



UNIVERSITY OF THE PUNJAB

B.A. / B.Sc. Part-II
Annual Exam - 2017

Roll No.

Subject: Computer Studies-II

PAPER: A (Database Managt Systems, System & Network Adminst.)

TIME ALLOWED: 3 hrs.

MAX. MARKS: 70

Note: Attempt THREE questions from Part I and THREE questions from Part II

Part I (Database Management Systems)

Max Marks: 35

Note:

1:-Question 1 in part-I is compulsory.

2:-Attempt any TWO questions from the remaining questions in part-I

Q1) Choose the most appropriate option for the following statements and write on the provided answer sheet. (Please write only correct options, no need to write whole Answer). (Marks:10)

1) Which SQL statement is used to manipulate data in a database?

- A). UPDATE
B). SAVE AS

- C). MODIFY
D). SAVE

2) Rows of a relation in relational database are called

- A) Tuples B) a Relation row C) a data structure D) an entity

3) A table is in second normal form (2NF) if:-----

- A). It includes no partial dependencies.
B). It includes no transitive dependencies.
C). It is in first normal form (1NF) and it includes no partial dependencies.
D). It is in first normal form (1NF) and it includes no transitive dependencies

4) Dependency based on only a part of a composite primary key is called-----

- A). Functional dependency C). Transitive dependency
B). Partial dependency D). Primary key dependency

5) In an E-R diagram relationship is represented by

- A) Circles B) Rectangles C) Diamond shaped box D) Ellipse

6) A person, place, object, event, or concept in the user environment about which the organization wishes to maintain data refers to a(n):-----

- A). Attribute. D). Entity.
B). Data element. E). Process.
C). Relationship.

7) BCNF stands for:-----

- A). Biased-Code Normal Form
B). Base-Coded Normal Form
C). Boyce-Codd Normal Form
D). Base-Conversion Normal Forum

8) Which SQL statement is used to delete data from a database?

- A) ALTER B) DELETE C) REMOVE D) CANCEL

9) With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" is "UMAR"?

- A) SELECT [all] FROM Persons WHERE FirstName=' UMAR '
B) SELECT * FROM Persons WHERE FirstName LIKE ' UMAR '
C) SELECT [all] FROM Persons WHERE FirstName LIKE ' UMAR '
D) SELECT * FROM Persons WHERE FirstName=' UMAR '

10) Pick the relationship from the following:

- A) a classroom B) Teacher C) Attends D) Cost per dozen

Q2) Identify entities, attributes and relationships, Also draw an E-R Model for the Road Tour Bus Company. Use the following requirements and take your own assumptions (if needed) (Marks:3.5+9=12.5)

A Road Tour Bus Company owns a number of busses. Each bus is allocated to a particular route, although some routes may have several busses. Each route passes through a number of towns. One or more drivers are allocated to each stage of a route, which corresponds to a journey through some or all of the towns on a route. Some of the towns have a garage where busses are kept and each of the busses are identified by the registration number and can carry different numbers of passengers, since the vehicles vary in size and can be single or double-decked. Each route is identified by a route number and information is available on the average number of passengers carried per day for each route. Drivers have an employee number, name, address, and sometimes a telephone number.

Q3) (a) Write a note on Client-Server Database Applications. (Marks:6)

(b) Define database and also discuss advantages of database processing systems. (Marks:6.5)

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- Q4) (a) Write SQL Statement: (Marks:6)**
- Which Create the following table Employee
 - Which insert the following given data in Employee Table
 - Which display average salary of employees?

| Employee | | |
|----------|-----------|--------|
| Emp Name | Address | Salary |
| Waseem | Quetta | 35000 |
| Imran | Islamabad | 45000 |
| Khurram | Karachi | 30000 |

- (b) Define database key? And also discuss different types of database keys with examples. (Marks:6.5)**

Part-II (Operating Systems and Networks) Max Marks: 35

Note:

- 1:-Question 5 in part-II is compulsory.**
- 2:-Attempt any TWO questions from the remaining questions in part-II**

Q5) Choose the most appropriate option for the following statements and write on the provided answer sheet. (Please write only correct options, no need to write whole Answer). (Marks:10)

- The short term process scheduler is also called.....
A) Swapper B) Dispatcher C) Thread
- A cable break in a topology stops all transmission.
A) Mesh B) Bus C) Star D) Primary
- A process is that set of instructions brought to life, a dynamic entity performing actions as prescribed by the code.
A) True B) False C) Statement is not clear
- On interactive systems, the average time it takes the system to start responding to user inputs is called.....
A) Response time B) Turnaround time C) Wait time D) None of them
- Round Robin (RR) is preemptive process scheduling algorithm.
A) True B) False C) Statement is not clear
- Which topology features a point-to-point line configuration?
A) Mesh B) Ring C) Star D) All of them
- In the..... layer, the data unit is called a frame.
A) Physical B) Data link C) Network D) Transport
- Aprocess is one that shares information with or controls the sequence of instructions executed by another process.
A) Shared B) Integrating C) Cooperating D) Binding
- Dialog control is a function of thelayer.
A) Transport B) Session C) Presentation D) Application
- Shortest Job First (SJF) is non-preemptive process scheduling algorithm
A) True B) False C) Statement is not clear

Q6) Define the following: (Marks:12.5)

- Thread
- Heavy weight Process
- Light weight Process
- Swapper
- Dispatcher

Q7) (a) Discuss Briefly Operating System Kernel. (Marks:6.5)

(b)What is a Process and also discuss different states of Process. (Marks:6)

Q8) Discuss briefly Functions of Data Link and Presentation Layer of OSI Model. (Marks:6+6.5= 12.5)