**VARIABLE SCOPE AND STORAGE SPECIFIER ASSIGNMENTS**

1. Refer the code snippet below and answer the queries

int val;

extern void display();

static int function()

{

val++;

int x = 10;

int i = 0;

static int j = 20;

for (; i < 3; i++)

{

int x = 20;

printf(“\n %d”, x+i);

x+=3;

j++;

display();

}

return val;

}

int main(int argc, char \*argv[])

{

val= 0;

function();

return 0;

}

1. What is the change required if val declaration line below is to be moved to an other file?

**If the val is declared in another function we need to use extern key word in this file. For eg: extern int val;**

1. What is the value of x after for loop execution?

**The value of x after for loop execution is 10. Because inside the for loop the value of x is defined and its scope is the loop. But outside the loop the value of x=10.**

1. What does the keyword static in following lines mean?

static int function()

static int j = 20;

**Static function() means the function is accessible only in this file. It cannot be called from other files.**

**Static int j means the variables are defined and preserved throughout the program**

1. What is the value of j after for loop execution?

**The value of j is 23 as it is a static variable the changes updated inside the loop also taken**

1. Identify the variables which would be in the stack of function()

**The variables in stack of function are x and i**

1. What does extern in the following line mean?

extern void display();

**The word extern means the display function is in another file.**