

- N.B.
- 1) All questions are compulsory.
 - 2) Figures to the right indicate marks.
 - 3) Illustrations, in-depth answers and diagrams will be appreciated.
 - 4) Mixing of sub-questions is not allowed.

Q. 1 Attempt All (Each of 5Marks)

(15M)

(a) Multiple Choice Questions :

1. Diagrams which are used to distribute files, libraries and tables across topology of hardware are called
 - a. Deployment diagrams
 - b. use case diagrams
 - c. sequence diagrams
 - d. collaboration diagrams
2. The UML supports event-based modeling using _____ diagrams
 - a. Deployment
 - b. Collaboration
 - c. State chart
 - d. All of the mentioned
3. The model stipulates that the requirements be completely specified before the rest of the development can processed.
 - a. Waterfall
 - b. Rapid Application Development (RAD)
 - c. Iterative Development
 - d. Incremental Development
4. Project Risk factor is considered in which model?
 - a. Spiral model
 - b. Waterfall model
 - c. Prototyping model
 - d. None of the above
5. Test Conditions are derived from
 - a. Test Design
 - b. Test Cases
 - c. Test Data
 - d. Specifications

(b) Fill in the blanks:

1. ISO stands for
2. SRS stands for
3. SQA stands for
4. COCOMO stands for
5. CMM stands for

- (c) **Answer in 1 – 2 lines**
1. What is software re-engineering?
 2. Define uml in software engineering?
 3. What is software metrics?
 4. What is software quality in software engineering?
 5. What is verification and validation?

Q. 2 Attempt the following (Any THREE) (15M)

- (a) State and explain the activities in SDLC.
- (b) Draw use case diagram for Car Rental System.
- (c) What is SRS? State and explain its types
- (d) What is component diagram? Draw and explain symbols for the same
- (e) Explain Agility and write its advantages and disadvantages.
- (f) How to draw and where to use Deployment diagram.

Q. 3 Attempt the following (Any THREE) (15M)

- (a) State the disadvantages of LOC. How is it different from COCOMO?
- (b) Explain Software user interface design.
- (c) Write the scope of software metrics.
- (d) Explain software design specification.
- (e) Explain Project Scheduling.
- (f) Explain Empirical Estimation model.

Q. 4 Attempt the following (Any THREE) (15)

- (a) Define Test Case, Test Oracle, Test Plan
- (b) What are the errors found while doing Black Box Testing?
- (c) What is Risk management? Explain Software risk management process.
- (d) What is Quality Assurance? What are Quality Assurance Criteria.
- (e) What is Structural testing? Write its advantages and disadvantages.
- (f) Explain Capability Maturity Model.

Q. 5 Attempt the following (Any THREE) (15)

- (a) State all and write down a short note on any 3 fact finding techniques.
- (b) What is coupling and cohesion?
- (c) Explain Verification and Validation.
- (d) Define and explain ISO Quality Standards.
- (e) What is Cyclomatic complexity? Explain with an example.
