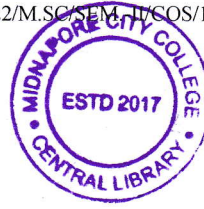


PG (CBCS)
M.SC Semester- II Examination, 2023
COMPUTER SCIENCE
PAPER: COS 201
(ADVANCED DBMS AND GREEN COMPUTING)



Full Marks: 40

Time: 2 Hours

The figures in the right-hand margin indicate full marks.
 Candidates are required to give their answers in their own words as far as practicable.

Write the answer for each unit in separate sheet

M1: ADVANCED DBMS

GROUP-A

1. Answer any **TWO** from the following questions: 2×2=4
- What is data model? Give examples.
 - Name and briefly describe the five SQL built-in functions.
 - Define BCNF? What is foreign key?
 - What is Shadow paging?

GROUP-B

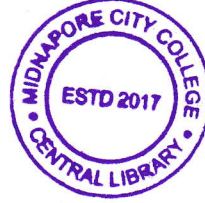
2. Answer any **TWO** from the following questions: 2×4=8
- Discuss ACID properties of transaction. 4
 - What is two-phase locking? Explain it with suitable example. 2+2
 - Why is the foreign key needed?
How does it play a role in the join operation? 2+2
 - Discuss about multi-valued dependency. Give examples. 2+2

GROUP-C

3. Answer any **ONE** from the following questions: 1×8=8
- Consider the following two transactions. Are these schedules conflict-serializable? Explain why or why not. 4+4
 - S1: R₄(A), R₂(A), R₃(A), W₁(B), W₂(A), R₃(B), W₂(B)
 - S2: R₁(A), R₂(A), R₁(B), R₂(B), R₃(B), W₁(A), W₂(B)
 - Briefly describe distributed database technique with proper diagram. Discuss the external view and internal view in three tier database architecture.

(P.T.O)

(2)

M2: GREEN COMPUTING**GROUP-A**

4. Answer any **TWO** from the following questions: 2×2=4
- a) What is sustainable development?
 - b) Discuss three rules of Green IT.
 - c) What are the burdens of Green IT.
 - d) Define Green cloud computing.

GROUP-B

5. Answer any **TWO** from the following questions: 2×4=8
- a) Discuss hazardous chemicals used in the manufacturing of electronic devices.
 - b) What do you mean by Energy-Saving Software Techniques?
 - c) Explain Platform Power Policies.
 - d) How can we use IT and Hardware to Greening the Enterprise.

GROUP-C

6. Answer any **ONE** from the following questions: 1×8=8
- a) Discuss about the strategies for Green initiative.
 - b) Explain the awareness programme to implement Green IT.
