Exam Roll No - 18312911011

Name of Program - B.tech (IT & MI)

Semester / Year - VII Semester / IV year

Unique Paper Code - 911714

Title of Paper - Environment Management

Date & Time of Exam - 07/12/2021 @ 9:30 AM

Q.2 What is supervised ---- techniqure

A-2 Supervised classification can be defined normally as the process of samples of known identity to classify pixels of unknown identity. Samples of known identity are those pixels located within training areas. Pixels located within these area term the training samples used to guide the classification algorithm to assigning specific spectral values to appropriate informational class.

The basic steps involved in a typical supervised classification procedure are-

1) The training stage
2) Feature Selection
3) Selection of appropriate Classification Algorithm
4) Post Classification Smoothening
5) Accuracy Assessment

Role of the maximum Likelihood Classifier -

Maximum likelihood decision rule assigns each pixel having measurements or features X to the class c whose units are most probable or likely to have given rise to feature vector x. It assumes that the training data statistics for each class in each band are normally distributed (Gaussian). So, we can say that training data with bi- or trimodal histograms in a single band are not ideal. In such cases, individual modes probably represent individual classes that should be trained upon individually and labelled as separate classes which would then produce unimodal.

So, to conclude the maximum likelihood classifier classifies the pixels with the maximum likelihood into the corresponding class.