

Scheme -I
Sample Question Paper

Program Name : Computer Engineering Program Group
Program Code : CO/CM/IF/CW
Semester : Fourth
Course Title : Software Engineering
Marks : 70

22413

Time: 3 Hrs.

Instructions:

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order.

Q.1) Attempt any FIVE of the following.

10 Marks

- a) Define Software & Software Engineering.
- b) List any 4 types of Software.
- c) State the need of SRS.
- d) List any 4 types of Risks.
- e) Define project Cost Estimation.
- f) Define Quality Control and Quality Assurance.
- g) State phases of software Quality Assurance.

Q.2) Attempt any THREE of the following.

12 Marks

- a) Draw neat labelled diagram of Software Engineering layered technology approach. Give Significance of each layer.
- b) Describe symbols used in DFD.
- c) Draw and describe management spectrum.
- d) State and describe any 4 basic principles of project scheduling.

Q.3) Attempt any THREE of the following.

12 Marks

- a) Distinguish between RAD model and incremental model.
- b) Describe any 4 software deployment principles.

- c) Draw DFD for library management system for level 0 and level 1.
- d) State and describe two metrics of project size estimation.

Q.4) Attempt any THREE of the following.

12 Marks

- a) State any 8 features of agile software development.
- b) Describe any 4 core principles of software engineering practices.
- c) Draw RMMM plan. Describe its major components.
- d) Describe following project cost estimation approaches.
 - Heuristic
 - Analytical
- e) Prepare macro timeline chart for 15 days of Home Automation System (5 days a week). Consider broad phases of SDLC.

Q.5) Attempt any TWO of the following.

12 Marks

- a) Sketch use-case diagram for ATM machine with minimum 4 use cases and 2 actors.
- b) Differentiate between validation and verification.
- c) Use COCOMO model to calculate
 1. Effort
 2. Development Time
 3. Average Staff Size
 4. Productivityif estimated size of project is 400 KLOC using Embedded mode.

Q.6) Attempt any TWO of the following.

12 Marks

- a) Draw neat labelled diagram of translation of requirement model into design model.
- b) Describe six sigma. State operations under DMADV/IC..
- c) Recognize requirements for following modules of banking software
 1. Customer Module
 2. Loan Module
 3. Account Module

Scheme -I
Sample Test Paper - I

Program Name : Computer Engineering Program Group
Program Code : CO/CM/IF/CW
Semester : Fourth
Course Title : Software Engineering
Marks : 20

22413

Time: 1 Hour

Instructions:

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
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- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR.

08 Marks

- a. List any 2 Characteristics of software.
- b. State any 4 attributes of good software.
- c. Define- SRS.
- d. List any 4 Barry Boehn's W5HH principles
- e. Define data dictionary. List its any 2 characteristics.
- f. State and draw symbols used in use case diagram.

Q.2 Attempt any THREE.

12 Marks

- a. State and describe software generic process framework activities.
- b. Describe any 4 software communication principles.
- c. Prepare SRS for online shopping system using following points
 1. Introduction
 2. Overall Description
 3. System Features
 4. External Interface Requirements
- d. Describe elements of analysis module with neat label diagram.
- e. Draw neat labelled diagram of Incremental model. Describe working of incremental model with its advantages.

Scheme -I
Sample Test Paper - II

Program Name : Computer Engineering Program Group
Program Code : CO/CM/IF/CW
Semester : Fourth
Course Title : Software Engineering
Marks : 20

22413

Time: 1 Hour

Instructions:

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR.

08 Marks

- a. Define Unit Testing
- b. Compare reactive and proactive risk strategy.
- c. Define manager and project management.
- d. Define project Scheduling and list its types.
- e. Define software quality assurance.
- f. Define software security.

Q.2 Attempt any THREE.

12 Marks

- a. Distinguish between black box testing and white box testing.
- b. Use COCOMO Model for organic, Semi detached, embedded mode to calculate effort and development time for size of project 600 KLOC
- c. Describe risk identification with the help of risk item checklist.
- d. Describe PERT chart with suitable example.
- e. Differentiate between software quality control and software quality assurance.