THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL

DIPLOMA IN TECHNICAL EDUCATION EXAMINATION

722 **EDUCATION**

Time: 3 Hour. **ANSWERS** **Year: 2015**

Instructions

1. This paper consists of **seven (7)** questions.
2. Answer **five (5)** questions only.
3. Each question carries **twenty (20)** marks.
4. All communication devices and any unauthorised materials are **not** allowed in the examination room
5. Write your **Examination Number** on every page of your answer booklet(s)

1. (a) What is the meaning of the term "instructional strategy"?

An instructional strategy is a deliberate, planned method or technique used by a teacher to deliver content and facilitate learning. It involves the approach taken to organize, present, and reinforce knowledge and skills in a way that helps students meet the set learning objectives.

(b) Differentiate between direct instruction and experiential learning.

Direct instruction is a teacher-centered approach where the teacher actively controls the lesson, explains concepts, and demonstrates procedures for students to follow.

Experiential learning is a learner-centered method where students engage in hands-on tasks or real-life experiences, reflect on what they did, and derive meaning from their participation.

(c) Describe four factors a technical teacher should consider when selecting an instructional strategy.

The nature of the content: Practical content may require demonstration, while theory may need explanation or discussion.

Learner characteristics: Different levels of readiness, learning styles, or prior knowledge influence the strategy chosen.

Available resources: Access to tools, time, and physical space can limit or support specific strategies.

Intended learning outcomes: Some objectives require knowledge recall, while others demand skill performance or analysis.

(d) Outline three advantages of using demonstration as an instructional strategy in workshops.

It provides a visual model for learners to follow, reducing errors.

It helps in simplifying complex or unfamiliar procedures.

It engages learners actively, especially when followed by hands-on practice.

2. (a) Define the term "lesson reflection" in teaching practice.

Lesson reflection is the process where a teacher critically reviews and evaluates a lesson after delivery to identify what worked well, what did not, and how future lessons can be improved to enhance teaching and learning.

(b) Provide three benefits of regular lesson reflection by technical teachers.

It promotes continuous professional growth and improvement in teaching practices.

It helps identify students' learning difficulties and adjust instruction accordingly.

It enhances lesson planning by incorporating past experiences into future teaching.

(c) Identify four key areas that a teacher should focus on during post-lesson reflection.

Achievement of lesson objectives.
Student engagement and participation.
Effectiveness of teaching methods and materials.
Challenges encountered and how they were handled.

(d) Give two reasons why student feedback is important during lesson reflection.

It provides insights into how students perceived and understood the lesson.

It allows the teacher to make learner-centered adjustments for future improvement.

3. (a) What is formative assessment?

Formative assessment is a type of evaluation conducted during the learning process to monitor student progress and provide feedback that helps both the teacher and learner improve learning before final evaluation.

(b) Provide four examples of formative assessment techniques suitable for a workshop environment.

Observation of students during task performance.
Practical exercises or tasks.
Peer or group evaluation.
Short oral questioning or skill checks.

(c) Explain how each of the following can enhance effective formative assessment:

(i) Rubrics: These provide clear performance criteria, helping both teacher and learner understand expectations and assess quality of work.

(ii) Checklists: They outline specific steps or skills to be observed, ensuring systematic evaluation of task completion.

(iii) Observation: It allows the teacher to assess learners in real-time and give immediate feedback based on practical performance.

4. (i) Mention three strengths of the above lesson plan.

The objective is clearly stated and targets both setup and operation.

Materials and safety gear are identified, showing readiness for the lesson.

Activities include both demonstration and student practice, ensuring skill development.

(ii) Identify three aspects that need improvement.

The assessment method could be expanded beyond observation to include specific criteria.

There is no time breakdown for different lesson segments.

There is no mention of learner prior knowledge or entry behavior.

(iii) Suggest two additional safety measures that should be included during this practical session.

Ensuring a safety briefing is conducted before use of the lathe machine.

Verifying that all learners wear PPE and keep safe distance during operation.

5. (a) What is the purpose of classroom rules in vocational institutions?

Classroom rules are established to create a structured, respectful, and safe environment where learning can take place effectively. They guide student behavior, promote responsibility, and prevent accidents in workshops.

(b) State five examples of classroom or workshop rules that promote effective learning.

Always wear protective gear in the workshop.
Be punctual and prepared for every lesson.
Handle tools and equipment with care.
Respect instructors and fellow learners.
Do not enter workshop without supervision.

(c) Explain three ways teachers can involve students in developing classroom rules.

Facilitating group discussions to brainstorm acceptable behaviors.

Allowing students to vote or agree on proposed rules.

Asking students to reflect on the importance and consequences of each rule.

(d) Mention two challenges of enforcing rules in technical classes and suggest possible solutions.

Challenge: Learners may ignore rules due to peer pressure.
Solution: Consistent enforcement and use of positive reinforcement.

Challenge: Overcrowded workshops make supervision difficult.
Solution: Organize students into manageable groups and assign peer monitors.

6. (a) What is Competency-Based Education and Training (CBET)?

CBET is an approach to teaching and learning that focuses on the acquisition and demonstration of competencies (knowledge, skills, and attitudes) required to perform specific tasks to industry standards.

(b) Identify four challenges faced during the implementation of CBET in Tanzanian technical institutions.

Lack of adequate training for instructors on CBET delivery and assessment.

Shortage of modern equipment aligned with industry tasks.

Resistance to change from traditional teaching practices.

Limited involvement of industry in curriculum review and support.

(c) State three differences between traditional education and CBET.

Traditional education is time-based; CBET is performance-based.

Traditional methods focus on content delivery; CBET focuses on skill demonstration.

Assessment in traditional education is mostly theoretical; CBET emphasizes practical assessment.

(d) Explain the role of industry stakeholders in supporting CBET curriculum.

They help define occupational standards and competencies required for employment.

They provide opportunities for industrial attachment and workplace learning.

They support curriculum review to ensure training remains relevant to job demands.

7. (a) Define the concept of "occupational profile" in technical education.

An occupational profile is a detailed description of tasks, duties, skills, and knowledge required for effective performance in a specific occupation. It provides a reference point for developing relevant and competency-based curricula.

(b) State four components that make up an occupational profile.

Occupational title or name.
Key tasks and duties performed.
Required skills and competencies.
Working conditions and tools used.

(c) Briefly explain how an occupational profile supports curriculum development.

It ensures that training programs are aligned with real workplace needs.

It helps in selecting relevant content and designing practical assessments.

It guides the identification of learning outcomes and instructional methods.

(d) Provide two examples from your trade where occupational profiles have influenced specific training content.

In welding, the need for precision welding led to inclusion of TIG and MIG welding techniques.

In electrical installation, the demand for renewable energy skills led to the addition of solar power system installation modules.