

# KASNEB

## CICT PART I SECTION 2

### COMPUTER SUPPORT AND MAINTENANCE

WEDNESDAY: 24 May 2017.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

#### QUESTION ONE

- (a) Distinguish between a "Pentium" and a "Celeron" computer microprocessor. (4 marks)
- (b) Highlight three possible solutions to fix a slow running computer. (3 marks)
- (c) Summarise six components found on an advanced technology extended (ATX) motherboard. (6 marks)
- (d) Use a block diagram to illustrate the connection between the following computer components:
- Bridge.
  - Main memory.
  - Level 2 Cache.
  - System Bus.
  - I/O Busses.
  - Frontside Bus.
  - Backside Bus.

(7 marks)

(Total: 20 marks)

#### QUESTION TWO

- (a) Just similar to how certain events call for a computer memory upgrade, your computer's everyday performance will make any memory deficiencies apparent.

**Required:**

Summarise six easy-to-recognise signs that your computer might need a memory upgrade. (6 marks)

- (b) Troubleshooting a computer system will always be a process of trial and error. In some cases, one might need to use several different approaches before one could find a solution while other problems may be easy to fix.

**Required:**

Analyse four general steps of troubleshooting a computer. (8 marks)

- (c) Distinguish between the following:

(i) Transistors and capacitors. (2 marks)

(ii) South bridge and north bridge. (2 marks)

(iii) Main memory and auxiliary memory. (2 marks)

(Total: 20 marks)

#### QUESTION THREE

- (a) Outline three advantages of each of the following types of computer monitor technologies:

(i) Cathode ray tubes. (3 marks)

(ii) Liquid crystal display (LCD) monitors. (3 marks)

- (b) (i) Define the term "computer maintenance". (2 marks)

(ii) Highlight four reasons why preventive computer maintenance is important. (4 marks)

- (c) Identify eight common computer keyboard faults. (8 marks)

(Total: 20 marks)

**QUESTION FOUR**

- (a) Summarise six criteria that could be used for selecting a computer application package. (6 marks)
- (b) Sketch and label the four parts of a computer hard disk platter. (4 marks)
- (c) Tom Njogu, a technician in a college noticed that on powering a computer, the monitor displays a hard drive failure error message.

**Required:**

Outline the steps in troubleshooting the problem. (4 marks)

- (d) Teddy Oweri suspects that the processor of his computer is failing.

**Required:**

Suggest in six steps the procedure you would follow in replacing a faulty processor. (6 marks)

**(Total: 20 marks)**

**QUESTION FIVE**

- (a) Describe the following types of computer viruses:

- (i) Direct action viruses. (2 marks)
- (ii) Overwrite viruses. (2 marks)
- (iii) Resident viruses. (2 marks)

- (b) Citing an example in each case, explain two benefits of:

- (i) Professional computer hardware installation. (4 marks)
- (ii) Professional computer software installation. (4 marks)

- (c) As a recently promoted computer service manager, you have been tasked with selecting an outsourcing company to be responsible for all computer operations, including routine maintenance and enhancement of existing systems. Senior management has invited three outsourcing companies to tender for this business.

**Required:**

Highlight six points that could be used to evaluate and select the outsourcing vendor. (6 marks)

**(Total: 20 marks)**

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