DHARMSINH DESAI UNIVERSITY, NADIAD
FACULTY OF TECHNOLOGY
FIRST SESSIONAL EXAMINATION
SUBJECT: (CT616) SOFTWARE ENGINEERING

Examination	**: B.TECH Semester - VI**	**Seat No.**	**:**
Date	**: 16/02/2016**	**Day**	**: Tuesday**
Time	**: 12:30 to 01:45**	**Max. Marks**	**: 36**

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.

Q.1 **Do as directed.**

(a) Classify the risks in the software project. Give appropriate example. **[2]**
   1. What if hand off between satellites becomes too difficult to implement?
   2. What if a mobile phone becomes too much large for the people to conveniently carry?

(b) A module that has high cohesion and low coupling with other modules is said to be functionally independent of other module. Justify with example. **[2]**

(c) Distinguish between DFD, flow chart and activity diagram. **[2]**

(d) Normally you use an interaction diagram to represent how the behavior of an object changes over its life time. True or false. Justify. **[2]**

(e) The inheritance relationship describes the has a relationship among the classes. True or false. Justify. **[2]**

(f) The aggregation relationship can not be reflexive and symmetric but is transitive. True or false. Justify. **[2]**

Q.2 Attempt ***Any TWO*** of the following questions. **[12]**

(a) Suppose you are a project manager of a software project that consists of the following activities: **[6]**

Activity no.	Activity name	Duration(Week)	Immediate predecessor
1	Obtain requirements	4	-
2	Analyze operations	4	-
3	Define subsystems	2	1
4	Develop database	4	1
5	Make decision analysis	3	2
6	Identify constraints	2	5
7	Build module1	8	3,4,6
8	Build module2	12	3,4,6
9	Build module3	18	3,4,6
10	Write report	10	6
11	Integration and test	8	7,8,9
12	Implementation	2	10,11

   (a) Draw the activity network representation of the project. Also find the critical path.
   (b) Draw the Gantt chart representation of the project

(b) Describe various types of cohesion with example. **[6]**

(c) Give the examples of various kinds of invalid DFDs.

Q.3 (a) Perform SA/SD for the given system.(DFD atleast upto level 2) **[6+6]**

Restaurant automation system.

A restaurant owner wants to computerize his order processing, billing and accounting activity. He also expects the computer to generate statistical report about sales of different items.The measure goal of the system to make supply ordering more accurate. Availability of ingredients to satisfy orders for some popular items.

Make suitable assumptions where ever required.

OR

Q.3 (a) Draw class diagram and sequence diagram for the given system. **[6+6]**

Book shop automation system.(BAS).

BAS should help customer query where book is in stock and user can query availability of book by using book title or by book author name. The customer can provide his email address so that he can be intimated automatically by software as and when book copies are received. If book is in stock the exact no. of copies and rack no. of book can be displayed.

Make suitable assumptions where ever required.