**Kathmandu BernHardt College**

**Bafal, Kathmandu**

**Pre-Board Examination -2070**

**Faculty: Science Set ‘A’ FM: 60**

**Subject: System Analysis and Design.**(CSC 252) **PM: 24**

**Level: BSc CSIT IV SEM Time: 3 hrs**

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:** (2 x10=20)

1. For the following situation, draw a context-level diagram and a level-0 data flow diagram. Kellogg State Bank provides car and home loans to its banking customers. Initially, a potential loan customer meets with a Kellogg loan officer, requests a loan for a certain amount and time frame, and completes a loan application. Next, the loan officer determines the customer's credit standing, the type of loan required, and available interest rates. While the loan officer can authorize car loans for credit worthy customers, a loan committee must approve all home loans.
2. An individual wishes to withdraw cash from an ATM machine. Prepare a decision table to represent this situation. Please note any assumptions that you make.
3. Explain the steps in the maintenance process and contrast them with the phase of the systems development life cycle.

**Group B**

**Short Answer Questions:**

**Attempt any eight:** (8 x 5=40)

1. You have recently been hired by an appliance repair company. Your first task is to normalize the following relation.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Client  No. | Last  Name | Street  Address | City | State | Technician No. | Technician Last  Name | Service  Date | Type of  Service |

1. Explain object oriented development cycle. Write down the advantage of using OOAD.
2. Describe the commonly used methodology for performing economic cost benefit analysis.
3. What is CASE? What are the roes of CASE in data modeling?
4. What are the process for designing forms and reports?
5. What are the three management skills needed by system analysts?
6. Explain DSS and EIS from development perspective.
7. What is testing? Explain in detail.
8. How can you determine project benefits? Explain
9. Who is system analyst? List and explain the skills of system analyst.

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**Group A**

**Long Answer Questions:**

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

1. A computer supplies firm called True Disk has set up accounts for countless businesses in Dosville. True Disk sends out invoices monthly and will give discounts if payments are made within 10 days. The discounting policy is as follows: If the amount of the order for computer supplies is greater than $1,000, subtract 4 percent for the order; if the amount is between $500 and $1,000, subtract a 2 percent discount; if the amount is less than $500, do not apply any discount. All orders made via the Web automatically receive an extra 5 percent discount. Any special order (computer furniture, for example) is exempt from all discounting. Develop a decision table for True Disk discounting decisions, for which the condition alternatives are limited to Y and N.
2. Draw the Entity- Relationship Diagram (ERD) for the following scenario:

A salesperson may manage many other salespeople. A salesperson is managed by only one salespeople. A salesperson can be an agent for many customers.

A customer is managed by one salespeople. A customer can place many orders. An order can be placed by one customer. An order lists many inventory items. An inventory item may be listed on many orders.

An inventory item is assembled from many parts. A part may be assembled into many

inventory items. Many employees assemble an inventory item from many parts. A supplier supplies many parts. A part may be supplied by many suppliers.

1. What are the phases of SDLC? Explain the major activities of each phase.

**Group B**

**Short Answer Questions:**

**Attempt any eight:** (8 x 5=40)

1. What are UML diagrams and were they are used? Explain use-case diagram with suitable example.
2. How can you normalize a relation? Explain with suitable example.
3. Explain the data dictionaries with example.
4. Explain TPS and MIS from development perspective.
5. Why we need documentation in system development process. Explain types of documentation.
6. Distinguish between initial investigation and feasibility study. In what way are they related?
7. Why is it necessary to conduct cost/benefit analysis?
8. Why is it difficult to determine user requirements?
9. What is CASE? What are its objectives? Explain usages of CASE in SDLC.
10. Compare the different conversion methods with each other.