

**Tribhuvan University  
Institute of Science and Technology**

**2066**

Bachelor Level/ First Year/ First Semester/ Science  
**Computer Science and Information Technology (CSc. 252)**  
(System Analysis And Design)

Full Marks: 60  
Pass Marks: 24

*Candidates are required to give their answers in their own words as far as practicable.*

The figures in the margin indicate full marks.

**Group A**

**Long Answer Questions:**

**Attempt any two: (2x10=20)**

1. What do you mean by system analysis? Explain the system development life cycle with example.
2. Draw a DFD diagram of following up to level 2.  
Customer sends enquiry to commercial department, receives quotations from the sales department and places an order. Based on the customer order, the work order is sent to the planning department for planning scheduling and control, in turn, the planning department raises a job order on the "shop floor". On completion, delivery note and invoice are made out costing department also prepares an orderwise comparative statement of estimated and actual costs.
3. How can you transforming E-R diagram into relations? Explain with suitable example.

**Group B**

**Short Answer Questions:**

**Attempt any eight: (8x5=40)**

4. What are the system analyst and design tools?
5. Design the E-R diagram of the following.
  - a) Customer with draws money from his account.
  - b) Student attends classes.
6. Explain the data dictionaries with example.
7. Explain the cost-benefit analysis with example.
8. What is the difference between a 2 NF and 3NF relations?
9. What do you mean by file organization?
10. What is the role of software application testing?
11. Explain the factors that influence the cost of maintenance.
12. What managerial issues can be better understood by measuring maintenance effectiveness? Explain.
13. Differentiate between state diagrams and sequence diagrams in object oriented analysis and design.