**Computer Science and Information Technology Department, UoB, Quetta**

**Course: Database Systems**

**Terminal Exam 2020**

**BSCS (2017-21) Roll No: \_\_\_\_\_\_\_\_\_\_ Max marks: 40**

**Question No 1:** A food recipe has many ingredients, each ingredient is used in a specific quantity. Every recipe has a detailed set of instructions. Create an entity relationship diagram to model the data for food recipes.

**Question No 2:** Normalize the following data to 1st 2nd and 3rd Normal form.

|  |  |  |  |
| --- | --- | --- | --- |
| **Full Name** | **Address** | **Movies Rented** | **Salutation** |
| Tufail Ahmed | Sariab Road | Iron Man | Mr. |
| Asim Raza | Jinnah Road | Avatar, Iron Man | Mr. |
| Asma Zafar | Samungli Road | Avator, Hobbit | Ms. |
| Benish Rehman | Toghi Road | Hobbit, Avator | Ms |

**Question No 3:** What is transaction? What is their importance in a database system? Support your answer with an example.

**Question No 4:** What does concurrency mean? What is concurrency control?