



Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/B.TECH/OLD/SEM-2/CS-201/2013**

**2013**

**INTRODUCTION TO COMPUTING**

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 any *ten* of the following :

10 × 1 = 10

i) ASCII value of *a* is

- |       |        |
|-------|--------|
| a) 65 | b) 32  |
| c) 97 | d) 48. |

ii) What will be the output of the following program ?

```
main ( )  
{  
    float a = 12.25, b = 13.65;  
    if (a = b)  
        printf ("a and b are equal");  
    else  
        printf ("a and b are not equal");  
}
```

- |                                    |  |
|------------------------------------|--|
| a) <i>a</i> and <i>b</i> are equal | b) <i>a</i> and <i>b</i> are not equal |
| c) compiler error                  | d) none of these.                      |



iii) What will be the output of the following program ?

```
main ( )  
  
{   int x = 3, z;  
  
    z = x++ + ++x;  
  
    printf ("x=%d z=%d", x, z);  
  
}
```

- a)  $x = 8$   $z = 5$                       b)  $x = 5$   $z = 6$
- c)  $x = 5$   $z = 8$                       d)  $x = 5$   $z = 7$ .
- iv) What is the range of unsigned short int ?
- a) 0 to 65535                      b) 0 to 255
- c) - 128 to + 127                      d) none of these.
- v) What is the associativity of the operation [ ++ ] ?
- a) Right to left                      b) Left to right
- c) both (a) and (b)                      d) none of these.
- vi) ALU is a part of a
- a) input device                      b) output device
- c) memory                      d) CPU.



- vii) RAM stands for
- Random Access Memory
  - Read Access Memory
  - Readwrite Access Memory
  - none of these.
- viii) Which one is the special operator ?
- ? :
  - sizeof ( )
  - <<
  - ++
- ix) What is the output of the following code ?
- ```
int i = 100;
while ( i < 100 )
{
    i = i + 1;
    printf ("%d", i);
}
```
- 100
  - No output
  - 101
  - 99.
- x) What is the output of the following code ?
- ```
main ( )
{
    int n1 = 30, n2 = 40;
    n2 = n1;
    n2? (n1, n2)?n1 : n2 : n2 ;
    printf ("%d%d", n1, n2);
}
```
- 30 30
  - 30 60
  - 60 20
  - None of these.

- ```
main ( )
{
    struct    employee
    {
        char name [ 25]
        int age;
        float bs;
    }
    struct employee e;
    e.name = "Hacker";
    e.age =25;
    printf ("%s%d", e.name, e.age);
}
```

- 2265(O)



xv) What will be the output of the following program ?

```
main ( )  
{  
  
    static char str [ ] = "Limericks";  
  
    char * s;  
  
    s = &str[6]-6;  
  
    while (*s)  
  
        printf ("%c", *s++);  
  
}
```

- |             |                   |
|-------------|-------------------|
| a) Limerics | b) Compiler error |
| c) L        | d) None of these. |

**GROUP – B**

**( Short Answer Type Questions )**

Answer any *three* of the following.  $3 \times 5 = 15$

2. Explain precedence and associativity of operators with suitable examples.
3. Discuss about basic data types used in C.
4. Distinguish between while and Do-While loop.
5. Write a C program for checking whether a number is prime or not.
6. What is recursion ? Explain with an example.

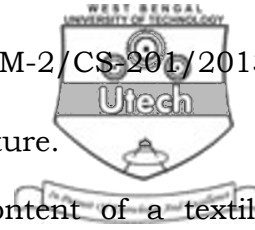


**GROUP – C**

**( Long Answer Type Questions )**

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

7. a) What is ternary operator ? Explain with an example.
- b) Explain 'Call by Value' and 'Call by Reference' with example.
- c) Write a C function to swap two integer data and call the function from the main ( ) function.  $5 + 5 + 5$
8. a) Write a C program to arrange a set of  $n$  numbers in ascending order.
- b) Draw a flow chart to determine the largest of two numbers.
- c) What do you mean by algorithm ? Explain with an example.  $5 + 5 + 5$
9. a) Convert :
- i)  $(427)_{10}$  to octal
- ii)  $(110010 \cdot 1011)_2$  to hexadecimal
- iii)  $(12 \cdot 32)_{10}$  to binary
- iv)  $(234)_5$  to  $(?)_7$ .
- b) Subtract 10111 from 110011 using 2's complement method.
- c) Draw the logic diagram and truth table of NAND and XOR gate.  $5 + 5 + 5$



10. a) Distinguish between Array and Structure.  
b) Write a C program to copy the content of a textile 'file1.txt' into another 'file2.txt'.  
c) Write a C program to find the GCD of two numbers.

5 + 5 + 5

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

- a) Dynamic memory allocation  
b) Pointer  
c) Storage Classes in C  
d) Macro  
e) Two Dimensional Array.

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