

QP Code : 14936

[3 Hours]

[Total Marks:80

- N.B.** (i) Q. No. 1 is **compulsory**.
(ii) Attempt any **three** questions from the remaining **five** questions.
(iii) Assume suitable **data** wherever necessary.
(iv) **Figures** in the **right** indicate **full** marks.

1. (a) What are the characteristics of a system? Describe how structured systems differ from object oriented systems? 10
(b) Explain Zachman's framework 10
 2. (a) Explain the different tools used for gathering requirements. How are these requirements validated? 10
(b) Consider the use case diagram of a Course Registration System and explain extend, include and generalize relations between use cases. 10
 3. (a) The Library of an institute has the problem of tracking books. Write the system proposal for this problem. 10
(b) What is Cost Benefit Analysis? Illustrate any two methods of cost-benefit analysis 10
 4. (a) Draw the sequence diagram for login procedure to a system. Include all scenarios and draw the activity diagram also. 10
(b) Draw state machine diagram for a Printer 10
 5. (a) Draw the DFD (upto 2 levels)for a Payroll system.How do you map DFD to a structured chart? 10
(b) Draw the class diagram for the Payroll system (minimum of four classes to be included) 10
 6. (a) Explain the need for system integrity, control and security with suitable examples 10
(b) Assume that the Library management system is deployed on a 3-tier architecture. Explain the various components and its deployment 10
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