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UGC-AUTONOMOUS INSTITUTION
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9. Previous Question Papers

R16

Code No: 135BM

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, November/December - 2018 SOFTWARE
ENGINEERING
(Common to CSE, IT)

Time: 3 hours   **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

(25 Marks)

1.a)	What are the merits of incremental model?	[2]
b)	List the task regions in the spiral model.	[3]
c)	What is feasibility study?	[2]
d)	What are the differences between functional requirements and non-functional requirements?	[3]
e)	List the guidelines for data design.	[2]
f)	Name the commonly used architectural styles.	[3]
g)	Write a short note on black box testing.	[2]
h)	How to compute the cyclomatic complexity?	[3]
i)	Differentiate between reactive risk and proactive risk strategies.	[2]
j)	What is software reliability and how this parameter helps in managing software quality?	[3]

PART – B   **(50 Marks)**

2.a)	What is legacy software? Explain briefly its impact in software engineering.	
b)	Explain the following: i) Water fall model ii) Spiral Model.	[5+5]

OR

3.a)	Give an overview of unified process model.	
b)	Write detailed notes on CMMI.	[5+5]

4.a)	Describe five desirable characteristics of a good software requirement specification document.

b)   Draw the complete DFD at least up to 2-levels for a library management system.   [5+5]

OR

5.a)   Compare ISO and SEI-CMM models.
  b)   Who should be involved in a requirement review? Draw a process model showing how a requirements review might be organized.   [5+5]

6. a)   Define Software architecture. Explain why it may be necessary to design the system architecture before the specifications. Compare function oriented and object oriented designs.
        b)   What do you mean by the terms cohesion and coupling in the context of software engineering? How are these concepts useful in arriving at a good design of a system?
                                                                                    [5+5]

OR

7.   What is system modeling? Explain the process of creating models and the factors that should be considered when building models.   [10]

8.   Show using a small example, why it is practically impossible to exhaustively test a program?
                                                                                    [10]

OR

9. a)   Distinguish between error and failure. Which of the two is detected by testing? Justify.
   b)   Explain how black box testing differs from white box testing.   [5+5]

10. a)   What do you mean by risk management? Explain how to select the best risk reduction technique when there are many ways of reducing a risk?
    b)   Explain about formal technical reviews.   [5+5]

OR

11.   Using a schematic diagram and suitable example to show the order in which the following are estimated in the COCOMO estimate technique: Cost, Effort, Duration, and Size.   [10]

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R16

Code No: 135BM

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

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 is legacy software?	[2]
b)	Explain about the waterfall model.	[3]
c)	What is function requirement?	[2]
d)	Describe data models.	[3]
e)	What are architectural styles?	[2]
f)	Explain about object constraint language.	[3]
g)	Define integration testing.	[2]
h)	Explain about metrics for source code.	[3]
i)	What is SQA?	[2]
j)	Discuss about RMMM plan.	[3]

PART – B

(50 Marks)

2.　　Define process model. What are evolutionary process models? Explain in detail.　　[10]

OR

3. a)　What are software myths? Explain in detail.
　 b)　Define software engineering. Explain about process patterns.　　[5+5]

4.　　Explain in detail about requirements elicitation and analysis.　　[10]

OR

5. a)　What are feasibility studies? Explain.
　 b)　Discuss in detail about structured methods.　　[5+5]

6. a)　Explain about task analysis and modeling.
　 b)　Discuss about program design language.　　[5+5]

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OR

7. a) What is architecture? Why is architecture important?

   b) Describe architectural design and interface design elements.   [5+5]

8.   Explain in detail about white-box and black-box testing techniques.   [10]

OR

9. a) What is software measurement? Explain in detail.
   b) Discuss about metrics for analysis model.   [5+5]

10.   Explain the following:
      a) Risk identification
      b) ISO 9000 quality standards.   [5+5]

OR

11.   Explain the following:
      a) Six Sigma quality standard
      b) Software risks.   [5+5]

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R16

Code No: 135BM
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, May/June - 2019
SOFTWARE ENGINEERING
(Common to CSE, IT)

Time: 3 hours   **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

                                                                          (25 Marks)

1. a) Define software engineering.   [2]
   b) List evolutionary process models.   [3]
   c) Differentiate between user requirement and system requirement.   [2]
   d) List the various types of feasibility studies.   [3]
   e) What are the goals of the design process?   [2]
   f) Define software architecture.   [3]
   g) What is meant by smoke testing?   [2]
   h) List the metrics for source code.   [3]
   i) Give the different categories of risks.   [2]
   j) What is meant by software review?   [3]

PART - B

                                                                          (50 Marks)

2. Discuss managers myths about software development and their effect on the
    practitioners performance as well as on overall outcome.   [10]
                                OR
3. What is software process? What is need of software process improvement? Discuss
    capability maturity models.   [10]

4. "The functional requirements specification of a system should be both complete and
    consistent". Substantiate this statement with relevant examples.   [10]
                                OR
5. a) Draw a context level model for a web-based food- ordering system such as "Swiggy".
   b) Discuss the main characteristics of data model for requirement engineering.   [5+5]

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6. How to translate the analysis model into the design model? Explain with an example scenario. [10]

OR

7. a) Explain how to map data flow into a software architecture?
   b) Explain the design of class based components. [5+5]

8. a) Discuss the process of debugging.
   b) What is the need of beta testing? [5+5]

OR

9. a) Explain the metrics for software quality.
   b) Explain about the test strategies for connectional software. [5+5]

10. a) Elaborate on risk projection steps.
    b) Provide the format of risk information sheet. [5+5]

OR

11. Explain the activities of software quality assurance group to assist the software team in achieving high quality. [10]

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