

Reg. No.:

Name :



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**Mid-Term Examinations, October 2021**

Programme	: <b>B.Tech – AI&amp;ML,BHI</b>	Semester	: <b>Fall 2021-22</b>
Course	: <b>Database Management Systems</b>	Code	: <b>CSE3001</b>
Faculty	: <b>Ms.E.Suganya</b>	Slot/Class no.	: <b>A21+A22+A23/ 0367</b>
Time	: <b>1½ hours</b>	Max. Marks	: <b>50</b>

**Answer all the Questions**

Q.No.	Sub . Sec.	Question Description	Marks																				
1		Define data abstraction and elucidate the levels of abstraction with a neat sketch.	10																				
2		<p>Draw an ER diagram to capture the requirements as stated below:</p> <p>A database is needed to capture information pertaining to the running of various clubs by the recreation cell of an institution. Details such as name, date of birth, gender are needed for each member. Club details are needed such as the activity type (oratorical, music, dance, instrumental music etc) and contact phone number. Team details required include team name and the days on which the team practices. Tutor details such as tutor name, address and telephone number are also needed, along with details of the skill each tutor is qualified in.</p> <p>Rules governing the involvement of members and tutors in the teams and clubs are as follows: members may head only one team and every team has to have a head. Tutors teach at least one team and every team has at least one tutor. Every member must belong to at least one team and each team has a number of members. Every team must belong to a club and clubs must have at least one team. Every club has a member who is the president but a member may only be president of one club.</p>	10																				
3		<p>The following table in Un normalized (UNF). Please convert this table to the BCNF using the techniques you learned in this Unit.</p> <table><tr><th>Employee ID</th><th>Employee Name</th><th>City</th><th>Department</th></tr><tr><td>101</td><td>Amit</td><td>Kolhapur</td><td>OBIEE,COGNOS</td></tr><tr><td>102</td><td>Divya</td><td>Indore</td><td>COGNOS</td></tr><tr><td>103</td><td>Yodhini</td><td>Hydrabad</td><td>SIEBEL</td></tr><tr><td>104</td><td>Amit</td><td>Kolhapur</td><td>ETL</td></tr></table>	Employee ID	Employee Name	City	Department	101	Amit	Kolhapur	OBIEE,COGNOS	102	Divya	Indore	COGNOS	103	Yodhini	Hydrabad	SIEBEL	104	Amit	Kolhapur	ETL	10
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Give the following queries in the relational algebra using the relational schema.

### Movies

title	director	myear	rating
Fargo	Coen	1996	8.2
Raising Arizona	Coen	1987	7.6
Spiderman	Raimi	2002	7.4
Wonder Boys	Hanson	2000	7.6

### Actors

actor	ayear
Cage	1964
Hanks	1956
Maguire	1975
McDormand	1957

### Acts

actor	title
Cage	Raising Arizona
Maguire	Spiderman
Maguire	Wonder Boys
McDormand	Fargo
McDormand	Raising Arizona
McDormand	Wonder Boys

### Directors

director	dyear
Coen	1954
Hanson	1945
Raimi	1959

1. Find movies made after 1997.
2. Find movies made by Hanson after 1997.
3. Find all movies and their ratings.
4. Find Coen's movies with McDormand.

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		5. Find movies with Maguire but not McDormand.	
5		<p>Consider the following schema definitions:  Branch (branchNo, street, city, postcode)  Staff (staffNo, fName, lName, position, DOB, salary, branchNo)  Answer the following sql queries.</p> <p>a) List the address of all branch offices in London or Bristol.  b) List the staff with a salary between \$10000 and \$30000.  c) List the staff in descending order of salary.  d) List the staffs who work in the branch whose street address is '163 Main Street'.  e) List the first names of staff whose last name ends with 'a'.  f) lists the number of Staff in each Branch.</p>	10

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