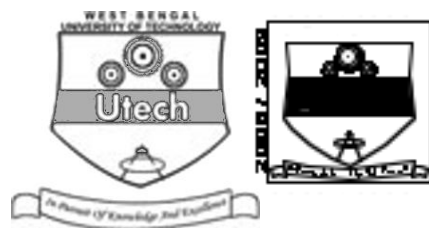


APPLICATION OF GEOINFORMATICS (SEMESTER - 2)

CS / PGDGI / SEM-2 / DGI-204 / 09



1.
Signature of Invigilator

2.
Signature of the Officer-in-Charge

Reg. No.

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Roll No. of the
Candidate

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CS / PGDGI / SEM-2 / DGI-204 / 09

ENGINEERING & MANAGEMENT EXAMINATIONS, MARCH – 2009

APPLICATION OF GEOINFORMATICS (SEMESTER - 2)

Time : 3 Hours]

[Full Marks : 70

INSTRUCTIONS TO THE CANDIDATES :

- This Booklet is a Question-cum-Answer Booklet. The Booklet consists of **32 pages**. The questions of this concerned subject commence from Page No. 3.
- In **Group – A**, Questions are of Objective type. You have to write the answers in the space provided marked '**Answer Sheet**'.
 - For **Groups – B & C** you have to answer the questions in the space provided marked '**Answer Sheet**'. Questions of **Group – B** are Short answer type. Questions of **Group – C** are Long answer type. Write on both sides of the paper.
- Fill in your Roll No. in the box** provided as in your Admit Card before answering the questions.
- Read the instructions given inside carefully before answering.
- You should not forget to write the corresponding question numbers while answering.
- Do not write your name or put any special mark in the booklet that may disclose your identity, which will render you liable to disqualification. Any candidate found copying will be subject to Disciplinary Action under the relevant rules.
- Use of Mobile Phone and Programmable Calculator is totally prohibited in the examination hall.**
- You should return the booklet to the invigilator at the end of the examination and should not take any page of this booklet with you outside the examination hall, **which will lead to disqualification**.
- Rough work, if necessary is to be done in this booklet only and cross it through.

No additional sheets are to be used and no loose paper will be provided

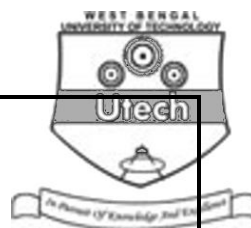
FOR OFFICE USE / EVALUATION ONLY

Marks Obtained

Group – A								Group – B				Group – C				Total Marks	Examiner's Signature
Question Number																	
Marks Obtained																	

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Head-Examiner / Co-Ordinator / Scrutineer

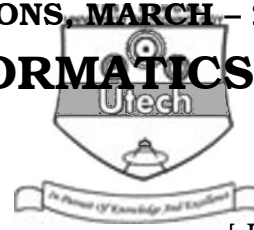
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APPLICATION OF GEOINFORMATICS
SEMESTER - 2



Time : 3 Hours]

[Full Marks : 70

GROUP – A

(Objective Type Questions)

1. Answer any *ten* of the following questions :

10 × 1 = 10

A) Answer the question briefly :

i) What is the full form of CSIRO ?

B) State whether the following statement is True or False :

ii) Erosion is an aggradational process.

C) Choose the correct alternative for the following :

iii) What forces are responsible for coastal erosion ?

a) Tide

b) Slope

c) Current

d) Wave

e) All of these.

D) Fill in the blank :

iv) Dumping site should be at distance from the roads so that collection vehicles can travel through the optimum route.



E) Choose the correct alternative for the following :

v) GIS is a that not only reduces time and cost of the site selection but also provides a digital data bank for future monitoring programme of the site.



- a) technique
- b) technology
- c) tool.

F) Answer the question briefly :

vi) What is a viewshed ?

G) Choose the correct alternative for the following :

vii) Which method of interpolation is also called 'Best Linear Unbiased Estimator' ?

- a) Inverse distance weighting
- b) Kriging
- c) Spline
- d) None of these.

H) State whether the following statement is True or False :

viii) Sedimentary rock with dip of 10° - 30° towards downstream direction is suitable for construction of reservoir.



I) Choose the correct alternative for the following :

ix) In land use mapping rivers should be taken from the satellite image of

- a) Rabi data
- b) Kharif data
- c) Summer data.



x) To map a road network for a town the suitable satellite image will be

- a) LISS III
- b) IKONOS
- c) RADARSAT.

xi) To study the urban sprawl you need to consider Satellite Image (FCC) of

- a) multi-spectral data
- b) multi-temporal data.

xii) To prepare a Basemap from Toposheet what are the essential features you need to draw ?

- a) Rivers
- b) Roads / Railways
- c) Forests
- d) Major settlements
- e) All of these.



GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following.



3 × 5 = 15

2. What is terrain classification ? Enlist important criteria for identification of different terrain units at different levels. 2 + 3
3. Discuss the landforms resulting from Fluvial erosion. 5
4. Write a short note on application of geoinformatics in dam site selection. 5
5. What is urbanisation ? The urban land use is a dynamic one. Explain. 5
6. What are the different steps to prepare a land use map from satellite image ? 5

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following.

3 × 15 = 45

7. Discuss the major process in the development of arid landforms. What are the important resultant landforms due to Aeolian action which can be recognized using remote sensing data ? 5 + 10
8. What is the role of GIS in solid waste management ? 15
9. What is a Digital Elevation Model ? How does DTM differ from DEM ? Mention important uses of DEM. Mention the structures of DEM. How are DEMs created ? Mention the steps of creation of stream network and watershed from DEM. 2 + 2 + 1 + 2 + 3 + 5
10. What are the factors working within any urban centre ? To prepare Urban Information System with RS and GIS what are the planning inputs you need to consider ? 7 + 8
11. What are the different factors governing land use pattern of any place ? Enumerate the role of RS and GIS in land use / land cover study. 7 + 8

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END