

UNIVERSITY OF PUNE
[4363]-264
T.E Software engineering Examination - 2013
INFORMATION TECHNOLOGY
(2008 COURSE)

[Total No. of Questions :12]
[Time : 3 Hours]

[Total No. of Printed Pages :3]
[Max. Marks : 100]

Instructions :

- (1) Answer *Q1 or Q2, Q3 or Q4 or Q6 and answer Q7 or Q8, Q9 or Q10, Q 11 or Q12 question from section I.*
- (2) Answers to the *two sections* should be written in *separate answer-books.*
- (3) Black figures to the right indicate full marks.
- (4) Neat diagrams must be drawn wherever necessary.

SECTION – I

- Q1 A) What are the characteristics of software? Explain in detail following software myths. 10
i) Practitioner's myths ii) Management myths
- B) Define software engineering. Explain the failure curve of software. 8
OR
- Q2 A) What is software process? Explain iterative software process model and Spiral model in detail. 10
- B) Explain in detail extreme programming 8
- Q3 A) Explain requirement elicitation and elaboration tasks in brief. 8
- B) What are the rules of thumb. Explain in detail following UML diagrams stating purpose and applicability. 8
i) Use-case diagram ii) State diagram
OR
- Q4 A) Draw level 0, level 1, and level 2 data flow diagram for library book returning system for a student. System also maintains book information. 8
- B) Explain (Class-Responsibility-Collaborator CRC) Modeling. 8

Q5 A) Explain in Detail following Design concepts: 12
1. Information Hiding 2. Modularity 3. Function Independence

B) Explain Layered architecture style in brief. 4

OR

Q6 A) Explain the Golden rules used for user interface design. 12

B) Explain Web application interface design principles and guidelines. 4

SECTION – II

Q7 A) Explain the Debugging Process with the help of a diagram. 6

B) Explain the following system testing strategies in brief. 6

i) Stress Testing ii) Security Testing

C) Define Cyclomatic Complexity? What are the 3 ways to calculate it? 4

OR

Q8 A) Explain the following Integration Testing Strategies: 8

i) Top-down integration ii) Bottom-up integration

B) Distinguish between: 8

i) White Box and Black Box Testing ii) Alpha and Beta Testing

Q9 A) Explain the FP based Estimation Decomposition Technique. 6

B) Explain the term people and process of management Spectrum. 6

C) State the direct measures of the Software process and product. Also state the indirect measures of product? 4

OR

Q10 A) Explain decision tree to support make-buy decision with an example. 8

B) What do you mean by DRE? What is the ideal value for DRE? What is the significance of DRE in maintaining Software Quality? 4

C) Describe the Lorenz and Kidd approach of estimation for Object-Oriented Projects. 4

Q11 A) Compare Reactive Verses Proactive Software Risks. Explain Software Risk Management. 10

B) What is a task network in project scheduling? Explain with an example. 8

OR

Q12 Write a Short note on: (Any 3) 18

1) Software Configuration Management 2) Software Quality

3) Earned Value Analysis 4) Product Metrics
