

INDIAN STATISTICAL INSTITUTE
BANGALORE

INTERNAL ASSESSMENT

Bsc (Mathematics) - Final Year

Total Marks : 40

Duration : 2 Hrs.

Date : 12-03-2004

Answer for 20 Marks from Part A(By Selecting 2 Questions)

and 20 Marks from Part B

PART A

- I.a Explain the following
- a. Database
 - b. Database system
- $2 \frac{1}{2} \times 2 = 5$
- I.b Explain Data Independence and its type in detail.
- 5
- IIa Explain Three Schema Architecture in Detail
- 6
- IIb What is Database Management System
- Explain different types of Database Management system
- 4
- III Compare File processing system with Database system
- 10
- IV Display employees whose job is system Analyst
- 2
- V Display employees whose commission is between 2000 and 5000
- 2
- VI Increment salary by 15 % and commission by 5 % of salary
- 2
- Write a note on
- $5 \times 3 = 15$
- 1. Grant & revoke statements
 - 2. Views and Indexes in SQL
 - 3. Group functions in SQL
- $6 \times 3 = 18$
- VII With Examples explain
- 1. Data Definition language in SQL
 - 2. Data Manipulation Language
- 5

Staff In Charge : K Ananthapadmanabha

ANSWER ANY 5 FULL QUESTIONS

- I a. Explain Metadata and System catalogue. 5 Marks
- b. Explain Data Model, E R Model and Mapping constraints. 5 Marks
- II a. Explain logical Data Independence and physical Data Independence 5 Marks
- b. Write a Note on structured Query language 5 Marks
- III Explain with standard syntax and examples 2 x 5 = 10Marks
1. Create Table Command
 2. Create Index command
 3. Select Statement
 4. Alter Command
 5. Drop Command
- IV Using E R Model Draw and explain E R Diagram of a company database schema 10M
- V Explain : 2 x 5 = 10Marks
1. Relational Data Model & Relational DBMS
 2. Tuple of a Table
 3. Domain of an Attribute
 4. Primary Key
 5. Foreign Key
- VI Explain Advantage, Disadvantages and applications of 5 x 2 = 10Marks
1. File processing system
 2. Database system
- VII a. Explain with examples
1. Grouping by and having clause 4 Marks
 2. Aggregate functions in SQL 6 Marks
- (Max, Min, Sum, Avg, Count)