

**Uva Wellassa University of Sri Lanka**  
**Faculty of Science and Technology**  
**Department of Computer Science and Technology**  
**200 level 2<sup>nd</sup> Semester Examination – Dec./Jan. 2017**  
**CST226-2 Software Engineering and Quality Assurance**



**Instructions to candidates**

**Duration:** Two (02) hours

**Number of questions:** Four (04)

**Mark allocation:** 100

**Answer all the questions.**

1.
  - a. Briefly explain the process of requirement engineering. (5 mark)
  - b. Describe the importance of design phase in software development. (5 mark)
  - c. What are the benefits of prototyping? (5 mark)
  - d. Explain how waterfall and prototype software development lifecycle models are combined in spiral software development life cycle model. (10 mark)
  
2.
  - a. Define the term modularity. (3 mark)
  - b. Discuss the importance of risk analysis. (5 mark)
  - c. Briefly explain the advantages of agile methodology in software development. (5 mark)
  - d. Discuss the software development process of an IT company which follows scrum methodology for their software development process. (12 mark)
  
3.
  - a. Mention any three (03) automated software testing tools widely used in Sri Lankan IT industry. (3 mark)
  - b. Briefly explain the software re-engineering process. (6 mark)
  - c. List and explain different types of testing in testing phase. (8 mark)
  - d. Explain the role of a QA engineer in software development. (8 mark)
  
4.
  - a. Explain the need of software maintenance phase. (4 mark)
  - b. Discuss the activities carried out during the software maintenance phase. (6 mark)
  - c. Assume that you have been appointed as a project manager for a major software products company. Your job is to manage the development of the next generation version of its widely used word processing software. Tight deadlines have been established and announced because competition is intense. Which software process model would you choose for this scenario? Justify your answer. (15 mark)

