Time allowed: 2 hrs 30 min   Max Marks: 50

Roll No: _____

Instruction: Students are required to write Roll No on every **page of the** question paper, writing anything except the Roll No will be treated as **Unfair Means. In** case of rough work please use answer sheet.

Section A   3*5= 15 Marks

1. What is an information system? Describe the organizational, management and technology dimensions of information systems.
2. Write short notes on any five of the following-
   a. Acceptable Use Policy
   b. Cyber vandalism
   c. Data Mining
   d. Transaction processing system
   e. Spyware
   f. Data Warehouse
   g. Malware
3. Describe the ethical issues raised by technology trends-
   a. computing power doubles every month,
   b. data storage costs rapidly declining,
   c. data analysis advances,
   d. networking advances and the internet
4. Describe how an auto manufacturer and distributor could you use information systems to achieve operational excellence?
5. Describe the characteristics of MIS and explain how MIS **differs** from TPS and from DSS.

Section B   2*10= 20 Marks
1. Describe how e-commerce has brought transformation in following industries
   o   Books
   o   Miusic
   o   Air Travel
   o   Movies
   o   Real estate
   o   Bill Payment
   o   Software
   o   Tourism
   o   Insurance
   o   Education

2. List and describe at least five different Internet business models. Which of these models do you think is the most risky for a dot-com business? Support your answer.
3. What are the six strategic business objectives of information systems. Explain any five of them.

Section C   **3*5= 15 Marks**
Case Study

Sudesh and Company, with four plants, sixteen assembly departments, eighteen cloth cutting centres and more than 200 machine centres has installed an integrated information system.

The operations are characterized by a nation-wide distribution network. The project moves through 38 branch offices and 312 authorized distributors all of which maintain some inventory. Authorized distributors generate 37 percent of the order but account for only 24 percent of the sales. Most of the business is done through the branch offices.

The product line is large, products are classified into 176 family groups, representing 12,000 finished goods. Approximately 1,500 new items enter the product line annually and a similar number are discontinued.

The 12,000 finished goods require 25,000 components, of which 6,600 are carried in inventory and 18,400 are made to order. In the seventies, Sudesh & Co. was achieving a 60 percent customer service level (i.e. 60 percent of the orders were being delivered according to original customer request with no delays or adjusting of dates). The sales/ inventory ratio was a respectable 4.2 percent. However, the production cost variance averaged 16.3 percent. Clerical expenses ran up to 36 percent of sales.

This was not good enough in a highly competitive business. Since the primary asset a company has (in addition to high quality reliable products) is customer service, an improvement in customer service was given a priority.

Three areas of cost control were also given high priority

1) Production costs, especially those associated with a nationwide disbursement of inventory, must be controlled within reasonable limits, relative to the customer service.

2) Distribution costs, especially those associated with a nationwide disbursement of inventory must be controlled within reasonable limits, relative to the needs of customer service.

3) Clerical costs in a growing business must be contained and if possible, reduced.

A computerized integrated management information and control system was instituted. By the early eighties, performance in the following four areas greatly improved.

1) Customer service: Up to 72 per cent orders were now filled as requested, as against the earlier 60 per cent, showing substantial improvement

2) Inventory turnover: the sales/ inventory ratio was 6.2, a 50 percent increae over the previous performance. More improvement was expected.

3) Production cost variance: this category had all but disappeared, being controlled with a 1 percent tolerance. This was possible because timely and accurate information now was available when needed.

4) Clerical expense: the ratio of clerical expense had dropped to 2.8 percent, an unusual achievement in a rapidly growing business that had to face increasing rate of clerical labour.

Of late, the company realized that they should enter into custom manufacturing, as its initial mass production techniques had pushed it into standardized products and long product life cycles. Rigid manufacturing emphasized efficiency and low cost, but not true customer satisfaction. Customers want quality, value and products specially tailored to their needs- at the lowest possible price.

Custom-manufacturing uses state of the art information technology to produce and deliver products and services designed to fit the specifications of individual customers. Companies can customize products in quantities as small as one unit with the same speed and low cost as mass production methods. In custom-manufacturing, software and computer networks are used to link the plant floor tightly with orders, design and purchasing to finely control the production machines. The result is a dynamically responsive environment in which products can be turned out in greater variety and easily customizes with no added cost for small production runs. Huge manufacturers can be as agile as small firms.

Custom-manufacturing system take information from customer and apply it behind the scenes to control the flow of goods.

Questions

1. Are you impressed with the improvement in customer service, inventory turnover, production cost variance and clerical expenses? Justify your answer.
2. How could custom-manufacturing change the way the company did its business?
3. Which activity areas were the focus of MIS: operation control, management control or strategic planning? Do you agree with the emphasis?