

**M. SC. (Computer Science) SEM – I (CBCS 2018 Course) : WINTER -
2018**

SUBJECT : ADVANCED DATABASE CONCEPTS

Day : Saturday
Date : 13/10/2018

W-2018-1036

Time : 03.00 PM TO 06.00 PM
Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the **RIGHT** indicate **FULL** marks.
 - 3) Draw diagrams **WHEREVER** necessary.
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Q.1 What is fragmentation? Discuss its types. Also Differentiate between vertical and horizontal fragmentation. **(15)**

OR

Explain local reliability protocol and distributed reliability protocol in detail.

Q.2 A) Answer **ANY ONE** of the following. **(08)**

- i) Elaborate the general architecture of parallel database system with the help of suitable diagram.
- ii) Describe geographic information system in detail.

B) Answer **ANY ONE** of the following. **(07)**

- i) What is meant by query parallelism? Explain.
- ii) Describe various operations performed on intervals in temporal database.

Q.3 Answer **ANY THREE** of the following. **(15)**

- a) Define - Object. What is the difference between permanent and transient object?
- b) What is meant by automatic analysis in multimedia database? Explain.
- c) Discuss LRM commands.
- d) Write down steps to map EER schema to an ODB schema.
- e) Explain features of web database.

Q.4 Write short notes on **ANY THREE** of the following. **(15)**

- a) Deductive database features
- b) Fault tolerance in distributed systems
- c) Database tuning
- d) Network partitioning
- e) OODBMS advantages

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