

W1-2-60-1-6

**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2016/2017**

**YEAR II SEMESTER I EXAMINATION FOR THE DIPLOMA IN INFORMATION TECHNOLOGY**

**DIT 0305: OBJECT ORIENTED ANALYSIS AND DESIGN**

**DATE: APRIL 2017 TIME: 1 ½ HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER ONE QUESTIONS**

**QUESTION ONE (40 MARKS)**

1. Define the following terms as used in object orientation;
2. Inheritance [2 marks]
3. Encapsulation [2 marks]
4. Classification [2 marks]
5. Differentiate between structured analysis and object in system design. [2 marks]
6. Discuss the?????????? involved in SDLC [10 marks]
7. State any SIX goals in the design of UML [6 marks]
8. Differentiate between the following as used in object technology;
9. Base class and derived class
10. Static binding and dynamic binding. [8 marks]
11. Define polymorphism and state its benefit? [4 marks]
12. Describe two kinds of interaction diagrams. [4 marks]

**QUESTION TWO (20 MARKS)**

1. Define UML [2 marks]
2. Discuss the classification of UML diagrams. [18 marks]

**QUESTION THREE (20 MARKS)**

1. Explain the FIVE principles used to design a class. [5 marks]
2. Describe the FIVE properties that characterize objects. [5 marks]
3. Differentiate between the following;

(i) A constructor and destructor [4 marks]

(ii) Super class and sub class [4 marks]

1. Differentiate between system analysis and system design. [2 marks]