

**BACHELOR OF SCIENCE (COMPUTER SCIENCE) (CBCS - 2018 COURSE)**  
**F.Y.B.Sc.(Computer Science) Sem-II : WINTER :- 2021**  
**SUBJECT: RDBMS USING ORACLE**

Day : Monday  
Date 17-01-2022

W-20078-2021

Time : 02:00 PM-05:00 PM  
Max. Marks: 60

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**N.B.:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
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- Q.1** Attempt **ANY TWO** of the following: [12]
- a) Explain PL / SQL procedure with the help of syntax and example.
  - b) What is transaction? Explain properties of transaction.
  - c) What is a schedule of transaction? Explain serial and non-serial schedule of transaction.
- Q.2** Attempt **ANY TWO** of the following: [12]
- a) Explain Normalization with the help of example.
  - b) Explain cartesian product operation with the help of example.
  - c) Explain two phase locking protocol with the help of example.
- Q.3** Attempt **ANY TWO** of the following: [12]
- a) Explain union operation in relational algebra with the help of example.
  - b) Explain states of transaction with suitable diagram.
  - c) Explain WHILE LOOP with the help of syntax and one example.
- Q.4** Attempt **ANY THREE** of the following: [12]
- a) Explain difference operation with the help of example.
  - b) What is the syntax of IF – ELSE statement in PL / SQL? Give one of example for the same.
  - c) State any four advantages of PL / SQL.
  - d) What is functional dependency? Give one example for functional dependency.
- Q.5** Attempt **ANY FOUR** of the following: [12]
- a) What is outer join operation? What is the syntax used to denote outer join operation?
  - b) State PL / SQL data types with one example.
  - c) Write a short note on database trigger.
  - d) Write a PL / SQL block to accept a number and display factorial of it.
  - e) Write a short note on projection operation in relational algebra.
  - f) Write a PL / SQL block to accept 3 numbers and display maximum number between them.

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