4. SE Previous Question Papers

Code No: 155DB **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, September - 2021
SOFTWARE ENGINEERING
(Common to CSE, IT)

Time: 3 Hours **Max. Marks: 75**

Answer any five questions
All questions carry equal marks

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1.a) Explain about evaluation of software engineering methodologies.
b) What are the challenges of software engineering? [8+7]

2.a) Explain Software development process models.
b) Write a short note on Waterfall model. [7+8]

3.a) Explain the importance of software specification of requirements.
b) Write a short note on Context Model. [7+8]

4. Describe various prototyping techniques and discuss on object oriented analysis and modeling. [15]

5. Briefly explain about the following:
a) Sequence diagram
b) Use case diagram. [7+8]

6. What are the design principles of a good software design? Explain. [15]

7.a) What is testing? How is it different from debugging?
b) Explain various structural testing techniques with suitable examples. [7+8]

8.a) List and explain the various software quality factors.
b) Describe the role of software reviews in achieving good quality software. [7+8]

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, March - 2021
SOFTWARE ENGINEERING
(Common to CSE, IT)

Time: 3 Hours **Max. Marks: 75**

Answer any five questions
All questions carry equal marks
- - -

1.a) Explain Software development process models.
b) Explain about evaluation of software engineering methodologies. [7+8]

2.a) What is the goal of requirements analysis phase? Give reasons why the requirements analysis phase is a difficult one.
b) Identify and briefly describe four types of requirement that may be defined for a computer based system. [8+7]

3. What are the design principles of a good software design? Explain. [15]

4. What is black box testing? Is it necessary to perform this? Explain various test activities. [15]

5.a) Discuss briefly about Pro-active and Re-active Risk strategies in detail.
b) Explain about Software risks in detail. [8+7]

6.a) How system modeling is achieved using UML? Explain with a suitable example.
b) How we perform design evaluation? Explain it with suitable example. [8+7]

7.a) What is a change? How it can be incorporated in the software.
b) What is the difference between verification and validation? Explain with an example. [8+7]

8.a) What is software maintenance? How to control maintenance cost.
b) Define software. List and explain about the elements of a software process. [8+7]

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year I Semester Examinations, August - 2022

SOFTWARE ENGINEERING

(Common to CSE, IT, ITE)

Time: 3 Hours **Max. Marks: 75**

Answer any five questions

All questions carry equal marks

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1.a) Explain CMMI model with a neat sketch.
b) Give an overview of unified process model. [8+7]

2.a) Discuss in brief about the waterfall model.
b) Explain process patterns and process assessment. [8+7]

3.a) Describe five desirable characteristics of a good software requirement specification document.
b) Give an overview of various system models. [8+7]

4.a) Discuss about principal requirements engineering activities and their relationships.
b) Explain how a software requirements document is structured. [8+7]

5.a) Write a short notes on data design.
b) Describe architectural styles and patterns. [8+7]

6. Explain the following diagrams:
a) Class diagrams and sequence diagrams
b) Collaboration diagrams and use case diagrams. [8+7]

7.a) Describe strategic approach to software testing.
b) Explain Software quality and metrics for analysis model. [8+7]

8. Illustrate various Metrics for Process and Products. [15]

Code No: 155DB **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, January/February - 2023
SOFTWARE ENGINEERING
(Common to CSE, IT, ECM, ITE)

Time: 3 Hours **Max. Marks: 75**

Note: i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

1.a)	What are software engineering layers?	[2]
b)	Write about process assessment.	[3]
c)	Define procedural interfaces.	[2]
d)	Discuss about requirements validation in brief.	[3]
e)	What is UML? Write the principles of modelling.	[2]
f)	Give an example of a class diagram.	[3]
g)	Define white-box testing and black –box testing.	[2]
h)	How debugging differs from testing?	[3]
i)	What is software risk?	[2]
j)	What are the metrics for software quality?	[3]

PART – B

(50 Marks)

2.a)	Define software. Explain in detail about software myths.	
b)	Discuss in detail about water fall process model.	[5+5]

OR

3.a)	What is a process model? Explain about prototyping model in detail.	

b) What is CMMI? Explain about CMMI levels. [5+5]

4.a) Explain about requirements management phases of requirement engineering process.
b) Explain about state machine models with examples. [5+5]

OR

5.a) Based on your experience with a bank ATM, draw a data-flow diagram modelling the data processing involved when a customer withdraws cash from the machine.
b) Discuss about architectural design in brief. [5+5]

6.a) What are building blocks of the UML? Explain.
b) Explain about refining the architecture into components. [5+5]

OR

7.a) Distinguish between sequence and collaboration diagrams.
b) Briefly explain about the design model. [5+5]

8.a) What is integration testing? Explain in detail.
b) Discuss about metrics for testing in detail. [5+5]

OR

9.a) Distinguish between verification and validation. Explain about organizing for software testing.
b) Explain about the metrics for design model. [5+5]

10. Explain the following:
a) Software quality concepts
b) Risk identification. [5+5]

OR

11. Explain the following:
a) Statistical SQA
b) Developing a risk table. [5+5]