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Daffodil International University
Department of Software Engineering
Quiz-1, Fall-2025

Course Title: Database System **Course Code: SE 223**
Section: 43-D **Teacher: CP**
Time: 30 Minutes **Marks: 15**

ID: _____ **Sec: _____**

[The figures in the right margin indicate the full marks. Responses must be written in the designated space, as no additional pages will be provided]

Q-1 :
Company_1

Employee ID	Name	Age	Department Name
1	Anika	26	HR
2	Rashed	29	IT
3	Mizan	31	HR

Company_2

Employee ID	Name	Age	Department Name
1	Tania	24	Finance
2	Arman	31	Marketing
3	Farhan	23	Finance

Using Relational Algebra,

1. Display the employee names along with their corresponding department names from the Company_1 table. **[1]**
2. Display the **names** of the employees from the Company_2 table where the name begins with 'A'. **[1]**
3. Display the **names and ages** of the employees who work in the Finance department. **[2]**
4. Display the **names and ages** of **all employees** from both tables. **[2]**
5. Display the ages from Company_1 table that are not present in Company_2 table. **[2]**

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Q-2 :

Assume a **Movie Production System** where each production company can produce many movies and each movie is directed by one director. Every movie features multiple actors and one actor can act in multiple movies. A director can choose multiple actors for a movie. A senior actor can mentor another junior actor. **Movies** are attributed with Movie_ID, Name, Release_Date and Budget. **Production Companies** are attributed with Company_ID, Name, Headquarters and Established_Year. **Directors** are attributed with Director_ID, Director_Name, Experience_Years and Awards_Won. **Actors** are attributed with Actor_ID, Actor_Name, Date_of_Birth, Phone and Address, where Address is further divided into Present_Address and Permanent_Address.

Now, draw an ER diagram denoting the entities, types of attributes and proper cardinalities based on the above description [7]

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