**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;

}

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

Make it extern int val; in current file and int val; in the other file.

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

After for loop execution value of x will be 10, because outside loop the x is initialized to 10.

**c. What does the keyword static in following lines mean?**

**static int function()** – The function can only be accessed in the current file.

**static int j = 20;** -- the variable retains its value between function calls.

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

j= 23

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

x, i, j

**f. What does extern in the following line mean?**

**extern void display();**

extern keyword helps to include modules or files taken from another file.

Here, display( ) function is taken from some other file.