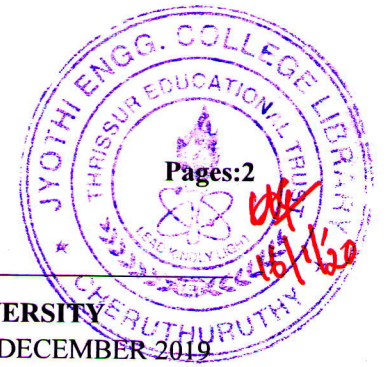D   **F192070**   **Pages:2**

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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
SIXTH SEMESTER B.TECH DEGREE EXAMINATION(S), DECEMBER 2019

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   Explain software engineering as a layered technology   (3)

2   Write characteristics of Waterfall model for software development   (3)

3   How prototyping helps in software development   (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) Explain Spiral Model for software development with a neat diagram.   (3)

    b) Describe any three methods of Requirement elicitation process   (3)

    c) Describe the different levels of Capability Maturity Model   (3)

6 a) Write the elements of requirements engineering process   (2)

    b) Discuss the prototyping model. What is the effect of designing a prototype on the overall cost of the project?   (4)

    c) What is the scope of software engineering   (3)

7 a) Discuss the maintenance aspects of software engineering.   (3)

    b) Explain the importance of requirements. How many types of requirements are possible ?   (3)

    c) Differentiate between Waterfall model and incremental model for software development?   (3)

PART C
Answer all questions, each carries 3 marks.

8   Describe any two software size estimation techniques.   (3)

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

10   Differentiate between code walk through and codeinspection   (3)

11   Draw the Rayleigh manpower loading curve and state PNR model for staffing   (3)

PART D

Answer any two full questions, each carries9 marks.

12 a) Explain two types of Black box testing strategies.   (3)

    b) Differentiate between top down and bottom up design strategies.   (3)

    c) A simple stand – alone software utility is to be developed in 'C' programming by   (3)
a team of software experts for a computer running Linux and the overall size of
this software is estimated to be 20,000 lines of code. Considering (a, b) = (2.4,
1.05) as multiplicative and exponential factor for the basic COCOMO effort
estimation equation and (c, d) = (2.5, 0.38) as multiplicative and exponential
factor for the basic COCOMO development time estimation equation,
approximately how long does the software project take to complete ?

13 a) Define any four types of System testing   (4)

    b) Differentiate between stamp coupling and content coupling.   (2)

    c) Explain basis path testing with example   (3)

14 a) Define Cohesion. Explain different types of cohesion   (5)

    b) Explain stepwise refinement   (2)

    c) How Black box testing differ from White box testing   (2)

PART E

Answer any four full questions, each carries10 marks.

15 a) Write the need for software maintenance. Explain different categories of   (5)
maintenance

    b) Discuss the building blocks of CASE.   (5)

16 a) Discuss Risk management activities in detail.   (5)

    b) Write any four rules for user interface design.   (5)

17 a) Describe the need for software configuration management.   (5)

    b) Discuss 4 p's of software management concepts.   (5)

18 a) Describe different categories of risk.   (5)

    b) Explain different project scheduling techniques   (5)

19 a) Write the different activities of software project management.   (5)

    b) Explain architecture of CASE environment.   (5)

20 a) Discuss how to define a task set for the software project.   (5)

    b) Explain software configuration management activities.   (5)