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# P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

**Eighth Semester, B.E. - Information Science and Engineering**

**Semester End Examination; May/June - 2019**

**Software Engineering**

Time: 3 hrs

Max. Marks: 100

*Note: Answer FIVE full questions, selecting ONE full question from each unit.*

## UNIT - I

- |      |  |    |
|------|--|----|
| 1 a. | What is meant by Software Engineering? Explain the software process activities.      | 7  |
| b.   | Mention and explain the attributes of good software.                                 | 7  |
| c.   | State and explain the key challenge of a Software Engineering                        | 6  |
| 2 a. | Describe software development life cycle with merits and demerits.                   | 10 |
| b.   | List out and explain the complete structure of SRS or Software Requirement document. | 10 |

## UNIT - II

- |      |  |    |
|------|--|----|
| 3 a. | Define architectural design. Briefly explain system structuring with an example.         | 10 |
| b.   | Describe repository model with merits and demerits.                                      | 10 |
| 4 a. | List out and explain the different stages involved in an object oriented design process. | 10 |
| b.   | Design a state diagram for weather station and explain.                                  | 10 |

## UNIT - III

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|------|--|----|
| 5 a. | Mention and explain the four dimensions of dependability.                              | 6  |
| b.   | List out and explain the terms of Reliability terminology.                             | 7  |
| c.   | Explain Reliability metrics.   | 7  |
| 6 a. | Compare verification and validation. Explain the verification and validation planning. | 10 |
| b.   | Briefly explain the software inspection process.                                       | 10 |

## UNIT - IV

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|------|---|----|
| 7 a. | What is meant by motivation? Briefly explain the role of project managers in motivating people. | 10 |
| b.   | Describe the people capability maturity model.  | 10 |
| 8 a. | Explain the factors effecting software pricing.   | 10 |
| b.   | Briefly explain COCOMO model.   | 10 |

## UNIT - V

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|-------|--|----|
| 9 a.  | Explain architectural evaluation process.  | 10 |
| b.    | What is meant by software maintainance? Briefly explain about maintainance protection. | 10 |
| 10 a. | Briefly explain the re-engineering process.  | 10 |
| b.    | Define program modularization. Explain in detail program modularization.               | 10 |