



Code No: 842AE

R17**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****MCA II Semester Examinations, December - 2019****SOFTWARE ENGINEERING****Time: 3hrs****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**5 × 5 Marks = 25**

- 1.a) Explain the five generic process framework activities. [5]
- b) What is requirements traceability? How is it useful in requirements change management? Explain. [5]
- c) Explain about sequence diagrams. [5]
- d) What questions do black-box tests answer? Explain with examples. [5]
- e) Differentiate between product standards and process standards. [5]

PART - B**5 × 10 Marks = 50**

- 2.a) What is process pattern? Explain the template for describing a process pattern.
- b) Explain Waterfall model with its merits and demerits. Provide three examples of software projects that would be amenable to the Waterfall model. [5+5]

OR

- 3.a) Discuss the various framework activities that are used during PSP and TSP? Write the objectives of each one.
- b) What is the purpose of process assessment? Write the formal techniques that are available for assessing the software process. [5+5]

4. What is the goal of requirements analysis phase? Give reasons why the requirements analysis phase is a difficult one. [10]

OR

- 5.a) What kind of problems are likely to occur in software requirements specifications? Discuss.
- b) Is it possible to have a system that can automatically verify completeness of an SRS document? If not, why? [5+5]

6. Write the taxonomy of different software architectural styles and explain each style. [10]

OR

7. What are the different static and dynamic models that UML provides to document the design? Discuss them clearly with suitable examples. [10]

8.a) What Boundary value analysis? Write the guidelines to create boundary value analysis test cases and explain.

b) List and explain the metrics used for software maintenance. [5+5]

OR

9.a) Explain the path testing technique with suitable example.

b) What are the metrics used for design model? Explain. [5+5]

10.a) Why is there often tension between a software engineering group and an independent Software quality assurance group? Is this healthy?

b) Define software reliability and explain software reliability measures. [5+5]

OR

11.a) What is Software Quality Assurance? Discuss about the significance of Statistical SQA.

b) With a sample risk information sheet, explain the RMMM plan. [5+5]

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