

## Daffodil International University Department of Software Engineering Faculty of Science & Information Technology Final Examination, Spring 2024 Course Code: SE 223; Course Title: Database Systems Sections & Teachers: NJ, KRA, AM

## Time: 2:00 Hrs

Marks: 40

## Answer <u>ALL</u> Questions [The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

Employee											
Employee_	id Employ	ee_name	Department_ID	Department							
101	Ste	ven	200	HR Finance Marketing							
202	Johr	Doe	201								
301	I	.ex	114								
402	Alex	ander									
501			203	Accounting							
Salary Bruce			121	IT							
EMPLOY	EE_ID Salary	PHONE_NUM	IBER HIRE_DATE	Department ID	ا ۲						
101	20000	515123456		200	-		CLO-3 Level-3				
202	3598	524123456	57 2005-09-21	201	-						
301	3000	515125856	57 2001-01-13	114	[Marks-10	[Marks-10]					
404	79000	515124856	57 2006-01-03	203							
505	348799	51548956	7 2005-06-25	121	_						
102	12390	57848956	2000 01-03	123	_						
<ul> <li>Develop SQL queries for the given question:</li> <li>a. Retrieve the average salary for each department.</li> <li>b. Find all employees who earn more than John Doe.</li> <li>c. Find those employees who earn more than the average salary.</li> <li>d. Count the number of employees in each department.</li> <li>e. Get the details of employees who work in the "Marketing Department".</li> <li>f. Find all employees who do not have a salary entry.</li> <li>g. Get the employee information whose name starts with "A".</li> <li>h. Find the phone numbers of those employees who were hired between 17th June 2003 and 3rd January 2006.</li> <li>i. Find all employees whose salary is higher than the average salary of their department.</li> </ul>											

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For more questions: https://diuqbank.com | Uploader: Md Rohejul Islam Hemal

2.	$\top$									
2.		Consider the DIU library borrowed a		$\left[ \right]$						
		borrowed a l StudentID: ( StudentNam StudentEma StudentPho BorrowID: (								
		BookID	BookName	Auth	orName	Publisher				
		04	To Kill a Mockingbi	rd Harpe	Lee	HarperCollins				
		05	1984	Georg	Orwell	Penguin Books				
			The Great Gatsby		et Fitzgerald	Scribner				
	<i>a)</i>	from those t	the table from 1NF ables given in ques	up to BCNF; existion 2 with properties	amining ever er explanatio	y step of the process	[Marks-6]			
2	b)	Distinguish above tables	[Marks-4]	CLO-4 Level-4						
1	10	List the norr databases.	[Marks-4]	-						
	<i>d</i> )	Analyze fou	r anomalies that m		Marke (1					
	e)	Student_Id Student name Student Address G					[Marks-4] [Marks-2]	-		
		Explain the	e current normalizat			Course_title				
3.	a)	Explain the current normalization level of the given table.         Establish an Entity relationship diagram based on the tables given in question 2 [Marks-5] CL with appropriate attribute type, cardinality, and relationship.								
4.	a)	<b>Demonstra</b> properties, a		Level-3						
	b)	<b>Define</b> eac integrity, ar	[Marks-2]	CLO-5 Level-2						
					ansactions.					