# 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. If the val is declared in another function we need to use extern key word in this file. For eg: extern int val;
3. **What is the value of x after for loop execution?**
4. 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.
5. **What does the keyword static in following lines mean?**

static int function()

static int j = 20;

**A.** 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?**

**A.** 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()**
2. A. The variables in stack of function are x and i
3. **What does extern in the following line mean?**

extern void display();

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