THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL

DIPLOMA IN TECHNICAL EDUCATION EXAMINATION

722 **EDUCATION**

Time: 3 Hour. **ANSWERS** **Year: 2011**

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) Define the term "teaching methodology."

Teaching methodology refers to the structured approach a teacher uses to deliver content and guide the learning process. It includes the principles, strategies, and techniques applied to help learners achieve specific educational objectives.

(b) Explain four factors that influence the choice of teaching methodology in technical training.

The nature of the content: Practical topics may require demonstration, while theoretical ones may suit explanation.

Learner characteristics: Their background knowledge, learning styles, and motivation levels influence method selection.

Available resources: Tools, machines, classrooms, and time can determine what method is feasible.

Learning objectives: If the goal is skill performance, hands-on methods like projects or simulations are more appropriate.

(c) Describe three advantages of using project-based learning in vocational education.

It promotes problem-solving and critical thinking by challenging learners to complete real-world tasks.

It encourages collaboration and communication among learners.

It allows learners to integrate theory and practice, improving their job readiness.

(d) State two limitations of relying solely on lecture method in Technical Education.

It limits learner engagement and participation, making learning passive.

It does not support development of hands-on skills, which are critical in vocational training.

2. (a) What is lesson implementation?

Lesson implementation is the process of delivering a lesson as planned, involving actual interaction between the teacher and learners using selected methods, materials, and activities to achieve set objectives.

(b) State four teacher responsibilities during lesson implementation in a technical classroom.

Present content clearly and systematically.

Engage learners through questions, discussions, or activities.

Manage classroom time and resources effectively.

Assess learners' understanding through ongoing checks and feedback.

(c) Identify three learner-centered activities that promote active participation during lessons.

Group discussions or brainstorming.

Hands-on practice or skill demonstrations.

Peer teaching or collaborative problem-solving.

(d) Describe how a teacher can check for understanding during lesson delivery.

By asking questions and prompting learners to explain or apply what they've learned.

By observing learner performance during activities.

By using short, informal assessments or exercises during the lesson.

3. (a) Define the term "instructional supervision."

Instructional supervision is the process through which educational leaders support, monitor, and guide teachers to improve teaching quality and promote learner achievement.

(b) Mention three objectives of instructional supervision in vocational institutions.

To ensure effective teaching practices are followed.

To promote professional development among teachers.

To evaluate the implementation of curriculum standards.

(c) List four roles of a supervisor in supporting technical teachers.

Conducting classroom observations and giving feedback.

Organizing workshops or in-service training.

Providing teaching resources and advice.

Helping resolve classroom management or instructional challenges.

(d) Explain two challenges that may hinder effective instructional supervision and suggest solutions.

Challenge: Limited time due to supervisor workload.
Solution: Create a supervision schedule and delegate tasks.

Challenge: Teachers feeling intimidated or judged.
Solution: Use supervision as a supportive and developmental tool, not punishment.

4. (a) Explain the term "psychomotor domain" in Technical Education.

The psychomotor domain involves physical movement, coordination, and the use of motor skills. In Technical Education, it focuses on learners' ability to perform tasks like operating machinery or assembling components.

(b) Give four examples of psychomotor skills in your trade area.

Welding a metal joint accurately.

Measuring and cutting materials to size.

Connecting electrical components on a board.

Operating a lathe machine to shape a workpiece.

(c) State three teaching methods suitable for developing psychomotor skills.

Demonstration followed by learner practice.

Simulation or role-playing in a workshop setting.

Project-based tasks where learners complete real products.

(d) Explain why it is important to assess psychomotor skills in vocational education.

It ensures learners can apply what they've learned in real work situations.

It confirms competence in tasks that require precision and safety.

It provides evidence that learners are job-ready and meet trade standards.

5. (a) What is the meaning of "student-centered learning"?

Student-centered learning is an approach where learners take an active role in their education, while the teacher acts as a facilitator rather than a primary source of knowledge. Learning is personalized, interactive, and driven by students' interests and needs.

(b) Give four characteristics of a student-centered classroom.

Learners are actively engaged in discussions and activities.

Lessons are adapted to learners' pace and needs.

Students collaborate in groups and problem-solve together.

The teacher uses feedback and reflection to guide instruction.

(c) Mention three benefits of student-centered learning in technical training.

It fosters deeper understanding through active participation.

It encourages learners to take responsibility for their progress.

It supports the development of both technical and soft skills.

(d) Suggest three techniques a teacher can use to shift from teacher-centered to student-centered instruction.

Use group projects and peer assignments.

Ask open-ended questions and allow time for discussion.

Provide learning tasks that require decision-making and creativity.

6. (a) Define the concept of "evaluation criteria" in practical assessment.

Evaluation criteria are the specific standards or benchmarks used to judge the quality and accuracy of a learner's performance in a task. They make assessment consistent, fair, and objective.

(b) State four examples of evaluation criteria for a task like metal cutting or circuit wiring.

Accuracy of measurements and cuts.

Correct sequence of procedure.

Neatness and safety of the work area.

Proper use of tools and equipment.

(c) Explain how evaluation criteria help ensure fairness in technical assessments.

They provide a clear and consistent basis for grading all learners.

They reduce bias by focusing on observable and agreed standards.

They help learners understand expectations before performing tasks.

(d) Describe two consequences of using unclear criteria in assessing practical work.

Learners may be confused about what is expected, leading to poor performance.

It may lead to inconsistent and unfair grading, affecting learner motivation and trust.

7. (a) What is the difference between a teaching method and a teaching technique?

A teaching method is a broader instructional approach (e.g., demonstration), while a technique is a specific way of applying that method (e.g., breaking a task into steps for better learner understanding).

(b) Identify four teaching techniques commonly used in technical subjects.

Step-by-step explanation of procedures.

Use of questioning during demonstrations.

Immediate feedback during learner practice.

Use of checklists to guide student performance.

(c) Explain three advantages of combining multiple techniques in one lesson.

It caters to different learning styles, improving understanding.

It maintains learner interest and reduces monotony.

It reinforces content by presenting it in varied forms.

(d) Give two examples of how a teacher can adapt techniques for students with special needs.

Use visual aids and models for learners with hearing impairments.

Allow extended time or simplified tools for learners with motor difficulties.