

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA INTEGRATED– SEMESTER - IX EXAMINATION- SUMMER-2023

Subject Code: 2698601**Date: 27/06/2023****Subject Name: Design Pattern****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

- Q.1(a)** Define the terms. **02**
1. What are design patterns. **03**
 2. Draw the structure of Factory method. **02**
 3. Describe patterns in software. **07**
- (b)** Explain how to use design pattern? **07**
- Q.2(a)** What are the common causes of redesign? Explain. **07**
- (b)** Explain the steps to be followed for selecting a design pattern. **07**
- OR**
- (b)** Explain the sample code for Flyweight pattern. **07**
- Q.3(a)** Explain toolkit and frameworks. **07**
- (b)** Write the code for prototype pattern. **07**
- OR**
- (a)** Draw the structure of Factory method and explain. **07**
- (b)** Differentiate Structural and Behavioral Design pattern. **07**
- Q.4(a)** Explain the implementation of composite design pattern with example. **07**
- (b)** Explain the following. **03**
1. Interpreter **04**
 2. Chain of responsibility **04**
- OR**
- (a)** What are the implementation issues raised by State pattern? Explain **07**
- (b)** Explain Template Method. **07**
- Q.5(a)** **04**
1. Write the implementation steps for strategy patterns. **03**
 2. Write the implementation steps for Visitor patterns. **07**
- (b)** Discuss what to expect from Design pattern. **07**
- OR**
- (a)** Explain structure, participants and implementation of Iterator pattern. **04**
- (b)** **03**
1. Explain the structure of Mediator pattern. **03**
 2. Explain the implementation of Memento pattern. **03**
