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23 AUG 2013
EASTERN UNIVERSITY, SRI LANKA

Eastern University, Sri Lanka

Department of Mathematics

Second Examination in Science – 2009/2010

Second Semester (April, 2012)

CS 205 – SOFTWARE ENGINEERING PRINCIPLES

(Proper & Repeat)

Answer all questions **Time allowed: 1 Hour**

Q1)

a) Briefly explain the 'Waterfall model' with the aid of block diagrams. List two advantages and two draw backs of the above model.

b) List four software quality attributes. Briefly explain how these attributes connected with the quality of a software product.

c) What do you understand by Functional and Nonfunctional Requirements? List at least three examples for each requirement types.

d) The prototyping is used as a most powerful requirement elicitation tool.

   a. What do you understand by requirement elicitation?
   b. What do you understand by Prototyping?
   c. What are the different types of prototyping?
   d. Why the prototyping plays an important role in requirement elicitation?

e) What do you understand by requirement change management?

f) List the problems faced when describing the requirement specification in natural languages?

g) List at least four names of the tests that carried out during the life cycle of a software product.

Q2)

a) List at least four names of the tests that carried out during the life cycle of a software product.

b) List three advantages of the object oriented software design.

c) Discuss the importance of data flow diagrams in the context of software design.

d) What do you understand by balancing of dataflow diagrams?

e) A brief description for a portion of the online examination system is given below:

> There is an online examination system in which Teacher enters the questions. The questions are validated and stored in a database. This system requires the student to logon to the website. Once the student logged in, the system will generate the questions to the student to answer them online. At the end of the examination the system send the result to both the student and the teacher. At the same time the result is saved for future reference.

Draw a **context diagram** and **top level dataflow diagram** for the above system.