 during its optimization using a binary-coded genetic algorithm. Let us also assume that $d$ varies in a range of $(5.0, 10.0)$. The real value of $d$ is found to be equal to

   a. 8.196
   b. 9.759
   c. 5.659
   d. 7.258

   (a)  
   (b)  
   (c)  
   (d)  

No, the answer is incorrect.

Score: 0

Accepted Answers: (a)
Which one of the following statements is FALSE?

a. A Genetic Algorithm (GA) can improve accuracy in prediction of a fuzzy reasoning tool through training.

b. A GA can make a fuzzy reasoning tool faster by reducing its size of rule base.

c. A GA cannot be coupled with a fuzzy reasoning tool.

d. A GA-based tuning of rule base of a fuzzy reasoning tool may contain redundant rule(s).

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

4) A Genetic Algorithm (GA) is coupled with a clustering tool to

a. ensure compact clusters only.

b. ensure distinct clusters only.

c. remove / reduce the number of outliers only.

d. obtain compact as well as distinct clusters after minimizing the number of outliers.

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

5) Cell body / Soma of a biological neuron is copied in the artificial neuron in the form of

a. activation / transfer function

b. bias value.

c. summing junction.

d. connecting weights.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(c)
The value of Log-sigmoid transfer function used in neural network (NN) varies in the range:

- a. \((-1.0, +1.0)\)
- b. \((0.0, +1.0)\)
- c. \((-2.0, +2.0)\)
- d. \((-10.0, +10.0)\)

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

7) Which one of the following statements is FALSE?

- a. Fuzzy reasoning tool is a non-conventional regression tool.
- b. Artificial neural network can be used as a non-conventional regression tool.
- c. For modeling the problems involving a large number of variables, neural network is preferred to fuzzy reasoning tool.
- d. Both fuzzy reasoning tool and artificial neural network have in-built optimize algorithm.

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

8) Which one of the following statements is FALSE?

- a. Training of a neural network is much involved computationally compared to a fuzzy reasoning tool.
- b. More problem information is required for the training of a fuzzy reasoning tool compared to a neural network.
- c. Inputs are to be passed through the neural network in their real scales.
- d. Inputs can be passed through the fuzzy reasoning tool in their real scales.

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

9)
Un-supervised learning is carried out in neural networks

(a) using the principles of competition, cooperation and updating.
(b) using pre-determined input-output relationships of the process to be modelled.
(c) using the principle of learning with a teacher.
(d) using a gradient-based method of optimization.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(a) 1 point

Which one of the following statements is FALSE?

(a) Incremental mode of training in neural networks is known as on-line training.
(b) Batch mode of training in neural networks is known as off-line training.
(c) Batch mode of training can yield an adaptive neural network.
(d) Batch mode of training of a neural network requires the less amount of data compared to its incremental training.

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