2018

M.Sc.

2nd Semester Examination

COMPUTER SCIENCE

PAPER—COS-205

Subject Code—26

(PRACTICAL)

Full Marks : 50

Time : 2 Hours

he figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Group–A

Answer any *one* question : 1×20

1. Consider the following relational database:

Student (s_id, s_name, total marks)

Subject (sub_id, sub_name, s_id, sub_marks)

Write SQL query for the following:

(a) Find maximum and minimum marks for each subject.

(b) Find average marks of the subject "Mathematics".

(c) Find names of students who failed in exactly one subject.

(d) Find names of students who obtained at least 50% marks in all subjects.

2. Consider the following relational database: Employee(e_id, e_name, salary, address, hiredate)

Manages(e_id, Manager_id)

Write SQL query for the following:

(a) Find maximum salary for each department.

(b) Find names of employees who joined in the second half of the year 1982.

(c) Print employees with their manager's name.

(d) Find names of highest paid manager.

3. Consider the following relational database:

Project (p_no, p_name, p_location, manager_name)

Employee(e_no,e_name)

Assign_to(p_no, e_no)

Write SQL query for the following:

(a) Print the name of the project along with number of employees.

(b) Find names of projects where no employee is not still assigned.

(c) Find names of employees worked for the project located at 'Delhi'.

(d) Display total number of projects located at "Kolkata".

4. Consider the following relational database:

Supplier (S#,Sname,city,status)

Parts (P#,Pname,colour,weight)

SP(S#,P#,quantity)

Write SQL query for the following:

(a) Find names of suppliers located at same place and supply same parts.

(b) Find names of suppliers who currently do not supplying any items.

(c) Display the total number of parts along with the supplier's name .

(d) Find total number of parts irrespective of its colour.

5. Consider the following relational database:

Hotel(H_no, H_name, H_address)

Room(R_no, H_no, Type, Charge)

Booking(H_no, G_no, R_no, Date_from, Date_to)

Guest(G_no, G_name, G_address)

Write SQL query for the following:

(a) Find numbers guests at "Hotel Taj";

(b) Find numbers of "Deluxe" type room at "Hotel Taj";

(c) Find names of Guests who were at room number 5 of "Hotel Taj" on 25th April, 2018.

(d) Find the name of the hotel which has maximum number of rooms and located at "Kolkata".

6. Consider the following relational database:

Book(Acc_no, Title, Publisher, no_of_copy, Category)

Borrower(Card_no, B_Name, B_address)

Issue(Acc_no, Card_no, Date_of_issue, Date_of_return)

Write *SQL query for the following:*

(a) Find total number of "computer science" category book.

(b) How many students arc currently taken the book namely "Fundamental of Database Systems".

(c) Show the list of books of publisher "Pearson".

(d) Find the names of books having less than 5 copies.

Group–B

Answer any *one* question : 1×20

1. Write a PL/SQL procedure/function for getting two numbers from key board and applying following one operation based on user's choice:
   (a) Addition (b) Subtraction
   (c) Multiplication (d) Division

2. Write a PL/SQL program to find maximum salary from EMP table and save the value into a variable 'sal' and display the value of 'sal'.

3. Write a PL/SQL program to insert three rows to existing tables.

4. Write a PL/SQL program to update sal column by increasing 5% for all employees of EMP table.

5. Write a PL/SQL program to find average salary from EMP table. If EMP table is not available; display appropriate message else print the average salary of employees.

6. Write a PL/SQL program to find are and peripheral of a rectangle.

7. Write a PL/SQL program that takes two numbers and if a number is greater than other, it swaps the two numbers, otherwise double them.

8. Write a PL/SQL program to obtain details of employee drawing minimum salary. Modify the minimum salary by 5% of the current value.

9. Write a PL/SQL program to add first n natural numbers.

10. Write a PL/SQL program to find smallest and highest of three input numbers.

[Practical Note Book : 5 Marks

Viva-Voce : 5 Marks]
