

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--

BCA

UTU (SEM.-IV) Examination-2014

SOFTWARE ENGINEERING*Time : 3 Hrs.*

Note: Attempt any Five Questions. All questions carry equal marks.

Max. Marks : 70

1. (a) What is the principal aim of the software engineering discipline? What does the discipline of software engineering, discuss?
- (b) What do you understand by the expression "life cycle model of software development"? Why it is important to adhere to a lifecycle model during the development of a large software product?
2. (a) What are the major phases in waterfall model of software development? Which phase consumes the maximum effort for developing a typical software product?
- (b) Explain why the spiral life cycle model is considered to be a Meta model?
3. (a) What is a prototype? Under what circumstances is it beneficial to construct a prototype?
- (b) Suppose you were to plan to undertake the development of a product beset with a large number of technical as well as customer related risks, which lifecycle model would you adopt? Justify your answer.

4. (a) What are the different categories of software development project, according to, the COCOMO estimation model?
(b) What do you understand by the term 'functional independence' in the context of functional design? What is the advantage of functional independence?
5. (a) What do you mean by balancing a DFD? Illustrate your answer with suitable example.
(b) Distinguish between error and failure. Which of the two is detected by testing? Justify your answer.
6. (a) What are driver and stub modules in the context of integration and unit testing of a software product? Why are stub and driver modules required?
(b) What is the difference between black box testing and white box testing.
7. (a) What is meant by a code walk-through? List the important types of errors checked during code walk-through.
(b) When the project planning activity does starts and ends in software lifecycle? List the important activities of software project managers performed during project planning.
8. Write short notes on following :
 - i. Cohesion and Coupling
 - ii. CASE
 - iii. Top-down decomposition
 - iv. Software Crises