**COMSATS University Islamabad, Islamabad campus**

**Department of Computer Science**

**FIRST Sessional Examination, Fall 2020**

**PART – II**

**Class:** BCS/BSE 2  **Marks:** 15

**Subject:** CSC103 Programming Fundamentals  **Time:** 25 min

**Instructors:** Dr. Manzoor Ilahi Tamimy / Mr. Rizwan Rashid / Ms. Saadia Maqbool / Dr. Behjat Zuhaira

**Dated:** October 23, 2020

**Instructions:**

1. Solve all questions on question paper within the space provided.
2. Part – I is form-based and consists of Q – 1, Q – 2, and Q – 3.
3. Part – II consists of Q – 4 and Q – 5.

**Q – 4 (CLO – 3) Program/Code (Marks 10):**  Write a complete Java program for the given scenario.

The program takes as input two values from the user: department and salary of an employee. For the value of department, the user can enter one of the following values: 11, 22, and 33. Calculate and display the appropriate amount of raised salary by using the following rules:

* Employees in departments 11 and 22 are receiving a 2% raise in their salaries
* Employees in department 33 are receiving a 1.5% raise in their salaries

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| import java.util.Scanner; public class quiz {  public static void main (String args[]){  double full\_sal;  double percent;  Scanner scan = new Scanner(System.*in*);  System.*out*.println("What is your department:");  int department = scan.nextInt();  System.*out*.println("What is your Salery:");  float salary = scan.nextFloat();  if (department == 11 || department == 22) {  percent = (salary \* 0.02);  full\_sal = percent + salary;  System.*out*.println("Your total salery is: " + full\_sal);  }  else if (department == 33) {  percent = (salary \* 0.015);  full\_sal = percent + salary;  System.*out*.println("Your total salery is: " + full\_sal);  }  else  System.*out*.println("Wrong department number");   } } |
|  |

**Q – 5 (CLO – 2) Operator precedence (Marks 05):**

Solve the given arithmetic expression. Write all steps clearly.

The values of variables are: A = 6, B = 3, C = 8, X = 2, Y = 5

**S = 7 + 3X % 5 – 11(Y – 4) + A + B – C / X**

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| A = 6, B = 3, C = 8, X = 2, Y = 5  S = 7 + 3X % 5 – 11(Y – 4) + A + B – C / X  S = 7 + 3X % 5 – 11(5 – 4) + A + B – C / X  S = 7 + 3X % 5 – 11(1) + A + B – C / X  S = 7 + 3X % 5 – 11 + A + B – C / X  S = 7 + 6 % 5 – 11 + A + B – C / 2  S = 7 + 1 – 11 + A + B – C / 2  S = 7 + 1 – 11 + A + B – 8 / 2  S = 7 + 1 – 11 + A + B – 4  S = 7 + 1 – 11 + 6 + 3 – 4  S = 8 - 11 + 9 - 4  S = 17 - 15  S = 2 |