

QUESTIONS ON FUNCTIONS IN C LANGUAGE

Q1. What is the output of the following program?

```
main()
{
int x=20;
int y=10;
swap(x,y);
printf("%d %d",y,x+2);
}
swap(int x,int y)
{
int temp;
temp =x;
x=y;
y=temp;
}
```

Ans: 10 22 (duplicate copy of arguments are generated on calling a function)

Q2. What will be the output of the following code?

```
output()
{
printf("%p",output);
}
```

Ans: Some address will be printed as function names are just addresses. Similarly output() is also a function and its address will be printed.

Q3. What will be the output of the following code?

```
main()
{
int i;
```

```
printf("%d",scanf("%d",&i)); // value 10 is given as input here
}
```

Ans: 1 as Scanf returns number of items read successfully. So number of items read is 1.

Q4. What is a static function?

Ans: A static function is a function whose scope is limited to the current source file. Scope refers to the visibility of a function or variable. For Example-

```
static int fun(void)
{
printf("I am a static function ");
}
```

Q5. Is it possible to execute code even after the program exits the main() function?

Ans: C library consists of a function named atexit() that can be used to perform "cleanup" operations when your program terminates. You can set up a set of functions you want to perform automatically when your program exits by passing function pointers to the atexit() function.

Q6. Is using exit() the same as using return?

Ans: No. The exit() function is used to exit from your program and the return function is used to return from a function and return control to the calling function.

Q7. Explain the use of fflush() function?

Ans: It is used to empty the buffer associated with the o/p stream. For Example-

```
printf("Enter a number\n");
scanf("%d",&num);
fflush(stdin);
printf("Enter a character\n");
scanf("%c",&ch);
```

Q8. What is the difference b/w malloc() and calloc()?

Ans: malloc allocates uninitialized memory while calloc initializes the allocated memory with a constant (0). malloc uses single parameter while calloc uses 2 parameters to initialize memory.

Q9. State the keyword which is used to transfer the controls back to a calling function from a function. Also write a sample program to justify your answer.

Ans: The keyword which is used to transfer controls back to a calling function from a function is "RETURN" and the sample program is as follows-

```
#include<stdio.h>
int add(int, int); /* Function prototype */
int main()
{
int a = 4, b = 3, c;
c = add(a, b);
printf("c = %d\n", c);
return 0;
}
int add(int a, int b)
{
/* returns the value and control back to main() function */
return (a+b);
}
```

The output of the program will be c=7

Q10. How many arguments can be used in a function?

Ans: As such c language doesn't put any restriction on number of arguments but arguments greater than 8 is not preferred.

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