

Seat No. : _____

DB-125

December -2017

4th Year M.Sc. (CA & IT) Integrated

Advanced Database System

Time : 3 Hours]

[Max. Marks : 100

1. (A) Define following terms : **6**
 - (1) Schemas
 - (2) Data independence
 - (3) Natural language interface
 - (4) Data model
 - (5) Metadata
 - (6) Parametric users interface

(B) Answer the followings : **14**

 - (1) Explain Actors on the Scene.
 - (2) Explain database languages in details.
2. Answer the following questions : (Any **four**) **20**
 - (1) Explain index tuning.
 - (2) Write a note on factors that influence physical database design.
 - (3) Explain discretionary security mechanisms and mandatory security mechanism.
 - (4) Explain vertical and horizontal partitioning with example.
 - (5) Define tuning and write goals of database unit.
3. Answer the following questions : (Any **four**) **20**
 - (1) Define the features of the Open Gateways in Heterogeneous database in oracle.
 - (2) Explain multilevel indexes.
 - (3) Explain recovery techniques based on immediate update.
 - (4) Explain problems arise in distributed DBMS environment.
 - (5) What is checkpoint ? Write steps for taking checkpoints.

4. (A) Define following terms : (Any **six**) **6**
- (1) Duration events
 - (2) Time dimension
 - (3) Spatial database
 - (4) Tuple versioning
 - (5) Semantic heterogeneity
 - (6) Communication autonomy
 - (7) Data fragmentation
- (B) Answer the following : (Any **Two**) **14**
- (1) Write advantages of distributed database.
 - (2) Define data replication and explain types of data replication.
 - (3) Explain types of DDBMS.
5. (A) Define following terms. (Any **six**) **6**
- (1) Row type constructor
 - (2) ORDBMS
 - (3) Encapsulation
 - (4) MANET
 - (5) Day stations
 - (6) Access continuity
 - (7) Object relational database design
- (B) Answer the following : (Any **two**) **14**
- (1) Explain GIS and give two example of all three categories of GIS applications.
 - (2) Define Genome data management. Explain types of genetics.
 - (3) Write nature of multimedia applications.
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