

22413

23124

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) 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) Define software. Draw the failure curve for software.
 - b) State two characteristics of software.
 - c) State need of Software Requirement Specification (SRS).
 - d) Define risk and list any two type of risk.
 - e) Name two cost estimation approaches.
 - f) Define software quality control and quality assurance.
 - g) List the phases of software quality assurance.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Explain software engineering as layered technology approach.
 - b) Explain the notations used for preparing a data flow diagram.
 - c) Explain following elements of management spectrum :
 - i) People
 - ii) Process
 - iii) Product
 - iv) Project
 - d) Explain four basic principles of software project scheduling.
- 3. Attempt any THREE of the following:** **12**
- a) Distinguish between perspective process model and agile process model.
 - b) Describe any four principles of communication for software engineering.
 - c) Draw DFD0 and DFD1 diagram for library management system.
 - d) Explain line of code metrics for size estimation.
- 4. Attempt any THREE of the following:** **12**
- a) Describe extreme programming with proper diagram.
 - b) Enlist core principles of software engineering practice.
 - c) Describe RMMM strategy with example.
 - d) Describe following project cost estimation approaches
 - i) Heuristic
 - ii) Empirical
 - e) Explain GANTT chart and it's application for project tracking with an example.

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

- a) Sketch use-case diagram for library management with minimum four use-cases and two actors.
- b) Differentiate between white box and black box testing.
(Any six point)
- c) Describe a cocomo and cocomo-II models

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

- a) Draw neat labelled diagram of translation of requirement model into design model and explain it with details.
- b) Describe CMMI. Give significance of each level.
- c) Identify and enlist requirement for given modules of employee management software :
 - i) Employee detail
 - ii) Employee salary
 - iii) Employee performance.
