

X

<https://swayam.gov.in>https://swayam.gov.in/nc_details/NPTEL

d22180@students.iitmandi.ac.in ▾

NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » **Pattern Recognition And Application**
(course)



Click to register
for Certification
exam

<https://examform.nptel.ac.in>

/2023_10
/exam_form
/dashboard)

If already
registered, click
to check your
payment status

Course
outline

How does an
NPTEL
online
course
work? ()

Week 0 ()

Week 1 ()

● Lecture 01 :
Introduction
(unit?unit=17&
lesson=18)

● Lecture 02 :
Feature

Week 1 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-08-09, 23:59 IST.

As per our records you have not submitted this assignment.

1)

2 points

Which of the following statement/(s) is/are correct?

- a) Chain code is translation variant.
- b) Chain code is 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:

c)

2)

2 points

Extraction - I
(unit?unit=17&
lesson=19)

● Lecture 03 :
Feature
Extraction - II
(unit?unit=17&
lesson=20)

○ Quiz: Week 1
: Assignment
1
(assessment?
name=108)

○ Feedback
Form for Week
1
(unit?unit=17&
lesson=21)

● Assignment 1
Solution
(unit?unit=17&
lesson=113)

Week 2 ()

Week 3 ()

Week 4 ()

**Download
Videos ()**

**Text
Transcripts ()**

Books ()

Which of the following feature corresponds to boundary based features?

- I. Intensity
 - II. Chain code
 - III. Polygonal approximation
 - IV. Signature
- a) Only I
 - b) Only I and IV
 - c) II, III and IV
 - d) All of these

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)

No, the answer is incorrect.
Score: 0

Accepted Answers:
c)

3)

2 points

For representation of a circle, radius and center are used features, then which of the following is/are correct?

- a) Radius is translation invariant.
- b) Center is translation variant
- c) Radius and center both are translation invariant
- d) Both a and b

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)

No, the answer is incorrect.
Score: 0

Accepted Answers:
d)

4)

2 points

Which of the following is/are true?

- I. In case of supervised learning, known patterns or labelled data are used for training purpose.
 - II. In case of unsupervised learning, additional step of data agglomeration is done based on similarity.
- a) Only I
 - b) Only II
 - c) Both I and II
 - d) Neither I and II

- ☐ a)

- ☐ b)
☐ c)
☐ d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

c)

5)

2 points

When two classes can be separated by a straight line, they are known as-

- 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)

6)

2 points

Given patterns: $P_1 = \langle 3,4,5,10 \rangle$, $P_2 = \langle 3,4,6,10 \rangle$, $P_3 = \langle 104,105,106,10 \rangle$. Which of the following statements is correct?

- a) P_1 and P_2 are similar
b) P_1 and P_3 are similar
c) P_1 and P_2 are dis-similar
d) All of the above.

- ☐ a)
☐ b)
☐ c)
☐ d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

a)

7)

2 points

Compute the chain code of the given structure in Figure 1 using the coded direction given in Figure 2. Assume 8-connectivity and moving in clockwise direction.

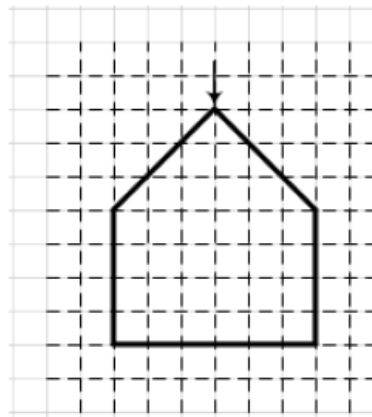


Figure 1

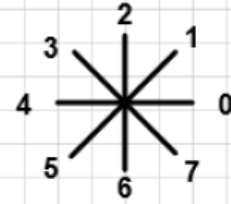


Figure 2

- a) 7776664444442222111
- b) 77776664444442222111
- c) 77766664444442222111
- d) 7776666444442222111

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

c)

8)

2 points

Compute the differential code of the given structure in Figure 1 using the coded direction given in Figure 2. Assume 8-connectivity and moving in clockwise direction. For counting differential direction use anticlockwise direction.

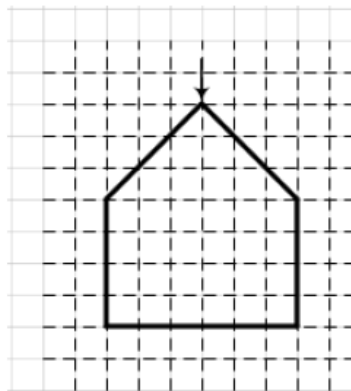


Figure 1

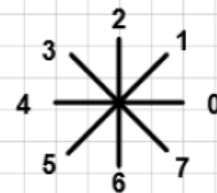


Figure 2

- a) 60070006000006000700
- b) 60007000600000600070
- c) 60070006000006007000
- d) 60070006000000600070

- ☐ a)
☐ b)
☐ c)
☐ d)

No, the answer is incorrect.
 Score: 0

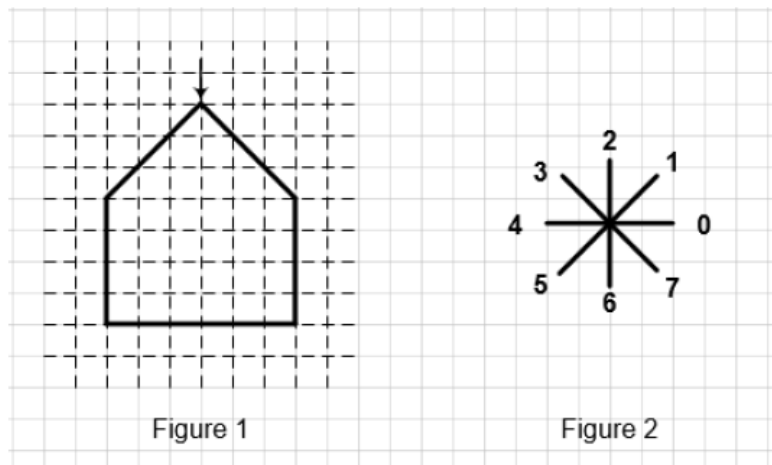
Accepted Answers:

a)

9)

2 points

Compute the shape number (largest number) using differential chain code of the given structure in Figure 1 using the coded direction given in Figure 2. Assume 8-connectivity and moving in clockwise direction. For counting differential direction use anticlockwise direction.



- a) 70006000006000700600
 b) 70060070000600000600
 c) 70060070006000000000
 d) 70060070006000006000

- ☐ a)
☐ b)
☐ c)
☐ d)

No, the answer is incorrect.
 Score: 0

Accepted Answers:

d)

10)

2 points

Which of the following geometrical shape corresponds to the signature given in Figure 3?

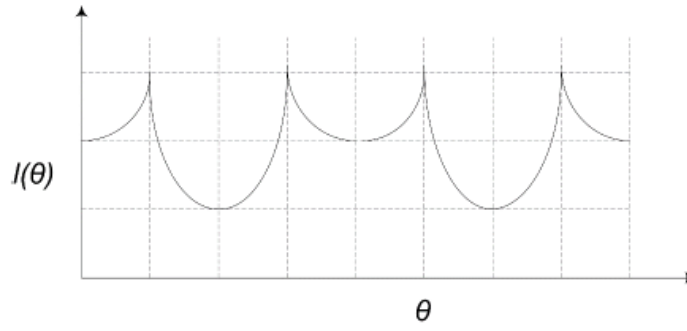


Figure 3

- a) Circle
- b) Square
- c) Rectangle
- d) Equilateral triangle

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

c)