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|  | **Database Management Systems**  **BSCS-4**  **Department of Computer Science**  **Bahria University, Lahore Campus** |

**Quiz: 4**

Date: Week 15, 2 January 2024

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Roll No: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Evaluation of CLO** | **Question Number** | **Marks** | **Obtained Marks** |
| **CLO: analysis user requirements to design a database for the given scenario.** |  |  |  |
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|  |  |  |
| **Total Marks** | | **10** |  |

**Question 1:**

|  |  |  |
| --- | --- | --- |
| ProjectID | EmployeeName | EmployeeSalary |
| 100a | Adnan | 65000 |
| 100a | Salman | 5100 |
| 100b | Salman | 51000 |
| 200a | Adnan | 64000 |
| 200b | Adnan | 64000 |
| 200c | Amir | 28000 |
| 200c | Salman | 51000 |
| 200d | Amir | 28000 |

PROJECT (ProjectID, EmployeeName, EmployeeSalary)

where ProjectID is the name of a work project

EmployeeName is the name of an employee who works on that project

EmployeeSalary is the salary of the employee whose name is EmployeeName

Assuming that all of the functional dependencies and constraints are apparent in data, which of the following statements is true?

1. ProjectID > EmployeeName
2. ProjectID > EmployeeSalary
3. (ProjectID, EmployeeName) > EmployeeSalary
4. EmployeeName > EmployeeSalary
5. EmployeeSalary > ProjectID
6. EmployeeSalary > (ProjectID, EmployeeName)

**Answer these questions:**

1. What is the key of PROJECT?
2. Are all non-key attributes (if any) dependent on the whole key?
3. In what normal form is PROJECT?
4. Describe two modification anomalies from which PROJECT suffers.
5. Is ProjectID a determinant?
6. Is EmployeeName a determinant?
7. Is (ProjectiD, EmployeeName) a determinant?
8. Is EmployeeSalary a determinant?
9. Does this relation contain a partial dependency? If so, what is it?
10. Redesign this relation to eliminate the modification anomalies.