

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

**635**

**INFORMATION AND COMMUNICATION TECHNOLOGY**

**Time: 3 Hours.**

**ANSWER**

**Year: 2014**

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**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. Give four disadvantages of using social media platforms as the main channel for student communication in schools.**

One disadvantage is distraction. Students may spend more time browsing unrelated posts and chatting with friends instead of focusing on academic matters, which reduces learning time.

Another disadvantage is exposure to harmful content. Social media platforms often contain inappropriate materials that may influence students negatively in terms of behavior and discipline.

A third disadvantage is misinformation. Students can easily come across false or misleading academic information shared by peers, which may confuse them and affect their studies.

Lastly, not all students have equal access to social media. Some may lack smartphones or internet connectivity, which creates inequality in communication and learning opportunities.

**2. Mention four ways in which lack of ICT facilities may negatively affect students' academic performance.**

One way is reduced access to information. Without ICT facilities, students cannot explore online resources, e-books, and academic databases, which limits their knowledge.

Another way is low digital skills development. Students who lack ICT exposure will be unprepared for further education or careers that require computer literacy.

A third way is poor academic presentation. Without ICT, students may struggle to prepare neatly typed assignments, presentations, or reports, which reduces the quality of their work.

Lastly, lack of ICT facilities denies students interactive learning experiences. They miss the chance to use simulations, videos, or online collaboration that make concepts easier to understand.

**3. State four differences between using printed textbooks and digital e-books in the teaching and learning process.**

One difference is accessibility. E-books can be downloaded and carried on digital devices, while printed textbooks require physical storage and may be heavy to carry around.

Another difference is cost. Digital e-books are often cheaper or even free, while printed textbooks can be expensive for schools and students.

A third difference is interactivity. E-books may include hyperlinks, videos, or quizzes, while printed textbooks only provide static text and images.

Lastly, printed textbooks do not depend on electricity or devices, while e-books require gadgets and power, which can be a challenge in areas with poor infrastructure.

#### **4. Outline four reasons why schools should enforce computer ethics among students.**

One reason is to prevent plagiarism. Enforcing computer ethics helps students learn to respect intellectual property and avoid copying work from the internet without acknowledgment.

Another reason is to protect student privacy. Ethics teach students not to misuse personal information of their peers or teachers.

A third reason is to promote responsible use of resources. Students will learn not to misuse school computers for gaming, social media, or harmful content.

Lastly, computer ethics prepare students for future workplaces. By learning proper digital behavior early, they develop integrity and responsibility that are valued in professional environments.

#### **5. List four common causes of data loss in school computer laboratories.**

One cause is computer viruses. Infected machines may corrupt or delete important files belonging to students or teachers.

Another cause is hardware failure. Hard drives or storage devices may crash, causing permanent loss of data.

A third cause is human error. Students or staff may accidentally delete important files or overwrite them.

Lastly, power interruptions such as blackouts or surges can cause unsaved work to be lost and even damage storage devices.

#### **6. Give four ways ICT can improve collaboration among students working on group assignments.**

One way is through online document sharing. Platforms like Google Docs allow students to work together on the same assignment at the same time, even from different locations.

Another way is instant communication. Students can use emails, WhatsApp groups, or discussion forums to exchange ideas quickly and coordinate their work.

A third way is project management tools. ICT provides applications where students can assign tasks, set deadlines, and track progress, making collaboration more organized.

Lastly, ICT allows presentation of collective work. Students can use presentation software or video conferencing to showcase their group projects effectively.

#### **7. State four challenges teachers face when relying on PowerPoint presentations for teaching.**

One challenge is technical problems. Projectors or computers may fail, leaving the teacher unable to deliver the lesson as planned.

Another challenge is overdependence. Teachers may become too reliant on slides and fail to engage students actively through discussion and questioning.

A third challenge is limited student participation. If lessons are reduced to reading from slides, students may become passive and lose interest in learning.

Lastly, preparation time is another issue. Designing effective and appealing presentations requires extra effort, which may be difficult for teachers with a heavy workload.

#### **8. Mention four reasons why ICT-based examinations may be more effective than paper-based examinations.**

One reason is efficiency. ICT-based exams are automatically marked, especially multiple-choice tests, which saves time for teachers.

Another reason is security. Digital exams can use encryption and authentication to prevent leakage of exam papers, unlike printed versions which may be stolen.

A third reason is flexibility. Students can take ICT-based exams online or in computer labs, making it possible to test larger groups at once.

Lastly, ICT-based exams reduce paper usage, making them environmentally friendly and more sustainable for schools.

#### **9. List four risks of students relying heavily on Google for their academic research.**

One risk is plagiarism. Students may copy information directly from Google without understanding or analyzing it, which affects originality.

Another risk is poor critical thinking. Heavy reliance on Google prevents students from practicing analytical skills and independent reasoning.

A third risk is exposure to unreliable sources. Not all content on Google is verified, so students may end up using incorrect information.

Lastly, students may ignore other useful resources. By depending only on Google, they may neglect libraries, textbooks, and teachers' guidance.

#### **10. State four reasons why maintaining ICT equipment is critical for sustainable learning in schools.**

One reason is cost saving. Regular maintenance extends the lifespan of ICT equipment, reducing the need for frequent replacements.

Another reason is efficiency. Well-maintained computers and networks run smoothly, ensuring that students and teachers can rely on them during lessons.

A third reason is safety. Maintenance helps identify and fix faults such as overheating or faulty wiring that may pose risks to users.

Lastly, maintenance ensures continuity in teaching and learning. Preventing breakdowns reduces disruptions in lessons, especially when ICT is integrated into daily classroom activities.

#### **11. Discuss five problems students face when doing online learning in schools.**

One problem is poor internet connectivity. Many schools, especially in rural areas, have weak or unstable internet connections, making it difficult for students to attend live lessons or download study materials.

Another problem is lack of digital devices. Not all students can afford personal laptops or smartphones, and this inequality limits participation in online learning.

A third problem is lack of ICT skills. Some students may not know how to use online platforms effectively, which reduces their ability to learn and interact.

Another challenge is reduced teacher-student interaction. Online learning can feel distant, making it harder for students to ask questions and receive immediate clarification.

Lastly, there is the issue of distractions. Studying online often exposes students to social media and other non-academic websites, which can reduce concentration and academic performance.

## **12. Explain five ways ICT can enhance student assessment and feedback.**

One way is through online quizzes. These allow teachers to quickly test students' knowledge and provide instant results.

Another way is through automated marking. ICT systems can check multiple-choice and structured questions, saving teachers' time and giving fast feedback to students.

A third way is through digital portfolios. Students can upload assignments, projects, and reflections into online platforms, which makes tracking progress easier.

Another way is through e-learning platforms that provide personalized feedback. For example, systems can highlight weak areas and suggest extra practice based on student performance.

Lastly, ICT supports peer assessment. Students can share work online and receive feedback from classmates, which encourages collaboration and learning from each other.

## **13. Analyse five reasons why many schools in Tanzania find it difficult to integrate ICT into their teaching and learning processes.**

One reason is high cost. Many schools cannot afford enough computers, projectors, or internet services due to limited budgets.

Another reason is lack of skilled teachers. Some teachers have little or no training in ICT, making them hesitant to use it in their teaching.

A third reason is poor infrastructure. Electricity supply is unreliable in many areas, making it difficult to operate ICT facilities.

Another reason is limited content. In some schools, digital teaching materials are not available or do not match the curriculum, making integration less effective.

Lastly, cultural resistance plays a role. Some educators and parents prefer traditional teaching methods and resist adopting ICT in classrooms.

## **14. “ICT is transforming education into a more student-centered approach.” Justify this statement with six points.**

Firstly, ICT allows students to access learning materials at their own pace. Online resources, recorded lectures, and e-books enable them to review difficult topics repeatedly.

Secondly, ICT encourages interactive learning. Tools such as simulations, videos, and educational games make lessons more engaging and practical.

Thirdly, ICT enables personalized learning. Systems can adapt to a student's strengths and weaknesses, offering tailored exercises and practice.

Fourthly, ICT supports collaboration. Students can work together online, share ideas, and jointly develop projects, which strengthens teamwork skills.

Fifthly, ICT develops critical thinking. Online research forces students to evaluate information sources carefully and apply analytical skills.

Lastly, ICT empowers students to take control of their learning. Instead of relying solely on the teacher, they can explore different topics independently, making education more learner-driven.

#### **15. Discuss six negative effects of excessive ICT use among students and suggest solutions.**

One negative effect is health problems. Prolonged computer use can cause eye strain, back pain, and poor posture. The solution is encouraging regular breaks and proper ergonomic practices.

Another effect is addiction. Students may spend too much time on gaming or social media instead of studying. The solution is parental and teacher monitoring of ICT use.

A third effect is cyberbullying. Excessive ICT use exposes students to online harassment. The solution is implementing strict school policies and teaching digital responsibility.

Another effect is poor social skills. Overreliance on ICT may reduce face-to-face interactions, leading to weak interpersonal communication. The solution is balancing ICT use with group discussions and teamwork.

Fifthly, excessive ICT use can reduce academic performance. Students may prioritize online entertainment over schoolwork. The solution is proper time management training.

Lastly, ICT misuse exposes students to harmful content. They may access violent or inappropriate material. The solution is installing filters and educating students on responsible browsing.

#### **16. Assess six ways ICT can contribute to improving secondary education in Tanzania.**

Firstly, ICT improves access to information. Students and teachers can use the internet to find learning materials beyond the textbook.

Secondly, ICT enhances teaching quality. Teachers can use projectors, videos, and digital resources to make lessons more understandable and interesting.

Thirdly, ICT improves assessment. Computer-based testing makes exams faster, more accurate, and easier to manage.

Fourthly, ICT promotes equality. Through online platforms, students in rural schools can access the same quality learning resources as those in urban schools.

Fifthly, ICT develops essential skills. Students gain digital literacy, problem-solving, and communication skills, which prepare them for higher education and employment.

Lastly, ICT strengthens school management. Student records, timetables, and performance data can be stored digitally, making administration more efficient.