



TAXATION PROGRAMME EXAMINATIONS

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DIPLOMA LEVEL

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D1: BUSINESS INFORMATION MANAGEMENT

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WEDNESDAY 16 DECEMBER 2015

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

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**INSTRUCTIONS TO CANDIDATES**

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question. You will be told when to start writing.
2. This question paper consists of **FOUR (4)** questions of Twenty Five (25) marks each. You must attempt all the **FOUR (4)** questions.
3. Enter your Student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.
4. Do **NOT** write in pencil (except for graphs and diagrams).
5. **Cell Phones** are **NOT** allowed in the Examination Room.
6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.
7. All workings must be done in the answer booklet.
8. Present legible and tidy work.
9. Graph paper (if required) is provided at the end of the answer booklet.

**Attempt all FOUR (4) questions**

**QUESTION ONE**

Information Technology is a critical ingredient to business success as it drives the day to day business operations.

- (a) Discuss the assumption above using the headings below:
- (i) Global economies. (5 marks)
  - (ii) Organisational strategies and planning. (5 marks)
  - (iii) Change Management. (5 marks)
  - (iv) Flexibility and structure of workflows. (5 marks)
- (b) List any five (5) benefits of e- commerce. (5 marks)

**[Total: 25 Marks]**

**QUESTION TWO**

Computerised Accounting Information Systems are being developed in most organisations, as such, careful evaluation and selection of software and hardware is essential.

**Required:**

- (a) Prepare a check-list containing any six (6) factors for management to consider before selecting software. (12 marks)
- (b) Prepare another check-list containing any four (4) factors for management to consider when selecting suitable hardware. (8 marks)
- (c) Write detailed notes on having a disaster recovery plan. (5 marks)

**[Total: 25 Marks]**

**QUESTION THREE**

A knowledge base is generally considered as a database.

- (a) Briefly describe any four (4) opportunities that a knowledge base provides to an organisation. (8 marks)
- (b) Controls could be classified as *Application* controls, which include both automated and manual procedures and *Administrative* controls, which include physical, personnel and back-up facilities.
- (i) Mention any Two (2) Application controls. (2 marks)
  - (ii) Discuss in detail physical and personal controls. (10 marks)

- (c) Discuss what is meant by "back-up arrangements." (5 marks)

**[Total: 25 Marks]**

**QUESTION FOUR**

- (a) What is the business value that is driving so many companies to install and extend intranets rapidly throughout their organisations? You need to outline at least Five (5) reasons. (10 marks)
- (b) Give any three (3) business benefits and any two (2) management challenges of client server networks. (10 marks)
- (c) List, without explaining, any Three (3) benefits of the internet and any Two (2) drawbacks of using the internet. (5 marks)

**[Total: 25 Marks]**

**END OF PAPER**

## **D1: BUSINESS INFORMATION MANAGEMENT**

### **SUGGESTED SOLUTIONS AND MARKING KEY**

#### **DECEMBER 2015 EXAMINATIONS**

#### **SOLUTION ONE**

Impact of IT on today's business and strategy:

(i) **Global Economies**

Information Technology has created market pressure where there is strong competition among sellers and buyers. Global economies have been facilitated by advanced telecommunication systems networks, especially the advent of the internet. This is eminent in technologies such as e-commerce. In e-commerce, the buyer can be subjected to several choices among the many goods and services offered. Sellers and manufacturers of products can use the latest technologies to bring innovation to products and differentiate them for the liking of customers. There are also technologies which networks have created which enable manufacturers to sell goods and services on-line such as just-in-time. This technology minimizes inventory levels and maintenance and improves production scheduling to reduce costs and promote efficient workflows.

(ii) **Organizational Strategies and Planning**

Information Technology enables Organizations use strategies for competitive advantage, for example, continuous improvements in the production process such as business process re-engineering, business alliances, customer-focused approach business and mass customization. Total Quality management is another effort businesses to day utilize due to IT influence. Data monitoring, collection, summarization, analysis and reporting are improved, including inspection and testing. IT has also improved the decision-making process in organizations due to the readily availability of information, this includes planning.

(iii) **Management and Change**

Information Technology has created an environment which is rapidly changing therefore there is need for organizations to respond by restructuring and changing operations. There is need for retraining employees regarding the latest technologies and new services they have brought.

The vertical structure which was dominant in olden days is no longer working. IT encourages a flat organizational structure where employees are responsible of their own activities in the organization. There is also an aspect of the lifespan on products which has been drastically reduced. A new product introduced today will no longer sell and appeal to customers tomorrow.

#### (iv) **Flexibility and Structure of Workflows**

Information Technology has changed today's workforce including workflows. This has become more diversified to include multinationals. There is also the aspect of flexibility; organizational structures are encouraged to fit into business processes. The major goal is to encourage creation of teams where each team is responsible for a complete business process. This is more eminent in a net-worked structure. This reduces the span of authority to promote a flat organizational structure, in these structures group work collaboration is also promoted.

#### b) Benefits of e-commerce

- It enables an individual/business to reach a global market.
- It caters for both local and international demand.
- Can operate 24 hours a day, 7 days a week.
- Gives an opportunity for customers to select from a wide variety.
- Shopping online is mostly convenient and time saving.
- It reduces the burden of infrastructure to conduct business.

### **SOLUTION TWO**

#### a) Six (6) factors to select software

A check-list may include the following to be considered:

**Functionality:** Are all functionality features been included to meet requirements of the application?

**Cost:** Can the organization meet the cost of acquiring or developing the software. This can be weighed against benefits of using the software.

**Maintenance:** How is the cost of maintenance going to be met? Is the software maintenance-free?

**Supplier profile:** Examine the profile or background of supplier of software. Is the software from a renowned supplier, with notable success stories?

**Integration with other systems:** How flexible is the software to be integrated with other systems?

**Security features:** Are there any security features in the software? Are there any debugging facilities?

b) Four(4) factors to select suitable hardware

A check-list may include the following:

**Model of hardware:** Is the model popular and who is the manufacturer of the model?

**Processing power including storage capacity:** Processing speed can also be considered including size of Hard Disk and RAM.

**Cost of meeting budget:** Can the cost of hardware be met by the organization?

**Ease of maintenance:** Is maintenance readily available, including upgrading the system?

c) Disaster Recovery Plan

This is a record, or a list of safeguards that have been put in place to protect or minimize setbacks when a disaster has happened to computers or information systems to enable an organization to restart the system. The data can be saved to a different location for safety purposes.

For example:

If fire has attacked the computer system building, there must be a backup for the organization to fall back on and restart the system. This must be given as a sequence of events to follow the recovery procedure.

### **SOLUTION THREE**

a) A knowledge base is a database containing knowledge about the organization knowhow. The following opportunities can be provided by knowledge base to the organization:

**Knowledge Sharing:** Involves exchange of ideas among customers, employees, business partners regarding best practices in the operations of the business. Sharing of knowledge therefore facilitates organizational learning.

**Promoting innovation:** Knowledge as a change agent can promote innovation practices, promoting continuous change to products. This prolongs the lifespan of a product. Innovation can also bring about creation of new products which can be introduced into the market.

**Updating organizational knowledge:** An organization can be kept u-to-date with new knowledge by bringing new developed technologies, science, social thought and arts. It is important to note that knowledge does not die but it is constantly updated to reflect the changing environment.

**Storing an active knowledge base:** Internal knowledge can save as consultation points for new employees who want to learn, thus preserving expertise that might have been lost, for example if they left the organization.

b)

i) Application controls

- Input controls; necessary to ensure accuracy and completeness of data when it is been entered into the computer system
- Processing controls; necessary to ensure that data are complete and accurate during updating
- Output controls; necessary to ensure that the result of computer processing are accurate complete and properly distributed

ii) Administrative Security controls

### **Personnel controls**

Personnel are not always careful about protecting their passwords and security codes and through social engineering they might fall into the wrong hands and personnel controls are necessary to ensure employees in the position of trust are not compromised to cause a security breach.

System should be designed so that only a few staff are in a position of trust. Job rotation at random intervals so that an employee cannot be certain that he/she will be able to set up a breach of security before the next job rotation. References should be checked before a member of staff is hired.

## **Physical controls**

Physical controls are concerned with denying physical access to the computer system, preventing the physical destruction of the system, and keeping the system available. To implement physical controls; For example, mainframe computers are often located in controlled-access rooms and personal computers are sometimes cabled to work tables or placed in locked cabinets when they are not in use.

Access to a secure area can be controlled by issuing identification cards, badges, keys, or personal identification numbers (PINs) to authorized personnel, and surveillance cameras are becoming increasingly common.

Modern biometric devices can be used to identify an individual via retinal scan, fingerprint analysis, voiceprint, or signature analysis.

### c) Back up facilities

Backup refers to the copying of data for the purpose of having an additional copy of an original source. If the original data is damaged or lost, the data may be copied back from that source, a process which is known as Data recovery or Restore. The data in question may be either data as such, or stored program code, both of which are treated the same by the backup software.

Backups are a way of physically securing computer based information systems;

Backups are kept on hard disks, CD-R, CD-RW, DVD and tapes, and can be kept in a multitude of locations, some of the suggested places would be a fireproof, waterproof, and heat proof safe, or in a separate, off-site location than that in which the original files are contained. Individuals and companies can also keep their backups in safe deposit boxes inside the vaults of banks. There is also a fourth option, which involves using one of the companies on the Internet that backs up files for both business and individuals.

## **SOLUTION FOUR**

- a) Many companies have sophisticated and widespread intranets, offering detailed data retrieval, collaboration tools, personalised customer profiles and links to the internet.

Businesses are installing and extending intranets throughout their organisations to

- i) Improve communications and collaboration among individuals and teams within the enterprise;
- ii) Publish and share valuable information easily, inexpensively, and effectively via enterprise information portals and intranet web sites and other intranet services;
- iii) Develop and deploy critical applications to support business operations;
- iv) Easy access to company-wide resources including databases and peripherals
- v) Collaboration with business partners;
- vi) To deploy applications to support decision making;
- vii) To enforce security on the company's systems against outsiders.

- b) Business benefits and management challenges

### **Business benefits**

- i) A continuing trend is the downsizing of larger computer systems by replacing them with client/server networks.
- ii) Having a central repository eases the task of putting security measures and controls.
- iii) Since application processes are shared, there is less duplication of work.
- iv) Client/server networks are seen as more economical and flexible than legacy systems in meeting end-user, workgroup, and business unit needs.
- v) Client/server networks are seen as more adaptable in adjusting to a diverse range of computing workloads.

### **Challenges**

- i) Balancing people's access requirements with overall security requirements, and then working with them to find ways of creating an effective solution without compromising security.
- ii) There is need for an administrator to ensure that the server is working correctly.

iii) It may be costly for management if the server fails to work.

### c) Benefits of Internet

- Sharing Information

You can share information with other people around the world.

- Collection of Information

A lot of information of different types is stored on the web servers on the Internet. It means that billions of websites contain different information in the form of text and pictures.

- News

You can get latest news of the world on the Internet. Most of the newspapers of the world are also available on the Internet.

- Searching Jobs

You can search different types of jobs all over the world, Most of the organizations/departments around the world, advertise their vacant vacancies on the Internet.

- Advertisement

Today, most of the commercial organizations advertise their product through Internet. It is very cheap and efficient way for the advertising of products.

- Communication

You can communicate with other through Internet around the world. You can talk by watching to one another;

- Entertainment

Internet also provides different type of entertainments to the people. You can play games with other people in any part of the world.

- Online Education

Internet provides the facility to get online education. Many websites of different universities provide lectures and tutorials on different subjects or topics.

- Online Results

Today, most of the universities and education boards provide results on the Internet. The students can watch their results from any part of country or world.

- Online Airlines and Railway Schedules

Many Airline companies and Pakistan Railway provide their schedules of flights and trains respectively on the Internet.

### **Drawbacks of Internet**

Although Internet has many advantages but it also has some disadvantages. The main disadvantages are:

- Viruses

Today, Internet is the most popular source of viruses. Most of the viruses move from one computer to another through e-mail or when information is downloaded on the Internet. These viruses create different problems in your computer. For example, they can affect the performance of your computer and damage valuable data and software stored in your computer.

- Security Problems

The valuable websites can be damaged by hackers and your valuable data may be deleted. Similarly, confidential data may be accessed by unauthorized persons.

- Filtration of Information

When a keyword is given to a search engine to search information of a specific topic, a large number of related links are displayed. In this case, it becomes difficult to filter out the required information.

- Accuracy of Information

A lot of information about a particular topic is stored on the websites. Some information may be incorrect or not authentic. So, it becomes difficult to select the correct information. Sometimes you may be confused.

- Wastage of times

Personnel may waste a lot of time chatting or playing games instead of been engaged in productive work. At home and offices, most of the people use Internet without any positive purpose.

**END OF SOLUTIONS**