



LAB 6

1. Given the declaration:

```
int x,*p;int *q;
```

mark the following statements as valid or invalid. If a statement is invalid, explain why

a. `p = q;`

b. `*p = 56;`

c. `p = x;`

d. `*p = *q;`

e. `q = &x;`

f. `*p = q;`

2. What will be the output of the following piece of code

(A)

```
int num[5];
int* p;
p = num;
*p = 10;
p++;
*p = 20;
p = &num[2];
*p = 30;
p = num + 3;
*p = 40;
p = num;
*(p + 4) = 50;
for (int i = 0; i < 5; i++)
cout << num[i] << ", ";
```

(B)

```
int x[5] = { 1, 2, 3, 4, 5 };
int* p = x;
for (int i = 0; i < 2; i++){
int temp = *(p + i);
*(p + i) = *(p + 4 - i);
*(p + 4 - i) = temp;
}
for (int i = 0; i < 5; i++)
cout << x[i] << " ";
```

3. What will be the output of the following piece of code

```
void find(int a, int& b, int& c);
int main(){
    int x=5, y=2, z=1;
    find(x, y, z);
    cout << x << ", " << y << ", " << z << endl;
    return 0;
}

void find(int a, int& b, int& c){
    int temp;
    c = a + b;
    temp = a;
    a = b;
    b = 2 * temp;
}
```

4. Consider the following code:

```
int x=1;    //Line 1
```

```

void p(int,int);
int main(){
    int x =3 ;    //Line 4
    p(x,x);
    return 0;
}
void p(int y, int z){
    cout<<x+y+z;    // Line 9
}

```

- a. What is the output of Line 9?
- b. With Line 4 commented, What is the output of Line 9?
- c. With Line 1 commented, What is the output of Line 9?
- d. With statement “int x =4;” add before Line 9, What is the output of Line 9?

5. Consider the following function prototype:

```
void testDefaultParam(int a, int b = 7, char z = '*');
```

Which of the following function calls is correct?

- a. testDefaultParam(5);
- b. testDefaultParam(5, 8);
- c. testDefaultParam(6, '#');
- d. testDefaultParam(0, 0, '*');

6. Consider the following function definition:

```

void fun(int u, int v = 5, double z = 3.2){
    int a;
    u = u + static_cast<int>(2 * v + z);
    a = u + v - z;
    cout << "a = " << a << endl;
}

```

What is the output of the following function calls?

- a. fun(6);
- b. fun(3, 4);
- c. fun(3, 0, 2.8);