

**BACHELOR OF COMPUTER APPLICATIONS  
(BCA) (Pre-Revised)**

**Term-End Examination**

**01090 December, 2017**

**CS-06 : DATABASE MANAGEMENT SYSTEMS**

*Time : 3 hours*

*Maximum Marks : 75*

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**Note :** *Question number 1 is compulsory and carries 30 marks. Answer any three questions from the rest.*

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1. (a) What is DBMS ? Explain three views — *logical, conceptual and internal*, of DBMS with the help of an example. 10
- (b) Draw an ER-diagram for a Banking Management System, covering the following aspects :
- (i) Various types of accounts support
  - (ii) Various types of transactions support
  - (iii) All the operations are either initiated or managed by *account\_holder*, *dealing\_officer* or *manager*
- Show proper relationship and cardinality in your ER-diagram. 10

- (c) What is client/server computing ? Explain the components of client/server computing. Give two examples of applications of client/server computing. 10

2. (a) Consider the following relations :

Employee (empid, empname, salary, designation, deptid)

Dept (deptid, dname, hod, roomno)

Project (projid, proj\_name, proj\_detail, deptid)

Write SQL commands for the following : 10

- (i) List all the projects (project name and project description) running in the Computer Science department.
  - (ii) List the the employees (employee name and designation) who are getting the highest salary.
  - (iii) List employee names along with their hod name.
  - (iv) Display the total number of employees who are working in the Computer Science department.
- (b) Explain the need of normalization of database with the help of an example. Also define 2NF (Second Normal Form). 5

- 3. (a) What is an Object Oriented Database Management System (OODBMS) ?**  
**Explain the advantages of OODBMS over Relational Database Management System (RDBMS).** **10**
- (b) Explain referential integrity rule of DBMS with the help of an example.** **5**
- 4. (a) Explain direct file organization with the help of an example. Also explain the advantages of using direct file organization.** **10**
- (b) What is a View ? Explain two advantages and two disadvantages of using views, in brief.** **5**
- 5. Write short notes on the following :** **3×5=15**
- (a) Advantages of Data Distribution**
- (b) Network Data Model**
- (c) Knowledge Based System**
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