

Tech Mahindra Technical Paper

C-Test Paper

1. #include

* What is wrong in the following problem

```
main() {  
int i,j;  
j = 10;  
i = j++ - j++;  
printf("%d %d", i,j);  
}
```

ans: 0, 12

2.#include * What is the output of the following problem

```
main() {  
int j;  
for(j=0;j<3;j++)  
foo();  
}  
foo() {  
static int i = 10;  
i+=10;  
printf("%d\n",i);  
}
```

/* Out put is (***)since static int is used i value is retained between

* 20 function calls)

* 30

* 40

*

/

3.#include #include #include /* This is asked in PCS Bombay walk-in-interview

* What is wrong in the following code

*/

```
main()  
{
```

```
{
```

```
char *c;
```

```
c = "Hello";
printf("%s\n", c);
}
```

/*ans:- Hello, The code is successfully running */

4. #include /* This problem is given in PCS BOMBAY walk-in-interview.

* What is the final value of i and how many times loop is

* Executed ?

*/

```
main()
```

```
{
```

```
int i,j,k,l,lc=0;
```

```
/* the input is given as 1234 567 */
```

```
printf("Enter the number string:<1234 567 \n");
```

```
scanf("%2d%d%d%1d",&i,&j,&k);
```

```
for(;k;k--,i++)
```

```
for(l=0;lprintf("%d %d\n",i,l);} 
```

```
printf("LOOPS= %d\n", lc-1);
```

```
}
```

```
/* Ans: i = 16, and loop is executed for 169 times */
```

5.#include /* This is given in PCS Bombay walk-in-interview */

/* What is the output of the following program */

```
main() {
```

```
union {
```

```
int a;
```

```
int b;
```

```
int c;
```

```
} u,v;
```

```
u.a = 10;
```

```
u.b = 20;
```

```
printf("%d %d \n",u.a,u.b);
```

```
}
```

```
/* Ans : The latest value assigned to any of the union member
```

```
will be present in the union members so answer is
```

```
20 20
```

```
*/
6.#include main()
{
float i, j;
scanf("%f %f", &i, &j);
printf("%.2f %.3f", i, j);
}
```

/Ans:- 123.34 3. 234 */

7.#include /* This is given in PCS Bombay walk-in-interview

* What is the out put of the following problem ?

```
*/
main()
{
char *str = "12345";
printf("%c %c %c\n", *str, *(str++), *(str++));
}
```

/* Ans: It is not 1 2 3

* But it is 3 2 1 Why ??

```
*/
```

8.#include /* This problem is asked in PCS Bombay Walk-in-interview

* Write a macro statement to find maximum of a,b

```
*/
```

```
#define max(a,b) (ab)?a:b
```

```
main()
```

```
{
```

```
int a,b;
```

```
a=3;
```

```
b=4;
```

```
printf("%d",max(a,b));
```

```
}
```

/* Ans is very simple the coding is just for testing it

and output is 4 */

```
~
```

9.#include /* This problem is asked in PCS Bombay

* What is the output of the following coding

```
*/  
main()  
{  
int len=4;  
char *st="12345678";  
st = st -len;  
printf("%c\n",*st);  
}
```

/* Ans : It will print some junk value */

~

10. #include main()

```
{  
func(1);  
}  
func(int i){  
static char *str = { "One", "Two", "Three", "Four"};  
printf("%s\n",str[i++]);  
return;  
}
```

/* Ans:- it will give warning because str is pointer to the char but

it is initialized with more values

if it is not considered then the answer is Two */

11.

```
#include main()  
{  
int i;  
for (i=1;i<100; i++)  
printf("%d %0x\n",i,i);  
}
```

/* Ans:- i is from 1 to 99 for the first format,

for the second format 1to9, ato f, 10 to 19,1ato1f, 20 to 29, etc */

12. #include /* This problem is asked in PCS Bombay walk-in-interview

* In the following code please write the syntax for

* assigning a value of 10 to field x of s and id_no 101 of s

```
*/
struct {
int x;
int y;
union {
int id_no;
char *name;
}b;
}s,*st;
main()
{
st = &s;
st->x=10;
st->b.id_no = 101;
printf("%d %d\n",s->x,s->b.id_no);
}
```

/* Ans: The answer is st->x=10;

* st->b.id_no=101;

```
*/
```

13.#include /* This problem was asked in PCS Bombay in a walk-in-interview

* Write a recursive function that calculates

* $n * (n-1) * (n-2) * \dots * 2 * 1$

```
*/
```

```
main() {
int factorial(int n);
int i,ans;
printf("\n Enter a Number:");
scanf("%d",&i);
ans = factorial(i);
printf("\nFactorial by recursion = %d\n", ans);
}
int factorial(int n)
{
if (n <= 1) return (1);
```

```
else
```

```
return ( n * factorial(n-1));
```

```
}
```

```
~
```

14. #include /* This problem is asked in PCS Bombay walk-in-interview

* What is the output of the following problem

*/

```
main(){
```

```
int j,ans;
```

```
j = 4;
```

```
ans = count(4);
```

```
printf("%d\n",ans);
```

```
}
```

```
int count(int i)
```

```
{
```

```
if ( i < 0) return(i);
```

```
else
```

```
return( count(i-2) + count(i-1));
```

```
}
```

```
/* It is showing -18 as an answer */
```

15. #includemain()

```
{
```

```
int i=4;
```

```
if(i=0)
```

```
printf("statement 1");
```

```
else
```

```
printf("statement 2");
```

```
}
```

```
/* statement 2 */
```

This is pcsb paper.

1. #include * What is wrong in the following problem

```
main() {
```

```
int i,j;
```

```
j = 10;
i = j++ - j++;
printf("%d %d", i,j);
}
```

ans: 0, 12

2. #include * What is the output of the following problem

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foo() {
static int i = 10;
i+=10;
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/* Out put is (**since static int is used i value is retained between

* 20 function calls)

* 30

* 40

*

/

3. #include #include #include /* This is asked in PCS Bombay walk-in-interview

* What is wrong in the following code

*/

```
main()
{
char *c;
c = "Hello";
printf("%s\n", c);
}
```

/*ans:- Hello, The code is successfully running */

4. #include /* This problem is given in PCS BOMBAY walk-in-interview.

* What is the final value of i and how many times loop is

* Executed ?

*/

main()

{

int i,j,k,l,lc=0;

/* the input is given as 1234 567 */

printf("Enter the number string:<1234 567 \n");

scanf("%2d%d%d%1d",&i,&j,&k);

for(;k;k--,i++)

for(l=0;lprintf("%d %d\n",i,l);}

printf("LOOPS= %d\n", lc-1);

}

/* Ans: i = 16, and loop is executed for 169 times */

5.#include /* This is given in PCS Bombay walk-in-interview */

/* What is the output of the following program */

main() {

union {

int a;

int b;

int c;

} u,v;

u.a = 10;

u.b = 20;

printf("%d %d \n",u.a,u.b);

}

/* Ans : The latest value assigned to any of the union member

will be present in the union members so answer is

20 20

*/

6.#include main()

{

float i, j;

scanf("%f %f", &i, &j);


```
printf("%.2f %.3f", i, j);  
}
```

/Ans:- 123.34 3. 234 */

7. #include /* This is given in PCS Bombay walk-in-interview

* What is the out put of the following problem ?

*/

```
main()
```

```
{
```

```
char *str = "12345";
```

```
printf("%c %c %c\n", *str, *(str++), *(str++));
```

```
}
```

/* Ans: It is not 1 2 3

* But it is 3 2 1 Why ??

*/

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* Write a macro statement to find maximum of a,b

*/

```
#define max(a,b) (ab)?a:b
```

```
main()
```

```
{
```

```
int a,b;
```

```
a=3;
```

```
b=4;
```

```
printf("%d",max(a,b));
```

```
}
```

/* Ans is very simple the coding is just for testing it

and output is 4 */

~

9. #include /* This problem is asked in PCS Bombay

* What is the output of the following coding

*/

```
main()
```

```
{
```

```
int len=4;
```

```
char *st="12345678";
```

```
for(i=0; i<6; i++)
```

```
st = st -len;
```

```
printf("%c\n",*st);
```

```
}
```

```
/* Ans : It will print some junk value */
```

```
~
```

```
10.#include main()
```

```
{
```

```
func(1);
```

```
}
```

```
func(int i){
```

```
static char *str ={ "One","Two","Three","Four"};
```

```
printf("%s\n",str[i++]);
```

```
return;
```

```
}
```

```
/* Ans:- it will give warning because str is pointer to the char but
```

```
it is initialized with more values
```

```
if it is not considered then the answer is Two */
```

```
11.
```

```
#include main()
```

```
{
```

```
int i;
```

```
for (i=1;i<100; i++)
```

```
printf("%d %0x\n",i,i);
```

```
}
```

```
/* Ans:- i is from 1 to 99 for the first format,
```

```
for the second format 1to9, ato f, 10 to 19,1ato1f, 20 to 29, etc */
```

```
12.#include /* This problem is asked in PCS Bombay walk-in-interview
```

```
* In the following code please write the syntax for
```

```
* assing a value of 10 to field x of s and id_no 101 of s
```

```
*/
```

```
struct {
```

```
int x;
```

```
int y;
union {
int id_no;
char *name;
}b;
}s,*st;
main()
{
st = &s;
st-x=10;
st-b.id_no = 101;
printf("%d %d\n",s.x,s.b.id_no);
}
```

/* Ans: The answer is st-x=10;

* st-b.id_no=101;

*/

13. #include /* This problem was asked in PCS Bombay in a walk-in-interview

* Write a recursive function that calculates

* $n * (n-1) * (n-2) * \dots * 2 * 1$

*/

```
main() {
int factorial(int n);
int i,ans;
printf("\n Enter a Number:");
scanf("%d",&i);
ans = factorial(i);
printf("\nFactorial by recursion = %d\n", ans);
}
int factorial(int n)
{
if (n <= 1) return (1);
else
return ( n * factorial(n-1));
}
```

~

14. #include /* This problem is asked in PCS Bombay walk-in-interview

* What is the output of the following problem

*/

```
main(){
```

```
int j,ans;
```

```
j = 4;
```

```
ans = count(4);
```

```
printf("%d\n",ans);
```

```
}
```

```
int count(int i)
```

```
{
```

```
if ( i < 0) return(i);
```

```
else
```

```
return( count(i-2) + count(i-1));
```

```
}
```

```
/* It is showing -18 as an answer */
```

```
15. #includemain()
```

```
{
```

```
int i=4;
```

```
if(i=0)
```

```
printf("statement 1");
```

```
else
```

```
printf("statement 2");
```

```
}
```

```
/* statement 2 */
```

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