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Reg. No. :												
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Question Paper Code: 40999

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2021.

Fifth Semester

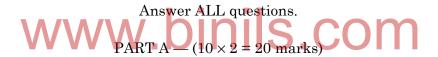
Civil Engineering

## OCS 551 — SOFTWARE ENGINEERING

(Common to: Automobile Engineering/Biomedical Engineering/Electronics and Communication Engineering/Electronics and Telecommunication Engineering/Medical Electronics/Bio Technology/Food Technology/Pharmaceutical Technology)

(Regulations 2017)

Time: Three hours Maximum: 100 marks



- 1. Outline the need for system analysis.
- 2. What is system design?
- 3. Outline the need for requirements elicitation.
- 4. Define risk.
- 5. What are functional requirements? Give example.
- 6. Write a note on UML.
- 7. Define modularity.
- 8. Outline the need for walk throughs.
- 9. Define verification and validation.
- 10. What is debugging?

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PART B —  $(5 \times 13 = 65 \text{ marks})$ 

11.	(a)	Elaborate the spiral model for software life cycle with a diagram. (13)					
		$\operatorname{Or}$					
	(b)	(i) What is Prototyping? Outline the advantages and disadvantages of prototyping. (5)					
		(ii) Elaborate evolutionary prototyping and throwaway prototyping with an example. (8)					
12.	(a)	Elaborate the COCOMOI cost estimation model. (13)					
		Or					
	(b)	What is Gantt chart? Outline the steps to model a Gantt chart with an example. (13)					
13.	(a)	What is a software requirements specification document? Outline the structure of a software requirement specification document. (13)					
		$\operatorname{Or}$					
	(b)	What is a data flow diagram? Outline the steps to model a data flow diagram with an example. (13)					
14.	(a)	What is cohesion? Outline the types of cohesion with an example. (13)					
	(b)	Or  (i) Explain the importance of data abstraction and encapsulation with an example. (7)					
		(ii) Present an outline of coding standards. (6)					
15.	(a)	(i) What is the need for both White box and Black box testing? (3)					
		(ii) Elaborate system testing with an example. (10)					
		$\operatorname{Or}$					
	(b)	(i) Discuss the importance of Unit Testing with an example. (5)					
		(ii) What is integration testing? Outline the types of integration testing with an example. (8)					
		PART C — $(1 \times 15 = 15 \text{ marks})$					
16.	(a)	Prepare a software requirements specification document for a "Library Management System". (15)					
		$\operatorname{Or}$					
	(b)	Present a comparison of the different life cycle models. (15)					