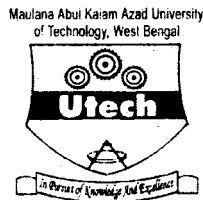


CS/BCA/ODD SEM/SEM-1/BCA-103/2016-17



**MAULANA ABUL KALAM AZAD UNIVERSITY OF
TECHNOLOGY, WEST BENGAL**

Paper Code : BCA-103

INTRODUCTION TO PROGRAMMING

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) What will be the output if you compile and execute the following C code ?

```
void main ( ) {  
    printf("%s", "C" "question" "bank");  
}
```

- a) C question bank
- b) C
- c) bank
- d) Cquestionbank.

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[Turn over

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- ii) Find out the output of the following code after compiling and executing.

```
void main ( ) {  
    int a [3] [4] = { 1,2,3,4,5,6,7,8,9,10,11,12};  
    printf ("%u %u %u",a[0]+1, *(a[0]+7),  
            *(a+0)+1);}
```

- a) address, 8, 2 b) 1, 8, 2
c) 1, 7, 2 d) none of these.

- iii) What will be output after compiling and executing the following C code ?

```
# include <string.h>  
void main ( ){  
    printf {"%d%d", sizeof ("string"), strlen ("string");}
```

- a) 6 6 b) 7 7
c) 6 7 d) 7 6.

- iv) What will be output after compiling and executing the following C code ?

```
void main ( ){  
    char str1 [ ]= "Bombay", str2 [ ] = "Hyderabad";  
    char *s1=str 1, *s2 = str2;  
    while (*s1++!=NULL)  
        *s2++=*s1++;  
    printf ("%s", s2);}
```

- a) Hydbay b) erbad
c) Compiler error d) None of these.

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- v) A Typecast is used to
- a) define a new atatype
 - b) rename an old type
 - c) force a variable to be of a particular type
 - d) none of these.

- vi) Find out the output of the following program :

```
void main ( )  
{  
    int x = 5, y = 7;  
    x = y++ + ++x;  
    y = ++y + x ++;  
    printf ("\n%d %d", x, y);}
```

- a) 13, 22
- b) 14, 22
- c) 14, 21
- d) none of these.

- vii) Which one of the following is a bit-wise operator ?

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

- viii) Which one of the following is not a basic data type ?

- a) Character
- b) Structure
- c) Real
- d) Integer.

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ix) The fopen() function returns when the file is not opened.

- a) " "
- b) 1
- c) NULL
- d) None of these.

x) Find out the output of the following code :

```
void main ( )  
{  
    int x, y = 2;  
    x = y << 1;  
    printf ("%d", x );}
```

- a) 1
- b) 2
- c) 3
- d) 4.

GROUP - B

(Short Answer Type Questions)

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

- 2. What are the left shift and right shift operators ? Give some examples which implement those operators. What is a macro ? $2 + 2 + 1$
- 3. Write a C program to find the LCM of two integer numbers.
- 4. What is the difference between array of pointer and pointer to an array with respect to multidimensional array. What is structure pointer ? $3 + 2$

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5. Write a program to print the following (number of lines should be given as input by the users) :

```
      *
     * * *
    * * * *
   * * * * *
  * * * * * *
```

6. Write a C program to reverse a string using pointer concept in C (Don't use strlen () function or "string.h").
7. Write a program to print sum of three digits prime numbers.

GROUP - C

(Long Answer Type Questions)

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

8. a) Compare the use of the switch statement and the use of the nested if-else statement with suitable example.
- b) Write a program to read marks of 10 students in the range of 0-100. Then make 10 groups : 0-10, 10-20, 20-30 etc. Count the number of values that falls in the group and display the result.

8 + 7

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9. a) Compare the purpose of break statement with that of the continue statement. Within which control statements can they be included ? State each in brief.
- b) Write a program to interchange the largest and the smallest numbers in the array.
10. What is the purpose of main function ? What are the differences between void type and other data type used in function definition ? What do you mean by recursion ? Write a recursive function that will generate and print the first n fibonacci numbers. $3 + 3 + 3 + 6$
11. a) Discuss the use of fscanf() and fprintf () functions with the use of scanf () and printf (). What are fread () and fwrite () functions ? Give some examples.
- b) What is the purpose of feof () function ?

$(6 + 6) + 3$

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6

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12. What is the C preprocessor ? What is its use ? What are command line arguments ? Write a C program which passes a string "This is a test" in command line and print those arguments one by one and also print the number of arguments.

2 + 4 + 3 + 6

