Roll No .....

IT - 605

B.E. VI Semester

Examination, June 2013

Software Engineering and Project Management

Time : Three Hours

Maximum Marks : 70/100

Note: Attempt all questions. Each question carry equal marks.

1. a) Discuss the major differences between software engineering and some other engineering discipline, such as bridge design or house building. Would you consider state-of-the-art software engineering as a true engineering discipline?

   b) Explain the unified approach to software development. Discuss the merits and demerits of this approach.

OR

2. a) What do you understand by a layered software design? What are the advantages of a layered design? Explain your answer by using suitable examples.

   b) Explain the Software Life Cycle Model in detail.

3. a) Explain the notations cohesion and coupling.

   b) The estimated size for military software is 10^6 KDSI. What is the expected effort obtained with the use of the COCOMO Model?

   c) Explain in detail about COCOMO model.

OR

4. a) Compute the function point value for a project with the following :

Information domain characteristics.

Number of external inputs : 32

Number of external outputs : 60

Number of external inquires : 24

Number of external interface files : 2

Number of internal logical files : 8

Assume that all complexity adjustment values are average.

b) What is the role of effort estimation in a project, and why is it important to do this estimation early?

5. a) Explain the ways and means for collecting the software requirements and how are they organized and represented.

b) Differentiate between data structure design and object oriented design.

OR

6. a) Why is accurate estimation of the effort required for completing a project difficult? Briefly explain the different effort estimations methods that are available. Which one would be most advisable to use and why?

b) Describe the design process in software development. What are the characteristics and criteria for design?

7. a) Explain the integration testing process and system testing processes and discuss their outcomes.

b) What is black box testing? Is it necessary to perform this? Explain various test activities.

OR

8. a) What are the testing principles the software engineer must apply while performing the software testing?

b) Define the term Component? What are the benefits of Component-based software engineering (CBSE).

9. Explain the following terms (Any four) :

Project Scheduling

Reverse Engineering

Web Engineering

Software Quality Assurance

Risk Analysis