

Code No.: IT732PE

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**CMR ENGINEERING COLLEGE: : HYDERABAD**  
**UGC AUTONOMOUS**  
**IV-B.TECH-I-Semester End Examinations (Supply) - April- 2024**  
**DESIGN PATTERNS**  
**(IT)**

[Time: 3 Hours]

[Max. Marks: 70]

**Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

**PART-A**

**(20 Marks)**

1. a) Define the meaning of "Intent" in design pattern. [2M]
- b) Explain Pattern name. [2M]
- c) What is Lexi? [2M]
- d) What is role of formatting in design document editor? [2M]
- e) What are related patterns in Abstract Factory pattern? [2M]
- f) List five types of Creational patterns. [2M]
- g) What are the two variations of the Adapter pattern? [2M]
- h) Define Bridge pattern. [2M]
- i) What we are using in Interpreter pattern? [2M]
- j) What is the benefit of Momento pattern? [2M]

**PART-B**

**(50 Marks)**

2. Explain MVC architecture in Small Talk. [10M]
- OR**
3. Give the step-by-step approach to apply a design pattern effectively. [10M]
4. Explain embellishing the user interface in Design patterns. [10M]
- OR**
5. Explain in detail about "supporting multiple window systems". [10M]
6. Illustrate the features of Creational patterns and write sample code of Prototype pattern. [10M]
- OR**
7. Explain consequences, implementation, and sample code of Singleton pattern in detail. [10M]
8. Explain in detail about the participants and consequences of Composite pattern. [10M]
- OR**
9. Explain about implementation issues of Decorator pattern. [10M]
10. Explain its uses and implementation issues in motivation behind the Observer pattern. [10M]
- OR**
11. Explain about the structure and participants of state design pattern. [10M]

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