Roll No							

End Semester Examination 2024

Name of the Course: B.Tech.(CSE)

Semester: VI

Paper Code: TCS-611

Name of the Paper: Software Engineering

Time: 3 Hour's

Maximum Marks: 100

Note:

(i) All Questions are compulsory.
(ii) Answer any two sub questions among a,b and c in each main question.
(iii) Total marks in each main question are twenty.
(iv) Each question carries 10 marks.

Q1	**(10 X2 = 20 Marks)**	**CO1**
(a)	Explain the Spiral model of software development. Also discuss the limitations of this model.	
(b)	What is meant by Software Crisis and how it is handled.	
(c)	Explain the various phases of a Software Development Life Cycle in detail.	
Q2	**(10 X2 = 20 Marks)**	**CO2**
(a)	Why is SRS also known as the black-box specification of the system?	
(b)	Explain with suitable examples the different types of requirement problems that should be identified and resolved during the Requirements Analysis activity?	
(c)	Explain the following: (i) Feasibility Study (ii) Software Quality Assurance Plans	
Q3	**(10 X2 = 20 Marks)**	**CO3**
(a)	Define Coupling in the context of a Software Design. What are the different types of coupling used in practice. Discuss them briefly. Also discuss, why data coupling is the best form of Coupling.	
(b)	Define Software Metrics. Why metrics are required in software? Discuss.	
(c)	What is Cyclomatic Complexity? Write all methods which are used to calculate the Cyclomatic Complexity of a Control Flow Graph.	
Q4	**(10 X2 = 20 Marks)**	**CO4**
(a)	Discuss the White Box Testing in detail.	
(b)	Write short notes on the following with suitable examples: (i) Formal Technical Review (ii) Walkthrough	
(c)	What do you understand by the term Integration Testing? Discuss the various types of Integration Testing methods in brief.	
Q5	**(10 X2 = 20 Marks)**	**CO5**
(a)	Differentiate Corrective, Adaptive, Perfective and Preventive maintenance in the context of a software.	
(b)	What do you mean by Software Configuration Management? Describe various SCM activities in detail.	
(c)	Using a schematic diagram and suitable example, show the order in which the following are estimated in the COCOMO estimation technique: cost, effort, duration, size.	