Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
SIXTH SEMESTER B.TECH DEGREE EXAMINATION, APRIL 2018
Course Code: CS308
Course Name: SOFTWARE ENGINEERING AND PROJECT MANAGEMENT (CS)

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	Compare waterfall model and incremental model for software development	(3)
3	How does software prototyping help to increase the overall quality of the software?	(3)
4	How ISO 9000 helps in software process improvement?	(3)

PART B
Answer any two full questions, each carries 9 marks.

5	a)	Describe software engineering as a layered technology.	(4)
	b)	Describe Boehm's spiral model for software development.	(5)
6	a)	Explain the different levels in Capability Maturity Model.	(5)
	b)	Discuss the specification and design aspects of software engineering.	(4)
7	a)	Why requirements elicitation is considered as a critical task in requirements engineering? Explain any **two** methods for requirements elicitation.	(5)
	b)	Describe the elements of analysis model.	(4)

PART C
Answer all questions, each carries 3 marks.

8	What is the importance of software project planning?	(3)
9	Compare top-down and bottom-up design strategies.	(3)
10	What is software testing? Write any four fundamental testing principles.	(3)
11	What is the significance of adopting programming practices and coding standards?	(3)

PART D
Answer any two full questions, each carries 9 marks.

12	a)	What is the need of a modular system? Describe the effects of cohesion and coupling in modular design.	(5)

b) An air traffic control project of size 500 KLOC is to be developed. Software project team has very little experience on similar projects and the project schedule is also tight. Calculate the effort, development time, average staff size and productivity of the project. (4)

13 a) Describe basis path testing. Illustrate with an example. (5)

b) Explain code walk-through and code inspection. (4)

14 a) Describe the different levels of COCOMO. (5)

b) Discuss any **two** types of system test for software-based systems. (4)

PART E

Answer any four full questions, each carries 10 marks.

15 a) What is a task set? Write the various steps in selecting appropriate task set for a project. (6)

b) Explain Putnam-Norden-Rayleigh (PNR) curve with a neat graph showing effort versus development time. (4)

16 a) What is software maintenance? Explain various categories of software maintenance. (6)

b) Differentiate between product and process. (4)

17 a) What is risk identification? How risks are monitored and managed by project managers? (6)

b) What are the various types of risks in software projects? (4)

18 a) Describe software configuration management process. (6)

b) Discuss the rules for user interface design. (4)

19 a) Explain the basic building blocks of CASE tools. (6)

b) Write a note on integrated CASE environment. (4)

20 a) What are the signs that a software project is in jeopardy? What are the steps to be taken by a project manager to tackle this situation? (6)

b) How various stakeholders are organized to perform effective software engineering? (4)

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