

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

635

INFORMATION AND COMMUNICATION TECHNOLOGY

Time: 3 Hours.

ANSWER

Year: 2017

Instructions

1. This paper consists of sections **A**, **B** and **C**.
2. Answer **all** questions in sections A and **two (2)** questions from each sections B and C.
3. Mobile phones and unauthorized materials are **not allowed** in the examination room.
4. Write your **Examination Number** on every page of your answer **booklet(s)**.

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1. Explain four challenges teachers face when integrating ICT in overcrowded classrooms.

One challenge is limited access to ICT tools. In overcrowded classrooms, the number of students often exceeds the available computers, projectors, or tablets, which makes it difficult for all learners to engage equally.

Another challenge is classroom management. Teachers may struggle to monitor every student's activity on digital devices, leading to distractions such as students using ICT tools for games or unrelated websites.

A third challenge is insufficient technical support. When many students use ICT at once, technical issues such as network breakdowns or system crashes become frequent, and without proper support teachers lose valuable teaching time.

Finally, teachers face the challenge of time management. Integrating ICT into lessons in a large class requires more time for setting up, ensuring every student participates, and addressing problems, which disrupts lesson flow.

2. State four disadvantages of relying only on oral communication in schools.

One disadvantage is that oral communication may be forgotten easily. Students who do not take notes might fail to recall details later.

Another disadvantage is lack of accuracy. Oral messages can be misunderstood, leading to misinterpretation of instructions or concepts.

A third disadvantage is that oral communication provides no permanent record. Without written or digital records, schools cannot refer back to instructions for accountability.

Finally, oral communication limits inclusivity. Students with hearing impairments or language barriers may be excluded or disadvantaged.

3. Describe four ways in which spreadsheet software can help school administrators manage student records.

Spreadsheets can be used for storing student data such as names, subjects, and grades in an organized format that is easy to retrieve and update.

They can also perform automatic calculations. For example, averages, totals, and rankings can be generated without manual effort, reducing errors.

Spreadsheets assist in data analysis by creating charts and graphs that show student performance trends over time.

Additionally, spreadsheets allow quick searching and filtering of records, making it easier for administrators to find specific information such as attendance or fee balances.

4. Outline four reasons why information is considered a key resource in the learning process.

Information provides the foundation for knowledge. Students rely on accurate information to understand new concepts.

It supports decision-making in learning. For instance, a student with enough information can choose better study methods or resources.

Information enhances critical thinking because learners can compare multiple sources, analyze content, and form their own opinions.

Lastly, information enables innovation and creativity. Students exposed to wide and reliable information can develop new solutions to problems.

5. Mention four socio-economic benefits of introducing ICT clubs in secondary schools.

ICT clubs create opportunities for students to develop skills that can increase their employability in technology-driven industries.

They encourage entrepreneurship among youth by exposing them to digital tools for online businesses, programming, or digital marketing.

ICT clubs also reduce the digital divide, especially in rural schools, by giving students exposure to computers and the internet.

Finally, they promote teamwork and collaboration, skills that are highly valued in both academic and professional environments.

6. Identify four possible dangers of students frequently downloading files from the internet.

One danger is exposure to malware and viruses, which can damage devices or compromise school networks.

Another danger is the risk of cyber fraud, where students may unknowingly download harmful software that steals personal information.

A third danger is accessing inappropriate content disguised as harmless files, which may negatively influence behavior.

Frequent downloading also consumes excessive internet bandwidth, slowing down school networks and increasing costs.

7. Describe four factors that can reduce the efficiency of ICT labs in rural schools.

Poor electricity supply is one factor, since frequent blackouts make ICT labs unreliable.

Another factor is outdated or insufficient equipment. Many rural schools operate with few or old computers that cannot run modern applications.

Lack of skilled technicians is also a challenge, as faulty machines often remain unrepaired for long periods.

Finally, limited internet connectivity reduces access to online learning resources, making ICT labs underutilized.

8. Explain four reasons why ICT is necessary in modern examination systems.

ICT enables faster marking of exams through automated systems, reducing delays in releasing results.

It minimizes errors in grading since computerized systems are more consistent than manual marking.

ICT also ensures secure storage of exam data, protecting against loss or tampering.

Additionally, it allows for flexible assessment methods, including online quizzes and interactive tests that measure higher-order skills.

9. State four cultural challenges that may slow the adoption of ICT in Tanzanian schools.

Some communities resist ICT because of the belief that computers or the internet promote immoral behavior.

Gender stereotypes can also hinder adoption, with some cultures discouraging girls from using ICT tools.

Language barriers present another challenge, as most ICT content is in English while many learners are more fluent in Kiswahili or local languages.

Traditional teaching attitudes may also resist ICT integration, with some elders or teachers preferring face-to-face oral methods over digital learning.

10. Give four ways teachers can motivate students to use ICT tools for academic purposes.

Teachers can design interactive lessons where students actively use ICT tools to solve problems or create projects.

They can reward students for completing ICT-based assignments, encouraging positive attitudes toward technology.

Teachers may also integrate real-life applications of ICT, showing students how digital tools connect to careers or daily life.

Lastly, they can encourage peer learning by grouping students to work collaboratively on ICT tasks, making learning more engaging.

11. Discuss four reasons why e-learning platforms sometimes fail to improve academic performance in secondary schools.

One reason is lack of student self-discipline. E-learning requires learners to manage their own time and follow lessons independently, but many students fail to stay focused without close supervision.

Another reason is poor internet connectivity. In many schools, unreliable or slow internet prevents students from fully accessing learning materials, leading to incomplete lessons and frustration.

A third reason is inadequate digital literacy. Some students and even teachers lack the basic ICT skills needed to use e-learning platforms effectively, making the system underutilized.

Finally, e-learning platforms may not match the local curriculum. If content is not aligned with school syllabuses, students may learn irrelevant material that does not prepare them for exams.

12. Explain four ways ICT can be misused by students in schools.

Students may misuse ICT by engaging in cyberbullying, where they use digital platforms to insult, harass, or spread harmful rumors about peers.

They may also misuse ICT by accessing or sharing inappropriate content such as pornography or violent material, which distracts them from learning.

Another misuse is academic dishonesty. Students can use ICT to cheat in exams or copy assignments from the internet without understanding the content.

Additionally, ICT can be misused through excessive gaming and social media use during school hours, which reduces concentration and productivity.

13. Give four reasons why regular ICT maintenance is important in schools.

Regular maintenance helps to extend the lifespan of ICT equipment by preventing breakdowns that could result from dust, overheating, or wear and tear.

It reduces repair costs, since small issues can be fixed early before they become major faults that require expensive replacements.

Maintenance also improves efficiency. Computers and networks that are regularly updated and serviced run faster and more reliably, supporting smooth teaching.

Lastly, maintenance enhances safety by ensuring that security systems such as antivirus software and firewalls remain up-to-date to protect students' data.

14. State four challenges faced by teachers when using ICT in lesson planning.

Teachers often face the challenge of limited ICT resources, as many schools do not provide enough laptops, projectors, or software to support lesson preparation.

Another challenge is insufficient training. Teachers who are not well trained in ICT struggle to design digital lesson plans that are engaging and effective.

Time constraints are also a major challenge. Preparing ICT-based lessons usually takes longer than preparing traditional lessons, and teachers with heavy workloads find it difficult to balance.

Finally, unreliable electricity or internet services can hinder teachers, since they may lose access to materials or tools during lesson planning.

15. Describe four ways ICT contributes to inclusive education in schools.

ICT provides assistive technologies such as screen readers for visually impaired students and subtitles for hearing-impaired students, making learning accessible.

It enables flexible learning formats, such as recorded lessons, which allow slow learners to replay and study at their own pace.

ICT also reduces physical barriers by allowing students with mobility challenges to access digital resources without moving to libraries or classrooms.

Moreover, ICT encourages personalized learning. Adaptive software can adjust difficulty levels based on individual student performance, ensuring no learner is left behind.

16. Identify four effects of cybercrime on students in schools.

Cybercrime can lead to financial loss if students are tricked into scams or online fraud, affecting their trust in digital platforms.

It can also cause psychological harm. Victims of cyberbullying or identity theft may suffer from stress, anxiety, or low self-esteem.

Cybercrime disrupts learning when malicious software or hacking leads to loss of important academic files or exam materials.

Lastly, it damages students' digital reputation. Once harmful content such as fake profiles or stolen information is spread online, it may negatively affect their future opportunities in education or employment.