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Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Sixth Semester B.Tech Degree Regular and Supplementary Examination July 2021

Course Code: CS308
Course Name: SOFTWARE ENGINEERING AND PROJECT MANAGEMENT

Max. Marks: 100 Duration: 3 Hours

PART A

Answer all questions, each carries 3 marks. Marks

1 What is a software process? Why it is important? (3)

2 Explain the layered technology used in software engineering process. (3)

3 List out the characteristics of a good SRS document. (3)

4 Write the significance of requirement analysis in software engineering. (3)

PART B

Answer any two full questions, each carries 9 marks.

5 a) Describe any three methods of requirement elicitation process. (4)

b) Describe the different levels of Capability Maturity Model. (5)

6 a) What are the crucial steps of requirement engineering? Explain with the help of a diagram. (4)

b) Suppose you were to plan to undertake the development of a product with a large number of technical as well as customer related risks, which life cycle model would you adopt? Justify your answer. (5)

7 a) Compare spiral model and incremental model for software development. (4)

b) Discuss the specification and design aspects of software engineering. (5)

PART C

Answer all questions, each carries 3 marks.

8 Compare top-down and bottom-up design strategies. (3)

9 Explain basic path coverage testing. (3)

10 Assume that the size of an organic type software product has been estimated to be 32000 lines of code. Assume that the average salary of software engineers is Rs.15,000 per month. Determine the effort required to develop the software product, the nominal development time and the cost required to develop the product. (3)

11		Explain all the levels of COCOMO model.	(3)

PART D

Answer any two full questions, each carries 9 marks.

12	a)	Define Cohesion. Explain different types of cohesion.	(5)
	b)	Define any four types of System testing.	(4)
13	a)	What is modularity? List out the important properties of a modular system.	(4)
	b)	What is the significance of adopting programming practices and coding standards?	(5)
14	a)	Explain code walk-through and code inspection.	(4)
	b)	Explain cyclomatic complexity analysis with suitable example.	(5)

PART E

Answer any four full questions, each carries 10 marks.

15	a)	Describe different categories of risk.	(4)
	b)	Discuss Risk management activities in detail.	(6)
16	a)	Write the need for software maintenance. Explain different categories of maintenance.	(6)
	b)	Discuss 4 p's of software management concepts.	(4)
17	a)	Explain different project scheduling techniques.	(7)
	b)	Differentiate between product metrics and process metrics.	(3)
18	a)	Describe the need for software configuration management.	(6)
	b)	Explain software configuration management activities.	(4)
19	a)	What do you understand by the terms CASE tool and CASE environment? With a neat schematic architecture explain CASE environment.	(7)
	b)	Explain the User interface design rules.	(3)
20	a)	Annual Change Traffic for a software system is 15% per year. The development effort is 600 PMs. Compute estimate for Annual Maintenance Effort. If life time of the project is 10 years, what is the total effort of the project?	(6)
	b)	Write the different activities of software project management.	(4)

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