THE OPEN UNIVERSITY OF SRI LANKA
DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
B.Sc. DEGREE PROGRAMME 2011/2013
NO BOOK TEST: 01
CPU2140: SYSTEM ANALYSIS AND SOFTWARE ENGINEERING
DURATION: ONE AND HALF HOURS ONLY (1.5 HOURS)

Date: 16th February, 2012 **Time: 4.00 p.m. to 5.30 p.m.**

Answer **ALL** Questions.

Q1).

I.

a. What is *Software Engineering*?

b. Briefly describe the reason to emerge the notion of Software Engineering?

II. IT department of the Open University is going to install a management information system to manage activities and data on student information, registration process and examinations.

a. As an undergraduate who is studying Software Engineering do you recommend them to use a *generic product* or a *customized product*. Justify your answer.

b. Discuss four (04) aspects that you expect from the above system to consider it as a good quality product, other than the services it provides.

III. "*Verification and validation cost of critical systems are usually very high (more than 50% of the total system development)*". Do you agree with this statement? Justify your answer.

Q2).

I.

a. Name the fundamental activities that are common to all software processes.

b. Briefly describe three software process models used for abstract representation of software processes.

II. Consider the management information system described in Q1) II. Assume you have been assigned as a Software Engineer for that project. What is the software process model you suggest them to use by considering the pros and cons of each model that have given as answer for the above question. Justify your answer.

III. Rational Unified Process (RUP) is an example of a modern process that has been derived from work on UML and the associated software development processes. Briefly describe the static perspectives and dynamic perspective of RUP.

Q3):

I. "*Software management is difficult than the other product project management*". Comment on this statement.

II. *Non Functional requirements are often more critical than individual Functional requirements.*" Comment on this statement by giving a suitable example.

III. "*Software requirement specification should specify both what the system should do and how the system should do*". Do you agree with this statement? Justify your answer.

IV. Consider the management information system described in Q1) II. Briefly describe the importance of carrying out a feasibility study for that system.