

Total No. of Questions : 6]

SEAT No. :

P540

[Total No. of Pages : 2

APR - 18/TE/Insem - 143

TE (Computer Engineering)

SOFTWARE MODELING AND DESIGN

(2015 Course) (Semester - II) (310253)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Assume suitable data, if necessary.*

Q1) a) Elaborate on how unified process is different from traditional waterfall model. [5]

- b) Draw a use case diagram for the system: Credit card authentication system. The scenario is : The merchant submits a credit card transaction request to the credit card payment gateway on behalf of a customer. Bank which issued customer's credit card is actor which could approve or reject the transaction. If transaction is approved, funds will be transferred to merchant's bank account. [5]

OR

Q2) a) Comment on how COMET is useful in software design and analysis. [5]

- b) Mention the significance of Extends and the includes relation in the Use Case diagram with a suitable example. [5]

Q3) a) Draw a class diagram for online shopping system. Assume the scope. [5]

- b) Different elements used in package diagram. [5]

OR

Q4) a) Define Interface. Explain provided interface and required interface with an example. [5]

- b) Explain the different elements of deployment diagram. Draw a deployment diagram for J2EE web application with load balancing and clustering which shows specific server instances involved. [5]

P.T.O.

- Q5)** a) Draw a Sequence diagram for Online shopping system. [5]
b) Explain Fork and Join concept in Activity diagram with a suitable example. [5]

OR

- Q6)** a) Draw a State machine diagram for ATM machine. ATM is initially turned off. After the power is turned on, ATM performs startup action and enters Self Test state. If the test fails, ATM goes into Out of Service state, otherwise there is triggerless transition to the Idle state. In this state ATM waits for customer interaction. [5]
b) Explain the significance of timing diagram with a suitable example. [5]

