

Monthly Test – Computer Science

Class: XII Marks :70

Date: 24 -05-19 Time : 3hrs

**Section - A**

**I. Answer the following**

1. What are the set difference and set intersection operations? How are they different? (2)
2. What are the three levels of data abstraction? (2)
3. What do you understand by data independence? (2)
4. What are the two types of data independence? How they different? (3)
5. Name the different data models available for database system. Which of them is the most preferred one? (3)
6. What are the similarities and differences between network and hierarchical data models? (2)
7. Draw a diagram explaining various levels of data abstraction. (2)
8. What are views? How are they useful? (2)

**Section – B**

**II. Answer the following**

 9. What are the main difference between a file-processing system and a

 database management system? (6)

10. What is relation? Define the properties of a relation. (6)

11. Define the following terms (4)

 (i)Relation (ii)Tuple (iii)Attribute (iv)Domain

12. Define the following terms (4)

 (i)Cardinality (ii)Unique key (iii)Cartesian product (iv)Degree

13. Define the following (4)

 (i)Primary key (ii)Candidate key (iii)Alternate key (iv)Foreign key

14. What are the set difference and set intersection operations? How are they different? (4)

15.What are the main difference between a file-processing system and a database management system? (4)



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16. Explain the concept of UNION between two tables, give appropriate example. (5)

17. Explain the concept of INTERSECTION between two tables, give appropriate example. (5)

18. Write the SQL query commands based on following table (10)

## Table : Book

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Book\_id | Book name  | Author\_name  | Publisher | Price  | Type  | Quantity  |
| C0001 | Fast Cook  | Lata Kapoor  | EPB  | 355 | Cookery  | 5  |
| F0001  | The Tears  | William Hopkins  | First Publi.  | 650 | Fiction  | 20 |
| T0001  | My First c++ | Brain & Brooke  | FPB  | 350 | Text | 10 |
| T0002 | C++ Brain works  | A.W. Rossaine  | TDH  | 350 | Text | 15 |
| F0002 | Thunderbolts  | Anna Roberts  | First Publ.  | 750 | Fiction  | 50  |

Table : issued

|  |  |
| --- | --- |
| Book\_Id  | Quantity Issued  |
| T0001 | 4 |
| C0001  | 5 |
| F0001  | 2  |

Write SQL query for (a) to (f)

1. To show book name, Author name and price of books of First Pub. Publisher
2. To list the names from books of text type
3. To Display the names and price from books in ascending order of their prices.
4. To increase the price of all books of EPB publishers by 50.
5. To display the Book\_Id, Book\_name and quantity issued for all books which have been issued
6. To insert a new row in the table issued having the following data. ‘F0003’, 1
7. Give the output of the following
	* 1. Select Count(\*) from Books
		2. Select Max(Price) from books where quantity >=15
		3. Select book\_name, author\_name from books where publishers=’first publ.’
		4. Select count(distinct publishers) from books where Price>=400

16. Explain the concept of UNION between two tables, give appropriate example. (5)

17. Explain the concept of INTERSECTION between two tables, give appropriate example. (5)

18. Write the SQL query commands based on following table (10)

## Table : Book

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
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| F0001  | The Tears  | William Hopkins  | First Publi.  | 650 | Fiction  | 20 |
| T0001  | My First c++ | Brain & Brooke  | FPB  | 350 | Text | 10 |
| T0002 | C++ Brain works  | A.W. Rossaine  | TDH  | 350 | Text | 15 |
| F0002 | Thunderbolts  | Anna Roberts  | First Publ.  | 750 | Fiction  | 50  |

Table : issued

|  |  |
| --- | --- |
| Book\_Id  | Quantity Issued  |
| T0001 | 4 |
| C0001  | 5 |
| F0001  | 2  |

Write SQL query for (a) to (f)

1. To show book name, Author name and price of books of First Pub. Publisher
2. To list the names from books of text type
3. To Display the names and price from books in ascending order of their prices.
4. To increase the price of all books of EPB publishers by 50.
5. To display the Book\_Id, Book\_name and quantity issued for all books which have been issued
6. To insert a new row in the table issued having the following data. ‘F0003’, 1
7. Give the output of the following
	* 1. Select Count(\*) from Books
		2. Select Max(Price) from books where quantity >=15
		3. Select book\_name, author\_name from books where publishers=’first publ.’
		4. Select count(distinct publishers) from books where Price>=400