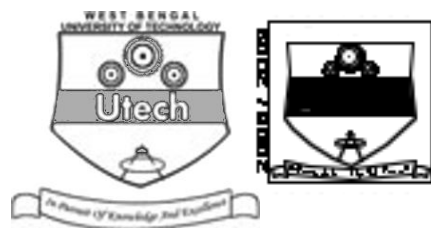


# SPATIAL DATABASE, ANALYSIS AND MODELING ( SEMESTER - 2 )

CS/PGDGI/SEM-2/DGI-201/09



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-201/09

ENGINEERING & MANAGEMENT EXAMINATIONS, MARCH – 2009

## SPATIAL DATABASE, ANALYSIS AND MODELING ( 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**

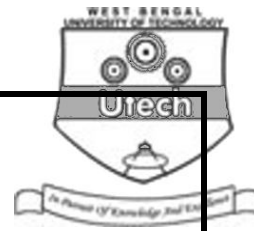
### FOR OFFICE USE / EVALUATION ONLY

Marks Obtained

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

Head-Examiner/Co-Ordinator/Scrutineer

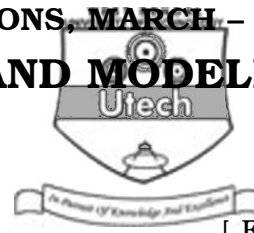
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**ENGINEERING & MANAGEMENT EXAMINATIONS, MARCH – 2009**  
**SPATIAL DATABASE, ANALYSIS AND MODELING**  
**SEMESTER - 2**



Time : 3 Hours ]

[ Full Marks : 70

**GROUP – A**

**( Objective Type Questions )**

1. Answer any 10 questions :

10 × 1 = 10

i) Which of the following is not an arithmetic operator ?

- |      |        |
|------|--------|
| a) + | b) %   |
| c) * | d) <=. |

ii) What is the value of  $x$  if  $x = 9 - 12/3 + 3 * 2$  ?

iii) To read a decimal integer, scanf format code is

- |       |                   |
|-------|-------------------|
| a) %d | b) %c             |
| c) %f | d) none of these. |

iv) Every C program must have at least one function.

State *True* or *False*.

v) In an array, data types of all the elements are same.

State *True* or *False*.

vi) Which of the following is not an example of loop ?

- |        |             |
|--------|-------------|
| a) for | b) do-while |
| c) if  | d) while.   |

vii) Which of the following is not an input device ?

- |             |             |
|-------------|-------------|
| a) Keyboard | b) Mouse    |
| c) Scanner  | d) Printer. |



- viii) ALU unit is responsible for performing arithmetic and logical operations in a digital computer.

State *True* or *False*.



- ix) Write down the full form of DML.
- x) The type of computer file structure that is most efficient at handling data retrieval is
- a) a direct indexed file
  - b) an inverted indexed file
  - c) a simple list
  - d) an ordered sequential file.
- xi) Which of the following is/an example of non-spatial data ?
- a) The number of rooms in an office building.
  - b) The path of a highway between two cities
  - c) The total population of Austin, Texas.
  - d) The intersection of two streets.
- xii) A database system that can handle one-to-one relationships, one-to-many relationships and many-to-one relationships is
- a) Hierarchical database system
  - b) Network database system
  - c) Relational database system
  - d) All of these.

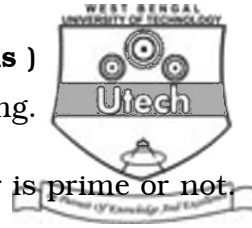


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**GROUP – B**

**( Short Answer Type Questions )**

Answer any *three* of the following.



3 × 5 = 15

2. Write a program in C to check whether a given number is prime or not.
3. Write a short note on programming languages.
4. Define entity, relationship and primary key.
5. What is the principal advantage of an 'object-oriented' database ?
6. How does the organization of hierarchical data files differ from the organization of relational data files ?

**GROUP – C**

**( Long Answer Type Questions )**

Answer any *three* questions.

3 × 15 = 45

7. Define database management system. Explain the advantages of using DBMS. Discuss the role of database administrator.
8. Describe the basic components of computer, with the help of a block diagram. What is an operating system ? Explain its functions.
9. Explain the structure of hierarchical, network and relational database.
10. Describe the raster data model and map file used in GIS.
11. What are the different sources of errors in digitization ?

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END