NATIONAL SCHOOL OF BUSINESS MANAGEMENT

CS 102.3: Programming in C

Sample Paper

Instructions to Candidates

1) **Answer ALL questions.**
2) Time allocated for the examination is three and half hours (03 ½) hours.
3) If a page or a part of this question paper is not printed, please inform the Supervisor immediately.
4) Write your index number in all pages of answer script.
5) Staple all answer sheets at the end of the examination.

1. Write a program in C Language to display the employee name, new salary, when the user inputs employee name, and basic salary. You can refer to the following formula and the table to calculate new salary:

New Salary = Basic Salary + Increment

Basic Salary	Increment
Less than 5000	5% of Basic Salary
More than or equal 5000 and less than 10000	10% of Basic Salary
More than or equal 10,000	15% of Basic Salary

(15 marks)

2. The gross remuneration of a company salesman comprises the Basic Salary and certain additional allowances and bonuses as given below:
   Salesmen with over 5 years' service receive a 10% additional allowance of Basic Salary each month.
   Salesmen working in Colombo (Input character 'C' if the city is Colombo) receive an additional allowance of Rs. 2,500/- per month.
   The monthly bonus payment is computed as given below:

Monthly Sales(Rs)	**Bonus as a percentage of monthly sales**
0-25000	10
25000-50000	12
>=50000	15

   Write a program to output the gross monthly remuneration of a salesman.

(20 marks)

3. Write a program in C language to input 30 integer values and display the total number of (count) ‘positives’, ‘negatives’ and ‘zeroes’ in the entered number series.

(10 marks)

4.

a. Create a function which read 2 numbers (Allow the user to input) from the user and display the average value. After creating the function call the function inside the main function.

(10 marks)

b. Create a function which accept three integers as parameters and find and return the highest value. In the main function, input 3 numbers, call the function and display the highest value.

(15 marks)

c. Compare and contrast the differences between ‘recursion’ vs. ‘iteration’. You can use a sample program to explain the answer.

(5 marks)

5.

a. Write a C program to declare an array to store marks of a module of 20 students. Input marks into the array and display the average mark and highest mark.

(10 marks)

b. Write a C program to declare a multi-dimensional array with the size of 3 x 4. Allow the user input numbers with fractions (decimal values) in to the array and display the values in the form of matrix.

(15 marks)

End of Paper