NATIONAL OPEN UNIVERSITY OF NIGERIA

Plot 91, University Village Cadastral Zone, Nnamdi Azikiwe Express Way, Jabi-Abuja.
FACULTY OF SCIENCES
DEPARTMENT OF COMPUTER SCIENCE
2022_2 EXAMINATION

Course Code: CIT834
Course Title: OBJECT-ORIENTED PROGRAMMING USING C#
Credit Unit: 3 units
Instruction: Answer Question one and other three (3) questions **Time:** 3hrs

1. a. State three basic steps involved in object-oriented programming. **[5 marks]**
   b. State any five characteristics of object-oriented programming. **[5 marks]**
   c. Write a simple program that displays "Hello World" **[5 marks]**
   d. Create a class that represents a triangle with the definition of its properties: height, base-length and area **[10 marks]**
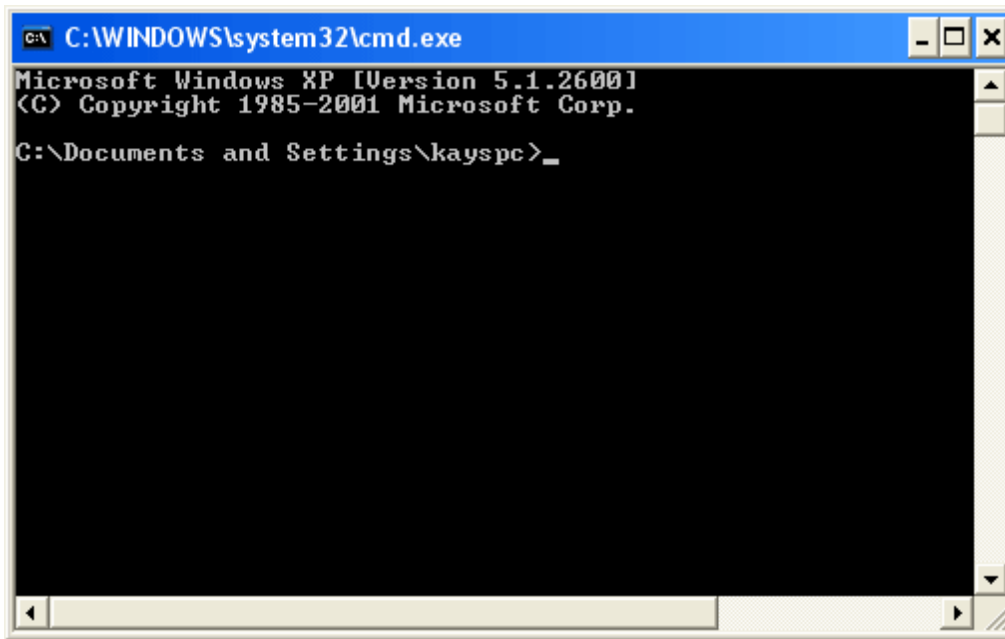
2. a. Explain the terms "Default Constructor" and "Destructor" **[5 marks]**

   b. Using an example, state the code for the execution of a constructor **[10 marks]**

3. a. Give a concise explanation of the concept of 'Polymorphism' as it relates to inheritance

   and upcasting. **[5 marks]**

   b. State the roles of inheritance in object-oriented programming. **[10 marks]**

4. Study the figure below carefully and answer the questions that follow:

4a. Give any 2 reasons why this this application is considered suitable for learning object-oriented programming using C# and utility programs? **[5 marks]**

b. State the procedure involved in creating a new Console Application project. **[10 marks]**

5 a. State five advantages of and five areas of application of object-oriented programming. **[10 marks]**

b. State the criterion for using the static property. **[5 marks]**

6. a. Define the term Inheritance **[2 marks]**

b. Explain the types of inheritance in modern programming languages **[4 marks]**

c. State with an example the procedure to demonstrate Inheritance **[9 marks]**