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M.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

FIRST SEMESTER

Computer Science

Paper IV — ADVANCED DATABASE MANAGEMENT SYSTEMS

Time : Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. What is data modeling?
2. Describe the use of UML diagram.
3. Give an introduction to transaction processing.
4. What are ACID properties?
5. Write a brief note on object databases.
6. What is a relational system?
7. Differentiate between security and authorization.
8. What are XML and Internet databases?

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Explain the concept of relational database design by ER and EER modeling with an illustration.

Or

10. Explain the following :
 - (a) Enhanced entity relation modeling
 - (b) UML modeling.

11. Explain the various concurrency control techniques available in DBMS with an example.

Or

12. Explain the database recovery techniques implemented in transaction processing.

13. Explain about the standards languages and design of object databases.

Or

14. Discuss about the object relational and extended relational systems.

15. Discuss the concept of distributed databases and client-server architectures.

Or

16. Discuss about the security and authorization aspects in enhanced data model for advanced application with an illustration.

