Internal Assessment Question Paper – 1

Ramaiah Institute of Technology
(Autonomous Institute, Affiliated to VTU)
Department of Computer Science and Engineering

Programme: B.E	**Term:** Oct 2021 – Feb 2022	**Max Marks:** 30
CIE: Test 1	**Subject:** Database Systems	**Subject Code:** CS52
Credits: 3:1:0		**Sem:** 5 Sec: A, B, C
Date: 06/12/2021	**Time:** 10:30 – 11:30 AM	**Portions for Test:** L1 – L12, L16

Instructions to Candidates:

1. 1st Question is compulsory. Answer any one full question from 2 or 3.
2. Each Question carries 15M.
3. Mobiles, smart watches or any electronic gadgets are strictly banned.

Sl #		Question	Marks	Bloom's Level	CO Mapping
1	a.	With a neat diagram, explain 3-schema architecture of a DBMS.	05	L2	CO1
	b.	Construct an E R diagram to record information about reality shows on different channels. Your database needs to record the following information: • For each reality show, its name, genre, basic_info and participants' name have to be tracked. Any reality show has at least two or more participants. • For each producer, the company name and company country has to be tracked. A show is produced by exactly one producer. And one producer produces exactly one show at a time. • For each channel, its name, start year and head office has to be tracked. A channel may broadcast multiple shows. Each show is broadcasted by exactly one channel. • For each user, his/her username, password, and age has to be tracked. A user may rate multiple shows, and a show may be rated by multiple users.	05	L3	CO1
	c.	Define Union compatibility. Consider the following publishing schema BOOKS (BookId, Title, Publisher, Year) STUDENTS (StId, StName, Major, Age) AUTHORS (AName, Address) BORROWS (BookId, StId, Date) HAS-WRITTEN (BookId, AName) DESCRIBES (BookId, Keyword) Write relational algebra queries for the following. 1. List the title of all books published by McGraw-Hill in the year 1990. 2. List the name of students majoring in 'CS'.	05 (2+1.5+ 1.5)	L3	CO2