<u>III - S - M.Sc. - (Comp.Sc.) - CS - 3.2 -</u> (Software Engineering) - (R & B)

2024

Full Marks - 70

Time - As in the Programme

The figures in the right hand margin indicate marks. Answer ALL questions.

- 1.(a) What is System Engineering ? Briefly explainSystem Engineering Process.[7]
- (b) What is Software Process Model ? Explain any two process model. [7

OR

(c) Discuss various Project Management activities.

[7

[P.T.O...

- (d) What is Risk Management? Explain different types of risks in project management. [7
- 2.(a) Describe different types of Software Requirements with suitable example from each. [7
 - (b) Write short notes on :
 - (i) Object Model. [3.5
 - (ii) Data Model. [3.5

- (c) What is Software Requirement Document ?Explain its structure. [7
- (d) Discuss different types of System Models from the system development point of view. [7
- 3.(a) Write short notes :
 - (i) Cohesion and Coupling. [3.5
 - (ii) Design with reuse. [3.5
- (b) What is Client-Server Architecture ? How it is different from distributed object architecture ? Explain CORBA ?

OR

- (c) What is real-time software design ? Explain the role of real time executives. [7]
- (d) Write short notes :
- (i) Design Pattern. [3.5
- (ii) Multi-processor Architecture. [3.5
- 4.(a) What is Verification and Validation ? Briefly explain clean room software development. [7
- (b) What is Software Testing ? Discuss different types of Software Testing ? [7

- (c) Discuss COCOMO model of software cost estimation in detail ? [7
- (d) Differentiate between :
- (i) Unit Testing and Integration Testing. [3.5
- (ii) System Testing and Acceptance Testing. [3.5
- 5.(a) What is Dependability ? Explain the dimensions of dependability ? [7
- (b) What is Critical System ? Explain critical system specification from the reliability, safety and security point of view ?

OR

- (c) Discuss key points for Critical System development with their effects ? [7
- (d) What Fault Minimization and Tolerance ? Describe Fault Tolerance Architecture. [7

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