

**N.B. :** (1) Question No.1 is **Compulsory**.

- (2) Attempt any 3 questions out of rest.
- (3) Figure to the right indicate full marks.
- (4) All questions carry equal marks.

1. A Canteen wants to design database with respect to the four dimensions, customer, Food items, category and bill.
  - a) Design tables with assuming suitable attributes and normalize the database. **5**
  - b) Define primary key, foreign key with its importance in database design. List Primary and foreign key in each table of above tables. **5**
  - c) Draw Star schema and Snowflake schema for above design. **5**
  - d) Explain difference between star schema and snowflake schema **5**
2.
  - a) Define Big Data. Explain various characteristics and issues in Big Data. **10**
  - b) Define Functional area Information System. Explain Information system For Human Resource Management. **10**
3.
  - a) Define relational database. Explain its advantages and disadvantages in detail. **10**
  - b) Explain Computer based Information System with its types. **10**
4.
  - a) Explain various threats to information system. **10**
  - b) Explain Data Warehouses and Data Marts with its characteristics. **10**
5.
  - a) Explain Pervasive Computing and the technologies that provide infrastructure For Pervasive Computing. **10**
  - b) Define Business Intelligence. Explain Business Intelligence applications for Data Analysis. **10**
6. Write short notes on any two **20**
  - a) Transaction Processing System
  - b) Enterprise Resource planning
  - c) E-Commerce

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