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**Paper Code :DCS-103**

**Roll No.**  
**DCA-3, ADCA-3, BCA-4**  
**1st Year Examination, Academic Batch 2018**  
**Data Base Management System**

*Time : 3 Hours ]*

*[ Max. Marks : 100*

**Note.** Attempt any **five** questions. Each questions carry equal marks.

1. Explain DBMS and its characteristics? Also discuss its applications and functions.
2. Discuss modeling and types of data model?
3. Discuss ER model? Describe notations used in ER diagram? Also discuss various relation types?
4. Discuss Attributes and Entities.
5. Discuss First and second normal form.
6. Write a PL/SQL code block to calculate the area of a circle for a value of radius varying from 4 to 8. Store the radius and the corresponding values of calculated area in an empty table named as areas, consisting of two columns radius and area.
7. (a) Discuss Concurrency control  
(b) Discuss database security.
8. Write short notes on –  
(a). Select (b). Profit and Loss account  
(c). Delete from (d) Update