

Part B

Instructions to candidates

Number of questions: Six (06) structured questions

Answer all questions on the given space

Mark allocation: 60

1. Briefly explain "View" in Database Management System (DBMS).

(4 mark)

2. Draw Entity Relationship (ER) diagrams for below scenario.

In a university, a student enrolls in courses. A student must be enrolled at least one or more courses. Each course is taught by a single professor. To maintain instruction quality, a professor can deliver only one course.

(15 mark)



3. List three (03) advantages of Database Management Systems(DBMS).

(6 mark)

4. List four (04) phases in database design.

(4 mark)

5. A video library maintains a database of movies rented out. All the information is stored in one table as shown below (Table 1). Convert that database to 3NF. (Note: Write any assumptions you make about the data.)

Initial database schema: Movie (nic_no,name,address,movies_rented ,category)

Table 1: Movie table

nic_no	name	address	movies_rented	category
1234	Janet	First Street Plot No 4	Pirates of the Caribbean	Action
			Clash of the Titans	Action
1235	Robert	3 rd Street 34	Forgetting Sarah Marshal	Romance
			Daddy's Little Girls	Romance
1257	Robert	5 th Avenue	Clash of the Titans	Action



a. 1NF

(5 mark)

b. 2NF

(5 mark)

c. 3NF

(5 mark)



6. Consider the salesmen DBMS table given below to answer the following question.

Table 2 (salesmen table)

salesman_id	name	city	commission
5001	James Hoog	New York	0.15
5002	Nail Knite	Paris	0.13
5005	Pit Alex	London	0.11
5006	Mc Lyon	Paris	0.14
5003	Lauson Hen	Null	0.12
5007	Paul Adam	Rome	0.13

a. Write a SQL statement to find the salesmen with all information who come from the city either Paris or Rome.

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(5 mark)

b. Write a SQL statement to find the salesmen with all information who gets the commission within a range of 0.12 and 0.14.

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(5 mark)

c. Write a SQL statement to find the salesmen with all information whose name's 1st character is 'N' and the 4th character is 'l' and rests may be any character.

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(5 mark)

