

THE OPEN UNIVERSITY OF SRI LANKA  
DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE  
B.Sc. DEGREE PROGRAMME - 2012/2013  
CSU3277- SOFTWARE ENGINEERING  
OPEN BOOK TEST (OBT)  
DURATION: 1 ½ HOURS



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Date: 19<sup>th</sup> February, 2013

Time: 4.00 p.m. – 5.30 p.m.

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**Q1.**

The following case study describes the processes in a pizza business. Use the case study to draw a Context Diagram, followed by a zero level Data Flow Diagram.

A large pizza business makes pizzas and sells them. The pizzas are manufactured and kept in cold storage for not more than two weeks. The business is split into a number of functional units. There is Production Control, Manufacturing, Stores, Accounts, Sales, Shipping and Purchasing. *Production Control* is responsible for organising which pizzas to produce in what order and in what quantity. They need to schedule the production of the pizzas according to the current and expected sales orders together with the number of pizzas already in *Stores*. *Manufacturing* take the raw materials from the *Stores* and manufacture pizzas returning the completed goods to the *Stores*. *Accounts* deal with the payments for the pizzas when delivered to the customer and the payment to the suppliers of the raw materials. *Sales* deal with customer orders whilst *Purchasing* organise the buying of raw material from suppliers. *Shipping* manages the packing and delivery of the goods to the customer with a delivery note.

When a sales order is received by sales they record what is being ordered and by whom. They also record the details of the expected date of delivery. *Production Control* access this information and make sure that, if required, pizzas are produced by *Manufacturing* and are ready in *Stores* for when the delivery needs to be made.

After the delivery is made *Accounts* make sure that the customer receives an invoice and that payment for the invoice is received at which time a receipt is issued. *Purchasing* look at the current stock of raw materials and by using current stock levels, supplier turnaround times and quantity to be ordered decide what needs to be ordered on a daily basis. Their aim is never to run out of an ingredient but to minimise the amount of raw material kept in stock.

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