S.D.E.

M.C.A. Sem - IV : WINTER - 2018

SUBJECT: UML AND DESIGN PATTERNS

Day: Tuesday | **W-2018-4806** | Time: 02.00 PM TO 05.00 PM

Date: 04/12/2018 | Max. Marks: 80

N.B.:

1) Attempt any **FIVE** questions from Section –I and any **TWO** questions from Section –II.
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION-I

Q.1 Briefly describe the following terms: **(10)**

i) Aggregation ii) Association

iii) Include iv) Generalization

Q.2 Explain the role of sequence and collaboration diagram in system modeling. **(10)**

Q.3 What is component and deployment diagram? Explain role of them in system design. **(10)**

Q.4 Explain the Prototype design pattern with intent, structure and applicability. **(10)**

Q.5 What do you know about Decorator? When to use it? **(10)**

Q.6 Illustrate when to use Command design pattern with its structure and applicability. **(10)**

Q.7 Write short notes on any **TWO** of the following: **(10)**

a) Use case realization

b) Template method

c) Façade

SECTION-II

Q.8 What do you know about class diagram? Illustrate use of it in system design with example. **(15)**

Q.9 What is an Adapter pattern? Illustrate how to use it to convert java.util. ArrayList into a stack interface and implementation. **(15)**

Q.10 Explain the functionality of online ordering system and draw an activity diagram to order a product using it. **(15)**

* * * *