

Model Question Paper
III/IV B.Tech. DEGREE EXAMINATION
Geo-Informatics Engineering
First Semester

GI3102
DATABASE MANAGEMENT SYSTEM
(Admitted batch 2020-21)

Time: 3 hours

Max. Marks: 70

Note : Question No.1 is compulsory.

Answer any FOUR from the remaining.

All questions carry equal marks. Answer all parts of any question at one place.

1. Write Short notes on the following (14m)
 - a) What are the advantages of DBMS
 - b) What are the different database languages?
 - c) What are integrity constraints?
 - d) Write short notes on Mobile databases
 - e) Define the terms: Cardinality, Domain of relation
 - f) What are views?
 - g) what is functional dependency

2. a) What is DBMS ? What are the characteristics of DBMS? (7m)
b) What is the differences between file system and database system ? (7m)

3. a) What is client-server architecture for DBMS? Explain 3-tier client-server architecture for DBMS (10m)
b) Explain the differences between procedural DML and non-procedural DML? (4m)

4. a) Explain with examples various relational algebraic operations? (10 m)
b) How does tuple relational calculus differ from domain relational calculus (4 m)

5. (a) What is JDBC? Describe the architecture of JDBC? (6m)
(b) Consider the relations Employee (Fname, Minit, Lname, SSN, Bdate, salary, DeptNo) and Department (DNo, DName, location)
 - i. Display number of employees with salary greater than or equal to 15,000.
 - ii. Display names of employees working in research department.
 - iii. Obtain the details of employees with Lname 'Smith'.
 - iv. Display the total salaries of employees who are working in 'research' department (8m)

6. (a)What is normalization? How does 3NF differ from BCNF? (6m)
(E) Consider the relation R with five attributes ABCDE and functional dependencies:
A->B, BC->E, ED->A
(i).List all the keys in R.
(ii) Is R in 3NF or BCNF ? (8m)

7. (a) Explain with examples various join operation in SQL? (7m)
(b) What is a trigger? Explain with example how to create triggers in SQL? (7m)

8. (a) Define the terms entity, entity set, relationship? What are the different types of relationships?
Explain with examples? (7m)
b) Explain with example model of union types in EER diagrams? (7m)

M. Snehalek

Model Question paper
Andhra University College of Engineering
3/4 B.Tech (Geoinformatics Engineering) Degree Examinations
GI: 3105 First semester
Elective Paper: *Geoinformatics for Resources Development and Disaster Management*

Duration: 3hrs

Max.Marks:70

NO:

Question No.1 is compulsory
Answer any FOUR questions from the remaining.
All questions carry equal marks
Answer all parts of any question at one place

1. Answer the following in brief: 7X2=14
- a) LIDAR Remote Sensing
 - b) Universal Soil Law Equation
 - c) Spectral behavior of soils
 - d) Bathometry
 - e) Storm surge
 - f) Crop production estimation
 - g) ASTER
2. a. Explain the various ways to reduce consumption of natural resources
b. Give an account of identification of groundwater potential zones using geospatial technologies
3. a. Explain the application of remote sensing in land use and land cover mapping
b. Discuss the procedure for mapping forest resources and effects of deforestation
4. a. Explain the importance of remote sensing techniques in identification of geological structure
b. Give an account of thermal and hyper spectral remote sensing in mineral exploration
5. a. What is coastal hazard preparedness? Explain the various steps in coastal hazard preparedness
b. Give an account of origin, propagation and effects of Tsunamis on coastal area
6. a. Explain the role of geoinformatics in mapping of disaster affected areas for rescue and mitigation studies.
b. Give an account of Decision supporting system for disaster management
7. a. What is meant by hazard? Explain the various types of hazards in coastal area.
b. Write about the role of coastal vegetation on the impact of coastal hazards
8. a. Why do environmentalists insist upon sustainable natural resources management? Explain.
b. Explain how hazard zonation mapping will help disaster mitigation in the case of earthquakes

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III / I - Model Paper
2020-21^a / 11 / 2022

Model Question Paper
III/IV B.Tech. DEGREE EXAMINATION
Geo-Informatics Engineering
First Semester

GI 3101
GEOGRAPHICAL INFORMATION SYSTEMS-I
(Admitted batch 2020-21)

Time: 3 hours

Max. Marks: 70

Note : Question No.1 is compulsory.
Answer any FOUR from the remaining.
All questions carry equal marks. Answer all parts of any question at one place.

1. Write a brief note on following: 7x2=14M
 - A) Define GIS.
 - B) Write about band sequential format encoding.
 - C) Write a short note on hierarchical data base structure.
 - D) What is the importance of map projections in GIS.
 - E) Explain difference between shapefile and geodatabase.
 - F) Give examples for continuous and discrete data.
 - G) Explain Quad tree structure.

2.
 - A) Describe history and components of GIS 7M
 - B) Explain the significance and uses of computer assisted cartography 7M

3.
 - A) Write an account of Database functions and structures in GIS 7M
 - B) Give an account of Non spatial data in GIS 7M

4.
 - A) Write an account of Raster data structures and models 7M
 - B) Write a short note on Data encoding, Pi-order, Triangulation 7M

5.
 - A) Write about vector data structure in detail . 7M
 - B) Write about topology in GIS. Describe topological relationships 7M

6.
 - A) What is DEM and write about the procedure of generating of DEM. 7M
 - B) Write about TIN structure, Thiessen polygons and Delaunay triangles 7M

7.
 - A) Write in detail about topological errors in GIS. 7M
 - B) Write a short note on fuzzy tolerance, Arc Node structure, Line weeding 7M

8.
 - A) Give a brief account on applications of GIS in various sectors 7M
 - B) Write about latest trends in GIS. 7M

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Model Question Paper
III/IV B.Tech. DEGREE EXAMINATION
Geo-Informatics Engineering
First Semester

(GI3103) Remote Sensing - II

(Admitted batch 2020-21)

Time: 3 hours

Max. Marks: 70

Note : Question No.1 is compulsory.

Answer any FOUR from the remaining.

All questions carry equal marks. Answer all parts of any question at one place.

1. Answer the following: 7x2= 14M
 - A) What are the advantages of Thermal Imagery.
 - B) Explain about Range Resolution.
 - C) Write a short note on Synthetic Aperture Radar.
 - D) What are differences between Thermal Capacity and Thermal Inertia.
 - E) Explain about Dark Object Subtraction.
 - F) Write a short note on Digital Number (DN).
 - G) What are the applications of Thermal Radiometers.

2.
 - A) Give an account on Data Acquisition System in Remote Sensing. 7M
 - B) Write an account of Return Beam Vidicon (RBV) used in Landsat Satellite. 7M

3.
 - A) Give an account of Atmospheric Correction and Random Noise Correction. 7M
 - B) Write an account on Ground Truth Instruments and Spectral Signature. 7M

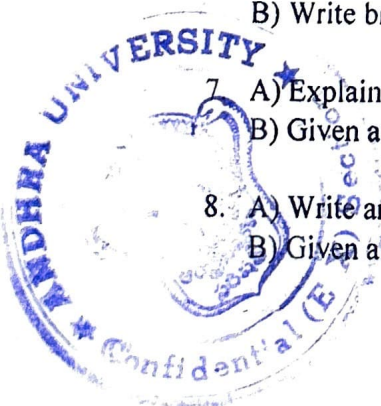
4.
 - A) Give an account of Thermal Data Interpretation. 7M
 - B) Write briefly on Airborne and Satellite Scanner System. 7M

5.
 - A) Give an account of Microwave Data Interpretation. 7M
 - B) Write briefly on Microwave Radiometers and Scatterometer. 7M

6.
 - A) Give an account of Different Terrain Properties in Radar Data. 7M
 - B) Write briefly about Radar Return and Image Signature. 7M

7.
 - A) Explain the influence of Atmosphere on the thermal IR Signal. 7M
 - B) Give an account of various applications of Thermal Remote Sensing. 7M

8.
 - A) Write an account of IRS Data Products. 7M
 - B) Give an account of Geometric and Radiometric Errors in Satellite Data. 7M



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