# Variable Scope and Storage Specifier Assignments

**Mandatory**

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?
2. Use extern int val; in the file where val is used.
3. What is the value of x after for loop execution?
4. The value of x after the for loop execution is 10, because the inner x inside the loop does not modify the outer x.
5. What does the keyword static in following lines mean?

static int function()

static int j = 20;

1. static int function() means the function is accessible only in this program. It cannot be accessed for other program.

Static int j means the variables are preserved throughout the program.

1. What is the value of j after for loop execution?
2. j=23.
3. Identify the variables which would be in the stack of function()
4. The variables which would be in the stack of function() are x and i.
5. What does extern in the following line mean?

extern void display();

1. The extern means this function is declared in other file.