

**Computer Science and Information Technology Department, UoB, Quetta**  
**Course title: Object Oriented Programming and Design**  
**Mid term Exam 2018**

**MCS-2<sup>nd</sup> Semester**

**Max marks: 30**

**Note: Attempt all questions. Every question is of 10 marks.**

**Question No 1:**

**A) Fill in the blanks**

1. A \_\_\_\_\_ has the same relation to an \_\_\_\_\_ that a basic data type has to a variable of that type.
2. Member functions defined inside a class definition are \_\_\_\_\_ by default.
3. A constructor is executed automatically when an object is \_\_\_\_\_.
4. A constructor's name is the same as \_\_\_\_\_.
5. Default copy constructor is called when one object is \_\_\_\_\_ to another object.

**B) True or False?**

1. Data items in a class must be private.
  2. In a class you can have more than one constructor with the same name.
  3. Data item declared private are visible/accessible outside class.
  4. A constructor has no return type but can take arguments.
  5. Default copy construct is built into all classes.
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**Question No 2:** Define a class Triangle which contains:

1. 2 private data members **base** and **height** of type **int**
2. 1 constructor that takes no arguments and initialize base with 6 and height with 8
3. 1 member function **getBase** which takes input from user and store it in base
4. 1 member function **getHeight** which takes input from user and store it in height
5. 1 member function **area**, which returns the area of the triangle, (Area of triangle = base \* height /2)

**Question No 3:** Write main function that uses the class Triangle defined in Question No 2.

1. create two Triangle objects **T1** and **T2**.
2. call **getBase** on T1
3. call **getHeight** on T1
4. call **area** on **T1** and display it using a **cout** statement
5. call **area** on **T2** and display it using **cout** statement