**COMPUTER SCIENCE**

**23/10/2019**

**2:00 pm - 5:00pm**



**SENIOR FIVE END OF YEAR EXAMINATIONS, 2019**

**SUBJECT: COMPUTER SCIENCE**

**COMBINATIONS:**

**MATHEMATICS- PHYSICS- COMPUTER SCIENCE (MPC)**

**MATHEMATICS-COMPUTER SCIENCE –ECONOMICS (MCE)**

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| --- |
|  **/100** **Marks:** |

**DURATION: 3 HOURS**

**INSTRUCTIONS:**

All questions are compulsory (**100 marks**)

**Attempt all questions. (100 marks)**

1) Write an equivalent while loop for the following code: **(3 marks)**

Int sz=25;

for(int i=0,sum=0;i<sz;i++)

sum+=i;

System.out.println(sum);

2) List 5 access non modifiers in java **(5 marks)**

3) Explain the function of the following Stack Methods **(8 marks)**

|  |  |
| --- | --- |
| **Stack methods**  | **Description**  |
| push ();  |  |
| pop ();  |  |
| peek ();  |  |
| boolean empty ();  |  |

4) What are the disadvantage of a cell phone **(2 marks)**

5) Explain why Switch is much preferred than a Hub **(4 marks)**

6) Differentiate entity and relationship. **(3 marks)**

7) What are the purpose of managing information? **(2 marks)**

8) A School needs design a data base to store information about Teacher (identified by TeacherId, FirstName, Surname, Salary, Qualification, Address, Contact); Combination (identified by CombinationId, CombinationName),Student (identified by StudentId, FirstName, Surname, Address, Schoolfees, ContactNumber) and Subject (identified by subjectId, SubjectTitle).

As hired as data base design State database steps you will use to design that database.

 **(6 marks)**

9) What the following controls prefix stand for? **(5 marks)**

Chk, fil, cbo, frm, txt

10) What do you understand by network subnet? **(3 marks)**

11) Write VB.6 codes that display your entered full name on the form when the **(4 marks)**

 application is loaded.

12) Predict the out put of the following program **(5 marks)**

class SampleSwitch {

public static void main(String args[]) {

for(int i=0; i<6; i++)

switch(i) {

case 0:

System.out.println("i is zero.");

break;

case 1:

System.out.println("i is one.");

break;

case 2:

System.out.println("i is two.");

break;

case 3:

System.out.println("i is three.");

break;

default:

System.out.println("i is greater than 3.");

}

}

}

13) Write a java program where you declare the variables school, firstname, lastname, age, level and combination. This program should display like this: Gs Kigali, Ange Batoni is 19 years old and in senior 4 of LKK **(10 marks)**

14) Using Visual Basic, write a program that prompts a user to enter a student’s score in Mathematics. If the score is above 45%, the program should display “Pass” otherwise it should display “Fail” **(10 marks)**

15) Write a class in C++ called person which has 2 functions: getdata() and putdata(). The getdata() prompts the user to enter his or her first name name, last name and age, the putdata() displays on the screen the user first name last, name and age. **(10 marks)**

17) Discuss advantages and disadvantage of using computer network in your school laboratory

 **(10 marks)**

18) Explain how you can care your laptop. **(10 marks)**