

EXAMINATION NO. _____

THE PUBLIC ACCOUNTANTS EXAMINATION
COUNCIL OF MALAWI

2013 EXAMINATIONS

ACCOUNTING TECHNICIAN PROGRAMME

PAPER TC 4: INFORMATION SYSTEMS

WEDNESDAY 4 DECEMBER 2013

TIME ALLOWED: 3 HOURS
2.00 PM - 5.00 PM

INSTRUCTIONS

1. You are allowed **15 minutes** reading time **before the examination begins** during which you should read the question paper and, if you wish, make annotations on the question paper. However, you are **not** allowed, **under any circumstances**, to open the answer book and start writing or use your calculator during this reading time.
2. Number of questions on paper - 8.
3. **FIVE** questions **ONLY** to be answered.
4. Each question carries 20 marks.
5. Begin each answer on a fresh page.
6. **DO NOT OPEN THIS PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.**

This question paper contains 3 pages

This question paper must **not** be removed from the examination hall.

1. Computers have been used as tools to help managerial decision making for a number of years and the various tools/decision aids used can be grouped into the following **four** categories:

- transaction processing systems
- management information systems
- decision support systems
- expert systems

Required:

Define and distinguish between these categories, ensuring that each is considered from the following aspects:

- | | | |
|-----|---------------------------------------|----------------|
| (a) | Application served | 4 Marks |
| (b) | Database facilities | 4 Marks |
| (c) | Decision capabilities | 4 Marks |
| (d) | Type of information output. | 4 Marks |
| (e) | Level served within the organization. | 4 Marks |

(TOTAL: 20 MARKS)

2. Computers have evolved through generations from first to fourth generation. Each generation is characterized by a major technological development. These resulted in increasingly smaller, cheaper, more powerful, more efficient and reliable devices.

Required:

Describe the major changes that have taken place in each of the four generations.

**5 Marks each
(TOTAL: 20 MARKS)**

3. (a) Explain the terms “top down” and “bottom up” in respect of approaches to information system design. **10 Marks**
- (b) State the advantages of:
- | | | |
|------|----------------------|----------------|
| (i) | “top down” approach | 3 Marks |
| (ii) | “bottom up” approach | 2 Marks |
- (c) State the disadvantages of:
- | | | |
|------|----------------------|----------------|
| (i) | “top down” approach | 2 Marks |
| (ii) | “bottom up” approach | 3 Marks |

(TOTAL: 20 MARKS)

Continued/.....

4. (a) Define the term 'computer bureau'. **3 Marks**
- (b) State **seven** major functions of computer bureaus. **7 Marks**
- (c) List **ten** guidelines that you would follow in selecting a computer bureau that you would use. **10 Marks**
- (TOTAL: 20 MARKS)**

5. (a) A program logic flow chart is independent of the programming language that will be used during program development. Programming languages are categorized into two major groups i.e. low level and high level.

Required:

- (i) Define the term 'computer language'. **3 Marks**
- (ii) (1) Define the term 'low level computer language'. **3 Marks**
- (2) What is the 'low level computer language' mainly used for? **2 Marks**
- (iii) Give **one** example of a low level computer language. **1 Mark**
- (iv) (1) Define the term 'high level computer language'. **3 Marks**
- (2) What is high level computer language mainly used for? **2 Marks**
- (v) Give **one** example of high level computer language. **1 Mark**

- (b) High level computer language requires a compiler in order to achieve its goal.
- (i) What is a computer compiler? **3 Marks**
- (ii) Why is a compiler required in a business organization? **2 Marks**
- (TOTAL: 20 MARKS)**

6. All general purpose computers require some basic hardware devices to function.

Required:

- (a) Mention and explain **five** basic hardware components that computers require to function. **15 Marks**
- (b) Describe a computer firewall. **5 Marks**
- (TOTAL: 20 MARKS)**

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7. Security of data and equipment is one of the most important elements of a data processing department.

Required:

Describe security and control measures that you should put in place in the following areas and state why you would use that control measure:

(a) Physical control of computer hardware. **7 Marks**

(b) Internal security controls for data and information. **7 Marks**

(c) Control of consumable hardware. **6 Marks**

(TOTAL: 20 MARKS)

8. A project feasibility study presented to senior management must always contain a detailed economic justification for any proposed expenditure on computerization.

Required:

Describe the costs which are incurred from the introduction and operation of computerized information systems. The answer should cover:

(a) tangible costs **10 Marks**

(b) intangible costs **10 Marks**

(TOTAL: 20 MARKS)

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