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SEAT No. :

P8469

[Total No. of Pages : 2

Oct-22/BE/Insem-47

B.E. (Computer Engineering)

OBJECT ORIENTED MODELING &amp; DESIGN

(2019 Pattern) (Semester - VII) (410244D) (Elective - III)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates :

- 1) Answer Q1 or Q2, Q3 or Q4.
- 2) Neat diagrams must be drawn whenever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

Q1) a) Explain element of a class diagram with examples. [6]

b) What do you mean by Association class? [4]

c) Explain different Relations in UML. [5]

OR

Q2) a) What are different type of analysis classes? Explain with an example. [6]

b) How you model class &amp; object in UML? [4]

c) Draw a class diagram for ATM system. [5]

Q3) a) Explain following : [5]

i) Composite state

ii) Self transition orthogonal states with respect to state chart diagram.

b) Draw state diagram with composite states from ATM card reading &amp; authentication system. [5]

P.T.O.

- c) Explain terms : [5]
- i) Aggregation
  - ii) Composition

OR

- Q4) a) Explain different components of a state diagram. [5]
- b) Explain how you model different events in state diagram. [5]
- c) Draw state chart diagram for Railway Reservation system. [5]

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**Study material provided by: Vishwajeet Londhe**

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Aug - 2023

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P5195

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**B.E. (Computer Engineering) (Insem)**  
**OBJECT ORIENTED MODELLING & DESIGN**  
**(2019 Pattern) (Semester - VII) (Elective - III) (410244D)**

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data if necessary.

- Q1)** a) Explain the types of relationship along with their notations. [5]  
b) Draw class diagram for ATM system. [5]  
c) Define object? Explain components of object diagram in brief? [5]

OR

- Q2)** a) Difference between link and association with suitable example. [5]  
b) What is OO development? Explain the OO the mes ? [5]  
c) Explain the following terms with respect to object oriented methodology. [5]  
i) Abstraction  
ii) Encapsulation  
iii) Sharing

- Q3)** a) Draw state diagram with composite states from ATM card reading & authentication system. [5]  
b) Write a short note on : [5]  
i) Package  
ii) Derived data  
iii) Constraints  
c) Define event and explain in brief different types of events. [5]

OR

- Q4)** a) Draw state chart diagram for Railway reservation system. [5]  
b) What do you mean by Association ends? Explain N-ary association in short. [5]  
c) What is state? Explain with example transitions and condition. [5]

