Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

School of Computer Science and Engineering
CONTINUOUS ASSESSMENT TEST - I
WINTER SEMESTER 2024-2025

SLOT: B1

Programme Name & Branch : B.Tech.-CSE with Business Systems
Course Code and Course Name : CBS1007 Database Systems
Faculty Name(s) : Dr. P.Natarajan
Class Number(s) : VL2024250505147
Date of Examination : 28-1-2025
Exam Duration : 90 minutes
Maximum Marks: 50

General instruction(s):

- Answer All Questions
- M - Max mark; CO – Course Outcome; BL – Blooms Taxonomy Level (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)
- Course Outcomes (Type the CO statements covered in this question paper. Use the CO number as per the syllabus copy)
  1. Acquire a good understanding of the architecture and functioning of database management systems
  2. Ability to construct an ER model and derive the relational schemas from the model

Q. No	Question	M	CO	BL
1.	You are working as a database designer in Amazon. You have to sell various consumable products though site and you are in charge for sales and stock maintenance. State the purpose of database systems for this given application.	10	1	2
2.	Draw the database architecture which has the shared memory concept. Explicate the database architecture functionality of each and every component involved on it.	10	1	1
3.	What is data abstraction in database management system? Explain levels of data abstractions in database management system with suitable diagram and example.	10	1	2
4.	Suppose you are given the following requirements for a simple database for the National Food Ball Tournament (NFBT) : · The NFBT has many teams, · Each team has a name, a city, a coach, a captain, and a set of players, · Each player belongs to only one team, · Each player has a name, a position (such as left wing or goalie), a skill level, and a set of injury records, · A team captain is also a player, · A game is played between two teams (referred to as host_team and guest_team) and has a date (such as May 11th, 2024) and a score (such as 4 to 2). Construct a clean and concise ER diagram for the NFBT database using ER diagram notation as in your textbook. List your assumptions and clearly indicate the cardinality mappings as well as any role indicators in your ER diagram.	10	2	4
5.	Identify the classification of classes in Object oriented data models. Apply the identified class classification in the domain of an attribute.	10	2	3