



**RAJARATA UNIVERSITY OF SRI LANKA  
FACULTY OF APPLIED SCIENCES**

B. Sc. (General) Degree  
Second Year Semester I Examination – Oct/ Nov 2014

**COM 2306 – VISUAL PROGRAMMING**

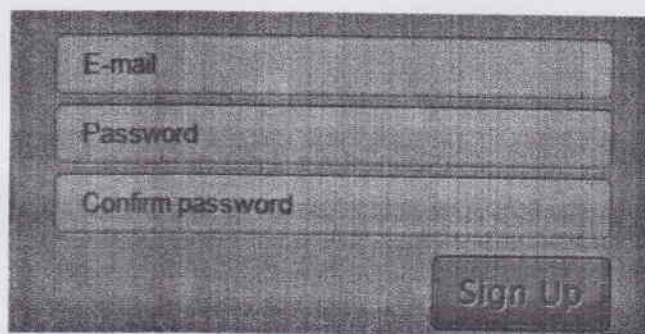
Answer **all** questions.

Time allowed: Two (2) Hours.

1.
  - (a) Define Visual Programming using your own words. (3 marks)
  - (b) Explain how a Visual Programming language helps users in programming. (6 marks)
  - (c) Describe the role of the .Net Framework in Visual Programming. (5 marks)
  - (d) What are the changes that will happen to the .cs file developed in Visual Studio .Net before running the project? (6 marks)

(Total 20 marks)

2. Following is a part of a Graphical User Interface (GUI) developed for a user email registration system.



- (a) Identify GUI components and list suitable events of each component of the interface. (3 marks)
- (b) Propose the most suitable GUI component for the above interface and state its function. (2+3 marks)
- (c) What are the properties of a password text field that can be changed from its default value? (3 marks)

*This question continues in the next page.*

(d) Write an algorithm to check emptiness of text fields before signing up (if necessary make suitable assumptions). (6 marks)

(e) List good programming practices and debugging strategies you may follow during system development. (4+4 marks)

(Total 25 marks)

3. Assume that you are a programmer in a software company and company administration requested you to develop a payroll system (salary calculator) for the company staff. Following is a sample of a salary sheet issued at the end of salary calculation process.

Emp. No	01856		
Name	A.C.G. Perera		
Designation	Management Assistance		
Department	Land and Savoring		
Salary Scale	U-AC 3-2006 26900-10x580;13x700;8x800-48250p.m.		
Month	October 2014		
<b>Earning</b>			
Basic Salary	27,775.00	M.C.L. Allowance	7,800.00
Refere Balance	2.72	Special Allowance	4,166.25
		<b>Total</b>	<b>39,743.97</b>
<b>Deductions</b>			
Stamp	25	RROUUPC/F	1.47
UPF	3,557.00		
		<b>Total</b>	<b>3,583.47</b>
<b>Net Pay Cash</b>			<b>36,160.00</b>
<b>UPF (15%)</b>			<b>5,336.25</b>
<b>ETF (3%)</b>			<b>1,067.25</b>

(a) Identify possible parameters required from a user to calculate salary at the month end. (5 marks)

(b) Design a GUI form to represent the salary calculator (use suitable GUI components). (7 marks)

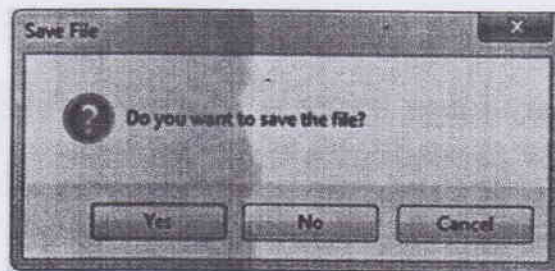
(c) Propose a complete class named "SalaryCalculator" with suitable methods to calculate the salary. (13 marks)

(d) Write an algorithm to save each salary calculation process in an access file at the end of each calculation process. (10 marks)

(Total 35 marks)

4.

- (a) What are Exceptions? Briefly explain. (4 marks)
- (b) How does C# make it possible to handle exceptions in C# coding? (8 marks)
- (c) Clarify "*Method Overriding*" and "*Method Overloading*". (2+2 marks)
- (d) Write codes for following popup message box for the click event of a button. (4 marks)



(Total 20 marks)