

**BHARATI VIDYAPEETH**  
(DEEMED TO BE UNIVERSITY), PUNE - 30

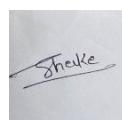
---

**ANSWER SCRIPT COVER SHEET**

Online Remote Proctored Descriptive and MCQ mode of University Examinations for Winter 2025

PRN:	2545100716
SEAT NUMBER:	2525691016
PROGRAMME NAME:	BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2023)
SUBJECT NAME:	DBMS-I
SEMESTER:	Sem-2
EXAM DATE:	11/01/2026
EXAM TIME:	11:00 AM 01:00 PM

Declaration: ~~I have read and understood the~~ "Guidelines for Remote Proctored Online Descriptive and MCQ mode of examinations and I agree to abide by it." I have written the answers to the questions in the answer sheets and they are 2 pages in total. I take full responsibility for appearing for online remote proctored descriptive and MCQ Winter 2025 university examinations, scan/take photographs and upload the answer scripts in to the online system.



10/01/2026

Signature and Date

(TO BE PRINTED OR HAND WRITTEN)

Details to be handwritten only

① Describe three tier architecture of a database management system?

→ The three tier architecture of presentation layer (user interface) application layer (business logic and processing) and database layer (data storage and management) it improve security scalability and data ~~independence~~ independence?

② Define a DBMS and explain its role managing data within organization

→ A database management system (DBMS) is software that allow user to store retrieve update and manage data efficiently it ensure data security reduces redundancy maintain consistency and support multiuser access.

(A) Different normal forms of database

① normalization?

⇒ \* 1NF No repeating groups ~~other than atomic values~~

\* 2NF No Partial dependency

\* 3NF No transitive dependency

\* BCNF Stronger form of 3NF ensuring every determinant is a candidate key

(B) Explain the fundamental concepts of EPM in conceptual data modeling.

⇒ EPM includes Entities (Real world object)  
 Attributes (Properties of entities)  
 Relationship (Connection between entities)  
 Primary key (unique identifier used in conceptual data design).