

SE201.3 Systems Analysis and Design

Model paper

This paper has two sections. Answer any four (04) questions given in the Section B.

Section A:

Case study for questions in Section B

Hightec Computer Repairs

Hightec is a computer repair company operating out of a small workshop. The owner, Peter is the only person working in the company but he hopes to expand and employ more engineers in the near future. At present Peter holds much of the information about repair jobs in a filing cabinet but this is rather disorganized and he realizes that a computer system would be a better method especially as any new members of staff would also need access to this information.

When a customer brings in a faulty computer Peter logs the fault and the customer's details giving him/her an estimated date for the repair to be completed. Every day he checks the list of repairs and selects the jobs to be done that day. If he finds he doesn't have the required parts in stock for a repair he places a purchase order with his supplier and reschedules the job to a later date. When a repair is complete and the customer comes to collect the computer, Peter gives him/her an invoice and the customer pays immediately. Once a week Peter checks his stock of parts, and orders any that are getting low from his supplier.

Section B

Question 1

1. Explain the differences between a physical and a logical data flow diagram (DFD).
2. List the processes and the external entities that you would include on a LOGICAL context level data flow diagram (DFD) of the Hightec company in Section A. (You do not need to draw the DFD).
3. Produce a Use Case diagram for the Hightec system.

Question 2

1. List five (05) techniques for eliciting requirements.
2. Explain four (04) of these techniques in detail including the advantages and disadvantages of each technique.

Question 3

1. Describe a system development method of your choice. You should include a description of the stages/phases of your method. A diagram of the method should be produced if appropriate.
2. Discuss whether your chosen method would be suitable for developing a new computer system to support Hightec as described in the case study in Section A.
