

Total Pages—4

(Set-Q₁)

B.Tech - 1st(All Br.)
Computer Programming

Full Marks : 70

Time : 3 hours

**Answer Q. No. 1, which is compulsory and
any five from the rest of the seven questions**

The figures in the right-hand margin indicate marks

1. Answer the following questions : 2 × 10

(a) What is the output of the following C code ?

```
main ( )  
{ int n, count = 20 ;  
  n = (count > 10 ? (count <= 15 ?  
                    50 : 75) : 100);  
  print f ("%d" ; n);
```

**(b) Distinguish between the BREAK and
CONTINUE statements in C language.**

(Turn Over)

(2)

- (c) Declare an array of 20 integer pointers.
- (d) What is meant by a modular program?
- (e) What are preprocessor directives? Give examples.
- (f) Write the use of argc and argv in a C program.
- (g) Declare a structure with structure members Roll No, Name, Semester, Marks in 5 subjects. Create 30 structure variables to store data for 30 students.
- (h) Distinguish between UNION and structure in C.
- (i) What will be the output?

Main ()

```
{  
    int n = 1;  
    while (n == 1)  
        n = n - 1;  
    printf ("%d", n);  
}
```

(3)

- (j) What will be the output?

main ()

```
{  
    int n[3], *p, m;  
    for (m = 0; m < 3; m++)  
        n[m] = m;  
    p = &n[1];  
    printf ("%d", * (++p) + n[2]);  
}
```

- 2. (a) Draw a block architecture of a computer. 5
- (b) Give examples for Unary, Binary and Ternary operators. 5
- 3. (a) Distinguish between formal and actual arguments with an example. 5
- (b) Write a C program to count the number digits in an input number. 5
- 4. (a) Write a C program to find the length of an input string without using any library function. 5
- (b) Explain the use of malloc and calloc functions in C programming. 5

(Turn Over)

5. (a) What is an Enumerated data type ? Explain its use with an example. 5
- (b) What is a storage class in C ? Give examples. 5
6. (a) Write a recursive function to generate Fibonacci series. 5
- (b) Write a program to count the number of words in a sentence. 5
7. (a) Write a program to read Emp. No.s and names of 200 employees stored in a data file. 5
- (b) Write a program to print prime numbers between 10 and 1000. Also print the number of such prime numbers. 5
8. (a) Write a program to search for an stem in an array using binary search technique. 5
- (b) What are pointers ? Explain pointer Arithmetic. 5
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