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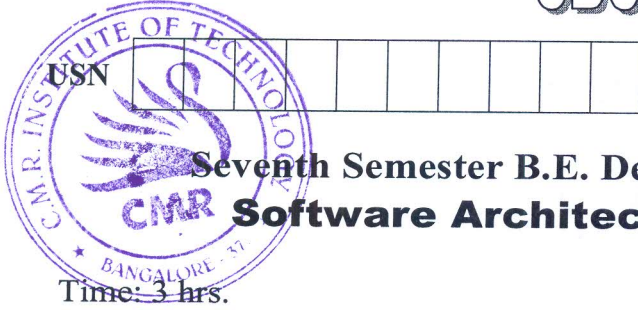**15IS72**

Seventh Semester B.E. Degree Examination, June/July 2023
Software Architecture and Design Patterns

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1	a.	Explain how design patterns solve design problems.	(05 Marks)
	b.	Classify and briefly explain the patterns.	(06 Marks)
	c.	How patterns and frameworks are different?	(05 Marks)

OR

2	a.	List and explain the four essential elements of design patterns.	(05 Marks)
	b.	Explain the key concepts of object-oriented development.	(06 Marks)
	c.	What are the merits and demerits of paradigm?	(05 Marks)

Module-2

3	a.	What is requirement? Classify and explain the different types of requirements.	(07 Marks)
	b.	What are the steps in the design process?	(04 Marks)
	c.	List the questions that can be raised during design process.	(05 Marks)

OR

4	a.	Explain why mistakes of the requirements at the analysis stage are the costliest to correct.	(04 Marks)
	b.	Briefly explain the system analysis phase.	(07 Marks)
	c.	Define conceptual classes and their relationships.	(05 Marks)

Module-3

5	a.	What are structural patterns? Explain.	(06 Marks)
	b.	Define bridge. Explain briefly.	(04 Marks)
	c.	List the design pattern catalog. Explain "Composite, decorator and facade".	(06 Marks)

OR

6	a.	Describe the Adapter pattern with an example.	(08 Marks)
	b.	Describe proxy pattern with an example.	(08 Marks)

Module-4

7	a.	Explain MVC architecture with a diagram.	(09 Marks)
	b.	Explain the implementing the undo operations.	(07 Marks)

OR

8	a.	What are interactive system? Explain.	(06 Marks)
	b.	Explain pattern based solutions.	(05 Marks)
	c.	List and briefly explain the benefits of MVC pattern.	(05 Marks)

Module-5

9 a. Explain the advantages and disadvantages of distributed systems.   **(05 Marks)**

     b. Explain JAVA remote method invocation.   **(06 Marks)**

     c. What are client-server systems? Explain.   **(05 Marks)**

OR

10 a. Explain the implementation of OOsystems on web.   **(06 Marks)**

     b. Explain the selection statements.   **(05 Marks)**

     c. Write short notes on CORBA.   **(05 Marks)**

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