

Unit 3 - Week 1

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# Assignment 1

The due date for submitting this assignment has passed. Due on 2019-08-14, 23:59 IST.  
 As per our records you have not submitted this assignment.

- 1) The texture of the region provides measure of which of the following properties? 1 point

- a) Smoothness alone
  - b) Coarseness alone
  - c) Regularity alone
  - d) Smoothness, coarseness and regularity

a)  b)  c)  d)

**No, the answer is incorrect.**  
Score: 0  
Accepted Answers: d)
- 2) What is the objective of perceptron learning? 1 point

- a) Class identification.
  - b) Weight adjustment.
  - c) Weight adjustment along with classification.
  - d) None of the above.

a)  b)  c)  d)

**No, the answer is incorrect.**  
Score: 0  
Accepted Answers: c)
- 3) Why do we need biological neural networks? 1 point

- a) To solve tasks like machine learning and natural language processing.
  - b) To apply heuristic search methods to find solutions of problem.
  - c) To make smart human interactive and user friendly system.
  - d) All of these.

a)  b)  c)  d)

**No, the answer is incorrect.**  
Score: 0  
Accepted Answers: d)
- 4) In perceptron learning, what happens when input vector is correctly classified? 1 point

- a) Weight adjustments does not depend on classification of input vector
  - b) No further adjustment in weight vector is done
  - c) Small adjustment in weight is done
  - d) Large adjustment in weight is done

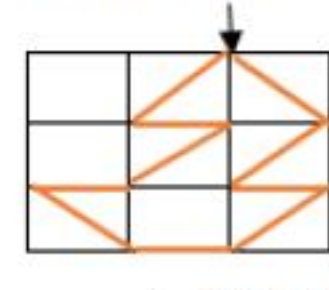
a)  b)  c)  d)

**No, the answer is incorrect.**  
Score: 0  
Accepted Answers: b)
- 5) Given patterns:  $P_1 = \langle 3,4,5 \rangle$ ,  $P_2 = \langle 3,4,6 \rangle$ ,  $P_3 = \langle 111,222,333 \rangle$  and  $P_4 = \langle 112,223,334 \rangle$ . Which of the following statements is incorrect? 1 point

- a)  $P_1$  and  $P_2$  are similar
  - b)  $P_3$  and  $P_4$  are similar
  - c)  $P_1$  and  $P_2$  are similar,  $P_1$  and  $P_3$  are dis-similar
  - d)  $P_1$  and  $P_3$  are similar,  $P_2$  and  $P_4$  are similar

a)  b)  c)  d)

**No, the answer is incorrect.**  
Score: 0  
Accepted Answers: d)
- 6) Assuming 8-connectivity, find the chain code for the following shape 1 point



  - a) 75601131041
  - b) 7505430141
  - c) 7504310621
  - d) 7041012110

a)  b)  c)  d)

**No, the answer is incorrect.**  
Score: 0  
Accepted Answers: b)
- 7) Which of the following statement/(s) is/are correct? 1 point

- a) Chain code is translation invariant
  - b) Chain code is not rotation invariant
  - c) Differential chain code is rotation invariant
  - d) All of these

a)  b)  c)  d)

**No, the answer is incorrect.**  
Score: 0  
Accepted Answers: d)
- 8) Which of the following statements related to pattern recognition is incorrect? 1 point

- a) Pattern recognition means to identify underlying structures, which are known a priori within a data
  - b) Pattern recognition can be done by supervised/unsupervised learning
  - c) Pattern recognition fails to solve classification problem
  - d) Pattern recognition finds application in speech recognition, multimedia document recognition, medical analysis etc

a)  b)  c)  d)

**No, the answer is incorrect.**  
Score: 0  
Accepted Answers: c)
- 9) When two classes can be separated by a straight line, they are known as- 1 point

- a) Linearly separable classes
  - b) Linearly inseparable classes
  - c) May depend on system, can be separable/inseparable
  - d) All of the above

a)  b)  c)  d)

**No, the answer is incorrect.**  
Score: 0  
Accepted Answers: a)
- 10) Given patterns:  $P_1 = \langle 5,4,3 \rangle$ ,  $P_2 = \langle 5,4,2 \rangle$ ,  $P_3 = \langle 101,202,303 \rangle$ . Which of the following statement/s is/are correct? 1 point

- a)  $P_1$  and  $P_2$  are dis-similar
  - b)  $P_1$  and  $P_3$  are similar
  - c)  $P_2$  and  $P_3$  are similar
  - d)  $P_1$  and  $P_2$  are similar

a)  b)  c)  d)

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