

22413

21222

3 Hours / 70 Marks

Seat No.

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15 minutes extra for each hour

- 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) Assume suitable data, if necessary.
- (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) List any four planning principles.
- c) Describe following design concepts
- i) Abstraction
- ii) Information hiding.
- d) List 4P's of Management spectrum.
- e) Define Quality Control and Quality Assurance.
- f) List any four selection criteria for Software Process Model.
- g) Define project Cost Estimation.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Explain Waterfall Model with neat labelled diagram.
 - b) State and describe any four core principles.
 - c) Explain Test Documentation with the help of following terms.
 - i) Test Case
 - ii) Test Data
 - iii) Test Plan.
 - d) Explain CMMI in detail with neat diagram.
- 3. Attempt any THREE of the following:** **12**
- a) State and describe any four deployment principles.
 - b) Draw DFD0 and DFD1 diagram for Library Management System.
 - c) State and describe two metrics of project size estimation.
 - d) Prepare Macro Timeline chart for 20 days of Hotel Management system (6 days a week) consider broad phase of SDLC.
- 4. Attempt any THREE of the following:** **12**
- a) Draw and explain Software Engineering Layered technology approach.
 - b) State the need of SRS and also enlist the characteristics.
 - c) Distinguish between Black Box and White Box testing.
(Write any four points).
 - d) Explain RMMM strategy.
 - e) State and describe any four basic project scheduling principles.

5. Attempt any TWO of the following:**12**

- a) Explain software process framework with neat labelled diagram and also describe software process framework activities.
- b) Draw and explain translating requirement model into design model.
- c) Describe following project cost estimation approaches.
 - i) Heuristic
 - ii) Analytical
 - iii) Empirical

6. Attempt any TWO of the following:**12**

- a) State and describe any six communication principles.
- b) Describe six Sigma Strategy in details.
- c) Use COCOMO model to calculate.
 - i) Effort
 - ii) Development Time
 - iii) Average staff size
 - iv) Productivityif estimated size of project is 400 KLOC using embedded mode.
