

**B. Tech. Sem - VIII (Computer Engg.) (2014 COURSE) (CBCS) :
SUMMER - 2019**

SUBJECT: ELECTIVE-IV DESIGN PATTERNS

Day: Tuesday
Date : 28/05/2019

Time: 02.30 PM TO 05.30 PM
Max. Marks: 60

S-2019-2888

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Assume suitable data if necessary.
- 4) Use of non-programmable **CALCULATOR** is allowed.

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- Q.1** **a)** Give the structure of singleton design pattern (05)
 b) Write the principle involved in design pattern fabrication (05)

OR

- Q.1** **a)** Define design pattern. What is the general purpose of it? (05)
 b) Explain Template method with example. (05)

- Q.2** **a)** How do we represent a document? (05)
 b) How do we arrange text and graphics on the screen (or paper)? (05)

OR

- Q.2** **a)** What are the impacts of the structure we choose? What do we need to consider? (05)
 b) What is formatting? Explain responsibilities of formatting. (05)

- Q.3** **a)** What is abstract factory pattern? (05)
 b) How to prevent cloning of a singleton object? (05)

OR

- Q.3** **a)** Explain factory pattern? Using factory patterns how to create an object give the suitable example. (05)
 b) What are creational pattern? Explain any one creational pattern with example. (05)

- Q.4** **a)** Write and explain about principle, structure example, implementation and design issues and advantages of façade design pattern. (05)
 b) Discuss about flyweight pattern with an example (05)

OR

- Q.4** **a)** What is composite pattern explain in briefly. (05)
 b) Explain merits and demerits of structure patterns. (05)

- Q.5** **a)** What is the use of iterator pattern? What are the entities of service locator pattern? (05)
 b) Explain observer pattern? None the actor used in observer pattern. (05)

OR

- Q.5** **a)** Discuss about mediator and state pattern with an example. (05)
 b) What are intent, motivation and applicability for command pattern? (05)

- Q.6** Write a case study producer consumer problem. (10)

OR

- Q.6** Write a case study simulator of traffic control. (10)

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