

Class Test 5 (17 marks)

1. Which of the following is implicit type casting: (1)

- a. `int a = (int)5.75;`
- b. `float b = 7;`
- c. `int c = static_cast<int>(4.5);`
- d. `char d = 'A';`

2. What would the output be: (1)

```
int a = 10;  
float b = 4.0;  
cout << a / b;
```

- a. 2
- b. 2.5
- c. 2.0
- d. 2.25

3. What would the output be: (1)

```
int x = 3;  
double y = 3.5;  
cout << x + y;
```

- a. 6
- b. 6.5
- c. 7
- d. Error

4. Can a float be implicitly converted to an int: (1)
- a. Yes
 - b. No
5. What is the most suitable data type to store the distance between two cities (in kilometers with decimal precision)? (1)
- a. int
 - b. float
 - c. double
 - d. char
 - e. bool
 - f. String
6. What will be the output: (1)

```
char letter = 'C';  
int ascii_value = letter;  
cout << ascii_value;
```

- a. 67
 - b. 'C'
 - c. 3
 - d. Error
7. What data type would be appropriate to determine if a student passed or failed? (1)
- a. int
 - b. float
 - c. double
 - d. char
 - e. String
 - f. bool

8. What data type would be appropriate for a student number? (example: u1975321) (1)

- a. int
- b. float
- c. double
- d. char
- e. bool
- f. String

9. Explain the difference between explicit and implicit type conversion and provide examples of each in pseudo code. (5)

10. Explain why and int can be implicitly converted to a float but a float can not be implicitly converted to an int. (4)