**Princess Sumaya University for Technology**

**King Hussein School for Information Technology Computer Science Department**

**Database Systems Quiz4**

**Student Name: Student ID:**

**Q1. Choose the correct answer and fill in the table [5 Pts]**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| B | AB |  |  |  |

Observe the **ENROLLMENT** **AND** **COURSE** database, and answer the following five MCQs:

|  |  |
| --- | --- |
| ***Enrollment*** | ***Course*** |
| |  |  |  |  | | --- | --- | --- | --- | | ***EmpID*** | ***EmpName*** | ***CourseID*** | ***Bonus*** | | *111* | *Joe* | *AMG* |  | | *222* | *Bob* | *AMG* | *3* | | *333* | *Lisa* | *PMG* | *3* | | *444* | *Sue* | *AMG* |  | | *555* | *Lisa* | *PMG* | *5* | | *666* | *Ali* |  |  | | *777* | *Manal* |  |  | | *888* | *Jamal* |  |  | | |  |  | | --- | --- | | ***CourseID*** | ***CourseName*** | | *AMG* | *Anger Management* | | *PMG* | *Project Management* | | *EMG* | *Easy Management* | | *SMG* | *Sandy Management* | |

**Choose the option that correctly answers the question.**

1. **What is the result of the following query?**

Select count(Bonus) from Enrollment;

A. 2 B. 3 C. 1 D. 11

1. **How many rows will the following query return?**

Select Count(\*) From Enrollment Group By courseId;

A. 2 B. 3 C. 5 D. 8

1. **How many rows will the following query return?**

Select Distinct EmpName, CourseID From Enrollment Order By EmpName Desc;

A. 3 B. 4 C. 5 D. 7

1. **How many rows will the following query return?**

Select \* From Course Where CourseName like '\_a%';

A. 2 B. 4 C. 5 D. 1

1. **How many rows will the following query return?**

Select \* From Enrollment E full outer join Course C On E.courseId = C.courseId;

A. 5 B. 7 C. 10 D. 12

**Q2. Considering the Insurance Database below, answer the following questions by writing the proper SQL statement that ` [5 Pts]**

|  |  |
| --- | --- |
| ***Client*** | ***Area*** |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | ***ClientID*** | ***ClientName*** | ***AgentID*** | ***ClientSpouseName*** | ***ClientIncome*** | | *C111* | *Tom* | *A1* | *Jenny* | *102,000* | | *C222* | *Karin* | *A1* | *Bill* | *105,000* | | *C333* | *Cole* | *A2* | *Amy* | *80,000* | | *C444* | *Dorothy* | *A2* |  | *90,000* | | *C555* | *Andy* | *A3* | *Amy* | *70,000* | | *C666* | *Tina* | *A4* | *Matt* | *180,000* | | *C777* | *Christina* | *A5* | *Mike* | *200,000* | | |  |  |  | | --- | --- | --- | | ***AreaID*** | ***AreaName*** | ***AreaHQ*** | | *1* | *East* | *Boston* | | *2* | *West* | *San Francisco* | | *3* | *Central* | *Chicago* | | *4* | *South* | *Memphis* | |
| ***Agent*** | |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | ***AgentID*** | ***AgentName*** | ***AgentArea*** | ***AgentRating*** | ***AgentYearOfHire*** | ***SupervisedBy*** | ***AgentSalary*** | | *A1* | *Kate* | *1* | *101* | *1990* |  | *102,000* | | *A2* | *Amy* | *2* | *92* | *2009* | *A1* | *100,000* | | *A3* | *Luke* | *2* | *100* | *1992* |  | *101,000* | | *A4* | *James* | *3* | *90* | *2010* | *A3* | *90,000* | | *A5* | *Salcedo* | *3* | *100* | *2018* | *A1* | *80,000* | | |

1. **adds the column ClientPhone to the table CLIENT with a proper datatype. [1 Pt]**

|  |
| --- |
| *ALTER TABLE client ADD (clientphone CHAR(12));* |

1. **for each area that has agents, displays the area id and the number of agents in the area. [1 Pt]**

|  |
| --- |
| *SELECT agentarea, COUNT(\*)*  *FROM agent*  *GROUP BY agentarea;* |

1. **moves the agent whose agent ID value is *A3* to the area whose area ID is 1. [1 Pt]**

|  |
| --- |
| *UPDATE agent*  *SET agentarea = '1'*  *WHERE agentid = 'A3';* |

1. **retrieves the name of each client who has no spouse. [1 Pt]**

|  |
| --- |
| *SELECT clientname*  *FROM client*  *WHERE clientspousename IS NULL;* |

1. **displays the name of each client of the agent with the highest agent rating in the company. [1 Pt]**

|  |
| --- |
| *SELECT c.clientname*  *FROM client c, agent a*  *WHERE c.agentid = a.agentid AND a.agentrating = (SELECT MAX(agentrating) FROM agent);* |