# **CHRIST UNIVERSITY, BENGALURU - 560029**

# End Semester Examination September/October - 2016 Bachelor of Science CME/CMS III SEMESTER

Code: CSC331 Max.Marks: 100

Subject: DATABASE MANAGEMENT SYSTEM AND SOFTWARE

ENGINEERING Duration: 3Hrs

#### **SECTION A**

Answer All Questions 10X2=20

- 1 Define DBMS. Give any two examples for DBMS.
- 2 Differentiate between weak entity set and strong entity set.
- 3 Define an entity set.
- 4 Differentiate between DROP and DELETE in SQL.
- 5 Define transaction.
- **6** Define software.
- 7 Draw a diagram of Evolutionary process flow and label it.
- **8** What is UML?
- **9** What is functional independence?
- 10 Define validation.

#### **SECTION B**

#### Answer any eight questions

8X5=40

- 11 Differentiate between logical data independence and physical data independence.
- 12 Explain the concept of a weak entity with help of an example.
- 13 Explain the concept of transitive dependency.
- 14 How are views implemented?
- 15 How does two-phase protocol ensure serializability?
- 16 Draw and explain hardware and software failure curves.
- 17 Briefly explain the five process framework for software engineering.
- 18 Explain 'Recognizing multiple view points" with respect to understanding requirements.
- 19 Explain stepwise refinement program development method.
- **20** Briefly explain unit testing and integration testing.

### **SECTION C**

## Answer any two questions.

2X10=20

- 21 Discuss the naming conventions used for ER diagrams.
- 22 Explain the first and second normal form with an example.
- 23 Consider the following relations for a database that keeps track of business trip of salespersons in a sales office:

SALESPERSON(Ssn,Name,Department,DOB)

TRIP(SSN,From City, To City,Departure\_Date,Return\_Date,Expense)

- Write SQL Query for getting Total Expense by an employee "Brinda"
- Write SQL Query for getting Department wise number of sales persons
- What are the primary and foreign keys in this table?

### SECTION D

#### Answer any two questions.

2X10=20

- You are asked to develop a huge project for banking system. Which development model would you like to choose for the development of the same? Justify your answer.
- 25 Explain scenario, class and behavioral based elements of the requirement model.
- **26** Explain software quality guidelines and attributes in software design process.