Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA – SEMESTER II– EXAMINATION – SUMMER 2018

Subject Code: 2820002   **Date: 01/06/ 2018**
Subject Name: Management Information System (MIS)
Time: 10:30 AM To 1:30 PM   **Total Marks: 70**
Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1 (a). Multiple choice questions. Each question carries one mark   06

1. An information system that uses what-if analysis, sensitivity analysis and optimization techniques for decision making
   A. Executive information system   B. Decision support system
   C. Enterprise systems   D Artificial intelligence systems

2. A cross functional enterprise system that uses IT to link organizations' business processes and business partners such as suppliers, distributors and customers.
   A. Customer relationship management system   B. Enterprise resource planning systems
   C. Enterprise architecture integration   D Supply chain management system

3. Private network over public internet backbone
   A. Extranet   B. Intranet
   C. Wi-Fi   D. EPBX

4. Practices of extracting and analyzing data from a data warehouse to find hidden pattern and trends
   A. Data analysis   B. Data extraction
   C. Data warehousing   D. Data mining

5. A virtual shop that is engaged in trading and e-commerce
   A. Virtual network   B. Electronic storefront
   C. Payment gateway   D. B2B Electronic commerce

6. Method of reasoning that resembles human reasoning since it allows for approximate values and inferences
   A. Fuzzy logic   B. Genetic algorithm
   C. Neural networks   D. Artificial intelligence

Q.1 (b) Define the following :   04
   i. Office automation systems
   ii. Firewalls
   iii. Intranet
   iv. Peer-to-peer computing

Q.1 (c) Write a short note on different network topology. Draw suitable diagrams where required.   04

Q.2 (a) What are management information systems? Explain their working and the different reports generated by them.   07

(b) Why are information systems so essential for managing business today? Highlight the strategic benefits achieved by using them.   07

OR

(b) Explain how information technology can be used to implement the basic competitive strategies. Support your answer by providing suitable examples.   07

Q.3 **(a)** Distinguish between the different modules of CRM application? How do the support the different processes   **07**

(b) What are the different ways in which organizations are making use of internet to facilitate their working? Explain the business benefit of using internet.   **07**

OR

Q.3 **(a)** How is Enterprise Resource Planning (ERP) beneficial to organize several business functions? Describe with proper examples   **07**

(b) Todays, business organizations are increasingly engaging with customers using e-commerce platform. What are the benefits of e-commerce business model?   **07**

Q.4 **(a)** What are decision support systems? Briefly explain the different analytical techniques used in decision support systems to support decision making.   **07**

(b) What is information system security? Explain the different security measures that are important for maintaining information system security.   **07**

OR

Q.4 **(a)** What are business intelligence systems? Explain their components and the decision making support they provide to business firms.   **07**

(b) What are the social, ethical and managerial challenges of implementing information systems in organizations? Explain them in detail giving suitable examples.   **07**

Q.5   **Mascot Foods**   14

Mascot Foods Pvt Ltd. is a Noida based packaged food manufacturing firm. It also manufactures biscuits and bakery products. In all 25 different products are produced and sold by the firm. Their products are mainly distributed in North Indian states of UP, Uttarakhand, Himachal Pradesh, Punjab and Haryana.

Ever since its inception in the year 2005, the firm has been purchasing its raw material like wheat flour, sugar, eggs, preservatives and additional flavors from the local farmers and nearby markets. The input cost varies with the cost of the products which in turn depends on the crop production and dependent on rainfall in the previous year. Besides the raw material cost, labour management is another factor that the company has to take care of. Looking at the seasonal variations in raw material availability, the company has to maintain enough buffer stocks.

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The company distributes its products through a network of dealers and distributors. They have appointed distributors in all the major zone in which they operate. Further, the distributors supply goods to the dealers in each city. The dealers approach retailers in towns and villages. Thus the products of the company reach thousands of retailers in the areas they are operating in.

To create demand and awareness about its products, the company regularly launches advertising campaigns in the visual and print media. The marketing manager has to be careful in choosing the most affective media to reach out to the customers. Besides the publicity, he also has to resort to discounts, freebies and attractive schemes for retailers to push the product sales.

The company sales have been almost stagnant for the last three years despite of manufacturing good quality product and tireless efforts by the company to increase sales and build new customers. A major portion of its margins is utilized up in maintaining dealers / retailers.

To grow the firms business and to meet the future demands, the top management is exploring the option of increasing reach by marketing their products in central Indian states. To meet the demands, the firm will have to set up new manufacturing unit in some other regions to take the benefits of attractive tax free zones provided in those states. They are also looking for adopting information systems so as to facilitate in their working.

Mascot Foods has approached you as an IT consultant to the firm.

Questions:

1. Suggest what IT systems can be adopted by the firm that can help them overcome the problems the firm is facing. Highlight the benefits of each tools / technologies suggested by you.   07

2. Elaborate what components would be required for automating the business processes.   07

OR

Q.5   **Chemtron**

Chemtron is a Mumbai based company, specializing in chemical coating of products. The company had two manufacturing units that are always busy and engaged to their full capacity utilization. The company has implemented integrated software solutions to take care of purchase order processing, sales order processing, inventory management, production planning, manufacturing processes, material management and financial accounting.

The firm has an e-commerce portal which is capable of receiving orders online. The orders are processed instantly and a confirmation is sent to the customer. The system also sends intimation to logistics, manufacturing planning and purchase department for receipt of said order. The production planning department then schedules the order for production and sends the material requirement plan to the purchase department and warehouse. The production manager can check the availability of raw material on his computer system and request the manager to replenish the stock shortages. The job is put for actual production as per the schedule and the online e-commerce site is updated with the real time data.

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The customer can see the status of their order by simply logging onto this site. As the product is ready, the intimation is sent automatically to the logistics manager and the sales head he then makes a dispatch advice, which is sent through the integrated application suite to the warehouse and the finance department. The finance manager generates the invoice and the details are sent to dispatch for actual shipment of the goods. The customer receives an electronic mail to this effect and they collect their goods from the transporters delivery office.

The CEO of the firm is also able to access summary reports that present a graphical display of data representing the business operation of the company. The managers too can access periodical, exceptional or on-demand report. The customer and suppliers too are able to access their data over the extranet that Chemtron has established.

Questions:
1. Identify the various types of information systems used by Chemtron   04
2. How do information systems support (a) business operations, (b) business decision making, (c) strategic advantage, (d) e-business initiative, and (e) e-commerce at Chemtron   10

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