

SECTION A: [30 MARKS]

1. (a) **Identification:** A – Computer/Workstation; B – Switch/Hub; C – Server. (3 mks)

(b) **Distinction: Technology** is the application of scientific knowledge for practical purposes, while **ICT** specifically refers to the integration of telecommunications, computers, and software to handle and communicate information. (2 mks)

(c) **True/False:** True. (1 mk)

(d) **Mention:** Improved access to government services (e-Citizen), mobile banking (M-Pesa) for financial inclusion, and distance learning opportunities. (2 mks)

2. (a) **Interface:** Graphical User Interface (GUI). (1 mk)

(b) **Steps:**

Right-click on the desktop/folder area and select "New Folder," then type "History Project."

Click and drag the "History Project" folder over the "Grade 10" directory.

Release the mouse button to drop/move it. (3 mks)

(c) **Selection:** Android. (1 mk)

(d) **Definition/Importance:** An OS is a software that manages computer hardware and software resources. It is important because it acts as an interface between the user and the computer hardware. (2 mks)

3. (a) **Icons:** X – Bold; Y – Italic. (2 mks)

(b) **Matching:** I — B (Spell Checker); II — A (Mail Merge); III — C (Page Setup). (3 mks)

(c) **Description:** Apply "Styles" (Heading 1, 2, etc.) to the titles in the document, go to the "References" tab, and select "Table of Contents." (2 mks)

4. (a) **Concept:** Digital Footprint. (1 mk)

(b) **Behaviors:** Avoid using "ALL CAPS" (shouting), respect people's privacy, use polite language, and cite sources to avoid plagiarism. (Any 3 - 3 mks)

(c) **Importance:** To protect personal data from unauthorized access, identity theft, and to control who sees your online content. (2 mks)



(d) **Ergonomics:** Use an adjustable chair with back support, keep the monitor at eye level, and take "20-20-20" breaks (every 20 mins, look 20 feet away for 20 seconds). (2 mks)

SECTION B: [50 MARKS]

5. (a) **Area:** E-commerce / Point of Sale (POS). (1 mk)

(b) **Device:** Barcode Reader/Scanner. It works by emitting a laser beam that detects the reflection of black and white bars, converting the pattern into digital data for the computer to identify the item. (3 mks)

(c) **Description:** Automating student records (Bio-data), managing school finances/fees via accounting software, and facilitating communication with parents through bulk SMS/Email. (4 mks)

(d) **Comparison:** Tele-medicine allows doctors to treat patients remotely (vital for rural areas like Turkana), while E-learning provides educational content over the internet (vital for continuous learning during school breaks). Both reduce the cost of travel. (4 mks)

6. (a) **Tool:** Desktop Publishing (DTP) Software (e.g., MS Publisher). (1 mk)

(b) **Distinguish:** A Word Processor is designed primarily for text creation and editing, whereas a DTP tool is optimized for page layout, graphic design, and professional printing. (3 mks)

(c) **Services:** Search Engines (Google), Stock Photo sites, Cloud Storage (Google Drive), and Email (to receive photos). (4 mks)

(d) **Description:**

Transitions: Go to the Transitions tab, select a slide, and choose an effect for how the slide appears.

Animations: Select a specific object (text/image), go to the Animations tab, and choose an entry/exit effect. (5 mks)

7. (a) **Terms:** Amina – Internet; Brian – ISP (Internet Service Provider); Chalo – URL (Uniform Resource Locator); Desta – Web Browser. (4 mks)

(b) **Hardware:** Router, Modem, and Network Cable (Ethernet). (3 mks)

(c) **Role:** It uses web crawlers to index websites, allowing users to type keywords and receive a list of relevant links/webpages. (2 mks)

(d) **Impacts:** Easy information sharing, job creation (online work), and efficient government service delivery. (3 mks)



8. (a) **Platform:** Cloud-based Collaboration (Teams). (1 mk)

- (b) **Tools:** Zoom, Google Meet, Microsoft Teams. (Any 2 - 2 mks)
- (c) **Impact of AI:** It improves speed through predictive text, provides 24/7 customer support via Chatbots, and allows real-time translation for global communication. (4 mks)
- (d) **Explanation:** A learner can post a question, receive feedback from peers in different locations, and share links or files for group review in real-time. (3 mks)
- (e) **Conservation:** Recycling old electronics (E-waste), turning off devices when not in use to save energy, and using digital storage instead of printing (paperless office). (3 mks)

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