



**NAMIIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

Faculty of Computing and Informatics

Department of Computer Science

QUALIFICATION: Bachelour of Computer Science	
QUALIFICATION CODE: 07BACS	LEVEL: NQF 6
COURSE: Programming 2	COURSE CODE: PRG620S
DATE: January 2019	SESSION:
DURATION: 3 Hours	MARKS: 100

SUPPLEMENTARY/SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
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THIS QUESTION PAPER CONSISTS OF 6 PAGES
(Excluding this front page)

INSTRUCTIONS

1. Respond to ALL problems in sections A, B and C.
2. Use the examination script booklet provided.
3. Each section must be started on a new page.
4. NUST examination rules and regulations apply.
5. Follow instructions in the examination script booklet.
6. Write clearly and neatly.

SECTION A [30 marks]

Instructions

- Respond to ALL problems in this section.
- Select the best option in each of the problems in this section.
- Responses must be written in the answer booklet provided.
- Marks to each question or part of question are given in [].

Problem A1

Consider the following statements:

- Statement A: There are two types of user interfaces, character user interface (CUI) and graphical user interface (GUI).
- Statement B: In CUI, you can interact with an application by entering commands.

Which of the following is correct with respect to the above statements?

- A. Both, Statement A and Statement B, are False.
- B. Both, Statement A and Statement B, are True.
- C. Statement A is True and Statement B is False.
- D. Statement A is False and Statement B is True.

[2 marks]

Problem A2

What is the output of this code fragment?

```
int X=3; int Y =10;
System.out.println(y%x);
```

- A. 0
- B. 1
- C. 2
- D. 3

[2 marks]

Problem A3

Which of the following lines will compile without warning or error?

- A. float f=3.1415;
- B. char c="hello";
- C. byte b=258957;
- D. boolean isPresent=true;

[2 marks]

Problem A4

If method carries the same name as class name and method doesn't have any return type, then it is known as.....?

- A. Destructors
- B. Object
- C. Variable
- D. Constructor

[2 marks]

Problem A5

How can you force garbage collection of an object?

- A. Garbage collection cannot be forced.
- B. Call System.gc().
- C. Call System.gc() passing in a reference to the object to be garbage collected.
- D. Call Runtime.gc().

[2 marks]

Problem A6

What is it called when a program is written to respond to the button clicks, menu selections, and other actions of the user in whatever order the user does them?

- A. Event-driven programming.
- B. Action-driven programming.
- C. User-driven programming.
- D. Mouse-driven programming

[2 marks]

Problem A7

When the user clicks on a button, what is generated?

- A. An Event.
- B. A Button object.
- C. A Container
- D. A Listener.

[2 marks]

Problem A8

An Event has _____ as default return type

- A. No return type for events
- B. String
- C. Double
- A. Integer

[2 marks]

Problem A9

What letter do many Swing class names start with?

- A. A
- B. B
- C. J
- D. S

[2 marks]

Problem A10

An application can have _____ context menu(s).

- A. two
- B. three
- C. only one
- D. more than one

[2 marks]

Problem A11

Confirm the correct java syntax for the while loop.

- A. while(Boolean_expression) { //Statements }
- B. while//loop//
- C. loop//while//
- D. <while>

[2 marks]

Problem A12

A computer game involves:

- A. at least one player who participates to have fun, entertainment, amusement, etc.
- B. goals which every player pursues – it stimulates rivalry among the players.
- C. rules which define the uniqueness of the game - how the game is played.
- D. All of the above

[2 marks]

Problem A13

Which of **Statement A** and **Statement B** is true and which one is false?

Statement A: Sprites can be part of a computer game.

Statement B: Avatars can be part of a computer game.

- A. Both Statement A and Statement B are false.
- B. Statement A is true and Statement B is false.
- C. Both Statement A and Statement B are true.
- D. Statement A is false and Statement B is true.

[2 marks]

Problem A14

The capability of a derived class to hide the characteristics of the parent class is called:

- A. Overloading
- B. Overriding
- C. Inheritance
- D. Structured programming

[2 marks]

Problem A15

An application can have _____ JFrame(s).

- A. two
- B. three
- C. only one
- D. more than one

[2 marks]

SECTION B [30 marks]

Instructions

- Respond to all problems in this section.
- State whether each of the statements in this section is true or false.
- Maximum score for each correct response on each question or part is given in [].

Problem B1

Is it possible to produce zero dimension arrays in Java. [2 marks]

Problem B2

The statement `int arr[][] = new int[2][5];` is illegal in Java. [2 marks]

Problem B3

Each class of controls has the same set of properties. [2 marks]

Problem B4

The statement `System.out.println(9 % 5);` will result in 1. [2 marks]

Problem B5

Any radio buttons that are placed directly on a form and not in a group box will function as a group. [2 marks]

Problem B6

Java permits the users to include two types of variables, namely primitive and reference. [2 marks]

Problem B7

All WYSIWYG (what-you-see-is-what-you-get) software used to design Windows forms makes it fast to develop Windows forms-based applications. [2 marks]

Problem B8

Programmers should include comments lines as possible in their code. [2 marks]

Problem B9

Identifiers in Java are not case sensitive. [2 marks]

Problem B10

C# is another name for Java. [2 marks]

Problem B11

A thread is a swing control in Java. [2 marks]

Problem B12

True and False are values that comprises Boolean variable. [2 marks]

Problem B13

If method carries the same name as class name and method doesn't have any return type, then it is known as constructor. [2 marks]

Problem B14

When a control receives focus, an exception event occurs. [2 marks]

Problem B15

Instantiating an object refers to creating an object based on a class. [2 marks]

SECTION C [40 marks]

Instructions

- Respond to all problems in this section.
- Maximum score for each correct response on each question or part is given in [].

Problem C1

a) Given the following code;

```
class Main {
    public static void main(String args[]) {
        String s = "java2s";
        jtxtOne.setText(s);
        s.replace('a', 'Z').trim().concat("Aa");
        s.substring(0, 2);
        jtxtTwo.setText(s);
    }
}
```

- What will be displayed in jtxtOne and jtxtTwo? [6 marks]
- What will be displayed in jtxtOne and jtxtTwo if s="c#qwerty"? [4 marks]

b. Given the following code;

```
public class Main {
    public static int getVal() {
        return 100;
    }
    public static void main(String args[]) {
        int num = 10;
        final int num2 = 20;
        switch (num) {
            case: 10
                // INSERT CODE HERE
            break;
            default: System.out.println("default");
        }
    }
}
```

- Write code you can use to replace the //INSERT CODE HERE line so that the code displays the text "default" in a button control called jbtnDef. [6 marks]
- What will be displayed in the button control if num !=10? [4 marks]

Problem C2

a) Given the following code;

```
switch (5) {
    case 0:
        jbtnDiplay.setText("zero");
        break;
    case 1:
        jbtnDiplay.setText ("one");
    default:
        jbtnDiplay.setText ("default");
    case 2:
        jbtnDiplay.setText ("two");
}
```

b) What will be printed out in jbtnDiplay, when the following code is executed? [2*4 marks]

b. Modify the code so that the same text is also printed in jlblNeon. [2*6 marks]

******End of Paper******