



**DHARMSINH DESAI UNIVERSITY, NADIAD**  
**FACULTY OF TECHNOLOGY**

**B.TECH. SEMESTER VI [C.E./I.T.]**

**SUBJECT: (CT616) SOFTWARE ENGINEERING**

<b>Examination</b>	<b>: Block Sessional</b>	<b>Seat No.</b>	<b>: _____</b>
<b>Date</b>	<b>: 08/03/2013</b>	<b>Day</b>	<b>Monday</b>
<b>Time</b>	<b>: 11:30 to 12:45 PM</b>	<b>Max. Marks</b>	<b>: 36</b>

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**INSTRUCTIONS:**

1. Figures to the right indicate maximum marks for that question.
  2. The symbols used carry their usual meanings.
  3. Assume suitable data, if required & mention them clearly.
  4. Draw neat sketches wherever necessary.
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**Q.1 Do as directed.**

- (a) Distinguish between a program and a software product? [2]
- (b) Giving suitable example, differentiate static and dynamic behavior of the system. [2]
- (c) “As a project manager it would be worthwhile on your part to reduce the project duration by half provided the customer agrees to pay for the increased manpower requirements.” State true or false. Justify the statement. [2]
- (d) How would you improve a software design that displays very low cohesion and high coupling? [2]
- (e) Define the term SCI in the context of software change management. [2]
- (f) State true or false and justify. [2]

1. The inheritance relationship describes the has-a relationship among the classes.
2. State chart diagrams in UML are normally used to model how some behavior of a system is realized through the cooperative actions of several objects.

**Q.2 Attempt *Any Two* from the following questions. [12]**

- (a) Explain Object-oriented design Vs Function-oriented design with example. [6]
- (b) Explain different characteristics of a good UI design. [6]
- (c) What are drivers and sub modules in the context of integration and unit testing of a software product? Why are stubs and drivers modules required? [6]

- Q.3** (a) A bank has a computerized customer accounting/transaction system. The system can be accessed by ATMs which communicate with the central computer which clears transactions. Each ATM accepts a pass card interacts with the user, communicates with the central system for clearance purposes, dispenses cash, processes various error messages and allows access to additional services include paying bills, printing of statement, credit transfer. Users may only use their card to the maximum value of Rs. 200.00 and not more than five times in one day. [6]

Identify the main classes their associations and attributes. And draw the class diagram.

- (b) Consider the system given above and draw the inter-action diagrams. [6]

**OR**

- Q.3** (a) Consider the following system: [6]

Consider the following system: A departmental store maintains inventory of various products being sold by them. The products are classified under three categories – Fruits and Vegetables; Groceries and Cloths. All these items have different kinds of promotion schemes. You need to help departmental store to design an online stock management, stock pricing and discount system. Make necessary assumptions.

Draw the class diagram and the use-case diagram.

- (b) Consider the system given above and draw the state-chart and activity diagrams. **[6]**