2020

PROGRAMMING WITH C#

Paper : 6·1·1

(New Course)

Full Marks : 30

Time : Two hours

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

*Answer **any three** questions.*

1. *(a)* What are the different types of data types used in C# ? Give example of each.   3+2=5

    (b) How is a variable declared in C# ? Explain CLR and CLS.   1+4=5

2. *(a)* Explain do-while loop with an example.   5

    (b) What is the use of constructor in C# ? Explain constructor with an example.   2+3=5

Contd.

3. *(a)* How is a one-dimensional array declared and initialized ?   3

    (b) Write a program to search a particular integer in an integer array using C#.   7

4. *(a)* Explain the concept of overriding in C#.   3

    (b) What is abstract class ? Explain the concept of inheritance with an example.   2+5=7

5. *(a)* What do you mean by exception handling ? Explain how multiple catch statement can be used.   2+5=7

    (b) What is the use of console class in C# ?   3

6. Write short notes on : *(any two)*   5×2=10

    (a) Operator in C#

    (b) Type conversion and casting

    (c) Operator overloading.

_____

2020

DATABASE DESIGN AND PROGRAMMING

Paper : 6·2·2

Full Marks : 20

Time : Two hours

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

Answer any two questions.

1. **Instruction :** Consider the following database table name "EMP" and write the following query : *(any five)* 10

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	30
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 lowest 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 the salary higher than their average salary in their department.

(d) Write SQL query to display the 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) Explain the software development life cycle. 5

(b) Write the difference between physical and logical database design. 5

3. (a) What is the need of database security ? Explain. 5

(b) Differentiate between Authorization and Authentication. 5

4. (a) What is transaction ? Write the properties of transaction. 5

(b) Explain the locking methods for concurrency control. 5

5. Write short notes on : *(any two)* 5×2=10

(a) Function call for Java programming

(b) Database transaction

(c) DBMS Architecture

(d) Dynamic SQL.

2020

WEB TECHNOLOGY

Full Marks : 40

Time : Two hours

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

*Answer **any four** questions of the following :*

10×4=40

1. What is Web Server ? Discuss in brief about web server architecture. 10

2. What is XML ? Why XML is used in web applications ? Describe. 10

3. Write short notes on : 10

   (a) COM

   (b) DCOM

4. What is JavaScript ? Describe about server-side scripting language. 10

5. What is ODBC ? Write down the steps to connect to a JDBC database. 10

6. Define the following terms : 10

   (a) DSL

   (b) DTD

7. What is client-side scripting ? Write the differences between client-side and server-side scripting. 10

8. What is ASP ? Write the differences between ASP and PHP. 10