



UNIVERSITY OF RUHUNA

Faculty of Engineering

End-Semester 4, Examination in Engineering - Part II,  
November/December 2016

Module No: EE4106      Module Name: Software Engineering Principles

[2 hour and 30 minutes]

[Answer all questions. each question carries 10 marks.]

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- Q1. a) Describe what polymorphism is in Object Oriented Programming? [4 Marks]  
b) List FOUR advantages of Object Oriented Programming over other programming styles. [2 Marks]  
c) Composition is an association among objects in Object Oriented Programming, Describe what is composition in detail. [4 Marks]
- Q2. Assume you are going to develop an software for a school to manage student details. The student details include subjects done by each student in each year and the marks obtained for each term.  
Also need to consider class teacher and the other teachers who teach relevant subjects. The parents must be able to view attendance details as well.
- (a) Draw a use case diagram related to the above software. [3 Marks]  
(b) Draw appropriate classes for the above mentioned school management software. [5 Marks]  
(c) Draw the associations among the classes you have drawn in Q2. (b). [2 Marks]
- Q3. a) Requirement gathering is one of the first activities involved in software development. Name THREE other activities. [3 Marks]  
b) List THREE strengths of Waterfall software development life cycle model. [3 Marks]  
c) List TWO occasions when we can use the waterfall software development life cycle model. [2 Marks]  
d) List TWO occasions when we can use RAD (Rapid Application Development) software development life cycle model. [2 Marks]

- Q4. a) List FOUR benefits of iterative software development. [4 Marks]
- b) What is the main difference between waterfall model and the V-shaped software development life cycle model. [2 Marks]
- c) Scrum is one of the agile method of software development. Write TWO advantages of having daily scrum meetings. [2 Marks]
- d) What is pair programming practiced under Extreme programming? [2 Marks]