

**W1-2-60-1-6**

JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

# **UNIVERSITY EXAMINATIONS 2016/2017**

SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE DIPLOMA IN INFORMATION TECHNOLOGY

**DIT 0301 : OBJECT ORIENTED PROGRAMMING**

**DATE: APRIL 2017 TIME: 1.30 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE [COMPULSORY] AND ANY OTHER ONE QUESTIONS**

**==========================================================**

**QUESTION ONE [40 MARKS][COMPULSORY]**

1. Explain any five advantages of object orientation [5 marks]
2. Define the following terms as used in object oriented programming
3. Polymorphism [2 marks]
4. Object class [2 marks]
5. Encapsulation [2 marks]
6. Explain five principles used to design a class [10 marks]
7. Discuss the application of any five areas of object oriented programming [5 marks]
8. Distinguish between destructors and contractors [4 marks]
9. What is the importance of divinity decimeters when defining classes [2 marks]
10. Explain each of the following terms as used in object oriented programming [8 marks]

(i) class

(ii) object

(iii) method

1. Object reference

**QUESTION TWO [20 MARKS]**

By use of examples explain the following terminologies as used in object

oriented programming

(i) compiler [2 marks]

(ii) manipulators [2 marks]

(iii) Data types [2 marks]

(iv) Points [2 marks]

(v) Abstract data type [2 marks]

(vi) Message passing [2 marks]

(vii) Applet [2 marks]

(b) Common and contract constructors from methods [6 marks]

**QUESTION THREE [20 MARKS]**

1. Create a class named rectangle with integer instance variables naked length and width. Override the default constructor and sue it to set the variable to zero. Also include the following utility/helper methods

(i) compute the area which outputs the area and returns a value

(ii) Compute perimeter which computes perimeter and returns overdue

(iii) Override the testing ( ) method to allow your rectangles to describe itself approximately [15 marks]

1. Write a class rectangle App that institutes two rectangle objects and displays the length , width area and perimeter of each. [5 marks]