QUESTION BANK

5.1   What is the difference between an external entity and a process in a DFD?

5.2   What are the main merits of using a DFD?

5.3   What is the role of DFD as a documentation aid?

5.4   What is the difference between a source and a sink in a DFD?

5.5   Why is data flow between data stores not allowed in DFD?

5.6   Is data flow allowed between an external entity and a data store. If your answer is

        "no", explain why.

5.7   What is a context diagram?

5.8   What do you understand by leveling of DFD?

5.9   What is the main difference between a flow chart and a DFD?

5.10   What do you understand by top down development of a DFD?

5.11   What is a physical DFD?

5.12   What is the difference between a physical and a logical DFD?

5.13   In what way is physical DFD useful?

5.14   Prepare physical and logical DFDs for the following activities:

        i.   Issuing out a book from the library

        ii.   Returning a book to the library

        iii.   Getting a ticket reserved for a train journey

        iv.   Getting an item issued from a store

        v.   Getting your mark-sheet from a University office.

5.15   Admission procedure in a University is as follows:

        An advertisement is issued giving essential qualifications for the course, the last date

for receipt of application, and the fee to be enclosed with the application. A clerk in the Registrar's office checks the received applications to see if mark-sheet and fee are enclosed and sends valid applications to the concerned academic department. The department checks the application in detail and decides the applicants to be admitted, those to be put in the waiting list, and those rejected. Appropriate letters are sent to the Registrar's office which intimates the applicant. Give physical and logical DFDs corresponding to the above problem.

5.16   A magazine is published monthly and is sent by post to its subscribers. Two months before the expiry of subscription, a reminder is sent to the subscribers. If subscription is not received within a month, another reminder is sent. If renewal subscription is not received up to two weeks before the expiry of the subscription, the subscriber's name is removed from the mailing list and the subscriber informed. Obtain logical DFDs for this problem

5.17   Obtain a flowchart for Exercise 5.17 and state in what way it differs from the DFD.

5.18   Obtain a physical DFD for a simple payroll system described below. A list of employees with their basic pay is sent to a clerk. He calculates the gross pay using standard allowances which are known for each pay slab. Deduction statements such as loan repayment, subscription to association etc. are also sent to another clerk who matches these slips with the slips of gross pay and calculates net pay. This slip is used by a third clerk to write out pay cheques for each employee and sent to respective employees. The total pay bills paid are also computed.

5.19   If the procedure of Exercise 5.19 is to be computerised, obtain a logical DFD for the computer-based system.