

Code : 061101

B.Tech 1st Semester Exam., 2017

FUNDAMENTAL OF INFORMATION
TECHNOLOGY

Time : 3 hours

Full Marks : 70

Instructions :

- (i) The marks are indicated in the right-hand margin.
- (ii) There are **EIGHT** questions in this paper.
- (iii) Attempt **FIVE** questions in all.
- (iv) Question No. 1 is compulsory.

1. Answer the following as directed (any seven) :
2×7=14

- (a) What will be the output of the following code segment?

```
char *p = "Structured Programming";
printf("%s", p + 5);
```

- (b) Which of the following is not an unconditional control statement in C?

- (i) Break
- (ii) Continue
- (iii) Exit
- (iv) While

(Choose the correct option)

- (c) What is the output of the following code?

```
int main ()
{
    int i;
    int arr [5]={1};
    for (i=0; i < 5; i++)
        printf ("%d", arr[i]);
    return 0;
}
```

- (d) What is E-commerce?
- (e) What is a search engine?
- (f) What do you mean by memory device?
- (g) If a function return-type is declared as _____ it cannot return a value.
(Fill in the blank)

- (h) Which of the following is the correct way to define a two-dimensional array?

- (i) int a[][4];
- (ii) int b[2, 4];
- (iii) int c[2][];
- (iv) int d[][4]={{1, 3, 5, 7}, {2, 4, 6, 8}};

(Choose the correct option)

- (i) What will be the output of the following program?

```
main()
{ int x=5;
  while (x==1)
    x=x-1;
  printf ("%d\n", x);
}
```

- (j) The sqrt() function is available in

- (i) conio.h
- (ii) string.h
- (iii) math.h
- (iv) graphic.h

(Choose the correct option)

2. (a) What is meant by formatted output? Mention the output of the following command : <http://www.akubihar.com> 3

```
int n=28;
```

- (i) printf ("%5d", n);
- (ii) printf ("%+5d", n);

- (b) Write a recursive function to compute factorial of a number. 6
- (c) Write a C program to find size of structure without using size of operator. 5

3. (a) Write a C program that displays the recommended actions depending on the color of a traffic light using the switch statement. 7
- (b) Write a C program to find factorial of a given number. 7
4. (a) Give an example of—
- (i) switch statement;
 - (ii) conditional expression;
 - (iii) nesting of loops;
 - (iv) dynamic memory allocation. 8
- (b) Why do we use do-while loop in C? Also give any properties which you know. 6
5. (a) Write a short note on mobile communication. 7
- (b) With the help of a suitable example, explain the use of a flowchart. 7
6. (a) What is Internet? List the important usage of Internet. 6
- (b) Write a short note on electronic data interchange. 8

7. (a) What is a two-dimensional array? Why is it necessary to give the size of an array in array declaration? Why do array subscripts start at 0 instead of 1? 8
- (b) With the help of an example, explain the use of GOTO statement in C. Why should it be avoided? 6
8. (a) Differentiate between call by value and call by reference by giving suitable example. 7
- (b) Define recursion. Write a complete program to evaluate the given series $1+2+3+\dots+n$, using recursive function `sum()`. Here n is user dependent. 7
