1. (a) What are different phases in SDLC? What is need of System Analysis? Explain the role of System Analyst.

(b) Draw a Data Flow Diagram (DFD) till second level Depicting the various processes, data flow and data repositories for a "Petrol - Pump retail outlet".

(c) What is meant by "System Design Specification"? Explain the purpose of the following system design tools:

(i) Object Interaction Diagram
(ii) Inheritance Diagram
(iii) Aggregation Diagram

(d) What is DSS? Explain various components briefly with the help of a suitable diagram.
(e) What is reverse engineering? Explain the need of reverse engineering with an example.

2. (a) What are object oriented Case Tools? List basic features of OO Case Tools. Also write differences between various types of OO Case Tools.

(b) What is on-line transaction processing? Give an example of on-line transaction processing. Also differentiate between on-line transaction, processing and batch processing.

3. (a) What is transaction audit? Explain four advantages of transaction audit.

(b) What is Joint Application Development (JAD)? Explain six typical participants in a JAD.

4. (a) What is need of software testing? Describe the objectives of the following testing techniques:

(i) Stress Testing
(ii) Performance Testing
(iii) Recovery Testing
(iv) Security Testing
(b) What is need of standard software documentation? Explain any three documentation standards briefly.

5. (a) Briefly, discuss various criteria for Form and Report design, using an example.

(b) Write a short note on following: 5x2=10

(i) Coupling and cohesion

(ii) Distributed system