

Code No: 5458AC

R17

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Tech I Semester Examinations, January - 2018

SOFTWARE ENGINEERING

(Computer Science and 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) With a neat sketch, explain the layered technology of software engineering. [5]
- b) Distinguish between data models and object models. [5]
- c) What is software architecture? Give an example. [5]
- d) Why is it difficult to test a highly coupled module? [5]
- e) Discuss the importance of quality assurance. [5]

PART - B

5 × 10 Marks = 50

2. What is software process assessment? Write its purpose and explain why SPICE has been developed as a standard for software process assessment. [10]

OR

3. List and explain different software process models in brief. Write the merits, demerits and applicability of each process model. [10]

4. Write about the activities that are to be carried during requirements analysis phase and explain the importance of each activity. [10]

OR

- 5.a) What are the problems with non-functional requirements? Discuss. [5+5]
- b) Discuss the importance of interface specifications. [5+5]

6. Explain the object oriented design methods. How to identify classes, objects and operations? How to refine them? Discuss. [10]

OR

- 7.a) How sequence diagram add information to use case? Explain with an example. [5+5]
- b) With a neat sketch, explain the component diagram and its purpose. [5+5]

8. Explain the main aspect of the test cases that are designed by White Box testing technique. [10]

OR

9. What is meant by product metrics? Explain the metrics used for analysis and design models. [10]

- 10.a) Discuss about the principles of risk management. [5+5]
- b) Distinguish between generic risks and product specific risks. [5+5]

OR

- 11.a) What is the need for conducting software reviews? Explain. [5+5]
- b) Discuss about ISO 9000 quality standards and their significance. [5+5]