



Professional Examinations Winter 2002

December 14, 2002

INFORMATION TECHNOLOGY MANAGEMENT, AUDIT AND CONTROL (MARKS 100)
Module F Paper F-21 (3 hours)

- Q.1 IT acquisitions vary in complexity and scale. Despite this diversity there are certain core principles that are generic and apply to all acquisitions?. Briefly describe those core principles? (20)
- Q.2 Passwords act as a first defense against unauthorized access. However, a bad composed password or a shared password can compromise security. Briefly list down points to be considered in selecting a password. What types of limits should be placed on composition of passwords? What rules should be there for strengthening the controls over passwords? (10)
- Q.3 What is Business Continuity Planning? What is the scope of such a plan? Identify and discuss any three components of an Information Systems Disaster Recovery Plan. (05)
- Q.4 What is the difference between Sys Trust and Web Trust? What are the principles of each? (05)
- Q.5 FastHire (Pvt) Ltd., is a recruitment company. Their most valuable assets include candidate resumes and client database, without which they would lose their competitive advantage. They are a company of around 60 employees. FastHire have offices in Islamabad, Lahore and Karachi that are connected through routers and a leased line. The Information Systems (IS) environment at FastHire is centralized. There is a Windows NT4 Primary Domain Controller in Karachi that controls one Domain - FH_Pak. Access to the Internet is provided through DSL in Karachi, and the firewall used is CISCO PIX. All employees have access to the internet which is well controlled through PIX. FastHire have outsourced the management of their own web site, which is also used to advertise job opportunities. The organization encourages the use of MSN Messenger and ICQ to communicate. Files are also transferred using these applications. The organization also maintains an FTP server in Lahore and allows anonymous logins to it. This allows employees from various offices to download relevant files. With this facility, employees can also access these files from home if and when they need to. Employees can also dial in to the network and access their network and e-mails through the Exchange server. The company does not currently use any other third party security product allowing authentication of employees who dial in. One of the IT analysts – Munir, has had issues with Management and has now decided to leave the company. Munir played a key role in setting up the LAN/WAN at FastHire, and was performing System Administrator activities. Another analyst has mentioned to the IT Manager that Munir is leaving to join a competitor.
- There was an incident once where 2 machines had to be reconfigured since they were completely destroyed by a virus. One of the employees received an attachment through e-mail that he accessed. According to him it simply played some music and displayed certain images. The virus made it's way to another machine but was picked up by it's anti virus scanner.

Required:

- (a) Identify four IT Risks in the current environment? Please use the format given below. (08)

Observation	Risks	Recommendation

- (b) What kind of an application is MSN Messenger (B2B, B2C, P2P, G2C) and what are the risks of such an application? (02)

- (c) Develop a checklist for Munir's termination process. What are the activities that need to be done immediately after Munir leaves? (05)

- (d) What are Trojans? How can a Trojan be planted? How can a Trojan that transfers files to someone outside the organization affect FastHires environment? How can FastHire protect itself? (03)

- (e) What risks is the FastHire Web site exposed to? How can FastHire minimize these risks? (02)

- Q.6 Discuss why Data Integrity is important. According to COBIT, what are the control objectives for data integrity? What are data integrity controls? (05)

- Q.7 Identify and discuss 3 risks due to weak logical controls? Differentiate between "internal" and "external" threats and discuss one preventive and one detective control that should be in place for each. (05)

- Q.8 In Public Key Cryptography, what is the Public key used for? How is the message decrypted by the recipient? (05)

- Q.9 Company XYZ has identified the need to implement an ERP, based on certain inefficiencies and non availability of information in a timely manner to support decision making. The executive management at XYZ is expecting significant benefits from his initiative. The company engaged Consultants to help them implement a solution. The Consultants have recommended that XYZ use SAP based on their experience and as SAP was being used by other organizations in the same industry segment. XYZ has accepted this recommendation and will be engaging the consultants for implementation work. The project manager will be an XYZ employee and the technical expertise will be provided by the Consultants. The Consultants will configure SAP based on XYZ's current business processes which will be analyzed as a first stage of the project. The contract with the consultants has not been formalized as yet, but the draft has been agreed.

- (a) What are the main concerns at this stage and why? Discuss each one in detail. (03)

- (b) Discuss your recommended approach in detail? (02)

- (c) If you were the CIO at XYZ what would you do? (02)

- (d) Prepare a project plan (identify the steps) that the project manager at XYZ should follow from this stage onwards. (03)

Q.10 HighTech (Pvt) Ltd. is a trading organization dealing in personal computers and its accessories. The head office is situated in Karachi and the sales offices are scattered throughout the country. The accounting is centralized and computerized using DBMS. The sales offices maintain their records on spreadsheets and send the printout of the data to head office which is input in the system at head office. As a result there are delays in updating the records which leads to inventory shortages at sales offices. The company had tried to obtain soft copies of the data on diskettes from the sales offices, however, due to virus the server went down for couple of days. Although no loss of data occurred due to strong control over back-up procedures the company is reluctant to use the same method again. The company is looking for a cost effective medium to transfer the data without any compromise on security.

You have been requested to prepare a report to streamline the reporting by the sales offices so that the data is updated at the head office on a timely basis. Prepare a report on what should be done to achieve such results and what steps should be taken to reduce the chances of problems faced in the past.

(15)

(THE END)