



*(Knowledge for Development)*

**KIBABII UNIVERSITY  
(KIBU)**

**UNIVERSITY EXAMINATIONS  
2017/2018 ACADEMIC YEAR**

**END OF SEMESTER EXAMINATIONS  
YEAR ONE SEMESTER ONE EXAMINATIONS**

**FOR DIPLOMA  
(INFORMATION TECHNOLOGY)**

**COURSE CODE : DIT 057**

**COURSE TITLE : COMPUTER SYSTEMS  
MAINTENANCE**

**DATE: 17/01/2018**

**TIME: 2.00 PM – 4.00 PM**

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**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTIONS ONE AND ANY OTHER TWO.**

**QUESTION ONE (COMPULSARY) [24 MARKS]**

- a. Explain the following terms as used in computer support. **[4 Marks]**
- i. Technical support
  - ii. Peer support
  - iii. User support center
  - iv. Help desk
- b. Distinguish the following terms as used in computer power supply. **[4 Marks]**
- i. Direct current and Alternating current
  - ii. Rectifier and transformer
- c. Define BIOS and explain three purposes served by the motherboard BIOS. **[4 Marks]**
- d. Discuss four features that affect processor performance and motherboards. **[4 Marks]**
- e. Explain the following terms as used in computer security. **[4 Marks]**
- i. Integrity
  - ii. Computer backup
  - iii. Virus protection
  - iv. Firewall
- f. Explain four problems that can be solved through memory upgrade. **[4 Marks]**

**QUESTION TWO [18 MARKS]**

- a. Without hardware, you cannot claim you have a computer system because it is only the computer hardware that sums up the tangible parts of the computer. Identify and explain any **FOUR** basic hardware components you must have in a computer system. **[4 Marks]**
- b. It is always recommended for computer users to update the computer system software as a way of routine maintenance. Discuss **FOUR** methods that you as a computer user would use to update software in your computer. **[4 marks]**
- c. Using tools properly helps prevent accidents and damage to equipment and people. Discuss **five** tools used in computer repair and maintenance. **[10 Marks]**

**QUESTION THREE [18 MARKS]**

- a. Discuss the role each of the following components play in a computer system. **[3 Marks]**
- i. Capacitor
  - ii. Diode
  - iii. Resistor
- b. Explain the **two** main tasks of a power supply other than supplying power to the rest of the components in the computer. **[2 Marks]**
- c. Erratic power supply or voltage fluctuation might damage the components of the computer. There are two categories of erratic power supply. Required:

- i. Discuss the major causes of power disturbances [6 Marks]
- ii. Explain the major causes of power disturbances. [3 Marks]
- iii. Explain the solutions to power disturbances. [4 Marks]

**QUESTION FOUR [18 MARKS]**

- a. Differentiate between BIOS and CMOS [2 marks]
  
- b. POST is an internal self-diagnostic routine that checks and sends out standardized commands to check every primary device. Explain the **TWO** stages that POST check occurs. [4 marks]
  
- c. It is always recommended for computer users to update the computer system software as a way of routine maintenance. Discuss **FOUR** methods that you as a computer user would use to update software in your computer. [8 marks]
  
- d. Differentiate between proprietary and open source software giving at least **TWO** advantages of each [4 marks]

**QUESTION FIVE [18 MARKS]**

- a. Explain the **THREE** types of computer cases/chassis. [3 Marks]
  
- b. Processor modes refer to the various ways that the processor creates an operating environment for itself. Discuss **three** processor modes. [6 Marks]
  
- c. Giving characteristics, identify and discuss **three** categories of microprocessors. [9 Marks]