

Code No: 125EM**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year I Semester Examinations, May - 2018****SOFTWARE ENGINEERING****(Common to CSE, IT)****Time: 3 hours****Max. Marks: 75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A**(25 Marks)**

- 1.a) What is Software Development Life Cycle? [2]
- b) Mention some of the factors to be considered during System modelling. [3]
- c) What is meant by Requirement management? [2]
- d) Differentiate between data flow diagram and state transition diagram. [3]
- e) List the principles of a software design. [2]
- f) What are the quality parameters considered for effective modular design? [3]
- g) What is the role of cyclomatic complexity in software testing? [2]
- h) Define black box testing strategy? [3]
- i) Distinguish between reactive and proactive risk management. [2]
- j) Write short note on RMMM. [3]

PART - B**(50 Marks)**

- 2.a) What are the advantages of layered technology?
- b) Give CMMI levels and explain. [5+5]

OR

- 3.a) How does system engineering differ from software engineering? Also write brief notes on computer based system and system engineering hierarchy.
- b) Explain in detail Evolutionary process model. [5+5]

- 4.a) Why is traceability an important aspect of requirement management? Why context system models are useful for requirements validation?
- b) Explain about the cardinality and modality with suitable example. [5+5]

OR

5. Give an overview of various steps in requirements engineering process. [10]

- 6.a) Write about architectural styles and patterns.
- b) Explain interface analysis and interface design steps. [5+5]

OR

- 7.a) How a component is designed based on function ? Explain.
- b) What are the golden rules for user interface design? Explain. [5+5]

- 8.a) What are the strategic approaches to software testing?
b) Discuss about art of debugging in detail. [5+5]

OR

- 9.a) What is software testing? Explain clearly the system testing.
b) What is meant by software quality? Explain the metrics for maintenance. [5+5]

- 10.a) How risk is identified? Explain.
b) Discuss about software reviews. [5+5]

OR

- 11.a) Discuss about Formal technical reviews.
b) What are the types of software risks? [5+5]

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