EASTERN UNIVERSITY, SRILANKA

SECOND YEAR SECOND SEMESTER EXAMINATION IN SCIENCE (2005/2006)

(March/ April, 2008)

CS 205 – SOFTWARE ENGINEERING PRINCIPALS

(Proper & Repeat)

Answer all questions   **Time allowed: 01 hour**

Q1.

(a) (i) What you understand by "**Well Engineered Software**".

(10 marks)

(ii) Identify and describe the attributes of Well Engineered Software?

(10 marks)

(b) (i) What are the **four** fundamental process activities?

(8 marks)

(ii) List **four** Software Engineering Paradigms.

(8 marks)

(iii) Briefly explain the prototyping model with the help of block diagrams, showing the different stages of software lifecycle, and define the different approaches used in this method of process modeling.

(14 marks)

Q2.

(a) (i). Briefly explain the terms "Cohesion" and "Coupling" and the important role played by them when designing software?

(10 marks)

(ii). Describe the Inheritance characteristics of the Object Oriented technique with the aid of suitable examples.

(10 marks)

(b) Draw a **context diagram** and **top level dataflow diagram** for the online system made up of the following:

A company has an online ordering system for its customers. The customers purchase the products online and the payments made through the Credit Card. When an order placed online, the system must send an "Acknowledgement" to the customer and the 'customer and order information' (including credit card information) are entered into the Customer database. The system must verify the Credit Card information (card number and order amount) with respective Credit Card Company. If the Credit Card Company rejects the payment, the online system must send an Order rejection report to the customer. Otherwise, the system must forward the order to the shipping unit. Once an order received to the shipping unit, it sends a confirmation and delivery information to the customer and updates the customer database and the inventory database.

(10+20 marks)