Code No: 821AK **R15**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

MCA II Semester Examinations, April/May - 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) Define and differentiate between software process, product and project. [5]
b) What are the characteristics of good SRS document? Discuss. [5]
c) Describe the process of mapping dataflow into software architecture. [5]
d) Differentiate between verification and validation testing with examples. [5]
e) What is Software reliability? Explain the software reliability measures. [5]

PART - B

5 × 10 Marks = 50

2. With neat sketches, explain the prototyping and spiral process models with examples. [10]

OR

3.a) Describe the Capability Maturity Model Integration with neat sketch and explain the functions of each layer.
b) Differentiate between personal and team process models. [5+5]

4.a) What are the various methods used for determining client needs? Discuss.
b) Distinguish between Functional and Non-Functional requirements with suitable examples. [5+5]

OR

5.a) What is requirements validation? Discuss the issues involved in validating the software requirements.
b) What is purpose of Object oriented models? Illustrate them with neat sketches. [5+5]

6.a) What is the use of Object Constraint Language? Explain various constructs and the notations used in it.
b) Differentiate between coupling and cohesion with examples. [5+5]

OR

7.a) What are the design issues to be considered in user interface design?
b) Explain the process of designing class based components. [5+5]

8.a) List and explain different metrics used in software design process.
b) What is software quality? Write about the metrics used for software quality. [5+5]

OR

9.a) What are the metrics used for software coding and testing? Explain.
b) Discuss in brief about the strategies used for testing conventional software. [5+5]

10.a) What is the significance of formal technical reviews? Explain.
b) Explain about ISO 9000 quality standards. [5+5]

OR

11.a) What is Software Quality Assurance? Explain the activities of SQA group.
b) Write the structure of RMMM Plan and explain. [5+5]

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