Q3)

```
#include <stdio.h>
#include <conio.h>
int main()
{
int i, j, n, num = 1;
printf("Enter the value of n: ");
scanf("%d", &n);
for (i = 1; i <= n; i++)
{
  for (i = 1; i <= n; i++)
  {
    for (j = 1; j <= i; j++)
    {
      printf("%d \t", num);
      num++;
    }
  printf("\n");
}
return 0;
}
```

OUTPUT :-

```
enter the value of n : 4
1
2    3
4    5    6
7    8    9    10
```

Q4)

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
 int ciemarks, seemarks;
float see, total;
 int i;
for( i=1; i<=5; i++)
{
 printf("enter your marks in CIE for sub(%d):
                                \n", i);
scanf("%d", &ciemarks);
if((ciemarks>=0)&&(ciemarks<=50))
{
 printf("your cie marks for sub(%d) is: %d\n",
                                i, ciemarks);
 }
else
{printf("marks invalid\n");
 exit(0);
}
printf("enter your marks in SEE for sub(%d):\n",i);
scanf("%d", &seemarks);
if((seemarks>=0)&&(seemarks<=100))
{
printf("your see marks for sub(%d) is: %d\n",
                                i, seemarks);
}
else
 {
```

```
printf ("marks invalid\n");
 exit (0);
}
see = seemarks /2;
total = see + ciemarks;
printf ("total marks you have scored in sub (%d) =
                              %d\n", i, total);
 if (total >= 90)
printf ("grade is S\n");
else if ( total >=80 && total <90)
printf ("grade is A\n");
else if ( total >=70 && total <80)
printf ("grade is B\n");
else if ( total >=60 && total <70)
printf ("grade is C\n");
else if ( total >=50 && total <60)
printf ("grade is D\n");
else if ( total >=40 && total <50)
printf ("grade is E\n");
else
printf (" grade is F\n");
}
return 0;
}
```

OUTPUT :-

```
enter your marks in CIE for sub (1):
43
your cie marks for sub(1) is : 43
```

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enter your masks in SEE for sub(1):
79
your see masks for sub(1) is : 79
total marks you have scored in sub(1) = 82.0000
grade is A
enter your masks in ~~CIE~~ for sub(2):
45
your ~~CIE~~ cie masks for sub(2) is : 45
enter your masks in SEE for sub(2): -67
masks invalid

Date __/__/____

5)
```
#include <stdio.h>
int main()
{
 int num1, num2, flag, i, j ;
printf("enter the 1st integer \n");
Scanf("%d", &num1);
printf("enter the 2nd integer \n");
scanf("%d", &num2);
printf("prime numbers from %d and %d are:
          \n", num1, num2);
for( i=num1; i<=num2 ;++i)
{
    flag=0;
    for(j=2; j<i/2; ++j)
        if(i%j ==0)
        {
            flag=1;
            break;
        }
    }
    if(flag==0)
    printf("%d\n", i);
}
return 0;
}
```

OUTPUT:

```
enter the 1st integer
23
enter the 2nd integer
```

Prime numbers from 23 and 50 are:

```
23
29
31
37
41
43
```

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Q6)
```
#include <stdio.h>
#include <math.h>
int main()
{
float area, volume, r, h;
int i, flag = 0;
float pi = 3.14;
do
{
printf("Enter 1:Cylinder \n 2: Cone\n 3: Sphere \n 4: exit");
scanf("%d", &i);
switch (i)
{
case 1:
printf("enter radius\n");
scanf("%f", &r);
printf("enter hieght \n");
scanf("%f", &h);
area = (2 * pi * r * h) + (2 * pi * r * r);
volume = (pi * r * r * h);
printf("the area and volume of cylinder is %f
    and %f \n", area, volume);
break;
case 2:
printf("enter radius \n");
scanf("enter hieght \n");
scanf("%f", &r);
printf("enter hieght \n");
scanf("%f", &h);
area = pi * r * (r + sqrt((h*h) + (r*r)));
volume = pi * r * r * (h/3);
```

```
printf ("the area and volume of cone is %f and
        %f \n", area, volume);
break;
Case 3:
printf ("enter radius \n");
scanf ("%f", &r);
area = 4 * pi * r * r;
volume = (4/3) * pi * r * r * r;
printf ("the area and volume of sphere is %f and
        %f \n", area, volume);
break;
Case 4:
flag = 1;
break;
}
}

while (flag != 1);
return 0;
}
```

OUTPUT :-

Enter 1: Cylinder
2: Cone
3: sphere
4: exit
~~enter radius~~ 3
enter radius
12
the area and volume of sphere is 1808.640015 and 5425.919922

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Enter 1: Cylinder
2: cone
3: Sphere
4: exit
1
enter radius
12
enter hieght
76
the area and volume of cylinder is 6631.679688 and 34364.160156
Enter 1: Cylinder
2: Cone
3: Sphere
4: exit
4

Date ___/___/_____

Q7)

```
#include<stdio.h>
#include<string.h>
void main()
{
char name[100][100];
int n, k, c, i=0, j=0, d=0;
do
 {
 printf("Enter the number of students:");
 scanf("%d", &n);
printf("Enter the name of the student and course respectively \n1 for internet of things\n2 for advanced java and J2EE \n3 for advanced data structure\n");
for (k=0; k<n; k++)
{
scanf("%s %d", name[i], &c);
}
for(k=0; k<n; k++)
{
  if (c==1)
     i++;
  if (c==2)
     j++;
  if (c==3)
     d++;
}
}
while (i<30 || j<30 || d<30);
printf("Students in internet of things : %d", i);
printf("Students in advanced java and J2E
```

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```
    %d", j);
printf("students in advanced data structure:
        %d", d);
}
```

OUTPUT:-

Enter the number of students: 4
Enter name of the students and course respectively
1 for internet of things
2 for advanced java and J2EE
3 for advanced data structure

ram 2
shyam 3
ghanshyam 1
sita 1
Enter the number of students: