

**MCT**  
MANJARA CHARITABLE TRUST  
**RAJIV GANDHI INSTITUTE OF TECHNOLOGY**

Department of Applied Science

Academic Year 2016-2017

Mid Term Test – I

Class : F.E  
Subject : SPA

Marks :40  
Duration : 1<sup>1/2</sup> hrs.

**Q.1 is compulsory. Attempt any three from the rest.**

Q1 a) What are the functions performed by an operating system within a computer? 5X2=10

b) Define flowchart? Are there any limitations of a flowchart?

c) Give output of the code

```
i) #include <stdio.h>
int main()
{
char c='A';
printf("%c",c + 10);
return 0;
}
```

```
ii) #include <stdio.h>
int main()
{
int d, a = 1, b = 2;
d = a++ + ++b;
printf("%d %d %d", d, a, b);
return 0;
}
```

d) Convert 12<sub>(10)</sub> into octal and hexadecimal number system

e) Write the difference between 7, '7', "7".

Q2 Write algorithm for the following :

a) to check whether an entered number is odd / even. (10)

b) to calculate sum of 10 odd numbers.

Q3 a) Write a program to display entered no is Armstrong no or not. (10)

b) Explain bit wise operator with example.

Q4 a) Explain the switch statement with syntax and example. (10)

b) Write a C program to check entered character is vowel or not.

Q5 a) Write a C program to check entered character is alphabet or not using Conditional operator? (10)

b) Explain any four functions of <math.h>