GROUP-7

AGGIGNMENT-3

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BATCH B

QUESTION -13

```
// Q13. C Program to take input from the user (circle/ rectangle/ square) and
then calculate
// the circumference of the circle/ rectangle/ square according to the user's
choice. (use
// switch case and user-defined functions to calculate area)
```

CODE :-

```
#include <stdio.h>

// Q13. C Program to take input from the user (circle/ rectangle/ square) and
then calculate
// the circumference of the circle/ rectangle/ square according to the user's
choice. (use
// switch case and user-defined functions to calculate area)

float recArea(int l,int b);
float cirArea(int r);

void main() {
  char shape;
  printf("Enter the polygon (C/S/R) :");
  scanf("%c", &shape);
  switch (shape) {
    case 'S':
      int l, b;
      printf("enter length :");
      scanf("%d",&l);
      printf("enter breadth :");
      scanf("%d",&b);
      float area1 = recArea(l, b);
      printf("Area is :%f sq.units",area1);
      break;
    case 'R':
      int l1, b1;
      printf("enter length :");
      scanf("%d",&l1);
      printf("enter breadth :");
      scanf("%d",&b1);
      float area3 = recArea(l1, b1);
      printf("Area is :%f sq.units",area3);
      break;
    case 'C':
      printf("Enter the radius :");
      int r;
      scanf("%d",&r);
      float area2 = cirArea(r);
```

```
      printf("Area is :%f sq.units",area2);
      break;
    default :
      printf("invalid! try again.");
  }

}

float recArea(int l,int b) {
  return l*b;
}

float cirArea(int r) {
  return 3.14*r*r;
}
```

OUTPUT: -

1)

Enter the polygon (C/S/R) :S

enter length :2

enter breadth :2

Area is :4.000000 sq.units

2}

Enter the polygon (C/S/R) :C

Enter the radius :5

Area is :78.500000 sq.units

QUESTION -14

```
// Q14. Write a C program to display Pascal’s triangle. Take the number of
rows in the triangle
// as input from the user.
// 1
// 1 1
// 1 2 1
// 1 3 3 1
// 1 4 6 4 1
// Use a user-defined recursive function call to print Pascal’s triangle.
```

CODE:-

```
#include <stdio.h>

// Q14. Write a C program to display Pascal’s triangle. Take the number of
rows in the triangle
// as input from the user.
// 1
// 1 1
// 1 2 1
// 1 3 3 1
// 1 4 6 4 1
// Use a user-defined recursive function call to print Pascal’s triangle.

int fact(int n);
void pTriangle(int n);

void main() {
  printf("Enter the no. of rows :");
  int n;
  scanf("%d",&n);
  pTriangle(n);
}

void pTriangle(int n) {
  printf("%d\n",1);
  for (int i = 1;i <= n;i++) {
    for (int j = 0;j <= i;j++){
      int ans = fact(i)/(fact(j)*fact(i-j));
      printf("%d ",ans);
    }
    printf("\n");
  }
}

int fact(int n) {
  if (n < 2) {
```

```
    return 1;
  }
  return n*fact(n-1);
}
```

OUTPUT:-

Enter the no. of rows :5

1

1 1

1 2 1

1 3 3 1

1 4 6 4 1

1 5 10 10 5 1