

Code No.: IT732PE

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H.T.No.

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**CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS**

IV-B.TECH-I-Semester End Examinations (Regular) - November- 2023

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 design patterns. [2M]
- b) Write short note on Chain of Responsibility. [2M]
- c) What is document structure? [2M]
- d) Define User Operations. [2M]
- e) Draw the structure of Prototype pattern. [2M]
- f) Draw the structure of Factory method. [2M]
- g) List out the uses of Decorator pattern. [2M]
- h) Draw the neat structure of Composite pattern. [2M]
- i) What is Template method pattern? [2M]
- j) List the benefits of Iterator pattern. [2M]

PART-B

(50 Marks)

2. What are elements of design patterns? Explain. [10M]
- OR**
3. Explain how design patterns solve the design problems. [10M]
4. Briefly Illustrate the design document editor. [10M]
- OR**
5. Explain spelling checking and hyphenation. [10M]
6. Justify the "Abstract Factory is used as an interface for creating family of related objects without specifying their concrete classes". [10M]
- OR**
7. Explain a short note on Builder design pattern. [10M]
8. Briefly Illustrate the Bridge patterns. [10M]
- OR**
9. What is the intent and motivation of Façade pattern? Explain. [10M]
10. What is command pattern? Describe about the structure, participants and collaborations of command pattern. [10M]
- OR**
11. Explain the implementation issues of visitor pattern. [10M]
