

3C7134

Roll No. _____

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MCA III - Sem. (Main & Back) Exam., Dec. 2019

MCA-304A Advanced Database System

Time: 3 Hours

Maximum Marks: 80

Min. Passing Marks: 32

Instructions to Candidates:

Attempt all question. Marks of question are indicated against each question.

*Use of following supporting material is permitted during examination.
(Mentioned in form No. 205)*

1. NIL

2. NIL

Q.1 Answer the following questions in 1 or 2 sentences -

[10×1=10]

- (a) Name any two complex types of OODBMS.
- (b) What is Heterogeneous DDBMS?
- (c) What is Skew in Parallel Database?
- (d) Write the PL/SQL Block structure.
- (e) What are the advantages of XML Database?
- (f) What is the need of Persistent Programming Language?
- (g) Describe Local and Global Transactions in DDBMS.
- (h) Name three techniques used for I/O Parallelism.
- (i) Write the syntax of declaring a variable in PL/SQL with an example.
- (j) What is the need of spatial Data Management?

Q.2 Answer the following questions in upto 50 words - 9

[5×3=15]

(a) Explain Object-Oriented Data Model.

• (b) What do you understand by Distributed DBMS? Explain its architecture.

• (c) Explain the architecture of Parallel Database.

• (d) Differentiate between simple loop and For – Loop of PL/SQL with syntax.

• (e) Explain the need of multimedia Database.

Q.3 Answer the following questions in upto 150 words - 12

[5×4=20]

• (a) Explain Nested Relations in Object – Relational Database with an example.

• (b) What are the rules for fragmentation of Data in Distributed DBMS? Differentiate between Vertical and Horizontal fragmentation with example.

• (c) Differentiate between Interquery and Intraquery Parallelism.

• (d) What do you understand by cursors? How are implicit cursors different from explicit cursors?

• (e) Explain XML Data Model with an example.

Q.4 Answer the following questions in detail -

[2×10=20]

(a) Write short notes on following:

(i) Distributed Query Processing

• (ii) 2 – Phase Commit Protocol

(b) Explain the following in PL/SQL with example-

(i) Exceptions

• (ii) Triggers

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Q.5 (a) Write a PL/SQL block that displays the reverse of the number entered by the user [5]

(b) Write short note on Parallel Sort [5]

(c) What do you understand by object oriented language [5]

OR

Q.5 (a) How is concurrency obtained in DDBMS? [5]

(b) What is Information Retrieval? What are its advantages? [5]

(c) Write a PL/SQL Block to display highest and lowest salary of the employee in a deptno entered by the user. [5]

(You are given Employee Database with the following column specifications:

EmpID	Primary key
EmpName	
Job	Salesman, Analyst, Manager, CTO (values)
Salary	
Date-of-Join	
Deptno	101, 102, 103, 104 (values)