

22413

12425

03 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 answer with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

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|-----------|---|-----------|
| 1. | Attempt any <u>FIVE</u> of the following: | 10 |
| | <ol style="list-style-type: none">a) Define Software Engineering.b) List types of Software. (Any four)c) State Need of SRS.d) State classification of risk.e) State different types of estimations in Software Projects.f) Differentiate quality control and quality assurances. (Any two)g) State the concept of Devops. | |

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) State and describe characteristics of Software Engineering.
 - b) Describe symbols used in DFD.
 - c) Describe 4 P's of management spectrum.
 - d) Explain work breakdown structure with suitable diagram.
- 3. Attempt any THREE of the following:** **12**
- a) With the help of suitable diagram describe waterfall model with any two advantages and disadvantages.
 - b) Describe communication practices. (Any four)
 - c) Draw DFD-0 and DFD-1 for Hotel Management System.
 - d) Describe function point metrics for size estimation.
- 4. Attempt any THREE of the following:** **12**
- a) Describe any four characteristics of agile process.
 - b) Describe core principles of Software Engineering.
 - c) Describe RMMM strategy.
 - d) State and describe project cost estimation approach. (Any two)
 - e) Prepare time line chart for ATM machine.
- 5. Attempt any TWO of the following:** **12**
- a) Sketch Use-Case diagram for Hotel Management System with minimum two actors and four use cases.
 - b) Differentiate between Black Box Testing and White Box Testing. (Six points)
 - c) Use COCOMO model to calculate:
 - i) Efforts
 - ii) Development Time
 - iii) Average staff size
 - iv) Productivity.
- If estimation size of product is 400 KLOC using organic model.

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

- a) Draw neat labelled diagram for translation of requirement model into design model.
 - b) Describe six sigma. State operations in DMADV/DMAIC.
 - c) Recognise requirements for following modules of banking software:
 - i) Customer Module
 - ii) Loan Module
 - iii) Account Module.
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