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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