015606

MAY 2023

B.Tech (ENC) 6th SEMESTER

Software Engineering (PEC-CS-S-601)

:Time: 3 Hours   Max. Marks:75

:Instructions: 1.   It is compulsory to answer all the questions (1.5 marks each) of Part -A in short.
                  2.   Answer any four questions from Part -B in detail.
                  3.   Different sub-parts of a question are to be attempted adjacent to each other.

PART –A

Q1 (a)   Discuss 'No Silver Bullet' in Software Engineering.   (1.5)

(b)   Differentiate between Personal Software Process and Team Software Process.   (1.5)

(c)   Explain Modularity. What problems are likely to arise if two modules have high   (1.5)
coupling?

(d)   Explain Risk management process?   (1.5)

(e)   Differentiate beween LOC and FP based estimation technique.   (1.5)

(f)   What is Behavioral Modeling? Explain.   (1.5)

(g)   Differentiate between Verification and Validation.   (1.5)

(h)   How Alpha Testing is different from Beta Testing.   (1.5)

(i)   Explain Statistical Software Quality Assurance.   (1.5)

(j)   Discuss ISO 9126 standard.   (1.5)

PART –B

Q2 (a)   What do you understand by Agile Software Development Life Cycle?? Discuss the   (10)
problems in Waterfall Model and the need of Agile Software Development model.

(b)   Explain Software process, project and product.   (5)

Q3 (a)   Draw the Level-0, Level-1 and Level-2 DFD for Travel Agency Management System.   (10)
Clearly describe the working of the system. Also mention all assumptions made by
you.

(b)   Discuss the process of Requirement Engineering. Also explain the different technique (5)
Of Software Elicitation.

Q4   What are the different categories of software development projects according to the (15) COCOMO estimation model? Give examples of software development projects belonging to each of these categories.

Q5 (a) Discuss the meaning of term modular design. What are the different factors that (10) affect the modularity of a design? How can you assess the modularity of a design?

    (b) Explain the characteristics of a good software design. (5)

Q6 (a) Differentiate between Static Testing and Dynamic Testing. (5)

    (b) Consider a program to determine largest of three numbers A, B and C within the (10) range [1, 50] and prints the largest number. Design boundary value test cases by all the three techniques of Boundary Value Analysis.

Q7 (a) List five salient requirements that a software development organization must (10) comply with before it can be awarded with ISO 9126 certificate.

    (b) Illustrate SQA Activities. Define the purpose of Quality Assurance in software (5) development.

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