

**BCA Fourth Semester Examination, May – 2019**  
**(Faculty of Science)**

**THIRD PAPER**

**Advanced Database Concepts**

Paper Code : 4631

**Time Allowed: Three Hours**

**Maximum Marks : 70**

*No supplementary answer book will be given to any candidate. Hence the candidates should write the answers precisely in the main answer book only.*

**(Attempt all six questions)**

**Part I (Question No. 1& 2) is compulsory & Part II (Question No. 3, 4, 5 & 6) has internal choice.**

**PART-I**

**1. Answer any 10 questions. Each question carries 1 mark.**

**10x1= 10**

(Words limit up to 20 words each)

- a) What are Transactions?
- b) Define Serializability.
- c) What do you mean by Concurrency Control?
- d) Define Database System Architecture.
- e) What is Parallel System?
- f) What is Persistent Programming Language?
- g) Define Distributed Data Storages.
- h) What is Interquery Parallelism?
- i) What is Cursor in PL/SQL?
- j) What is Distributed Transaction?
- k) What are Triggers?
- l) What do you mean by Exception Handling?

**2. Attempt all questions. Each question carries 5 marks.**

**4x5=20**

(Word limit upto 50 words each)

- a) Describe implementation of Atomicity and Durability.
- b) Explain Distributed System in detail.
- c) Explain Two – phase Commit Protocol.
- d) Describe control structure in PL/SQL.

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**PART-II**

**UNIT I**

3. Explain transaction states with diagram in detail. **10**

**OR**

What is Concurrency Control ? Explain Lock Based Protocol. **10**

**UNIT II**

4. Explain centralized and client – server architecture in detail. **10**

**OR**

What is Object – Based Database? Describe structure types and inheritance in SQL. **10**

**UNIT III**

5. What is Distributed Database? Explain Distributed Transaction in detail. **10**

**OR**

What is I/O Parallelism? Explain Intraoperation and Interoperation Parallelism. **10**

**UNIT IV**

6. What is PL\SQL? Explain exception handling in detail. **10**

**OR**

Describe following for PL / SQL : **4+3+3**

1) Packages

2) Conditional Control

3) Advantage of PL/SQL

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