POINTERS

1.#include<stdio.h>
int main()
{
	int x=126;
	char *p=&x;
	printf("%d ",++*p++);
	*p=1;
	printf("%d",x);
}

2.#include<stdio.h>
int main()
{
	int n=404;
	char *b=&x;
	if(*b<0)
		printf("hello");
	else
		printf("hai");
}

3.#include<stdio.h>
int main()
{
int *i=255;
printf("%p",i);
}

4.#include<stdio.h>
int main()
{
 int a=13;
 void *p=&x;
 printf("%d ",*p);
}

5.What is the difference between int *const p and int const *p.

6.#include<stdio.h>
int main()
{
	printf("%d\n",sizeof(int *));
	printf("%d\n",sizeof(char*));
	printf("%d\n",sizeof(double*));
}

7.#include<stdio.h>
int main()
{
 void *p=5;

```
  printf("%d ",(int*)p+1);
  printf("%d ",(long int*)p+1);
  printf("%d ",(char*)p+1);
}
```

8.How do you declare a pointer that can store the address of a float variable?

9.
```
#include<stdio.h>
int main()
{
        int p=200;
        short int *a=&p;
        a+1;
        *++a=0;
        printf("%d",p);
}
```

10.
```
#include<stdio.h>
int main()
{
  char a='3';
  char b=1;
  short int *pt=&a;
  printf("%d",*pt);
}
```

11.
```
#include<stdio.h>
int main()
{
int *p=20;
printf(“%d\n”,p+2);
short int *q =23;
printf(“%d\n”,q+3);
}
```

12.
```
#include<stdio.h>
int main()
{
short int a=45;
char *p=&a;
*++p=2;
printf(“%d\n”,*--p);
*p=5;
printf(“%d\n”,a);
}
```

13.
```
#include<stdio.h>
int main()
{
int i=56;
void *ptr=&i;
printf("%p",++((char*)ptr));  /* Assume the address of i is 0x1000 */
```

```
}

14.#include<stdio.h>
int main()
{
int x=10,y=20;
char *p=&x;
char *q=&y;
printf("%d",q-p);/* (Assume the address of x is 0x1000 and y is 0x1004)*/
}

15.#include<stdio.h>
int main()
{
	int x=370;
	short *p=&x;
	*p>>=2;
	*++p=3;
	*p>>=2;
	printf("%d",x);
}

16.#include<stdio.h>
int main()
{
 int *p='1';
 printf("%d ",p+1);
 char *q=2;
 printf("%d",q+1);
}

17.#include<stdio.h>
int main()
{
int num=500;
char *ptr=&num;
for(int i=0;i<4;i++)
{
if(*ptr!=0)
*ptr=2;
else
break;
}
printf("%d %d",i,num);
}

18.#include<stdio.h>
int main()
{
 int *p='1';
 printf("%d ",*p);
 char *q=2;
```

```
  printf("%d",*q);
}
```

19.
```
#include<stdio.h>
int main()
{
int a=100;
int *p=&a;
*((char*)p +1)=2;
printf("%d",*p);
}
```

20.What is void pointer(void*)?

21.
```
#include<stdio.h>
int main()
{
	int x=348;
	char *ptr=&x;
	*ptr++=4;
	*(ptr+1)=0;
	printf("%d %d",*ptr,x);
}
```

22.
```
#include<stdio.h>
int main()
{
double *p=NULL;
printf("%d\n",p);
p=(double*)100;
printf("%d",p+2);
}
```

23.
```
#include<stdio.h>
int main()
{
	int x=200;
	char *p=&x;
	short *q=&x;
	*(p+1)=3;
	*q++=4;
	*(q+1)=0;
	printf("%d %d",*ptr,*p);
}
```

24.
```
#include<stdio.h>
int main()
{
int x=400;
void *ptr=&x;
printf(“%d %d”,*((char*)ptr+2),*((char*)ptr +1));
}
```

25.#include<stdio.h>
int main()
{
short int x=556;
short int y=557;
int *p=&x;
*p=15;
printf("%d %d",x,y);
}

26.#include<stdio.h>
int main()
{
int n=416;
char *b=&n;
*b=*b>>2;
printf("%d",*b);
}

27. #include<stdio.h>
int main()
{
  int x=157;
  void *q=&x;
  printf("%d ",(int*)*q);
}

28.#include<stdio.h>
int main()
{
  int r=300;
  char *p=&r;
  *++p=1;
  short int *q=&r;
  q+1;
  printf("%d %d",*p,*q);
}

29.#include<stdio.h>
int main()
{
  int t=290;
  void *u=&t;
  printf("%d ",*(char*)u);
  printf("%d ",*(int *)u);
}

30.#include<stdio.h>
int main()
{
int a=-3;
unsigned char *p=(char *)&a;

```
printf("%d",*p);
}
```

31.
```
#include<stdio.h>
int main()
{
int a=-24;
char *p=(char *)&a;
*p=*p&0;
printf("%d",a);
}
```

32.
```
#include<stdio.h>
int main()
{
char c='a';
char *p=&c;
p++;
*(p-1)=68;
p--;
printf("%c",*p);
}
```

33.Write a program to find the size of a varible using pointer.

34.
```
#include<stdio.h>
int main()
{
	char x='a';
	short int *p=&x+3;
	printf("%u",p);		/* Assume the address of x is 0x1000)*/
}
```

35.Write a program to print short integer binary using pointer.

36.
```
#include<stdio.h>
int main()
{
int x=10,y=20;
short int *p=&x;
short int *q=&y;
printf("%d",q-p);		/* Assume the address of x is 0x1000 */
}
```

37.
```
#include<stdio.h>
int main()
{
int a=30;
int *p=&a;
printf("%d",sizeof(*p));
printf("%d",sizeof(p));
```

```
}
```

38.
```
#include<stdio.h>
int main()
{
int const *x=10;
x+=10;
printf("%d",x);
}
```

39.
```
#include<stdio.h>
int main()
{
int x='f';
char *y=&x;
int i=0;
while(i<4)
{
	*(y+i)=*y+i;
	i++;
}
printf("%c",*(y+2));
}
```

40.
```
#include<stdio.h>
int main()
{
const char *pt='a';
*pt+=3;
printf("%c",*pt);
}
```

41.
```
#include<stdio.h>
int main()
{
int a=11,b=22;
int *const t=&a;
t=&b;
printf("%d",*t);
}
```

42.
```
#include<stdio.h>
int main()
{
	char x=20;
	int *p=&x;
	printf("%d",*p);
}
```

43.
```
#include<stdio.h>
int main()
{
```

```
	int c=40;
	int *d=&c;
	d++;
	printf("%d",*d);
}
```

44.
```
#include<stdio.h>
int main()
{
	int x=50;
	int *p=&x+2;
	printf("%u ",&x);
	printf("%u",p);		/* Assume the address of x is 0x1000)*/
}
```

45.
```
#include<stdio.h>
int main()
{
int x=10,y=20;
char *p1=&x;
short int *p2=&y;
printf("%d",p2-p1); /* (Assume the address of x is 0x1000 and y is 0x1004)*/
}
```

46.
```
#include<stdio.h>
int main()
{
int x=2,y=4;
short int *p=&x;
p+=2;
printf("%d",*p);
p++;
printf(" %d",*p);
}
```

47.
```
#include<stdio.h>
int main()
{
int r=540;
char *p=&r;
p++;
short int *q=p;
printf("%d",*q);
}
```

48.
```
#include<stdio.h>
int main()
{
int a=30;
char *p=&a;
printf("%d",sizeof(*p));
printf("%d",sizeof(p));
```

```
}
```

49.
```
#include<stdio.h>
int main()
{
int m=89,n=90;
const int *const p=&m;
p++;
printf("%d",*m);
}
```

50.
```
#include<stdio.h>
int main()
{
int num=2,i;
int *p=&num;
for(i=31;i>=0;i--)
*p|=1<<i;
printf("%d",num);
}
```