THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL

GRADE A TEACHERS' CERTIFICATE EXAMINATION

635 INFORMATION AND COMMUNICATION TECHNOLOGY

Time: 3 Hours. **ANSWER** **Year: 2018**

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).**

1. Why is it difficult to achieve equity in ICT access among Tanzanian secondary school students? Provide examples to support your explanation.

   One difficulty is uneven infrastructure. Urban schools in places like Dar es Salaam often have stable electricity and broadband, while many rural schools experience frequent outages and weak mobile signals, so computer labs sit idle or teach in offline mode only.

   Another difficulty is cost barriers at the household level. Even when a school has a lab, many students cannot afford personal smartphones, laptops, or data bundles, which limits after school practice and widens gaps between students who can study online at home and those who cannot.

   A further difficulty is differences in teacher capacity. Schools with ICT trained teachers run richer lessons, integrate simulations, and set online assignments, while schools without such capacity limit ICT to typing or basic drills, producing unequal outcomes from the same hardware.

   Language and content relevance also limit equity. Much digital content is in English and not localized to the Tanzanian syllabus, so students with weaker English or those learning under resource constrained contexts gain less from the same platforms.

2. Differentiate between ICT literacy and digital fluency, and argue why the latter is more crucial for modern learners.

   ICT literacy is the ability to operate tools, for example opening applications, typing, saving files, and navigating basic settings. It answers the question, can the learner use the device.

   Digital fluency is the ability to use technology to solve problems, evaluate sources, create original products, collaborate ethically, and adapt to new tools. It answers the question, can the learner choose, combine, and justify tools to achieve a purpose.

   Digital fluency is more crucial because tools change quickly. A fluent learner can transfer skills to new platforms, judge credibility, protect privacy, and design workflows, while a literate learner risks becoming stuck when interfaces or apps change.

   Fluency also aligns with higher order outcomes. It supports critical thinking, creativity, and communication, which are needed for modern work and lifelong learning, not just button pressing.

3. How can poor ICT policy planning at the national level negatively affect classroom teaching and learning in schools?

Unfunded mandates push schools to adopt devices without money for teacher training, content, or maintenance, so classrooms receive hardware that is underused or quickly breaks.

Centralized procurement without school input can deliver devices or platforms that do not match the syllabus or language needs, forcing teachers to spend time workarounds instead of teaching.

Lack of standards on data protection exposes student records to misuse, which makes schools reluctant to use digital systems for assessment and feedback.

Weak monitoring and evaluation leads to focusing on counting devices rather than learning outcomes, so teachers are judged by hardware presence, not by improved pedagogy.

4. Suggest four reasons why ICT integration in education sometimes fails to improve students' academic performance despite heavy investments.

Integration often substitutes rather than transforms. Teachers project the same notes on a screen without changing tasks, so learning quality does not improve.

Teacher professional development is inadequate. Without ongoing coaching tied to classroom practice, teachers underuse tools or abandon them after technical hiccups.

Access time is too low. If a lab serves many classes, students may get only a few minutes of hands on practice weekly, which cannot shift performance.

Assessment remains traditional. If high stakes exams reward recall from printed notes, students and teachers will ignore richer ICT tasks that build analysis and application.

5. Analyze how the teacher's role changes when ICT is integrated into the classroom.

The teacher shifts from information transmitter to learning designer, planning tasks where students research, create, and present using digital tools.

The teacher becomes a curator of resources, selecting credible, level appropriate materials and modeling how to evaluate sources and cite properly.

The teacher acts as a coach who monitors dashboards and student artifacts to give timely, individualized feedback, rather than only end of unit grading.

The teacher also manages digital citizenship, setting norms for device use, collaboration, and academic integrity, and intervening to protect privacy and well being.

6. Explain how ICT can unintentionally widen the performance gap between rural and urban schools.

   Bandwidth heavy content such as video tutorials loads well in urban schools but buffers in rural ones, so urban students complete richer tasks and gain skills faster.

   Urban students often have devices and internet at home, which enables practice, revision, and submission outside school hours, while rural students depend entirely on limited lab time.

   Teachers in urban schools more often access training and peer support, so they implement advanced methods like simulations and data analysis, while rural teachers stay at basic use.

   Online competitions, scholarships, and MOOCs favor students who can register and participate reliably, creating extra credentials for urban learners that rural learners cannot obtain.

7. Describe four major ethical challenges faced by teachers when introducing ICT to young learners.

   Protecting student data is difficult. Teachers must balance the benefits of online platforms with the risk of exposing names, photos, and performance data.

   Preventing plagiarism and promoting originality is challenging when copy and paste and AI tools are easily available and not well understood by beginners.

   Managing exposure to harmful or age inappropriate content requires filters and supervision, yet overblocking can also remove useful resources needed for learning.

   Addressing cyberbullying and digital etiquette is essential, since online collaboration can lead to harassment or exclusion if norms are not taught and enforced.

8. Discuss how ICT can either strengthen or weaken cultural values in Tanzanian schools.

   ICT strengthens culture by preserving and sharing local languages, songs, stories, and ceremonies through recordings and community archives that students can study and extend.

   It enables schools to showcase projects and community service, reinforcing values of cooperation, respect, and responsibility through authentic audiences.

ICT can weaken culture when imported media promotes materialism, disrespectful speech, or stereotypes that conflict with local norms, which students may imitate.

It can also shift language use toward non local content and slang, reducing attention to Kiswahili and indigenous languages unless schools intentionally integrate them into digital work.

9. Why is ICT regarded as both a tool for empowerment and a source of dependency in the learning process?

ICT empowers by expanding access to information, enabling creativity with multimedia, and connecting learners to mentors and peers beyond the classroom.

It empowers inclusion through assistive technologies that give students with disabilities new ways to learn and express understanding.

It creates dependency when learners rely on search engines and templates instead of building memory, reasoning, and drafting skills, which reduces resilience when offline.

It also creates dependency on infrastructure and vendors. If platforms change or networks fail, learning stalls unless students have analog strategies and transferable habits.

10. Explain how ICT can transform traditional methods of student evaluation and assessment.

ICT enables continuous formative assessment through quick checks, adaptive quizzes, and analytics that help teachers target support in real time rather than waiting for end term exams.

It expands performance assessment with simulations, coding tasks, data investigations, and multimedia productions that capture application and creativity, not just recall.

It supports portfolios where students collect drafts, reflections, and finished products across subjects, giving a fuller picture of growth over time.

It facilitates peer and self assessment through rubrics and comment tools, improving metacognition and feedback quality, while audit trails help maintain academic integrity.

11. In what ways can poor digital infrastructure disrupt the effectiveness of ICT-based teaching in Tanzanian schools?

Unreliable electricity supply makes it difficult to run computer labs and projectors consistently. Frequent blackouts cause interruptions that discourage both teachers and learners from depending on ICT.

Weak internet connectivity prevents timely access to digital resources, online libraries, and educational platforms. Slow speeds mean students cannot watch videos or download assignments efficiently, leading to frustration and underuse.

Insufficient hardware maintenance causes breakdowns of computers and tablets that remain unrepaired for long periods. This reduces the number of functional devices per class, forcing students to share and limiting individual practice.

Lack of technical support staff means teachers themselves must handle troubleshooting. This consumes teaching time and reduces their motivation to prepare ICT-rich lessons.

12. Explain how over-reliance on ICT tools may weaken critical thinking among students.

When students depend too heavily on search engines for answers, they may bypass analysis and reflection, copying solutions instead of reasoning through problems.

Overuse of automated tools such as grammar checkers or calculators discourages the development of foundational skills like language construction or mental arithmetic, making learners less confident without digital assistance.

Entertainment-oriented ICT use can shift focus from problem-solving to instant gratification, where students skim for quick answers rather than exploring depth in their studies.

Students may lose persistence in tackling challenging questions, expecting ready-made answers online rather than struggling productively and building resilience.

13. Assess how ICT can influence teacher-student relationships in the classroom.

ICT can enhance interaction when used for collaborative projects, discussion boards, and interactive feedback, strengthening the bond through constant communication.

It can also create distance if teachers rely too much on digital content delivery, reducing face-to-face discussions and the personal guidance that builds trust.

ICT provides teachers with tools to monitor student progress closely through analytics, enabling more personalized support and stronger relationships based on understanding learner needs.

However, if ICT use emphasizes control, such as strict monitoring apps, students may feel mistrusted, creating tension rather than cooperation between teacher and learner.

14. Why might ICT-based teaching materials fail to align with the Tanzanian curriculum?

Many digital platforms are designed for international markets and do not address local syllabus requirements, leading to content that misses key national topics.

Language differences make some resources inaccessible. If material is only available in English and not simplified or translated, learners with weaker proficiency struggle to benefit fully.

Cultural irrelevance reduces engagement. Examples, case studies, or contexts may not reflect Tanzanian realities, making it harder for students to connect the material to their lives.

Rapid curriculum changes are not always matched by updates in digital content, meaning resources quickly become outdated and misaligned with exam requirements.

15. Discuss the risks and opportunities of using social media as an ICT tool in education.

Social media offers opportunities for collaborative learning by allowing students to form study groups, share resources, and discuss class topics beyond the classroom walls.

It provides a platform for teachers to share announcements, assignments, and supplementary materials, increasing accessibility and timeliness of information.

However, it carries risks of distraction, as students may spend more time on entertainment and chatting than on academic discussions.

It also exposes learners to cyberbullying, misinformation, and harmful content, which can damage mental health and academic focus if not managed responsibly.

16. How can ICT support inclusive education for students with disabilities in Tanzanian schools?

ICT provides assistive technologies such as screen readers for visually impaired students, ensuring they can access digital texts and participate equally in learning.

Speech-to-text tools help learners with hearing impairments or speech difficulties to communicate and complete assignments effectively.

Interactive software with adjustable levels allows students with learning difficulties to progress at their own pace, supporting differentiated instruction.

ICT also enables remote learning for students who cannot physically attend school due to disability, ensuring they remain connected to teachers and classmates.