

University Number: _____

ENGG1111 – Quiz
2016/2017
Part A

Write down the output of the following programs in the space provided.

A1 (2 marks):

```
#include <iostream>
using namespace std;
int main() {
    int i = 3;
    int sum = 0;
    for (int i = 0; sum < 2; sum += i++) {
        cout << i << " ";
    }
    cout << i << " " << sum;
    return 0;
}
```

Output: _____

A2 (2 marks):

```
#include <iostream>
using namespace std;
int main() {
    int a = 3, b = 5, c = 7;
    switch (b) {
        case 3:
            cout << "a";
        case 5:
            cout << "b";
        case 7:
            cout << "c";
    }
    return 0;
}
```

Output: _____

University Number: _____

A3 (2 marks):

```
#include <iostream>
using namespace std;
int func(int i) {
    i *= i;
    cout << i;
    return i;
}
int main() {
    int i = 1;
    while (func(i) < 3) {
        cout << i;
        i++;
    }
    return 0;
}
```

Output: _____

A4 (2 marks):

```
#include <iostream>
using namespace std;
void f(int a[], int length) {
    for (int i = 0; i < length; i++) {
        int c = a[i];
        a[i] = a[length-1-i];
        a[length-1-i] = c;
    }
}
int main() {
    int a[] = {1,2,4,3,5,6};
    int length = 6;
    f(a, length);
    for (int i = 0; i < length; i++)
        cout << a[i] << " ";
    return 0;
}
```

Output: _____

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A5 (2 marks):

```
#include <iostream>
using namespace std;
int a(int &a) {
    return ++a;
}
int b(int &b) {
    return b++;
}
int main() {
    int i = 4;
    {
        int j = a(i);
        int i = j;
    }
    a(i);
    cout << a(i);
    cout << b(i);
    cout << i;
    return 0;
}
```

Output: _____

A6 (2 marks):

```
#include <iostream>
using namespace std;
int main() {
    int x = 42;
    while (true) {
        if (x % 17 == 0) break;
        x--;
    }
    cout << x--;
    cout << " " << x;
    return 0;
}
```

Output: _____

Part A Marks: _____ / 12