Date: _____

Q#1

① Publisher (Publisher ID , Publisher Name , Address)
- → Publisher ID (int , Primary key)
- → Publisher Name (~~string~~) (varchar)
- → Address (~~string~~)(varchar)

② Author (Author ID , AuthorName, Gender, Birthdate , Country)
- → Author ID (int , Primary key)
- → Author Name (~~string~~) (varchar)
- → Gender (~~string~~)(varchar)
- → Birthdate (~~date~~)
- → Country (~~string~~) (varchar)

③ Book (ISBN, Author ID, Publisher ID , Publish Date , Book Title)
- → ISBN (int , Primary key)
- → Author ID (Foreign key ~~from~~ Author Table , int)
- → Publisher ID (Foreign key ~~fom~~ Publisher Table, int)
- → Publish Date (date)
- → Book Title (~~string~~) (varchar)

1) Insert into Publisher values (1 , "Ali" , "Johar Town")
2) // // // (2 , "Hamza" , "Askari 10")
3) (3 , "Tariq" , "Dream Villas")
4) // // // (4 , "Mustafa" , "Thokar")
5) (5 , "Irfan" , "Canti")

Date:

1) Insert into Author values (1, "Ali", "Male", 1990-7-3, "Pakistan")
2) // // // (2, "Hamza", "Male", 1992-8-2, "India")
3) (3, "Tariq", "Male", 1994-6-4, "Russia")
4) // // // (4, "Mustafa", "Male", 1984-8-2, "Iran")
5) (5, "Irfan", "Male", 1990-4-6, "China")

1) Insert into Book values (12345, 1, 1, 1990-7-3, "Wimpy kid")
2) // // // (32146, 2, 2, 1992-8-2, "Two Kites")
3) (32894, 3, 3, 1994-6-4, "Blade Runner")
4) // // // (56829, 4, 4, 1984-8-2, "Money")
5) (32894, 5, 5, 1990-4-6, "Political Science").

Q#2

Customer (table)
→ CustomerID (varchar(10))
→ Name (~~String~~) (varchar)
→ Gender (~~String~~) (varchar)
→ Contact no (varchar(15))
→ Address (varchar)
→ Type (varchar)
→ AccountID (int) (foreign key (account table)).

Account (table):
→ Account ID (int) (Primary key)
→ Customer ID (int) (Foreign key (Customer table))
→ Accounte type (varchar)
→ Balance (float)

Date: _____

Transaction (table):

- → TransactionID (varchar) (Primary key
- → Account ID (varchar / int) (Foreign key (Accounts table)).
- → Date (date)
- → Amount (float)

Product (table):

- → Product ID (varchar)
- → Name (varchar)
- → Description (varchar)
- → Category (varchar)

Q#3

AB	CD	We can verify all these by reducing them. Therefore all these are candidate keys.
AC	ABC	
AD	ABD	
BC	ACD	
BD	BCD	
	ABCD	

Q#4

(1) (a) Unsuccessful because primary key cant be null.
(b) Successful however one row is affected
(c) Unsuccessful because primary key cant be null
(d) Unsuccessful because there cannot be duplicates in primary key
(e) Unsuccessful because it violates referential integrity constraint for CustomerID and productID.

Date: _____

(2) (a) One row will be deleted and also 1 other because of it being a foreign key (from Production Table).

(b) One row will be deleted successfully.

(c) One row will be successfully deleted.

(d) 2 rows will be deleted successfully from Order Table.

(e) No row will be deleted

(3) (a) 3 rows deleted (1 from Product Table, 1 from Production Table 1 from Order Table).

(b) 2 rows deleted (1 from Customer Table, 1 from Order Table).

(c) 2 rows deleted from Production Table

(d) 3 rows deleted from Order Table

(e) No row affected.

(4) (a) Unsuccessful, referential integrity constraint violation.

(b) " " " "

(c) 2 rows will be affected

(d) No row affected.

(e) Unsuccessful,

(5) (a) 2 rows will be affected (1 from Customer Table 1 from Order Table)

(b) 2 rows will be updated (1 from Product table, 1 from Production Table)

(c) 1 row will be affected

(d) 2 rows will be affected

(e) Unsuccessful, primary key cannot be null.

Date: _____

(6) (a) error
(b) successful
(c) 1 row updated
(d) 2 rows updated
(e) Unsuccessful, primary key cannot be null.

(7) (a) Referential Integrity Constraint
(b) Unsuccessful, violation error
(c) 1 row updated
(d) 2 rows updated
(e) primary key cannot be null, constraint violation

Q#5

Date	YYYY	MM	DD					
Time	HH	MI	SS					
Date-Time	YYYY	MM	DD	:	HH	MI	SS	

functions:

1. Get Date()
2. Date Add()
3. Date Diff()
4. Date format()
5. Convert()
6. Year(), Month(), Day()

Date: _____

Q#6

A composite key is a key that consists of more than one column. A composite primary key is a combination of two or more columns that uniquely identifies each row in a table. A foreign key is a combination of 2 or more columns in a child table that references a composite primary key

Example:

```
Order Table ():
    Order ID    int  Primary key,
    Customer ID  int,
    Amount      int,
    Order date   date,
    Constraint pk_orders primary key (customerID, orderdate)
```

Here we can see that the orders table has 2 composite primary keys