

Faculty of Engineering and Technology			
Ramaiah University of Applied Sciences			
Department	CSE	Programme	B.Tech
Semester/Batch	5 th / 2017		
Course Code	CSC305A	Course Title	Programming Language Principles
Course Leader(s)	Mr. Prakash P/Ami Rai E./ Chaitra S.		

Assignment			
Reg.No.	XXXXXXXXXX	Name of Student	Enter Name

Marking Scheme		Marks		
		Max Marks	First Examiner Marks	Moderator
1.1	Implementation of the application using C-Programming	3		
1.2	Implementation of the application using JAVA-Programming using Object Oriented features	3		
1.3	Discussion on ease of writing program	3		
1.4	Discussion on amount of changes required	3		
1.5	Discussion on efficiency in terms of CPU usage and memory usage	8		
Total Marks		20		

Course Marks Tabulation				
Component-1 (B) Assignment	First Examiner	Remarks	Moderator	Remarks
1				
Marks (Max 20)				
Signature of First Examiner		Signature of Moderator		

Please note:

1. Documental evidence for all the components/parts of the assessment such as the reports, photographs, laboratory exam / tool tests are required to be attached to the assignment report in a proper order.
2. The First Examiner is required to mark the comments in RED ink and the Second Examiner's comments should be in GREEN ink.
3. The marks for all the questions of the assignment have to be written only in the **Component – CET B: Assignment** table.
4. If the variation between the marks awarded by the first examiner and the second examiner lies within +/- 3 marks, then the marks allotted by the first examiner is considered to be final. If the variation is more than +/- 3 marks then both the examiners should resolve the issue in consultation with the Chairman BoE.

Assignment

Instructions to students:

1. Maximum marks is **20**.
2. The assignment has to be neatly word processed as per the prescribed format.
3. The maximum number of pages should be restricted to **7**.
4. The printed assignment must be submitted to the course leader.
5. **Submission Date: 01/08/2016**
6. **Submission after the due date is not permitted.**
7. **IMPORTANT:** It is essential that all the sources used in preparation of the assignment must be suitably referenced in the text.
8. Marks will be awarded only to the sections and subsections clearly indicated as per the problem statement/exercise/question

Preamble

In computer science, principle of programming language makes students to understand the concepts of syntax-related concepts including context-free grammars, parse trees, data structure, printing and interpretation. Analyzing semantic issues associated with function implementations, including variable binding, scoping rules, and exception handling. Students study design issues of imperative, object-oriented and functional languages.

Question

(20 Marks)

Consider Goods and Service Tax (GST) slabs, 0%, 5%, 12%, 18%, and 28%. Design and develop a tax calculation application for the billing of goods and services covering all the tax slabs mentioned.

The report should address the following:

- 1.1 Implementation of the application using C-Programming.
- 1.2 Implementation of the application using JAVA-Programming using object oriented features.
- 1.3 Discussion on ease of writing program in C in comparison with that in JAVA.
- 1.4 Discussion on the amount of changes required to introduce a new tax slab 25% and removing 28% slab in both the languages.
- 1.5 Discussion on the efficiency in terms of CPU and memory usage using tools in both the languages.

