

Remote Sensing

Time: 60 minutes

Total Marks: 25

(Write answer on white sheet, scan, submit as RollNo-End Exam.Pdf by 1.05 pm in the Portal)

1. Can you derive a mushroom density (assuming you have the spatial resolution) with NDVI – why - **1 mark**
2. What is the Kappa Statistic? Why is it meaningful? – **1 mark**
3. How do you use the elements of visual interpretation for differentiating – **3 marks**
 - (a) Forest from agriculture and plantation
 - (b) Burnt paddy fields with deep water
 - (c) Evergreen forest and mangrove vegetation
3. The spectral reflectance pattern of the leaf is connected with the components / internal structure of leaf. Explain this statement with help of curve and how best and in what way the reflected signatures are useful in assessing the health of vegetation? - **4 marks**
4. During a single-band classification, the computer came across a pixel with a value of 100. Assuming that the user had defined 3 classes with the following spectral statistics

Class	Min	Max	Mean	Std.Dev.
1	25	125	95	10
2	20	100	50	5
3	90	110	98	1

Briefly explain into which class the pixel would be placed during: – **6 marks**

- (a) a minimum distance to means classification?
 - (b) a parallelepiped classification?
 - (c) a maximum likelihood classification?
5. Discuss how you will adopt the remote sensing process for the development of major inputs for forest management and conservation of biodiversity? – **10 marks**