



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

**DEPARTMENT OF COMPUTER SCIENCE & INFORMATION
TECHNOLOGY**

**UNIVERSITY EXAMINATION FOR:
BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY
(BSc. IT JAN 11/MAY11/12)**

ICS 2201: OBJECT ORIENTED PROGRAMMING II

**END OF SEMESTER EXAMINATION
SERIES: DECEMBER 2012
TIME: 2 HOURS**

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consist of **FIVE** questions

Answer question **ONE (COMPULSORY)** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

Question One (Compulsory)

a) Write the following structures using the correct syntax:

- | | | |
|-------|---------------------|-----------|
| (i) | If else structure | (3 marks) |
| (ii) | Nested if structure | (4 marks) |
| (iii) | While structure | (2 marks) |
| (iv) | Do while structure | (5 marks) |

b) Write a Java code to enter two integers and test the two integers to see if the large value entered is exactly divisible by the smaller value. You must ensure that both values entered by the user must be greater than zero, and then check to see which of the value is larger. Assume that a and b are the two values entered by the user, write a code to perform the above task. (9 marks)

- c) Give an appropriate example for each of the following data types char, int, float, string. **(4 marks)**
- d) Name the **THREE** types of comments used in a Java program. **(3 marks)**

Question Two

- a) Use the following Java code below to answer following questions: **(10 marks)**

```
int a, b;
for (a = 1 ; a <3; ++ a)
{
    For (b = 1; b < =3; ++b)
        system.out.println (a + b);
    system.out.println (" \n");
}
```

- (i) What will be the final value stored in variable a?
(ii) What will be the final value stored in variable b?
(iii) Which should be the correct output?
(iv) How many times would the second output statement be repeated?
(v) How many times would the first output statement be repeated.
- b) Write the output that was produced by the following Java code. **(10 marks)**

```
Int a, b;
for (a = 1; a<=a;a++)
{
    For (b - 1; b< =a; b++)
        system.out.print ("*");
    system.out.print (" \n");
}
```

Question Three

- a) Write a program that iterates through the odd numbers less than 30 and outputs the square of each number using for loop. **(12 marks)**
- b) Give the syntax to compile a Java source code. **(4 marks)**
- c) Name the **FOUR** methods that are included in every applet. **(4 marks)**

Question Four

- a) Write a Java code that required the user to input an integer between 1 to 100. Using a nested if, check that the integer is within this range. If so, determine whether the integer is greater than or less than 50. **(12 marks)**
- b) (i) State the requirements when creating a variable name. **(3 marks)**
- (ii) State which of the following are valid or invalid variable names, members, switch, 1BEE, price \$, employee – name. **(5 marks)**

Question Five

- a) Write a program that loops 30 times, and output only the numbers that are not divisible by 3 or 5. Use the for loop and the if statement to code this program. **(10 marks)**
- b) Write an applet program, to display the message “student Enrolment system” in blue color using the drawstring () method. **(10 marks)**