



INFORMATION TECHNOLOGY

(Marks 60)

Module D

(1 hour 45 minutes)

- Q.1 You have recently joined Shifa Pharmaceutical (SP) as IT Manager of its newly formed IT department. Previously IT support and services were outsourced. While reviewing the business and operations you observed that each department of SP had different local area network (LAN) topology and worked in isolation. For example, in Finance department every computer is connected to every other computer of the department whereas in Sales department all computers were connected via a single cable. When you pointed out this inconsistency to the SP's Chief Executive and suggested to implement the same topology throughout the organization, he asked you to brief him about various network topologies before implementing your suggestion.

You are required to apprise the Chief Executive on basic types of Local Area Network (LAN) system configurations.

(10)

- Q.2 With increased automation of today's businesses, the senior management of a company is often overloaded with various types of data. The ability to efficiently use such data for decision making purposes is quite often what distinguishes successful companies from others. Executive Information System (EIS) is a decision support system which is commonly used in many good organizations. You are required to:

- (a) briefly explain EIS; and
- (b) list key advantages of an EIS.

(03)

(03)

- Q.3 All organizations are at risk of attack from computer viruses, worms and trojan horses when they are connected to the Internet and while using removable media (e.g. floppy disks and CD-ROMs) or shareware/freeware software. The impact of a virus, worm or a trojan horse can be as harmless as a pop-up message on a computer screen or as destructive as deleting all the files on a hard drive. To counter such threats antivirus programs are installed either on the network infrastructure (i.e. mail server or firewall) or on the end user machines.

You are required to describe the respective advantages and disadvantages of antivirus programs installed at the network infrastructure and on the end user machines.

(06)

- Q.4 You are a software consultant and have been approached by a Right Angle Business School (RABS) to give a lecture on Computer Aided Software Engineering (CASE) tools to their students, highlighting their types, need and utility.

In the light of RABS's request, you are required to prepare a lecture on CASE tools explaining the following points:

- (a) Types of CASE tools
- (b) Advantages of using CASE tools in system analysis and development process

(03)

(03)

- Q.5 ABC Bank has recently implemented a custom-built software to automate its consumer lending operations. With an interface to the Bank's customer credit history database, the system is expected to allow faster processing of loan applications and ensure better credit-quality decisions. On completion of first processing cycle by the new system, the IT Manager has recommended to conduct its post implementation review (PIR). The management is not sure about the necessity of carrying out such a review and therefore has asked you to apprise them about PIR in detail before any decision can be taken.

You are required to submit a report on PIR covering the following:

- (a) purposes of conducting a PIR; and (03)
- (b) when should ABC Bank conduct the PIR of the new system? (02)

- Q.6 Hakim Hospital (HH) is a medium size hospital equipped with state of the art medical facilities. Though the records of HH are computerized, they are not integrated. The management is planning to get an integrated software developed from a software house. However, security over patients' history is their major concern.

You are required to list any six logical access controls that should be incorporated in the HH's integrated software to ensure the security of data. (07)

- Q.7 Galaxy Services (GS) is a newly established brokerage house which functions 24 X 7 hours a week due to its dealings in international markets. Since continuity of operations is a prime concern for GS, it is looking for alternative processing facility arrangements. In this regard, the management of GS has asked you, being their IT Manager to explore this issue in detail and submit a report.

You are required to write a report on alternative processing arrangements covering the following:

- (a) possible alternative arrangements with their distinguishing features; and (10)
- (b) which alternative processing facility(ies) would you recommend for GS and why? (03)

- Q.8 The Valley Bank (VB) has two types of credit card members viz. Gold card members and Silver card members. You are required to construct the flowchart of a program that will generate a list of each type of members showing the credit limits utilized by each member and the total of each list. (07)

THE END