

BABCOCK UNIVERSITY

ILISAN-REMO, OGUN STATE, NIGERIA.

SCHOOL OF COMPUTING AND ENGINEERING SCIENCES

DEPARTMENT OF SOFTWARE ENGINEERING

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| COURSE: Introduction to Programming in C (COSC111) |
| 1st Semester 2021.2022 Session |
| **ASSIGNMENT A (Due Date: March 11, 2022)** |

**SECTION A (Attempt all)**

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| --- | --- |
| 1. C program execution starts from   1. begin() 2. class() 3. main() 4. static void | 2. Which of the following languages is a subset of C++ language?  A. C language B. Java Language  C. C# language D. B language |
| 3. Which one of the following is not a primitive data type in C:  A. float B. array  C. int D. char | 4. A C language program runs on:  A. Interpreter B. Compiler  C. Assembler D. Dev |
| 5. Consider int x = 9/2; what is the value of x  A. 4.5 B. 4.0 C. 4 D. 1 | 6. Who wrote C language, where, and when? |
| 7. what is the output of the following code:  int a = 2;  int b = 3;  if(a = =b) printf(“This cannot be seen"); | 8. Dividing a value by zero is categorized under what type of error :………………… |
| **9. W**hat is control (flow) construct exhibited in the following lines of code and what is last value of x:  int x =1;  x = x + 2;  x = x \* 2; | 10. 7 % 4 = ? |

**SECTION B (Attempt any 3 questions)**

1. A software is to compute the monthly ***takehome*** of all category of employees of an

establishment. The employee taxation is based on the following constraints:

* If basic salary is less than or equal to N5000, 5% of basic salary is deducted as tax otherwise 8% deducted.
* Also 10% of the employee gross pay should be deducted as part of pension scheme.
* It is require that each employee pay slip should contain employee number, name, total allowance, tax, basic salary, gross pay and Net pay.

Analyze this problem and draw a flow chart showing the procedure and write a C code to implement the solution.

* + - Total allowances = Housing + Transport

HINTS:

* + - Gross Pay = Basic salary + Total allowances
    - Net pay = Gross pay – (Tax + pension)

1. State or draw out the order of evaluation of the operators used in the following:

X = 8 + 15 \* (6 – 2) -1

1. What do you understand by **dangling else**.
2. Explain what you understand by correctness property of an algorithm
3. Mrs Alli is a dealer of swiss lace in Idumota market, she sells different grade of swiss

lace. The grade of clothe is in five categories, and each category has specific price rate as

follows:

Grade 1: ~~#~~100, 000:00

Grade 2: ~~#~~250, 000:00

Grade 3: ~~#~~380, 000:00

Grade 4: ~~#~~500, 000:00

Grade 5: ~~#~~620, 000:00

Due to large in-flow of customers, her attendants are always making mistake of price related to each grade. Therefore, Mrs Alli contacted you to develop a simple application, which will help to correctly match grade with price.

Using switch case construct, write a C program that takes in various customers’ choice and display appropriate cost.



//Consider the following program snippnet

:

:

if(hungry==yes)

{

if(choice==rice)

{

printf("Have a plate of rice");

}

else

printf("Wait for beans");

}

else

printf("Have a bottle of ginger-drink");

1. What will be the output if the first “if” evaluates as false?
2. What will be the output if the second “if” evaluates to be true?
3. What will be the output if the second “if” evaluates to be false?

*God Bless You*