

**People's Education Society's**  
**Dr. Ambedkar College of Commerce & Economics, Wadala, Mumbai – 400 031**  
**F.Y.B.Sc. (IT) Second Semester Examination , April 2016**

**Sub: DBMS**

**Date: 13/04/2016**

**Marks: 75**

**Time: 2 ½ hrs.**

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- I. Answer any 2 (10 marks)
- A. Explain the concept of DBMS.
  - B. Explain storage system and query processor components of database.
  - C. What is the need of data in database?
  - D. Differentiate between file system and database system.
- II. Answer any 2 (10 marks)
- A. Explain degree of abstraction of database model.
  - B. Write a brief description about network model.
  - C. Explain the building blocks of data model.
  - D. Compare various data models available.
- III. Answer any 2 (10 marks)
- A. List and explain Codd's rules
  - B. Draw E-R model of computer shoppy.
  - C. List the entities and draw ER diagram for –  
A football club has a name and a ground and is made up of players .players can be play for only one club and a manager, represented by his name manages a club. A footballer has a registration number, name, age . A club manager also buys players. Each club plays against each other club in the league and matches have a date, venue and score.
  - D. Define different database keys.
- IV. Answer any 2 (10 marks)
- A. Define Joins and its types.
  - B. Explain concept of JOIN operation in relational algebra.
  - C. Write short note on relational division operator.
  - D. Write a short note on Rename Operator.

V. Answer any 2 (10 marks)

- A. Write short note on outer joins.
- B. Explain concept of Null values.
- C. What are views? How is it created?
- D. List and explain various advantages and disadvantages of a view.

VI. Answer any 2 (10 marks)

- A. Explain time stamp ordering protocol.
- B. What are concurrent transactions? Explain.
- C. Discuss the ACID properties of transaction processing.
- D. Describe protocol that prevent Deadlock.

VII. Answer any 3 (15 marks)

- A. Explain the concept of relational database .
- B. What do you understand by currency control?
- C. Explain the difference operator in relational algebra with an example.
- D. Explain why database is needed in real world.
- E. What is an ER diagram? Explain with a neat diagram and example.
- F. What is the difference between UNIQUE and PRIMARY KEY?