Course id: BIT 115 **Course name: C programming**

Semester: 1 year/ I semester

Program: BIT

COLLEGE OF MANAGEMENT & INFORMATION TECHNOLOGY

BACHELOR IN INFORMATION TECHNOLOGY

ASSIGNMENT ON

ASSIGNMENT NUMBER:

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1. Write a program in C to print all the prime numbers between 1 and 100.
   - Solution:

```
#include <stdio.h>
int main()
{
int i, Number, count;
printf(" Prime Number from 1 to 100 are: \n");
for(Number = 1; Number <= 100; Number++)
 {
 count = 0;
 for (i = 2; i <= Number/2; i++)
  {
  if(Number%i == 0)
 {
    count++;
     break;
 }
  }
 if(count == 0 && Number != 1 )
  {
printf(" %d ", Number);
  }
 }
return 0;
}
```

Output: Prime Number from 1 to 100 are: 2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97

2. Write a program in C to generate following pattern: 1 23 456 78910
   - Solution:

```
#include<stdio.h>
 int main()
 {
 int rows, i, j, number= 1;
  printf("Enter number of rows: ");
  scanf("%d", &rows);
 for (i=1; i<=rows; i++)
 {
 for (j=1; j<=i; ++j)
```

```
{
 printf("%d ", number);
++number;
 }
 printf("\n");
  }
 return 0;
}
```

3. Write a menu driven program using switch case to calculate
   a. Area of circle
   b. Area of sphere
   - Solution:

```
#include <stdio.h>
 void main ()
 {
  int choice,r;
      float area;
     printf("Input 1 for area of circle\n");
      printf("Input 2 for area of sphere\n");
      printf("Input your choice : ");
      scanf("%d",&choice);
     switch(choice)
     {
        case 1:
                printf("Input radius of the circle : ");
                scanf("%d",&r);
                area=3.14*r*r;
                 break;
         case 2:
        printf("Input radius of the sphere : ");
        scanf("%d",&r);
        area=4*3.14*r*r;
        break;
}
printf("The area is : %f\n",area);
}
```

4. Some text file is given; create another text file replacing the following words "Ram" to "Hari", "Sita" to "Gita", and "Govinda" to "Shiva". Define a

structure Employee having data members name, address and salary. Take data for n employee in an array dynamically and find the average salary.

- Solution:

```
#include<stdio.h>
#include<conio.h>
void main()
 {
 FILE *fp,*fpp;
char c[10];
 fp=fopen("cat.txt","r");
  if(fp==NULL)
  {
 printf("The file named cat.txt cannot be opened");
 exit(1);
 }
fpp=fopen("dog.txt","w");
 if(fpp==NULL)
 {
printf("File with the name dog.txt cannot be created");
   exit(1);
 }
while(fscanf(fp,"%s",c)!=EOF)
{
 if(strcmp(c,"Ram")==0)
  fprintf(fpp,"Hari",c);
else if(strcmp(c,"Sita")==0)
 fprintf(fpp,"Gita",c);
 else if(strcmp(c,"Govinda")==0)
 fprintf(fpp,"Shiva",c);
 else fprintf(fpp,"%s",c);
 }
 printf("completed!");
fclose(fp);
 fclose(fpp);
 }
```

- Solution:

```
#include<stdio.h>
#define n 5
int main()
{
struct employee
{
char name[30];
char address[30];
float salary;
}s[n];
int i;
float avgsalary,sum=0;
//Loop to read data for n employee
for(i=0;i<n;i++)
{
printf("\nEnter details of employee %d\n",i+1);
printf("Enter name:");
fgets(s[i].name,30,stdin);
printf("Enter salary:");
scanf("%f",&s[i].salary);
fflush(stdin);
printf("Enter address:");
fgets(s[i].address,30,stdin);
}
//Loop to find the sum of salary of all employees
```

```
for(i=0;i<n;i++)
{
sum=sum+s[i].salary;
}
avgsalary=sum/n;
printf("Average salary of employee:%f",avgsalary);
return 0;
}
```