

(i) Printed Pages : 2

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(ii) Questions : 9

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Exam. Code : 

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**B.A./B.Sc. (General) 4th Semester**

**1048**

**COMPUTER SCIENCE**

**Paper-CS07-Data Base Concepts**

**Time Allowed : Three Hours]**

**[Maximum Marks : 30**

**Note :-** Attempt **five** questions in all, select **one** each from Section A-D and Section E is compulsory.

**SECTION-A**

1. What is difference between file system approach and database approach ? 6
2. What do you mean by database approach ? Explain in detail the advantages of DBMS. 6

**SECTION-B**

3. Explain in detail 12 rules (Codd's rules) for an RDBMS. 6
4. Explain Hierarchical model. How the various operations are performed on it ? 6

**SECTION-C**

5. What is relational algebra ? How you can classify the relational algebra operations ? 6

6. (a) What is difference between relational algebra and relational calculus ? 3
- (b) What do you mean by relational calculus ? Explain various types of relational calculus. 3

### SECTION-D

7. (a) Define second normal form. Explain with the help of an example. 3
- (b) Explain various recovery techniques. 3
8. What is concurrency ? Explain concurrency control locking methods in detail. 6

### SECTION-E

#### (Compulsory Question)

9. Explain the following :
- (a) What is ER model ?
- (b) What is normalization ?
- (c) Explain distributed databases.  $2 \times 3 = 6$