

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- February 2019

B.Tech/ 2nd Semester

COURSE CODE: 14B21CI211

MAX. MARKS: 15

COURSE NAME: Basic Data structures

COURSE CREDITS: 4

MAX. TIME: One Hour

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

1. Write a program to C program to calculate length of the string using recursion. (3.0 marks)
- 2.(i)What do you mean by complexity of an algorithm? (3.0 marks)
(ii)Explain the worst case analysis and best case analysis of an algorithm.
2. Write a program to read and print student details using structure pointer. The details are the name, roll no and marks in subjects - English, Hindi and Maths. (3.0 marks)
3. List and explain the various types of Data Structures. (3.0 marks)
4. (i)Point out error if any in the following code: (3.0 marks)

```
main()
{
    int size;
    scanf ("%d", &size);
    int arr[size];
    for ( i = 1; i <= size; i++)
    {
        scanf ("%d", arr[i]);
        printf ("%d", arr[i]);
    }
}
```

- (ii)Point out error if any in the following code:

```
main()
{
    int i = 135, a = 135, k;
    k = pass ( i, a );
    printf ( "\n%d", k );
}
pass ( int j, int b )
```

```
int c;  
{  
c = j + b;  
return (c);  
}
```

(iii) What will be the output of the following code:

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

UNIT EXAMINATION FEB 2019