

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATIONS-2022

B.Tech-VII Semester (ECE)

COURSE CODE (CREDITS): 19B1WEC732 (3)

MAX. MARKS: 15

COURSE NAME: Pattern Analysis in Machine Intelligence

COURSE INSTRUCTORS: Dr. Alok Kumar

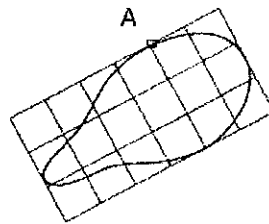
MAX. TIME: 1 Hour

*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

Q.1 What is meant by Pattern Recognition? Why is pattern recognition used? What are the different types of pattern recognition algorithms used in Machine Learning? [CO1] [4 Marks]

Q.2. What is the use of Feature Vector in pattern recognition? How shape based feature is different from region based feature? How can we distinguish the pattern if many patterns are mapped to the same feature vector? [CO1, CO2] [3 Marks]

Q.3 What is role of differential chain code in pattern recognition? How differential chain code is better than the chain code. Find out the chain code and differential chain code for the following Fig using 8 point connectivity. (Assume, A is the starting point). [CO1,CO2] [4 Marks]



Q.4 How Naive Baye's classifier is helpful in pattern recognition? Consider the given dataset and apply Naive Baye's algorithm to predict that, if a Fruit has the following properties then which type of fruit it is?

Fruit={Yellow, Sweet and long}

[CO2,CO3] [4 Marks]

Fruit	Yellow	Sweet	Long	Total
Mango	350	450	0	650
Banana	400	300	350	400
Others	50	100	50	150
Total	800	850	400	1200