Code: 20CS4601A

III B.Tech - II Semester – Supplementary Examinations
APRIL 2024

DESIGN PATTERNS
(COMPUTER SCIENCE & ENGINEERING)

Duration: 3 hours   Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.
2. All parts of Question must be answered in one place.

BL – Blooms Level   CO – Course Outcome

			Max. Marks
UNIT-I			
1	a)	Describe the elements of the design patterns.	7 M
	b)	Illustrate the organization of catalogue of design patterns.	7 M
OR			
2	a)	Demonstrate at least five design problems solved by the design patterns.	7 M
	b)	Explain in steps how to select the design patterns.	7 M
UNIT-II			
3	a)	Discuss the purpose of creational patterns and demonstrate the motivation of abstract factory pattern along with its implementation issues.	7 M
	b)	Discuss the motivation of singleton pattern along with its consequences.	7 M
OR			

4	a)	Illustrate with neat diagram the structure of builder pattern, known uses and related patterns.	7 M
	b)	Demonstrate the motivation of factory method and list the implementation issues.	7 M

UNIT-III

5	a)	Compare and contrast the Adapter and bridge pattern in terms of their structure and known uses with related patterns.	7 M
	b)	Describe the motivation of facade pattern and give its consequences.	7 M

OR

6	a)	Illustrate the Composite pattern with neat sketch for its structure, applicability and related patterns.	7 M
	b)	Distinguish between Creational Patterns and Structural Patterns.	7 M

UNIT-IV

7	a)	Brief the structure of command pattern and provide details regarding applicability and known uses.	7 M
	b)	Describe in detail about the visitor pattern motivation and consequences.	7 M

OR

8	a)	Discuss motivation ,structure ,consequences of chain of Responsibility.	7 M
	b)	Explain the motivation of observer pattern with applicability and implementation issues.	7 M

		UNIT-V	
9	a)	Explain in detail about supporting multiple window systems in designing a document editor.	7 M
	b)	Justify how visitor pattern provides solution for Spell checking and hyphenation in document editor.	7 M
		OR	
10	a)	Illustrate formatting and embellishing the user interface with a case study of designing a document editor.	7 M
	b)	Describe the user operations for the document editor.	7 M