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| Engineering and Technology | | | |
| Ramaiah University of Applied Sciences | | | |
| Department | Computer Science and Engineering | Programme | B. Tech. |
| Semester/Batch | 4th/2019 | | |
| Course Code | 19CSC212A | Course Title | Software Development Fundamentals |
| Course Leader(s) | Ms. Sahana P. Shankar, Ms. Supriya and Ms. Prakash P | | |

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| Questions | Marking Scheme | | Marks | | |
| Max Marks | First Examiner Marks | Moderator |
| 1 |  | | | | |
| 1.1 | Problems with the existing software process models for the current and future software development requirements | 3 |  |  |
| 1.2 | Design of a software process model which suits the current and future software development requirements | 5 |  |  |
| 1.3 | Justification of the designed model with an Example | 2 |  |  |
| **Question 1 Max Marks** | | **10** |  |  |
| **Total Assignment Marks** | | | 10 |  |  |

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| **Course Marks Tabulation** | | | | |
| **Question** | **First Examiner** | **Remarks** | **Moderator** | **Remarks** |
| 1 |  |  |  |  |
| **Marks (Max 10 )** |  |  |  |  |
| **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. The assignment consists of **1** question.
2. Maximum marks is **10**.
3. The assignment has to be neatly word processed as per the prescribed format.
4. The maximum number of pages should be restricted to **5**.
5. The printed assignment must be submitted to the course leader.
6. **Submission Date: 06/03/2020**
7. **Submission after the due date is not permitted.**
8. **IMPORTANT**: It is essential that all the sources used in preparation of the assignment must be suitably referenced in the text.
9. Marks will be awarded only to the sections and subsections clearly indicated as per the problem statement/exercise/question

**Preamble**

This course is intended to make the students learn and apply the fundamental concepts, principles, techniques and methodology of creating software. Any software application development involves requirements collection and analysis, high level and low level design, development, software testing, software installation at customer’s place and software maintenance. Students are trained in concepts used to design, develop, test and evaluate software based on given requirements. This assignment is framed to make the students evaluate and apply the object oriented and structured approach of software engineering.

**Question 1** **(10 Marks)**

Software is more than just program code. A program is executable code, which serves some computational purpose. Engineering on the other hand, is all about developing products, using well-defined, scientific principles and methods. Software engineering is an engineering branch associated with development of software products using well-defined scientific principles, methods and procedures. The outcome of software engineering is an efficient and reliable software product. Software Engineering has various software process models such as Waterfall, Prototype, Spiral, Incremental, among many others. The choice of the model depends on various factors such as budget, time and complexity of the software.

The latest software applications that are being developed pose a lot of challenges to software engineers in various phases of software development. There is a need to identify and address these challenges upfront before the commencement of software development life cycle. Hence there is a need to develop new software process models to effectively address development of such software applications. Develop a new model of your own with proper justification. The effort needs to be documented along the following lines:

**1.1** Problems with the existing software process models for the current and future software development requirements.

**1.2** Design of software process model which suits the current and future software development requirements.

**1.3** Justification of the designed model with an example.