



Name :

Roll No. :

Invigilator's Signature :

**CS/MCA/SEM-1/MCA-103/2012-13
2012**

COMPUTER PROGRAMMING WITH C

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

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

GROUP - A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

10 × 1 = 10

i) Output of the following code

```
#define N 2 + 3  
  
main()  
{ int a;  
  a = N*N;  
  printf("%d",a);  
}
```

- a) 25
- b) 13
- c) 0
- d) none of these.



ii) Output of the following code :

```
main()

{ int a [] = { 0, 1, 2, 3, 4 };

int k, *p;

for(p = a, k = 0; p + k <= a + 4; p++, k++)

    printf("%d", *( p + k ));

}
```

- a) 0 1 2 3 4 b) 0 2 4
c) Compiler error d) none of these.

iii) Output of the following code :

```
main()

{ int a [2][3] = { 1, 2, 3,

                  4, 5, 6

                  };

printf("%d", *( * (a + 1 ) + 2));

}
```

- a) 6 b) 2
c) compiler error d) none of these.



ix) Output of the following code :

```
main()
{
    int a = 5;
    printf("%d", a-- );
}
```

- a) 4
- b) 5
- c) 0
- d) none of these.

x) Which of the following is a bitwise operator ?

- a) /
- b) +
- c) *
- d) &.

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following. 3 × 5 = 15

2. What are the basic data types used in C language ? What are the user defined data types ? Explain briefly.

3. Compare the purpose of break statement with that of exit().

When do we use continue statement ? 3 + 2

4. Differentiate between do-while and while statements with suitable example. Distinguish between i++ and ++i statement. 3 + 2



5. Write a C program to find the LCM of two integer numbers.
6. Write a C program to print

```
1
1 0 1
1 0 1 0 1
1 0 1 0 1 0 1
```

GROUP - C
(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. Distinguish between Automatic and Static variables. Write two C programs that calculate factorial of a number using recursion and iteration ? Write a function to sort the characters of the string passed to it as argument. $2 + 5 + 8$
8. Write a C function to reverse the digits of an integer.

Write a complete C program for reading an employees file containing

{ emp_number, name, salary, address }. Create an output file containing the names of those employees along with their salary and address whose salary is $> 30,000$. $5 + 10$

9. Write a C function to reverse a string. Write a program in C which prints the smallest divisor of an integer, for example smallest divisor of 77 is 7. $7 + 8$

10. What are the different functions used for file handing ?

Write a C program to create a file contains a series of integer numbers and then reads all numbers of this file and writes all odd numbers to other file called odd and writes all even numbers to a file called. $5 + 10$



11. Write short notes on any *three* of the following : 3 × 5

- a) Structure
- b) Macro
- c) Recursion
- d) Pointer
- e) Storage classes in C.

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