```
Day 22
  RECUrsiON TRAcing
                            Past II
                                                  01/08/2025
Question No 7
                                            fun (1) Base Call
      int fun (unsigned into)
                                               getusis 1
          if (n==0 ||n==1) Rue au 1
                                                                gretion1
                                            tun (3)
                                                3%3 = = 0
                                              fun (3/3)
          of (n%3 5=0)
                                            fum (9)
                                               9 %3 == 0
                                               fun (9/3)
        gutions fun (1/3);
                                                27%3==0
     Z
                                              fcm (23/3)
                                                      gretion 1
```

```
Swelton No 8

# enclude < \le \pm d = 0.h

int f(= 1)

yetwon 1;

if (n < = 1)

yetwon f(= 1)

yetwon f(= 1)

yetwon f(= 1)

int max f(= 1)

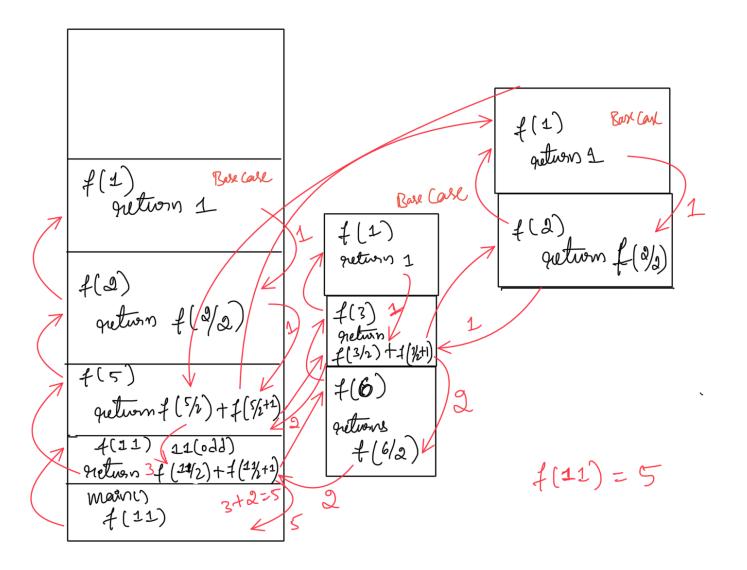
print f(= 1)

print f(= 1)

yetwon f(= 1)

print f(= 1)

yetwon f(= 1)
```



Question No 9

unsigned ent foo (un signed ent n, un signed ent 8) I

ef (n>0) queturn (n%8+ foo (n/8,18));

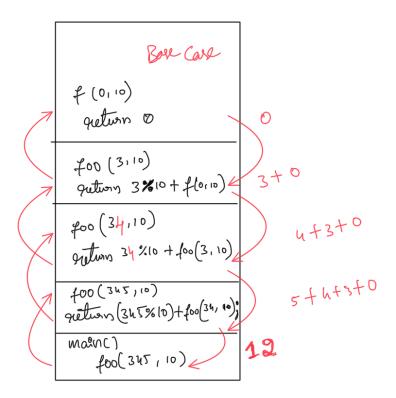
else geturn 0;

J

ent mach () I

permit ("X", foo (345, 10);

J



Question No 10

```
# forclude <stdio.h >

int f(int *a, int n)

if (n < = 0) return ();

close if (*a %2 == 0) return *a + f(a + 1, n - 1);

close getton *a - f(a + 1, n - 1);

int main () f

int a c j = t 12, 7, 13, 4, 11, 6 3;

paintf (" % d", f(a, 6));

return ();
```

a s s	ા ર	7	13	4	11	G
inder	\emptyset	1	2	3	4	5

$$f(*a,0) \quad \text{Base Case}$$

quetion 0

$$f(*a,1)$$

$$*a=6 \quad \text{Even}$$

$$9ulton 6+f(a+1,0)$$

$$f(*a,2)$$

$$*a=11, odd$$

$$9ulton 11-f(a+1,1)$$

$$f(*a,3) \quad \text{Even}$$

$$9ulton 4+f(a+1,2)$$

$$f(*a,4) = 13 \quad \text{odd}$$

$$9ulton 13-f(a+1,3)$$

$$f(*a,5)$$

$$*a=7 \quad \text{odd}$$

$$9ulton 13-f(a+1,3)$$

$$f(*a,5)$$

$$*a=7 \quad \text{odd}$$

$$9ulton 7-f(a+4)$$

$$f(*a,6)$$

$$*a=12 \quad \text{Eyen}$$

$$9ulton 12+f(a+1,5)$$

$$manch C)$$

$$f(a,6)$$

Question No 11

```
# in clude < stdio.h>
int fun(int n, ind of-P)

int fun(int n, ind of-P)

int f, f;

if (n < = 1) {

if (n < = 1) {

it = f un(n-1, f-P);

f = t + of-P;

return f;

queturn f;
```

let
$$x = 5$$

$$8x = 1000$$
Address

f(1, 2000) pf-P=1 gieturn 1 fun (2, 1000) t=f(1,1000); f= x+4P V/p= ti geturn f fun (3, 1000) £ = { (2,1000); ← fun (4, 1000) 3 t=f(3,1000) f=++++); *fp= f; gutuer of fun (5, 1000) t= +(4,1000); f= ++11; #f_P=+; geturn 7 maenc) fun (5, 1000)

f=1+1=& f=& Nf-P=1 t=2 *f-P=1 f= 2+1 f=3 P1-P=2 t=3 %fp=2 7=3+2=5 ofp=3 t=5 of-p=3 f=5+3 +f-P=5 1=8

Time functions culculates NH fobonacco xlumber.