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25226

3 Hours / 70 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
(2) Answer each next main Question on a new page.
(3) Illustrate your answers with neat sketches wherever necessary.
(4) Figures to the right indicate full marks.
(5) Use of Non-programmable Electronic Pocket Calculator is permissible.
(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following : 10
- a) List any four types of software.
 - b) Define system testing.
 - c) Enlist benefits of test plan.
 - d) State the need of software requirement specification.
 - e) Enlist four types of risks.
 - f) Define scrum.
 - g) Define abstraction, information hiding.

P.T.O.

- 2. Attempt any THREE of the following : 12**
- a) Draw DFD0 and DFD1 diagram for library management system.
 - b) Prepare macro time line chart for 15 days of college management system (5 days a week) consider phases of SDLC.
 - c) List and explain software testing life cycle (STLC).
 - d) Describe the contents of “Test Summary Report” used in test reporting.
- 3. Attempt any THREE of the following : 12**
- a) Explain software engineering as layered technology approach.
 - b) Sketch use-case diagram for Hotel Management System with minimum two actors and four use cases.
 - c) Write test case for login window for railway reservation system.
 - d) Draw defect life cycle. State the working of each phase.
- 4. Attempt any THREE of the following : 12**
- a) Describe extreme programming with proper diagram.
 - b) Draw neat labelled diagram for translation of requirement model into design model and explain it with details.
 - c) Differentiate verification and validation. (Any four points)
 - d) State need of metrics and measurement.
 - e) List and explain basic principle of Project Scheduling.

5. Attempt any TWO of the following : 12

- a) State requirements for given modules of online shopping system.
 - i) Order module
 - ii) Accountant module
 - iii) Categories module
- b) Use COCOMO model to calculate
 - i) Effort
 - ii) Development time

If estimated size of project is 500 KLOC using organic, semi-detached mode.
- c) Describe six sigma and state the phases of DMAIC and DMADV.

6. Attempt any TWO of the following : 12

- a) State project size estimation techniques and explain any one.
 - b) Explain software process framework with neat labelled diagram and also describe software process framework activities.
 - c) Design test case booking seat in Bus, Travelling from Pune to Nashik. (Any six valid test cases)
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