

**Total Pages—4**

**(Set-Q<sub>1</sub>)**

**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[z]);
}
```

- 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 )

( 4 )

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
-