

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS

IV-B.TECH-I-Semester End Examinations (Regular) - November- 2024

DESIGN PATTERNS
(Common for CSM, 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 "Intent" in design patterns. [2M]
- b) List the essential elements in design patterns. [2M]
- c) What is Lexi? [2M]
- d) What is the role of formatting in Document editor? [2M]
- e) What are related patterns of Abstract Factory pattern? [2M]
- f) Draw the structure of Factory method. [2M]
- g) Define Bridge pattern. [2M]
- h) Draw the structure of Composite pattern. [2M]
- i) What are the consequences of Chain of responsibility pattern? [2M]
- j) List the uses of Iterator pattern. [2M]

PART-B

(50 Marks)
[10M]

2. Illustrate MVC architecture in Small Talk. [10M]
- OR**
3. What is the role of a design pattern in solving a design problem? Explain with an example. [10M]
 4. Explain the class design structure of an editor for the music scores with suitable pattern. [10M]
- OR**
5. Explain in detail about "supporting multiple window systems". [10M]
 6. What are consequences of Builder pattern? Explain the implementation scenario of Builder pattern. [10M]
- OR**
7. Explain the motivation, structure, intent, participants and implementation issues of Singleton pattern. [10M]
 8. Briefly explain the motivation of Façade pattern. [10M]
- OR**
9. Explain in detail about Proxy design pattern. [10M]
 10. Explain in detail about Command pattern. [10M]
- OR**
11. Illustrate the structure of Mediator and Observer patterns with relevant class diagrams. [10M]
