

1	<ul style="list-style-type: none"> i. What is reverse engineering. ii. What is UML? For what purpose it is used. iii. Three Benefits of Virtual organizations. iv. What is meant by saying “organizational subsystems are interrelated & interdependent”. v. What are the three reasons that programmers become the cause of project failure? vi. List two situations where questionnaire is desired. vii. Give two ways in which a user can be helpful in the prototyping process. viii. What you mean by “exploding” in context of a DFD. ix. Define a decision support system and compare it to management information system.
2	<p>A) Go through the following Case study and answer the questions given at the end.</p> <p>“You will be happy to know that we made a strong case to management that we should hire a new system analyst to specialize in ecommerce development. Says Al Falfa, a system analyst for multi outlet international chain of Marathon vitamin shops. He is meeting with his large team of system analysts to decide on the qualifications that their new team member should possess. Al continues saying “ In fact, they were so excited by the possibility of our team helping to move Marathon into an ecommerce strategy that they have said we should start our search now and not wait until the fall.”</p> <p>Ginger Rut, another analyst agrees saying “As long as the economy is healthy, the demand for web site designers is far outstripping the supply. We should move quickly, I think our new person should be knowledgeable in CASE tools, VB, and Java Script to name a few.”</p> <p>Al said “well, that is no way we could go. But I would also like to see a person with some business savvy. He should know about accounting, inventory, and distribution of goods and services too. “</p> <p>The newest member Vita Minn says “From what I have seen, we are a friendly group. So let us hire someone who has a good personality and who fits in well with us.”</p> <p>Al concurs “The new person should be able to communicate well with us, as well as with our clients. We are always communicating through formal presentations, drawings, diagrams or interviewing users. If he understands decision making, it will make the job easier.” Also Marathon is interested in integrating the ecommerce into entire business. We need someone who at least grasps the strategic importance of the web.</p> <p>Ginger again says “I still say the new person should know UML. It is very important.”</p>

One of the senior system analysts says “we will see if a superman is available”. The group shares a laugh.

What qualifications should the Marathon look for? Is it more important to know specific languages or to have an aptitude for picking up languages and software packages rapidly? How important it is to have business understanding? Should all team members possess identical competencies and skills? What personality or character traits are desirable in a system analyst who will be working in ecommerce development?

B) Arch Ives, a newly hired and rather shy system analyst with your system group, has come to you with an idea that he assures you will save the team time, and hence the business you are consulting with will save money. Arch proposes that rather than doing time-consuming interviews or collecting current quantitative and qualitative documents, the team should rely primarily on what it discovers in an archival database, “They have kept everything. They even have their old reports from earlier system projects. We don’t have to talk with anyone. We can access the database all day”.

List the merits of what Arch is proposing. List the problems with what Arch is proposing. Can business process reengineering using workflow analysis be performed on archival data? Explain the need for different approaches to gather data.

C) Fred and Ginger, owners of the Film Magic chain of stores (which rent videos, DVDs, and video games), have always been interested in new technology. Because they keep adding new products to rent (such as DVDs and new games for PlayStation II), their business has grown into a smash hit in several cities. Because your home is close to their original store, you have become friends with them over the dozen years they have been in business, renting tapes as they make the move from the big screen to videos. You often swap views about which movies are must sees and which are bombs.

You being a computer engineer are asked to do some technical help to them.

Using object oriented analysis make a class diagram showing the attributes and behavior of the classes. Also show the hierarchy of various classes.

3	<p>A) Another question used on PPC questionnaire is the question: my satisfaction with access time to customer database is:</p> <table data-bbox="162 1764 1528 1858"><tr><td data-bbox="162 1764 324 1806">Displeased</td><td colspan="4"></td><td data-bbox="860 1764 1023 1806">Satisfaction</td></tr><tr><td data-bbox="162 1816 211 1858">0%</td><td data-bbox="373 1816 422 1858">5%</td><td data-bbox="535 1816 600 1858">25%</td><td data-bbox="698 1816 763 1858">50%</td><td data-bbox="860 1816 941 1858">100%</td></tr></table>	Displeased					Satisfaction	0%	5%	25%	50%	100%
Displeased					Satisfaction							
0%	5%	25%	50%	100%								

What type of scale is this one intended to be? Is the scale appropriate? Why or Why not? Rewrite the question for better results.

B) Nordic Designs, a chain of stores specializing in contemporary furniture from Scandinavia, has been circulating a corporate newsletter that brags about the prototype of its shipping information system. It proclaims “Our shipping information system prototype was put into service as soon as it was delivered. With absolutely no changes necessary, managers say it is the perfect solution to tracking furniture shipments. Watch for the prototype in your store soon.

How has the writer of the story misunderstood the concept of prototyping?

C) Reduce the decision table to minimum number of rules.

Conditions and Actions	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Sufficient Quantity On Hand	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N
Quantity Large Enough for discount	Y	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	N	N	N	N
Wholesale customer	Y	Y	N	N	Y	Y	N	N	Y	Y	N	N	Y	Y	N	N
Sales Tax exemption Field	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
Ship Items and prepare invoice	X	X	X	X	X	X	X	X								
Set up back order									X	X	X	X	X	X	X	X
Deduct Discount	X	X														
Add Sales Tax		X	X	X		X	X	X								

4 Create a context level, 0-level and 1-level data flow diagram for the following situation :

Technical Temporaries

Technical temporaries is a company that specializes in placing employees in businesses for short periods of time. The company specializes in “temporaries” who have a high degree of proficiency in working with PC software, such as word processing and spreadsheets, as well as other technical areas. Employees must pass proficiency tests for areas in which they wish to be certified. The system

described below is responsible for matching employees with short term openings that are available.

List of Business Activities

- a. Businesses telephone the company to request temporaries to fill specific positions. The requests are used to create a temporary employment request record. If the business requesting the temporary employee is not on the employee master file, a record is created for it.
- b. Employees are selected to fill the temporary positions based on employee qualifications and availability. The temporary employee master and the temporary Employment request files are used to list all qualified candidates.
- c. Contracts are sent to the selected temporaries. Information is printed from the employee Master and Temporary Employment Request Files.
- d. Returned contracts are used to update the Employee Master File. The Temporary Employment request file is updated with scheduling and personnel information.
- e. Monthly schedules are printed for each employee. They contain information from the Employee Master and the Temporary Employment Request Files and they are sequenced by employment date for each employee.
- f. Notification is sent to the business requesting the temporary employees confirming the date and qualifications of the workers as well as their names.

- 5
- A) Design a nested menus interface for a check-in and check out hotel reservation system. Use numbers to select a menu item. Show how each menu would look on a standard PC display. Take the normal assumptions in context of Good hotels. Also show the forms that will be displayed to the operator for filling up.
- B) Write a test plan for the following problem
- Development of a workflow based Complaint Management System which has the following functionalities
1. Every product will have an email id assigned to it. Customers, when they have a complaint about the product, will send an email to the email id provided to them for that product.
 2. These Emails should get logged into the database and a complaint number should be generated. The customer should get an acknowledgement back saying that his/her complaint is received.

3. Administrators will be set up for each product and he/she should see all the complaints received for that product.
4. Groups of complaint handling executives should be set up for each product.
5. The administrator for a product should be able to assign the complaints to specific members of the complaint handling team for that product.
6. The complaint management team member should see the complaints assigned to him/her in his inbox. He should be able to send mail to the customer through the system with any clarification/solution or asking for more information. These subsequent communications should be stored as a part of the same complaint.