TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY (DICT 14S/FT)

EIT 2205: OBJECT ORIENTED ANALYSIS & DESIGN

END OF SEMESTER EXAMINATION
SERIES: APRIL 2015
TIME: 2 HOURS

Instructions to Candidates:
You should have the following for this examination
- *Answer Booklet*

This paper consists of **FIVE** questions.
Attempt question **ONE (Compulsory)** and any other **TWO** questions
Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

Question One (Compulsory)

a) Define the following terms: **(10 marks)**
- **(i)** Message-passing
- **(ii)** Super class
- **(iii)** Object attributes
- **(iv)** Is – a relationship
- **(v)** Actor

b) Using examples discuss the different types of collections and packages used in object-oriented design **(8 marks)**

c) List the iterative development phases **(2 marks)**

Question Two

a) What is unified process used in object oriented software life cycle **(8 marks)**

b) Contrast between functional and non-functional requirements giving THREE examples for each of them **(12 marks)**

Question Three

a) You have been asked to analyze students' registration processes within your campus with an aim of creating an efficient online system. Discuss how UML can be applied to solve existing problems **(10 marks)**

b) What is the meaning of the following notations **(6 marks)**
- (i) 2, 4, 6
- (ii) 10
- (iii) 0..*

c) What does the acronym RAMP stand for with respect to software deployment and implementation **(4 marks)**

Question Four

a) Explain how deployment diagrams are set out. What are the advantages of using them. **(10 marks)**

b) Which application areas can one employ the use of deployment diagrams **(5 marks)**

c) Using a scenario of your choice, illustrate how robustness diagrams are used as tools for analysis and clearly show the symbols and notations involved. **(5 marks)**

Question Five

a) Differentiate between:
- **(i)** Association and Aggregation
- **(ii)** Method and attribute **(8 marks)**

b) Discuss the following analysis classes **(6 marks)**
- **(i)** Boundary class
- **(ii)** Entity class
- **(iii)** Control class

c) With the use of a diagram, illustrate the entity relations of objects using a class diagram

(6 marks)