S.Y.B.Sc(IT) CS-E

Q. P. Code: 36926

(2 ½ Hours) [Total Marks: 75]

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.

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