161

ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)
ORGANISATION OF ISLAMIC COOPERATION (OIC)
Department of Computer Science and Engineering (CSE)

MID SEMESTER EXAMINATION   **WINTER SEMESTER, 2017-2018**
DURATION: 1 Hour 30 Minutes   **FULL MARKS: 75**

CSE 4513: Software Engineering and Object Oriented Design

Programmable calculators are not allowed. Do not write anything on the question paper.
There are **4 (four)** questions. Answer any **3 (three)** of them.
Figures in the right margin indicate marks.

---

1. a) Briefly describe waterfall model. When can waterfall process model be more productive even over agile process models?   8+2

   b) Event management has become a very lucrative business now a days as organizations and individuals are outsourcing the management of their picnics, annual excursions, wedding receptions and miscellenious parties to event management companies. Suppose XYZ are running an event management business and they want a software to help them in their business. They told you about their business, now after hearing them: 7+8
      i. Can you elaborate the use case for booking an event/ party with XYZ?
      ii. Find out the domain classes and their basic relationships/ associations.

2. a) What are the planning activities you can think you when you plan for a software solution? Two of the planning principles are: 8
      - 'Planning is iterative' and
      - 'Plan based on what you know'
      Quote your experience in planning one of your projects and how you applied the two principles.

   b) Briefly describe how UML diagrams are used in agile process.   4

   c) Describe SCRUM agile development process.   8

   d) What is CRC? Quote a particular example of using CRC in any of your projects.   2+3

3. a) Change is difficult and costly to accommodate in typical software process model. Why? How does the agile process model accommodate change then? Show the cost savings of agile process using a chart/graph.   6

   b) Value Added Services (VAS) have become common in Cellular Data Network. Elaborate the VAS architecture?   8

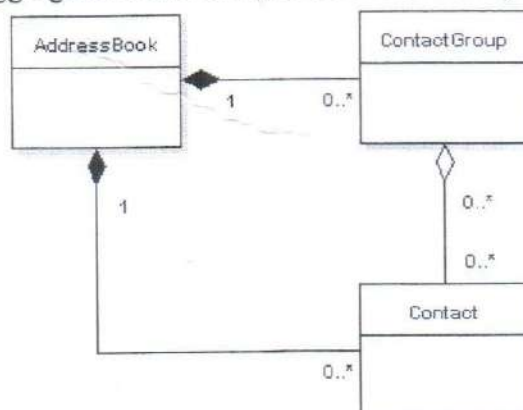   c) Describe the following aggregration and composition relationship given in Figure 1.   6

Figure 1.

   d) What are Continuous Integration (CI) and Test Driven Development (TDD)?   5

4. a) What is a Software Requirement Specification (SRS)? What are the elements of a SRS.   3+4
   b) Draw an activity/ swim lane diagram to withdraw money from an ATM machine.   7
   c) Write a short note on sequence diagram.   4
   d) Noun becomes class and Verb becomes method. Discuss the analysis principle with a   7
   suitable example. Also discuss about the placement of the methods into the classes.