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

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

# University Examinations 2015/2016

**YEAR II SEMESTER III EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN IT/BBIT**

# BIT 2214/HBT 2304: OBJECT OREIENTED ANALYSIS AND DESIGN

**DATE: AUGUST, 2016**  **TIME: 2 HOURS**

**INSTRUCTIONS: Answer Question ONE and Any Other TWO Questions.**

**Question One – 30 Marks**

a) Briefly describe the following OO concepts. [4 marks]

1. Class
2. Object
3. Polymorphism
4. Inheritance

b) Describe the use of the following structure diagrams. [6 marks]

1. Class diagrams
2. Deployment diagram
3. Package diagram

c) Describe the relationships used by use cases. [9 marks]

d) Explain three use of UML. [3 marks]

e) Describe object oriented analysis. [4 marks]

f) Differentiate between ‘method’ and ‘methodology’. [4 marks]

**Question Two – 20 Marks**

a) Define robustness analysis. [2 marks]

b) Identify any three elements of UML robustness analysis diagram. [6 marks]

c) Discuss the characteristics of a class diagram. [4 marks]

d) Discus the stages covered during UML development process. [8 marks]

**Question Three – 20 Marks**

a) Discuss the class level relationships in OO. [10 marks]

b) Explain the difference between sequence diagrams and collaboration diagrams. [4 marks]

c) Differentiate between the following:

1. Model and modeling
2. Functional and non-functional requirements
3. Actors and scenario [6 marks]

**Question Four**

A client has given you a contract to supply his organization with a system that will help him/her run his IT training centre.

a) Using one of the SDLC approaches explain how you will come up with the system. [10 marks]

b) Indicate the main activities to do in each stage of the development until it is implemented. [10 marks]

**Question Five**

a) Discuss four advantages of using II methodologies as opposed to traditional methodologies. [6 marks]

b) Explain why modeling is commonly used in OO. [4 marks]

c) Buoch, Jacobson and Rumbough are key in OO methodologies. Discuss the method advocated for by each man. [6 marks]

d) Explain any four limitations associated with using UML and other structural analysis methods. [4 marks]

c) Briefly discuss the concept of negotiation explaining the seven basic principles common to all forms of negotiation. (10 marks)

**Question Two – 20 Marks**

a) Depending upon the situation and time, the way negotiations are to be conducted differs. Discuss. (6 marks)

b) Advise your salesmen on the key elements they need for active listening during negotiation. (14 marks)