Total number of printed pages–3

2017

DATABASE DESIGN AND PROGRAMMING

Paper : 6·2

Full Marks : 40

Time : Two hours

The figures in the margin indicate full marks for the questions.

1. Instruction : Consider the following database table name "EMP" and write the following query   12

EMP NO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-DEC-14	800		20
7499	ALLEN	SALESMAN	7698	20-FEB-13	1600	300	30
7521	WARD	SALESMAN	7698	22-FEB-14	1250	500	30
7566	JONES	MANAGER	7839	02-APR-14	2975		20
7654	MARTIN	SALESMAN	7698	28-SEP-14	1250	1400	30
7698	BLAKE	MANAGER	7839	01-MAY-14	2850		30
7782	CLARK	MANAGER	7839	09-JUN-14	2450		10
7788	SCOTT	ANALYST	7566	09-DEC-13	3000		20
7839	KING	PRESIDENT		17-NOV-14	5000		10
7844	TURNER	SALESMAN	7698	08-SEP-14	1500	0	20
7876	ADAMS	CLERK	7788	12-JAN-13	1100		20
7900	JAMES	CLERK	7698	03-DEC-13	950		30
7902	FORD	ANALYST	7566	03-DEC-13	3000		20
7934	MILLER	CLERK	7782	23-JAN-12	1300		10

Contd.

a. Write SQL query to find the employees who earn the maximum salary in each department. Display the result in the ascending order of salary.

b. Write SQL query to find out the employees who are the last to join their department.

c. Write SQL query to find the employees who are earning more than the average salary in their department.

d. Write SQL query to display the two lowest earners' names and salaries in each department.

e. Write SQL queries to find out employees who earn a salary less than the average salary for their jobs.

f. Write SQL queries to find out employees who are managers and have at least one employee in that department.

2. a. Write the merits and demerits of top-down and bottom-up database design approach.   5

b. Write the difference between logical and physical database design. How physical design depends on logical design ?

5

3. What is structured system analysis ? What are the tools used for structured system analysis ? Explain each of them.

2+8=10

4. Write short notes on : *(any two)*

2×4=8

a. Spiral model

b. Goals of database security

c. Authorization and authentication.

d. Three tier architecture.

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