KENYA CERTIFICATE OF BASIC EDUCATION (K.C.B.E)

MARKING SCHEME

GRADE 10: I.C.T – TERM 1 – JANUARY 2026

SECTION A: (40 Marks)

1. ICT Terms Definitions

i. Information (1 mark)

- ✓ Processed data that is meaningful and useful for decision-making.
- ✓ Example: A student's grades after being calculated from raw scores.

ii. Process (1 mark)

- ✓ A series of steps or actions performed on data to produce meaningful information.
- ✓ Example: Summing up students' marks to calculate average.

iii. Communication (1 mark)

- ✓ The act of transferring information from one person or device to another.
- ✓ Example: Sending an email or SMS to convey a message.

iv. Technology (1 mark)

- ✓ Application of scientific knowledge for practical purposes, especially in industry and communication.
- ✓ Example: Computers, internet, mobile phones.

2. Application Areas of ICT

Application	Where Used
Keeping patients' medical records	Hospital
Scanning barcodes on goods	Supermarket
Recording students' exam marks	School
Producing sales receipts	Shops / Retail stores

3. ICT Infrastructure Components

i. Computers (Desktops, laptops, servers)
ii. Networking devices (Routers, switches, modems)
iii. Software (Operating systems, application software)
iv. Storage devices (Hard disks, cloud storage, flash drives)
v. Power supply and backup systems (UPS, generators)

4. Operating System Types

a. iPhone: iOS
b. Samsung phone: Android

c. Apple laptop: macOS
d. Most desktop computers in school: Windows OS

5. Steps to Change Desktop Background (Windows)

i. Right-click on the desktop
ii. Select "Personalize" from the menu
iii. Click on "Background" and choose an image or color
iv. Click "Apply" or "Save changes"

6. Uses of ICT in Accounts Office

i. Preparing financial statements and reports
ii. Storing and analyzing financial data efficiently
iii. Budgeting and forecasting
iv. Managing payroll

Device Identification

- ✓ X: Printer
- ✓ Y: Projector

7. Modern Communication Technologies

i. Mobile phones (SMS, calls)
ii. Email
iii. Social media platforms
iv. Video conferencing tools (Zoom, Teams)

Computer Parts Identification

- ✓ G: Monitor
- ✓ H: Keyboard

8. Computer Precautions

i. Avoid eating or drinking near the computer
ii. Keep the system clean and dust-free
iii. Use antivirus software
iv. Properly shut down the computer

Write in full
i. O.S: Operating System
ii. I.C.T: Information and Communication Technology

SECTION B: (60 Marks)

9. ICT in Hospitals

a) Ways ICT improves patient care
i. Maintaining electronic medical records for accurate patient history
ii. Scheduling appointments and managing patient flow
iii. Enabling telemedicine and online consultations
iv. Monitoring patients using health information systems

b) Risks of ICT in hospitals
i. Cybersecurity threats (data hacking)
ii. System failures leading to data loss or delayed care

c) Output devices
i. Printer
ii. Monitor
iii. Projector
iv. Speakers

d) Importance of backing up data
i. Prevents data loss in case of system failure
ii. Ensures continuity of patient care and hospital operations
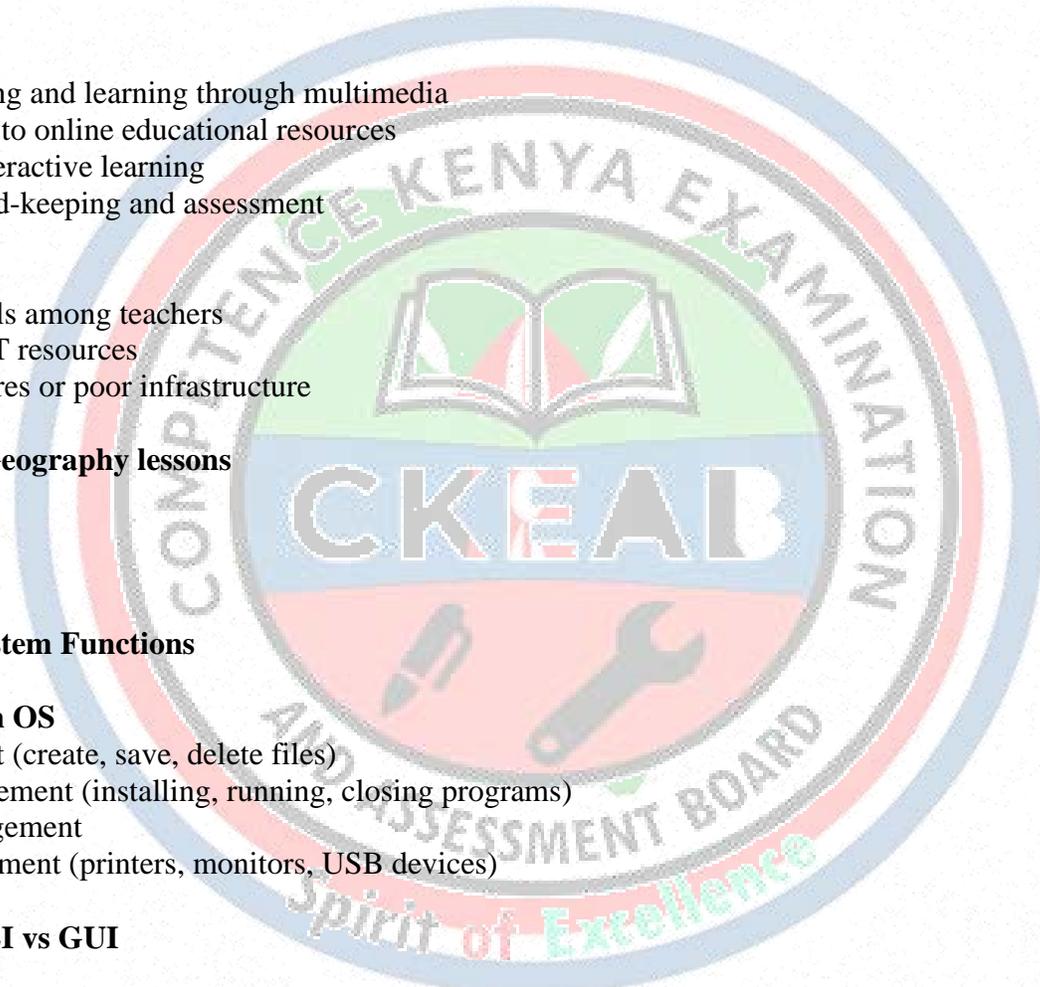
10. ICT in Teaching

a) Benefits
i. Enhances teaching and learning through multimedia
ii. Provides access to online educational resources
iii. Encourages interactive learning
iv. Improves record-keeping and assessment

b) Challenges
i. Lack of ICT skills among teachers
ii. High cost of ICT resources
iii. Technical failures or poor infrastructure

c) ICT tools for Geography lessons
i. GIS software
ii. Projectors
iii. Digital maps

11. Operating System Functions

a) Functions of an OS
i. File management (create, save, delete files)
ii. Program management (installing, running, closing programs)
iii. Memory management
iv. Device management (printers, monitors, USB devices)

b) Differences CLI vs GUI

Command Line Interface (CLI)	Graphical User Interface (GUI)
User types commands to operate the system	User interacts using graphical icons
Requires memorization of commands	Easy to use and visually intuitive
Faster for advanced users	Slower but beginner-friendly

12. ICT in Retail Shops

a) Uses
i. Stock management
ii. Billing and invoicing

iii. Customer database management

iv. Marketing and promotions

b) Steps to create a folder (Windows)

i. Right-click on desktop or directory

ii. Select "New" → "Folder"

iii. Name the folder

iv. Press Enter

c) Advantages of ICT in stock management

i. Reduces errors in inventory

ii. Provides real-time stock updates

iii. Saves time in record-keeping

iv. Helps in analyzing sales trends

13. Applications of ICT in Offices

a) Applications

i. Word processing

ii. Spreadsheet management

iii. Database management

iv. Email communication

b) ICT in transportation

i. GPS and navigation systems

ii. Online ticket booking

iii. Vehicle tracking and fleet management

c) Advantages of ICT in communication

i. Fast and reliable communication

ii. Cost-effective compared to traditional methods

iii. Enables remote collaboration

14. ICT Infrastructure

a) Meaning

✓ The combination of hardware, software, networks, and facilities needed to implement ICT in an organization.

b) Components

i. Hardware (computers, servers)

ii. Software (OS, applications)

iii. Networks (LAN, internet connectivity)

iv. Storage devices (cloud, HDD)

c) Factors when choosing ICT infrastructure

i. Cost and budget

ii. Scalability

iii. Security and reliability

iv. Compatibility with existing systems

15. Key ICT Concepts

a) Procedure for switching off a computer
i. Close all running applications
ii. Click "Start" → "Shut down"
iii. Wait for the system to power off completely

b) Uses of ICT in schools
i. Managing student records
ii. Enhancing learning through educational software

c) Differences IT vs ICT

IT	ICT
Focuses on computers and software	Focuses on computers + communication technologies
Mainly technical systems	Includes networking and media for information transfer
Example: programming	Example: email, video conferencing

d) Importance of ICT in organizations
i. Improves efficiency and productivity
ii. Facilitates communication and collaboration
iii. Supports data management and decision-making

16. Operating Systems Advantages & Selection Factors

a) Windows OS
i. User-friendly interface
ii. Compatible with many software applications

b) Linux OS
i. Free and open-source
ii. High security and stability

c) macOS
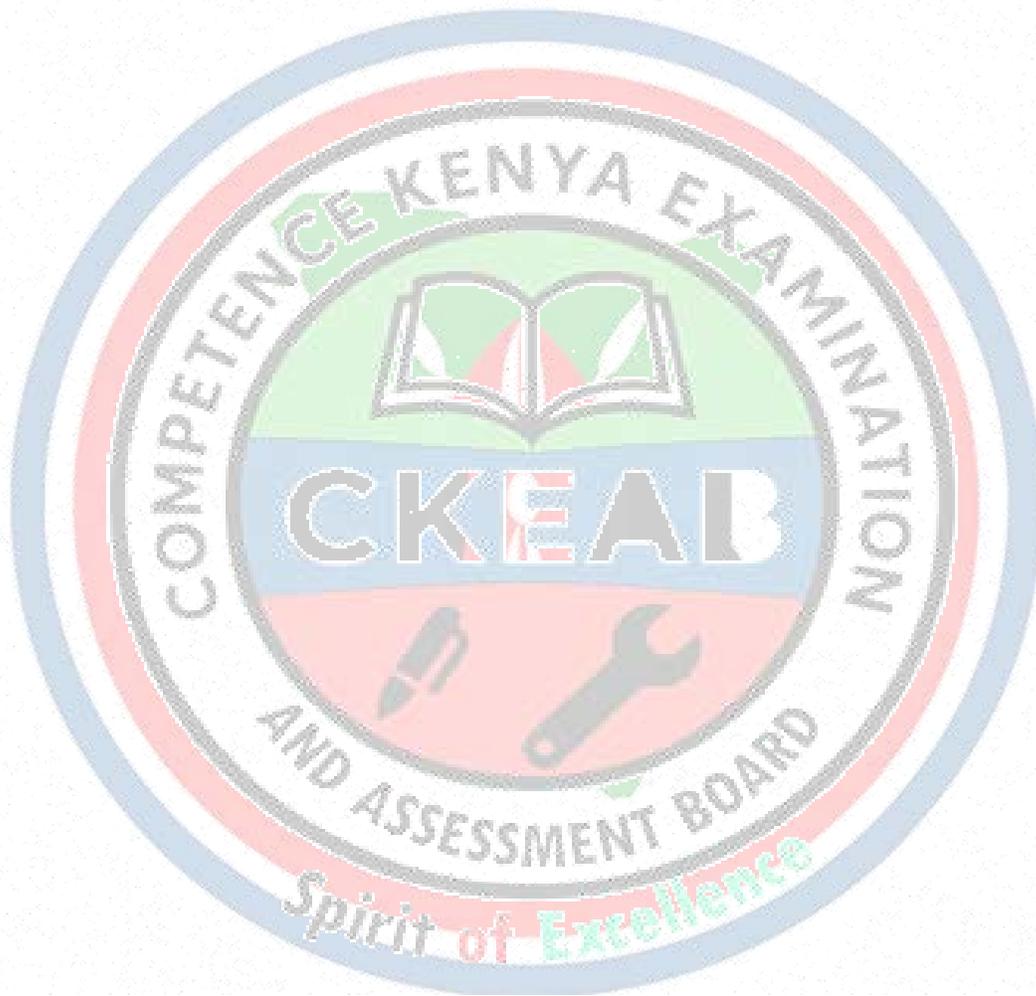i. Stable and reliable
ii. High-quality graphics and multimedia support

d) Factors for selecting OS
i. Cost of software
ii. Security features
iii. Compatibility with hardware and applications
iv. User skill level and support availability

NOTE TO FACILITATORS (TEACHERS):

The marking scheme provided is not exhaustive. Facilitators are advised to use their professional judgment when awarding marks. Any correct, relevant, and scientifically or contextually acceptable answer that demonstrates understanding of the concepts should be credited. Where examples are required, learners may provide other valid examples apart from those listed in the scheme.

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