Reg.	No.		
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# THIRD SEMESTER DIPLOMA EXAMINATION IN COMPUTER ENGINEERING — OCTOBER, 2016

### DATABASE MANAGEMENT SYSTEM

[Time: 3 hours

(Maximum marks: 100)

#### PART-A

(Maximum marks: 10)

Marks

- I Answer the following questions in one or two sentences. Each question carries 2 marks.
  - 1. Define field and record.
  - 2. Define degree of a relation.
  - 3. State the use of triggers.
  - 4. Write the syntax for creating a virtual relation in SQL.
  - 5. State the need of normalization.

 $(5 \times 2 = 10)$ 

## PART — B

(Maximum marks: 30)

- II Answer any five of the following questions. Each question carries 6 marks.
  - 1. Write various application areas of DBMS.
  - 2. Describe the duties of a database administrator.
  - 3. Define keys.
  - 4. Summarize the notations used in E-R diagrams.
  - 5. Distinguish between inner join and outer join.
  - 6. Discuss the goals of Data Mining Technology.
  - 7. Explain transparency in Distributed databases.

 $(5 \times 6 = 30)$ 

Marks

## PART—C

(Maximum marks: 60)

(Answer one full question from each unit. Each full question carries 15 marks.)

		Unit—I	
III	(a	Explain Component Modules of DBMS. 9	
	(b	Write short notes on DBMS languages. 6	
		Or	
IV	(a)	Explain any two data models.	)
	(b)	Distinguish between two-tier and three-tier architectures for DBMS.	6
		Unit—II	
V	(a)	Explain the following relational operations with examples.	
		(i) SELECT (ii) PROJECT (iii) RENAME	9
	(b)	Explain mapping of entity types and relationship types in E-R model to relational model.	6
		OR	
VI.	(a)	Explain enhanced ER diagram with an example.	9
	(b)	Discuss the relational model concepts of a database.	6
		Unit—III	
II	(a)	Explain different aggregate functions with suitable examples.	8
		Discuss the use of stored procedures with an example.	7
	(0)	OR	
П	(a)	List the steps taken to provide database connectivity using JDBC.	9
		List and explain the operations that can be done using 'ALTER TABLE' command.	6
		Unit—IV	
X	(a)	Define Functional Dependency.	6
		Discuss parallel and distributed database architectures.	9
	(0)	OR	
	/ >		9
X	(a)	State the object oriented database concepts.	n. 6
	(b)	Explain dependency preservation and lossless join properties of decomposition	