TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATIONS FOR DEGREE IN:
BACHELOR OF SCIENCE IN INFORMATION COMMUNICATION TECHNOLOGY
(BTIT Y1)

EIT 4102: FUNDAMENTALS OF OBJECT ORIENTED PROGRAMMING

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) Philosophies of programming are called paradigms. With examples, state FOUR common paradigms in programming **(8 marks)**

b) Write a simple Java code that would determine a quotient. Include comments that explain to a user what each statement means, as well as; author, data, version of your code **(8 marks)**

c) (i) Java is a strongly-typed language what does this statement mean **(2 marks)**

(ii) Name the primitive java data types **(6 marks)**

(iii) What other types of data than primitive, does java support? **(4 marks)**

(iv) Why are the primitive data types called “primitive” **(2 marks)**

Question Two

a) Diagrammatically, represent a flow control structure determined by the “if” statement **(5 marks)**

b) Using the “if” statement, construct code that would print the statement:
“X equals ten” after checking such equality **(6 marks)**

c) Write code that would compare a variable to a number and indicate at the coasole that either:
(i) The variable is less than the number of
(ii) The variable is greater than or equal to the number. use 10 as the number **(9 marks)**

Question Three

a) Show how you would represent the while LOOP, diagrammatically **(6 marks)**

b) Use a flow chart to show how you would check that some variable i is less than 7, and print the words “Not yet 7” When the count reaches 7, it should print “done” **(6 marks)**

c) Write a Java program that would perform the task in (b) above **(8 marks)**

Question Four

a) (i) What is an IDE? **(2 marks)**

(ii) Give THREE examples of IDEs **(3 marks)**

(iii) What is the usefulness of advanced IDEs **(2 marks)**

b) (i) What is OOP **(2 marks)**
(ii) What are classes **(7 marks)**

c) Differentiate between a java applet and a java application **(4 marks)**

d) Write a Java program that will multiply two numbers and give you a product. Use 8 and 6 **(5 marks)**

Question Five

Write short notes/statements on each of the following:

a) User-defined data types
b) Implementation inheritance
c) Data hiding
d) Encapsulation
e) Polymorphism **(20 marks)**