Subex Whole Test Paper

Hi All,

I attended the test conducted by Subex Azure ltd. The paper had C programming mainly on pointers.

Part 1: 20 questions in C (1/2 an hour duration)
Part2: A program to be written (1/2 an hour)

Part1: Find output of following programs

Assume
sizeof(char) = 2
sizeof(int) = 4
sizeof(float) = sizeof(pointer) = 4
sizeof(double) = 8

1.
```
#define _LINE_ 10
main()
{
printf("%d",_LINE_);
}
```

2.
```
#define STRINGDEF(expr) #expr
printf(STRINGDEF(10));
```

3.
calculate the following postfix expression
+ * + 2 6 - 1 5 6

4.
```
int i = 260;
float f = 12.2;
char c = ,a,;
char *ptr1,*ptr2,*ptr3;
ptr1 = (char *)&i;
ptr2 = (char *)&f;
ptr3 = (char *)&c;
printf ("%c|%c|%c",*ptr1,*ptr2,*ptr3);
```
options:
a. 260|12|97
b. 260|12|a

5.
```
int main(int argc,char **argv)
{
```

```
int *p;
p = malloc(10 * sizeof(int i));
realloc(p,0);
/*(i) */
return 0;
```
What is the state of the marked line (i)?
options:
a. dangling pointer p
b. defined
c. memory leakage during malloc

6.
```
main()
{
int i = 0;
if(i++,i)
return 1;
else
return 0;
}
```
options:
1.Always 0
2.Always 1

7.
```
struct
{
unsigned int is_keyword : 1;
unsigned int is_extern : 1;
unsigned int is_static : 1;
}flag;
/*print the value of is_keyword */
```
options:
1. Compile error
2. 1
3. Error, before the :

8.
```
int foo(void)
{
char *p;
int i;
if (i && (*p=10))
return 1;
else
return 0;
}
```
what will be the outcome if the foo function is called ?

9.
int m =1;
int l =0;
int i = -1;
int j =1;
....
for(; i > 4))
/*sorry i do not exactly remember the for loop,but it actually look like the above for loop */
.....

How many times will the loop execute,
options:
a. 8
b. 1
c. infite times

10.
struct
{
char *p;
int i;
}mem;
....
struct mem member = {"value, 3"},2;
....
options:
1. compile erroe
2. state defined

11.
struct
{
char *name;
int i;
union
{
char var;
int integer;
float var2;
}
}ARRAY_SIZE(10);
...
//see the above assumptions
printf("%d",sizeof(ARRAY_SIZE));
....
options
1.20
2.200

3.16
4.160

Part2:

Write a program to get strings and to substitute character from string1 to string2 (equv to UNIX command tr) for example:
string1: "abc"
string2: "def"
the occurrence of ,a, will be replaced by ,d, , ,b, will be replaced by ,e, , ,c, will be replaced by ,f, and for less complexity assume the string1 and string2 are of same size