

ADMISSION NUMBER											

School of Computing Science and Engineering

Master of Computer Applications
Mid Term Examination - Nov 2023

Duration : 90 Minutes
Max Marks : 50

Sem I - E1PA104B - Database Management System

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Match the following: 1. View level (a) Describes the part of database for a particular user group 2. Conceptual level (b) Describes the structure of whole database for community of users 40 Introduction to Database Management System 3. Internal level (c) Describes the part of database for a particular user group (a) 1-c, 2-b, 3-a (b) 1-b, 2-c, 3-a (c) 1-b, 2-a, 3-c (d) 1-a, 2-c, 3-b K2 (2)
- 2) Explain relational data model. K1 (3)
- 3) Elaborate role of database administrator in DBMS. K2 (4)
- 4) Explain the concept of data normalization in the context of databases. Demonstrate various normal forms with examples. K2 (6)
- 5) Apply Normalization database Employee(emp_id,emp_name,phone,skill,salary,deptno,dept_name,jobno,job_title) upto 3NF K3 (6)
- 6) Let R = (A, B, C, D, E) be a relation scheme with the following dependencies- $AB \rightarrow C$ $C \rightarrow D$ $B \rightarrow E$ Determine the total number of candidate keys and super keys. K3 (9)
- 7) Differentiate between primary key, candidate key and super key. K4 (8)
- 8) Construct an ER diagram for a car insurance company whose customers own or more cars each. Each car has associated with it zero to any number of recorded accidents. Each insurance company covers one or more cars and has one or more premium payments associated with it. Each payment is for a particular period of time and has an associated due date and the date when the payment was received. K4 (12)

OR

Construct an E-R diagram for a hospital with a set of patients and a set of medical doctors. Associate with each patient a log of the various tests and examinations conducted. K4 (12)