Assignment – 10

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Q1. Write a function to calculate the area of a circle. (TSRS)

Ans :- #include<stdio.h>

float cir(int);

int main()

{ int x;

  float c;

  printf("Enter Radius :- ");

  scanf("%d",&x);

  c = cir(x);

  printf("Area is %f",c);

}

float cir(int y)

{

  float z ;

  z = 3.14 \* y \* y ;

  return z ;

}

Q2. Write a function to calculate simple interest. (TSRS)

Ans :- #include<stdio.h>

float si(int,int,int);

int main()

{ int p,r,t;

  float s;

  printf("Enter P, R, T :- ");

  scanf("%d %d %d",&p,&r,&t);

  s = si(p,r,t);

  printf("SI is %f",s);

}

float si(int x,int y,int z)

{

  float o ;

  o = (x \* y \* z) / 100 ;

  return o ;

}

Q3. Write a function to check whether a given number is even or odd. Return 1 if the

number is even, otherwise return 0. (TSRS)

Ans :- #include<stdio.h>

int chk(int);

int main()

{ int n,z;

  printf("Enter a Number :- ");

  scanf("%d",&n);

  z = chk(n);

  printf("%d",z);

}

int chk(int y)

{

  if(y%2==0)

  return 1 ;

  else

  return 0;

}

Q4. Write a function to print first N natural numbers (TSRN)

Ans :- #include<stdio.h>

void Nat(int);

int main()

{ int n;

  printf("Enter a Number :- ");

  scanf("%d",&n);

  Nat(n);

  }

void Nat(int m)

{

  int i;

  for(i=1;i<=m;i++)

  printf("%d ",i);

}

Q5. Write a function to print first N odd natural numbers. (TSRN)

Ans :- #include<stdio.h>

void Nat(int);

int main()

{ int n;

  printf("Enter a Number :- ");

  scanf("%d",&n);

  Nat(n);

  }

void Nat(int m)

{

  int i;

  for(i=1;i<=m;i++)

  printf("%d ",2\*i-1);

}

Q6. Write a function to calculate the factorial of a number. (TSRS)

Ans :- #include<stdio.h>

int fact(int);

int main()

{ int n,z;

  printf("Enter a Number :- ");

   scanf("%d",&n);

    z = fact(n);

     printf("Factorial of %d is %d",n,z);

}

int fact(int m)

{

  int i,f=1;

   for(i=m;i>=1;i--)

    f = f \* i ;

    return f ;

}

Q7. Write a function to calculate the number of combinations one can make from n items

and r selected at a time. (TSRS)

Ans :- #include<stdio.h>

int com(int,int);

int main()

{ int n,r,z;

  printf("Enter Value of n , r :-\n");

   scanf("%d %d",&n,&r);

    z = com(n,r);

     printf("Combinations are %d",z);

}

int com(int x,int y)

{

  int i,j,k ;

   int P=1,Q=1,R=1,O;

   for(i=x;i>=1;i--)

    P = P \* i ;

   for(j=y;j>=1;j--)

    Q = Q \* j ;

   for(k=x-y;k>=1;k--)

    R = R \* k ;

   O = P/(Q \* R);

   return O ;

}

Q8. Write a function to calculate the number of arrangements one can make from n items

and r selected at a time. (TSRS)

Ans :-

#include<stdio.h>

int com(int,int);

int main()

{ int n,r,z;

  printf("Enter Value of n , r :-\n");

   scanf("%d %d",&n,&r);

    z = com(n,r);

     printf("Combinations are %d",z);

}

int com(int x,int y)

{

  int i,j,k ;

   int P=1,R=1,O;

   for(i=x;i>=1;i--)

    P = P \* i ;

   for(k=x-y;k>=1;k--)

    R = R \* k ;

   O = P/R;

   return O ;

}

Q9. Write a function to check whether a given number contains a given digit or not.

Ans :-

Q10. Write a function to print all prime factors of a given number. For example, if the

number is 36 then your result should be 2, 2, 3, 3. (TSRN)

Ans :- #include<stdio.h>

void prime(int);

int main()

{ int n ;

  printf("Enter a Number :-\n");

  scanf("%d",&n);

  prime(n);

}

void prime(int m)

{ int i ;

   for(i=2;i<=m;)

  {

    if(m%i==0)

    { m = m / i ;

       printf("%d ",i); }

    else

      i++ ;

    }

  }