



**Tribhuvan University**  
**Faculty of Humanities and Social Science**  
**Semester: III**

**Subject: System Analysis and Design**

**2023**

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Group B

**Attempt any SIX questions**

2. Define information system. Explain different types of information system.
3. What is meant by baseline project plan? Explain major parts of baseline project plan.
4. Explain various interactive methods with example of each.
5. Define system testing. Write and explain types of system tests.
6. "Documentation play vital role in system development and review Justify this statement.
7. Why system maintenance is important? Explain different types of maintenance.
8. What is normalization? Explain the major objectives of database design.

Group C

**Attempt any TWO questions**

9. Define DFD. Write rules to draw a DFD. Draw a DFD upto level 1 for library management system.
10. a) Write guidelines to design a forms and reports  
b) Explain types of system implementation.
11. What is system requirement analysis? Write and explain different types for determining system requirements.

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Group B

**Attempt any SIX questions**

2. You have been hired as a project manager of a large government project to replace an aging air traffic control system. Would you choose waterfall or agile as your application development method? Explain your decision.
3. Explain the roles and responsibilities of software project manager in project development.
4. Giving a simple example, explain how ER schemas are converted into a set of relations. Your example should have the use of multivalued and composite attributes too. Cardinality is a must.
5. What is meant by deliverable? Explain the major deliverables of planning phase.
6. What is the significance of normalization? Explain 2NF giving a suitable example.
7. Explain different approaches to installation? Which one is most expensive and risky?
8. A system costs RS 2,00,000 to install. The profit per year is RS. 50,000. Assuming an interest rate is 6%, what is the payback period of the investment?

Group C

**Attempt any TWO questions**

9. List rules for diagramming DFDs. Draw a context diagram and expand it to top level logical DFD for Student Enrollment System. The enrollment process works as follows.
  - Students send in an application form containing their personal details and their desired course.
  - The university checks that the course is available and that the student has necessary academic qualifications.
  - If the course is available, the student is enrolled in the course, and the university confirms the enrollment by sending a confirmation letter that they are registered for the course.
  - If the course is unavailable, the student is sent a rejection letter.
10. Explain the factors that influence the cost of maintenance. Explain the steps involved in maintenance process and contrast them with the phases of system development life cycle.
11. What qualities a software tester should have? What are the deliverables from coding, testing and Installation? Explain different types of Software testing in detail.

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Group B

**Attempt any SIX questions**

2. Describe and compare the various sources of software.
3. What different skills do you need to be a good systems analyst?
4. Describe the steps involved in corporate strategic planning.
5. What are the steps in creating decision table? How do we reduce the size and complexity of a decision table?
6. What is information gathering? Discuss questionnaire along with its merits and demerits.
7. Explain different types of software testing?
8. How can you transform ER Diagram into relation? Explain with your own suitable example.

Group C

**Attempt any TWO questions**

9. Assuming monetary benefits of an information system at Rs 85,000 per year, one-time costs of Rs 75,000, recurring costs of Rs 35,000 per year, a discount rate of 12 percent, and a five-year time horizon, calculate the following:
  - a) Net present value of the costs and benefits.
  - b) The overall return on investment.
  - c) The point at which breakeven occur.
10. What do you mean by software maintenance? Explain the different types of maintenance? Explain the process of maintaining the information system with examples.
11. Why we draw DFD? Explain the process of drawing DFD using suitable example.

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**2020**

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Group B

**Attempt any SIX questions**

2. What is system? What are the phases of SDLC? Explain Briefly.
3. What do you mean by planning? Write the process of planning for Information System Development Project?
4. Define Process Modeling. Explain DFD with Example.
5. List and explain the skills and responsibilities of project manager.
6. Explain the guidelines to design in an interface and dialogue box e-commerce system.
7. Differentiate between system and user documentation with their applications.
8. Define software testing. Explain software quality assurance activities

Group C

**Attempt any TWO questions**

9. What are the major differences between Agile methodologies and Waterfall Model? Why should you use agile methodologies? Explain.
10. How can you transform ER Diagram into relation? Explain with your own suitable example.
11. Why is Project Management important? Describe the concept of integrated CASE Tools with its applications.

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**2019**

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Group B

**Attempt any SIX questions**

2. Elaborate on the steps in feasibility of analysis.
3. Explain what is system and what are its characteristics of a system in details ?
4. Why is it difficult to determine user requirement? Illustrate the key strategies for eliciting information about user requirement.
5. Distinguish between system and user documentation and determine which types of documentation are necessary for a given information system.
6. Explain and contrast four types of maintenance.
7. Differentiate between questionnaire and interview Survey
8. What is difference between a 2NF and 3NF

Group C

**Attempt any TWO questions**

9. List and Describe the skills and activities of a project manager during project initiation, project execution and project close down.
10. Draw context diagram, Data flow Diagram up to level-2 of food ordering system of Bakery Cafe Jawlakhel- Lalitpur.
11. How can you transform E-R diagram into relation? Explain with suitable examples. A Bank has the following policy on deposits of Rs 50,000/- and above for five years above, the interest rate is 15%. On the same deposit for period user less than 5 years it is 12%. On the deposit below Rs 50,000/- the interest rate is 10% regardless of period and deposit. Write the above process using:
  - a. Decision Table
  - b. Decision Tree

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