ASSIGNMENT No. 1

Note: All questions carry equal marks.

Q.1 What are the differences between generic software product development and custom software development?

Q.2 Consider development of the following system. Suggest most appropriate software process model with arguments:
a) Online admission system  
b) Social networking system

Q.3 Explain how both the waterfall model and prototype can be accumulated in the spiral process model? Give example!

Q.4 Who should be involved in a requirement review? Draw a process model showing how a requirement review might be organize?

Q.5 Explain why the process of project planning is iterative and why a plan must be continually reviewed during a software project.

ASSIGNMENT No. 2

Note: Question 1 & 2 have 20 marks each and Question 3 has 60 marks

Q.1 Suggest how an engineer responsible for drawing up a system requirement specification might keep track of relationship between functional and non-functional requirement.

Q.2 Explain the four P’s that are important in effective software project management.

Q.3 You are responsible for the development of an electronic mail system to be implemented on a PC network. The e-mail system will enable users to create letters to be mailed to another user, general distribution, or a specific address list. Letters can be read, copied, stored and the like. Using these distributions as a starting point, derive a set of requirements and create a top level design for the e-mail system.
3414 Software Engineering-I
Recommended Book:
Software Engineering 5th Edition by Roger Pressman
Course Outlines:
Unit No.1 Introduction
   a) Introduction to Software, Role of Software
   b) Characteristics of Software, Need for Software
   c) Introduction to Software Engineering

Unit No.2 Software Engineering Models
   a) Software Process.
   b) Software Process Models (Linear Sequential Model, Prototyping Model, RAD Model, Evolutionary Software Process Models)

Unit No.3 Project Management
   a) Project Management Concept
   b) Software Management Team
   c) Common Software Management Problems.
   d) Basic Management Techniques

Unit No.4 System Engineering
   a) System, Types of System, Elements of System
   b) Approaches to Software Engineering
      a) Structured approach
      b) Object-Oriented approach)

Unit No.5 Analysis Concepts and Principles
   a) Requirements Analysis, Communication Techniques, Analysis Principles
   b) Software Prototyping, Specification, Specification Review

Unit No.6 Analysis Modeling -I
   a) Elements of the Analysis Model
   b) Data Modeling
   c) Functional Modeling (DFD).
   d) Behavioral Modeling (STD)

Unit No.7 Analysis Modeling-II
   a) Entity Relationship Diagram (ERD)
   b) Control Flow Model
   c) Control Specification and Process Specification
   d) The Data Dictionary

Unit No.8 Design Concepts and Principles
   a) Design Concepts, Design Process
   b) Effective Modular Design
   c) Design Principles for Effective Modularity
   d) Introduction to Design Model

Unit No.9 Software Testing Methods
   a) Software Testing Fundamentals
   b) Testing objectives, Testing principles
   c) Test Case Design
   d) White box testing, Basis Path testing, Control Structure Testing, Black Box Testing