M.Sc. 3rd Semester Examination, 2011

REMOTE SENSING AND GIS

PAPER – RSG-303(Gr.-A + B)

Option – 3

(Theory)

Full Marks : 40

Time : 2 hours

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

(*Geoinformatics in Coastal Management*)

GROUP – A

[*Marks* : 20]

Answer any **two** questions from the followings :

1. What is coastal morphodynamics ? Classify coasts on the basis of processes and sediment characteristics. 2 + 8

2. Explain the coastal biogeography with special reference to mangroves. 10

3. Discuss the coastal hazard of the Sundarban produced by 'Aila' cyclone in 2009, and mention it's management. 8 + 2

4. Write short notes on (any *four*): $2\frac{1}{2} \times 4$

   (*i*) Sea surface temperature (SST)

   (*ii*) RIP current

   (*iii*) Long period waves

   (*iv*) Pattern and components of sea waves.

   (*v*) Coast line and Shoreline.

GROUP – B

[*Marks* : 20]

Answer any **two** questions from the followings :

1. What are the basic features to be considered from a satellite image to assess the type of a coast-erosional or depositional ? 10

Or

What is PFZ ? How PFZ can be derived using satellite images ? 2 + 8

2. Write brief notes on the following answer any *two* : 5 x 2

(*i*) Role of land use dynamics in coastal area planning.

(*ii*) Time series analysis in shoreline management plan

(*iii*) Demarcation of HTL

(*iv*) Coastal inundation mapping

(*v*) Hyperspectral remote sensing in coastal ecosystem.

3. (*a*) How does the application of Remote Sensing and GIS help to study the chlorophyll content of coastal waters of West Bengal.

(*b*) What is the implication of such study ? 6 + 4

4. (*a*) Give a brief account of the biogeography of Indian Sundarbans with special reference to mangrove vegetation.

(*b*) How do the mangrove forests project coastal erosion ? 6 + 4