

**THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATION COUNCIL
GRADE A TEACHERS' CERTIFICATE EXAMINATION**

635

INFORMATION AND COMMUNICATION TECHNOLOGY

Time: 3 Hour.

ANSWERS

Year: 2024

Instructions

1. This paper has Section A and Section B with a total of fourteen (14) questions.
2. Answer all questions from Section A and four (4) questions from Section B.
3. Section A carries forty (40) marks and Section B carries sixty (60) marks.
4. Mobile phones are not allowed inside the examination room.
5. Write your Examination Number on every page of your answer booklet.

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SECTION A (40 Marks)

Answer all questions from this section,.

1. Enumerate four disadvantages of electronic communication at schools.

One disadvantage is the risk of **distractions**. Electronic communication tools like social media or messaging apps can divert students' and teachers' attention from learning.

Second, there is a concern about **cybersecurity threats**. Schools may face risks such as hacking, data breaches, or exposure to inappropriate content.

Third, electronic communication can lead to **miscommunication** because messages may be misunderstood without tone or body language.

Fourth, there is the issue of **inequality of access**. Not all students or teachers may have reliable devices or internet connectivity, creating a digital divide.

2. Explain four reasons for installing an operating system in a new computer.

First, an operating system manages the **hardware resources** like the processor, memory, and storage, allowing them to work efficiently.

Second, it provides a **user interface** that makes it easier for users to interact with the computer.

Third, the operating system manages **file storage and retrieval**, organizing data so that programs and users can access it.

Fourth, it enables the running of **application software** by providing necessary services and managing resources between programs.

3. Describe four points to support the argument that “word processing is important for teachers to enhance the teaching and learning process”.

Word processing allows teachers to **create and edit documents easily**, saving time in preparing lesson plans and assignments.

It provides tools for **formatting and organizing content**, which helps in producing clear and professional materials.

Teachers can use word processing to **include images, charts, and tables**, making learning resources more engaging.

It enables **quick corrections and updates**, allowing teachers to adapt materials based on student feedback or new information.

4. Explain two advantages and two disadvantages of using fiber optic cabling for the school's Local Area Network.

One advantage is that fiber optic cables offer **high-speed data transmission**, supporting faster communication across the network.

Another advantage is their **immunity to electromagnetic interference**, which means less signal degradation compared to copper cables.

A disadvantage is the **high initial installation cost**, as fiber optic cables and related equipment are more expensive.

Another disadvantage is that fiber optic cables are **fragile and require careful handling**, making repairs and maintenance more challenging.

5. Explain two methods used for collecting both primary and secondary information.

One method for collecting primary information is through **surveys or questionnaires**, where data is gathered directly from respondents.

Another primary method is **interviews**, which allow detailed and specific information to be collected.

For secondary information, one method is using **published books and journals**, which provide verified and organized knowledge.

Another secondary method is reviewing **online databases or reports** that compile data collected by other researchers or organizations.

6. Describe four signs of a computer infected by virus.

One sign is the computer running **slowly or freezing frequently**, indicating that malicious software might be using resources.

Another sign is the unexpected appearance of **pop-up ads or messages**, which can be caused by adware viruses.

Files or programs may **disappear or become corrupted**, showing that the virus is damaging data.

The computer may **crash or restart unexpectedly**, a sign of system instability caused by a virus.

7. Explain using four points why a spreadsheet would be more preferable for preparing students' performance reports.

Spreadsheets allow for **automatic calculations**, which reduce errors in totals or averages of students' scores.

They provide **easy data organization** with rows and columns, making it simple to enter and view student information.

Spreadsheets offer **graphical tools** to create charts and graphs, which visually represent performance trends.

They enable **quick updates and modifications**, so teachers can easily change data without rewriting entire reports.

8. Use four points to evaluate advantages of using wireless technology in communication process.

Wireless technology provides **mobility**, allowing users to communicate without being tied to cables or specific locations.

It offers **easy installation and expansion** since adding new devices doesn't require physical wiring.

Wireless communication supports **real-time data sharing**, which speeds up collaboration and decision-making.

It can reduce **infrastructure costs** by eliminating the need for extensive cabling and maintenance.

9. Analyse four disadvantages of using oral communication to provide instructions at school.

Oral communication can lead to **misunderstandings** if instructions are not clear or are forgotten.

It does not provide a **permanent record**, so it is difficult to verify or refer back to instructions later.

Some students might **mishear or miss important information** due to noise or distractions.

Oral instructions rely heavily on the **speaker's communication skills**, so poor delivery can reduce effectiveness.

10. Explain four possible causes of the printer to fail to print a report written in Microsoft Word program.

One cause could be that the printer is **not connected properly** to the computer or network.

Another cause might be that the printer is **out of paper or ink**, preventing printing.

The printer driver may be **outdated or corrupted**, causing communication issues between the computer and printer.

Finally, there might be a **software error or conflict**, such as Word crashing or the document being corrupted.

SECTION B (60 Marks)

Answer all questions from this section.

11. Validate the way innovation of ICT has revolutionized development and people in the society.

Innovation in ICT has transformed communication by making it faster and more accessible, allowing people to connect instantly across the globe. This has enhanced social interactions, business collaborations, and access to information.

ICT has improved education through e-learning platforms and digital resources, making knowledge more widely available and flexible for learners of all ages.

In the healthcare sector, ICT innovations like telemedicine and electronic health records have improved service delivery, diagnostics, and patient management, leading to better health outcomes.

Economic development has been boosted as ICT enables new industries, e-commerce, and automation, increasing productivity and creating job opportunities.

Overall, ICT has empowered individuals and communities by improving access to services, information, and opportunities, contributing significantly to social and economic development.

12. Explain five measures to be taken to prevent hackers from accessing reports stored in drive C.

First, use **strong passwords** for user accounts to prevent unauthorized access to the computer and its files.

Second, install and regularly update **antivirus and anti-malware software** to detect and block malicious activities.

Third, enable **firewalls** to monitor and control incoming and outgoing network traffic, providing a barrier against unauthorized access.

Fourth, regularly **update the operating system and software** to patch security vulnerabilities that hackers could exploit.

Fifth, restrict access by using **user permissions and encryption** on sensitive folders or files to ensure only authorized users can view or modify reports.

13. Explain five points to justify the drawbacks of using e-mails as means of communications.

One drawback is that emails can be **ignored or lost** among large volumes of messages, reducing their effectiveness.

Second, emails may cause **miscommunication** since tone and context can be misunderstood without face-to-face interaction.

Third, emails are vulnerable to **spam and phishing attacks**, posing security risks to users and organizations.

Fourth, sending large attachments can **slow down the network** and cause delivery issues.

Fifth, emails require **internet access**, which may limit communication in areas with poor connectivity.

14. Describe five points to justify the statement that “Information is very important to the development of the community”.

Information enables community members to make **informed decisions** about health, education, and economic activities, leading to better outcomes.

It promotes **awareness** about rights, responsibilities, and available services, empowering individuals to participate actively in development.

Access to information supports **innovation and problem-solving** by providing knowledge needed to address local challenges.

Information facilitates **coordination and planning** among community leaders and organizations, improving resource management.

Finally, it encourages **transparency and accountability**, helping to reduce corruption and ensure fair distribution of resources in the community.