

(i) Printed Pages : 2

Roll No.

(ii) Questions : 9

Sub. Code :

1	3	4	5	2
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Exam. Code :

5	0	4	4
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**Bachelor of Computer Applications (FYUP) 4th Semester
(2056)**

DATABASE MANAGEMENT SYSTEM

Paper : NBCA-402

Time Allowed : Three Hours]

[Maximum Marks : 45

Note :— The students are required to attempt **ONE** question from each Section (A to D) and the compulsory question.

SECTION-A

1. (a) What is DBMS? Discuss its functions. 5
- (b) Explain ER-Diagrams with example. 4
2. Describe Architecture of DBMS. Explain the concept of data independence. 9

SECTION-B

3. (a) Discuss RDBMS. Explain Codd's Rule for an RDBMS. 5
- (b) Differentiate hierarchical and Network Data models. 4
4. What is Relational data model? Discuss basic operations of Relational Algebra with examples. 9

SECTION-C

5. What are privileges? Discuss Data Control Language in detail. 9
6. (a) What are functions? Discuss aggregate functions with examples. 4
- (b) What is the purpose of using group by and order by statement in select query? 5

SECTION-D

7. (a) What are joins? Discuss its types with examples. 5
- (b) Explain concept of cursors in PL/SQL. 4
8. What is exception handling? Discuss types of exception with examples. 9

(Compulsory Question)

9. (a) Discuss logical and physical data independence. 2
- (b) What do you mean by Functional dependency? 2
- (c) Why triggers are used? 2
- (d) Explain Date functions. 2
- (e) Explain the purpose of normalization. 1