TERM TWO EXAMINATIONS

COMPUTER STUDIES

FORM ONE

MARKING SCHEME

1. Identify the input devices shown below

Name: Microphone	Name: Digitizer/Graphical tablet	Name: Fingerprint Scanner
Name: Optical Barcode Reader	**Name: Joystick**	**Name: Trackball**

Award 1 mark each max 6

2. Explain four types of Read-only Memory
   - *Mask Read Only Memory (MROM)-Data and instructions are written at the time of manufacture and cannot be changed afterward.*
   - *Programmable Read Only Memory (PROM)-Data can be written once by the user after which it cannot be changed again.*
   - *Erasable Programmable Read Only Memory (EPROM) – It is a ROM that can be erased and be programmed again when exposed to ultraviolet light.*
   - *Electrical erasable programmable read-only memory (EPROM)-this is a type of ROM that can be erased and reprogrammed electrically.*

Award 1 mark each max 4

3. List four logical operations carried out by the Arithmetic Logic unit

1

- *Sorting*
- *Comparing*
- *Matching*
- *Merging*

Award 1 mark each max 4

4. State five application areas of digital cameras.

- *Web design*
- *Photojournalism*
- *Domestic photography*
- *E-commerce*
- *Security*
- *Criminal investigation*

Award 1 mark each max 5

5. Name five types of keyboards
- *Ergonomic keyboard*
- *Flexible Keyboard*
- *Standard keyboard*
- *Braille keyboard*
- *On-screen keyboard*
- *Wireless Keyboard*

Award 1 mark each max 5

6. Give five factors to consider when choosing an input device
- *Cost*
- *Suitability/Appropriateness*
- *Reliability*
- *Accuracy*
- *Volume of input*
- *Mode of operation*

Award 1 mark each max 5

7. State five differences between Static RAM and Dynamic RAM

S RAM	D RAM
Expensive	*Cheap*
Faster	*Slower*
Created using transistors	*Created using transistors and capacitors*
Consume less power	*Consume a lot of power*
Content remains intact with constant power supply	*Content is lost even with constant power supply*
Small	*Larger*

Award 1 mark each max 5

8. State five challenges experienced by Computers users who rely on Cathode Ray tube Monitors for display
- *Heavy and bulky*

- *Consume a lot of power*
- *Suffer from the screen in burn*
- *Generate a lot of heat*
- *Have low screen resolution*

Award 1 mark each max 5

9. Briefly describe five reasons which make microcomputers suitable for personal computing work
- *Portability-ease to carry from one place to another*
- *Small in size, therefore, occupies less space*
- *Consume less power*
- *Least expensive therefore many people can afford*
- *Handled varied tasks when installed with the right software*

Award 1 mark each max 5

10. Explain how computers are used in the following areas
  (i) Universities
- *CCTV cameras installed at strategic points within the university provide maximum security*
- *Used for scheduling and time management using timetabling software*
- *Used to conduct research on the internet*
- *Keeping records and analyzing academic data using computer programs*
- *Monitor class attendance by learners through checking in and checking out from class through biometric systems*
- *Use computer simulations for dangerous experiments*
- *Communication takes place using different platforms like WhatsApp, sms, email, and Telegram*

Award 1 mark each max 5

  (ii) Health facilities like Hospitals
- *Computer-based programs are used to control and manage life support systems (ICU)*
- *Computers can be used to carry out research through the internet*
- *Computer-based programs are used to allocate wards to patients*
- *Computers are also in hospitals to support telemedicine*
- *Computer programs are used to support devices like MRI machines which are used to give very accurate results*

Award 1 mark each max 5

11. Name five things that are likely to cause eye strain the computer room
- *Prolonged use*
- *Use of flickering screens*
- *Very dull screens*
- *Reflective walls*
- *Very bright screens*
- *Poor sitting posture*

Award 1 mark each max 4

12. State four differences between primary memory and secondary memory (**4marks**)

Primary	Secondary
Direct access by the processor	*Cannot be accessed directly by the processor*
Volatile	*Non-volatile*
Low storage capacity	*High storage capacity*
Expensive	*Cheap*

Award 1 mark each max 4

13. Explain the following terms as used in computing
    (a) POST
    - *Power On Self-Test (POST) is a process that the computer undergoes to check whether the resources attached to it are ready and available for use*
    (b) BIOS
    - *Basic Input Output System (BIOS) is a special firmware mounted on the motherboard as a chip its main role is to supervise and coordinate POST*
    (c) Firmware
    - *Is a combination of both hardware and software also referred to as silicon chips that contain program instructions known as stored logic that cannot be easily modified*

Award 2marks each max 6

14. List five features of the fifth-generation computers
    - *Produce negligible heat*
    - *Consume less power*
    - *Very small in size*
    - *Designed using very large-scale integration*
    - *Mimic human experts*
    - *Massive storage*
    - *Handle processing very fast*
    - *Support natural language processing*

Award 1 mark each max 5

15.
    (i) Name three examples of softcopy output devices
    - *Speaker*
    - *Monitor*
    - *LED*
    - *Projector*

Award 1 mark each max 3

    (ii) Kameno Construction Company intends to buy output devices they can use to produce road plans, maps and invoices. State two output devices you would advise the company to buy
    - *Printing Road plans and Maps- Plotter*
    - *Printing Receipts and Invoice – Impact printers*

Award 1mark each max 2

    (iii) Give a reason for each choice in (ii) above
    - *Plotter is suitable for printing large format hardcopy like maps, Architectural plans etc.*
    - *Impact printers support printing of multiple copies like original , duplicate and triplicate copy*

Award 1mark each max 2

16. Kimani bought a flash drive of 8GB to store his personal files. He used half of it to save audio files, a quarter to save video clips, and half of the remainder to keep application programs
    (i) Work out the space used to store application programs in Megabytes **(3marks)**
    Audio file = ½
    Video = ¼
    Application = 1/8
    *Used space ½ +1/4 +1/8 =7/8 *8*1024*
                    7168
    (ii) Calculate the free space in flash **(3marks)**
    *1 -7/8 = 1/8 * 1024*8*
                =1024

4

17. On a computer, there are various ports that have various symbols which indicate where the various peripheral devices are connected. Identify the following symbols.
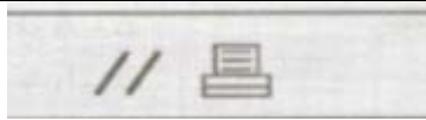
Parallel port	USB port
// 🖶	
SCSI	**Bluetooth**
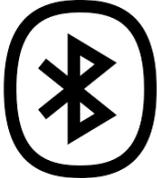
Award 1 mark each max 4

18. Karema and Justine wanted to acquire computers for their personal use. Karema bought a laptop at 70,000/= while Justine acquired a Desktop at 25,000. Suggest four factors that are likely to make Karema's computer to be more expensive
   - *Processor speed and manufacturer*
   - *Storage capacity (ROM, RAM, and Hard Disk)*
   - *Portability*
   - *Monitor resolution*

Award 1mark each max 4

19. State the standard units for measuring the Monitor size, Speed of the computer and Hard disk capacity

   - *Monitor size- Inches*
   - *Processor Speed – Hertz*
   - *Hard Disk- Byte*

Award 1mark each max 3

20. Mention three items that when are installed in a computer enable it to support multimedia functions
   - *Sound card*
   - *Multimedia software*
   - *Camera*
   - *DVD drive*
   - *Speaker*
   - *XVGA Monitor*

Award 1mark each max 3