EASTERN UNIVERSITY, SRI LANKA

DEPARTMENT OF MATHEMATICS

SECOND YEAR EXAMINATION IN SCIENCE-2012/2013

SECOND SEMESTER (OCT. / NOV., 2015)

CS 205 – SOFTWARE ENGINEERING PRINCIPLES

PROPER & REPEAT

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

Q1) Software Engineering is the field of Computer Science that deals with the building of software systems.

1. Briefly explain the following terms:
   a. Software,
   b. Well Engineered Software,
   c. Software Process.
2. Describe the fundamental process activities of software engineering.
3. Explain the **Evolutionary development model** with diagram and give three disadvantages of this model.
4. Describe the different levels of **software testing**.
5. Why '**Verification and validation**' is considered as an important phase in software engineering?

Q2) System model helps the analyst to understand the functionality of the system and models are used to communicate with customers.

1. What do you understand by **balancing** in a data flow diagram?
2. Define **classes** and **objects** in Object Oriented software development.

3. Consider the following scenario:

Youth Star is an association that distributes T-shirts and caps at discount price to their club members. When an order processing clerk receives an order form, he or she verifies that the sender is a club member by checking the Member file. If the sender is not a member, the clerk returns the order along with a membership application form. If the customer is a member, the clerk verifies the order item data by checking the item file. Then the clerk enters the order data and saves it to the Daily Orders file. The clerk also prints an invoice and shipping list for each order, which are forwarded to Order Fulfillment department to process there.

a. Draw a **context diagram** for the Youth Star Association.
b. Draw the **level-0** DFD for the activities described.
c. Draw the **level-1** DFD for the first process in level-0 DFD.