**Category A**

a) Functions without arguments and without return type

 check whether the year is Leap year

Ans:-

#include <stdio.h>

void lp();

int main()

{

printf("cheking leap year.\n");

lp();

return 0;

}

void lp()

{

int y;

printf("enter year no: \n");

scanf("%d",&y);

if(y%4==0)

printf("your year \"%d\" is leap year.\n",y);

else

printf("your year \"%d\" is not a leap year.\n",y);

}

Output:-

cheking leap year

enter year no:

2001

your year "2001" is not a leap year.

d) Functions with arguments and with return type

check perfect or abundant or deficient number

ans :

program :-

#include <stdio.h>

int pn(int);

int main()

{

int no,p=0;

printf("enter a no : \n");

scanf("%d",&no);

p = pn(no);

if (p==0)

printf("no %d is a perfect no.",no);

else

printf("no %d is not a perfect no.",no);

return 0;

}

int pn(int a)

{

int i,sum=0;

for(i=1;i<=a/2;i++)

{

if (a%i==0)

{

sum=sum+i;

}

}

if (sum==a)

return 0;

else

return 1;

}

Output:-

enter a no :

28

no 28 is a perfect no.

g) Recursive Functions

to Print Fibonacci Series

ans:-

#include <stdio.h>

int fib(int);

void main() {

int no,f;

printf("enter a no ");

scanf("%d",&no);

f=fib(no);

printf("fibonannci value is : %d",f);

}

int fib(int n)

{

if(n==0)

return 0;

else if (n==1)

return 1;

else

return fib(n-1)+fib(n-2);

}

Output:-

enter a no 12

fibonannci value is : 144