

Class Test – 4

1. Write a C function that generates a substring from a given string, a start index, and a length. For example, a substring of string 'abcde' with start index 1 and length 3 is 'bcd'. (10)

```

1  #include<stdio.h>
2
3  void substring(char s[], int start, int length, char t[])
4  {
5      int i = 0;
6      if (start < strlen(s))
7      {
8          while(s[start] && i < length)
9          {
10             t[i] = s[start+i];
11             i++;
12         }
13     }
14     t[i] = '\0';
15 }
16
17 int main()
18 {
19     char s[80], t[80];
20     substring("abcde", 1, 3, t);
21     printf("%s\n", t);
22     return 0;
23 }

```

2. Write a recursive function in C that finds out the number of digits of a given integer. (10)

```

1  #include<stdio.h>
2
3  int digitCount(int d)
4  {
5      if (d == 0)
6          return 0;
7      else
8          return 1 + digitCount(d/10);
9  }
10 int main()
11 {
12     int N;
13     scanf("%d", &N);
14     printf("%d\n", digitCount(N));
15     return 0;
16 }
17

```