SE | IT | III (R) 30|5|13
GUI, DBM.

Con. 6614–13. **GS–6543**

(3 Hours) **[Total Marks : 100**

N.B. (1) Question No. **1** is **compulsory.**
(2) Solve any **four** questions out of remaining **six** questions.

1. (a) What is the role of a DBMS, and what are its advantages ? **10**
   (b) Explain in detail in built control and Active-x control in VB. **10**

2. (a) Explain the following terms with example :— **10**
   (i) an entity
   (ii) a weak relationship
   (iii) a strong relationship
   (iv) a recursive relationship.
   (b) Use the small database shown in **figure (1)** and answer the questions :— **10**
   (i) Identify the primary keys
   (ii) Identify the foreign keys
   (iii) Create the Entity Relationship Model (ERM)
   (iv) Create the relational database.

Table name : Student

Stud_no	Stud_name	Stud_DOB
10	Bhuvi	15–8–90
11	Dhriti	26–1–92
12	Shree	5–9–95

Table name : Subject

Sub_code	sub_name	stud_no
301 IT Th	DBMS	12
302 IT Th	OOPS	11
303 IT Th	AT	12
304 IT Th	M-III	10
305 IT Pr	DBMS	11
306 IT Pr	OOPS	12
307 IT Pr	AT	11

figure 1 small database

3. (a) Describe two-phase locking protocols and graph based protocols. **10**
   (b) Explain the use of logs and check points for recovery in a database. **10**

4. (a) Explain the terms ODBC and OLEDB. **10**
   (b) What are the features of GUI ? Explain decision making statements and loop structures statements in VB. **10**

5. (a) What do you mean by deadlocks in database system ? Explain the techniques for deadlock prevention and deadlock detection. **10**
   (b) Why trasaction processing systems usually allow concurrent executions ? Give reasons. **10**

6. (a) What do you mean by a virtual table or a view. What are its characteristics ? **10**
   (b) Write a note on relational algebra. **10**

7. Write short notes on (any **four**) :— **20**
   (a) ACID properties
   (b) OODBMS and ORDBMS
   (c) DBA
   (d) Murphy's law of GUI design
   (e) EER model.
