



CAMEROON GENERAL CERTIFICATE OF EDUCATION BOARD

Technical and Vocational Education Examination

JUNE XXXX

INTERMEDIATE LEVEL

Subject Title	PLUMBING MAINTENANCE-PRACTICALS
Subject Code No.	5465
Paper No.	THREE

Duration 1HOUR 30m

- All dimensions are given in centimetres (cm).
- This paper shall be evaluated at 40% of the total paper weighted marks.

INSTRUCTIONS TO THE CONDIDATES

1. You are reminded of the necessity for good English and orderly presentation in your answers.
 2. Candidates must *provide all* their individual and personal working tools.
 3. Candidates are requested to be in their personal protection gears (PPEs).
 4. Candidates are to ballot for the maintenance subject they are to treated.
 5. Candidates who have already been evaluated must be isolated from all and are requested to leave their questions paper with the examiners.
 6. Candidates shall commence work as from 8:00 and will have 1:30 minutes for the maintenance session.
 7. Candidates shall not be given a break period.
 8. At the end of examinations, candidates are requested to keep their work station clean and workshop.
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THE LIST OF THE FAULTS TO BE SIMULATED TO EACH QUESTION IN FUNCTION OF THE AVAILABLE MATERIALS ARE THE FOLLOWING:

- N° 1 - Defective gasket joint.
- N° 2 – Poor regulated float valve arm.
- N° 3 – Blocked faucet spout (**aerator**).

TECHNICAL MAINTENANCE SHEET

Object: _____

N°	Diagnoses	Solution	Operating Mode	Tools

SUBJECT-N° 1

Description of the fault:

After turning off the mixer faucet, water continues to flow from the spout.

Work to be done:

Carry out the diagnoses of the fault, fill in the technical maintenance sheet accompanying the question and repair the fault discovered on the mixer faucet.

Marking scheme

	Rubrics	Marks
Phase 1 : Technical maintenance sheet 40%	Diagnoses	(10 marks)
	Solutions	(10 marks)
	Operating modes	(10 marks)
	Tools	(10 marks)
Phase 2 : Repair and maintenance 60%	Discovery of the dysfunction(fault)	(15 marks)
	Operating modes	(15 marks)
	Exactitude of repairs and effective maintenance	(20 marks)
	Rapidity	(10 marks)
Total 100%		(100 marks)

SUBJECT-N° 2

Description of the fault:

After acting on the flushing button of the WC, the quantity of the flushing water is very insufficient and the flushing did not take place.

Work to be done:

Carry out the diagnoses of the fault, fill in the technical maintenance sheet and repair the discovered fault.

Marking scheme

	Rubrics	Marks
Phase 1 : Technical maintenance sheet 40%	Diagnoses	(10 marks)
	Solutions	(10 marks)
	Operating Modes	(10 marks)
	Tools	(10 marks)
Phase 2 : Repair and maintenance 60%	Discovery of the dysfunction(fault)	(10 marks)
	Operating mode	(10 marks)
	Exactitude in repairs and effective maintenance	(20 marks)
	Rapidity	(10 marks)
Total 100%		(100 marks)

SUBJECT-N° 3

Description of the fault:

In turning on the mixer valve of the wash hand basin, the pressure at the spout was very low, even when the pressure in the line is high.

Work to be done:

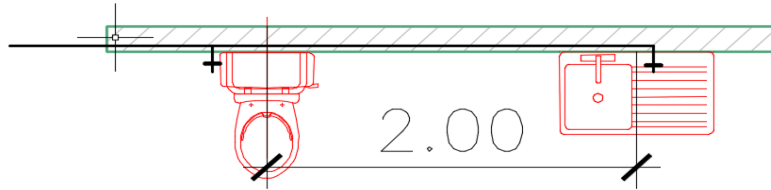
Carry out the diagnoses of the faults, fill in the technical maintenance sheet accompanying the question and repair/maintain the discovered fault.

Marking Scheme

	Rubrics	Marks
Phase 1 : Technical maintenance sheet 40%	Diagnoses	(10 marks)
	Solutions	(10 marks)
	Operating modes	(10 marks)
	Tools	(10 marks)
Phase 2 : Repair and maintenance 60%	Discovery of the dysfunction (faults)	(15 marks)
	Operating mode	(15 marks)
	Exactitude of the repair/maintenance	(10 marks)
	Rapidity	(10 marks)
Total 100%		100 marks

NOTE TO THE EXAMINERS

Several dysfunctions are to be observed or are to be created on the following plumbing fixtures; a wash hand basin and, kitchen sink as indicated on the figure 1.



Methodology of examination:

A – Preparatory phase of the examination

The examiners are to create an enabling framework adopted to evaluate the candidates in function of the proposed fixtures. They have to ensure that there is running water in the workshop or any other plumbing space the examination is to take place.

B – Evaluation phase of the examination

The candidate is to choose from the ballot of each numbered dysfunctions to be treated as defined by the question paper. The ballot corresponding to the question paper is given to the candidate. :

C- Unfolding phase of the examination

Phase 1:

The candidate sits in a classroom to fill the technical sheet which is given to him by the examiner. He fills the sheet and returns to the examiner for evaluation in function of the marking scheme; time duration of phase 15minutes.

Phase 2:

- The examiners go to the working post and create a dysfunction which is context of the question paper on the plumbing fixtures or faucet, in the absence of the candidate.
- The candidate is called to diagnose the dysfunction and to repair it by putting it back into effective service. The examiner follows, observes and evaluates each stage of the maintenance process in function of the proposed marking guide. Time duration 45 minutes.

REMARKS:

- The three posts could be use simultaneously by the candidate in function of their individual choice in order to manage time.

The candidates who have already chosen their questions should be isolated from the rest of the candidates who are still to be evaluated and their question papers kept till the end of the examination session.

LIST OF MATERIAL TO BE SUPPLY BY THE EXAMINATION CENTRE

S/N	Designation	Quantity	N°	Designation	Quantity
01	Complete wash hand basin	01	07	Flexible connection pipe ND 15	02
02	Complete WC with its angle valve	01	08	Brass compression cap of Φ 16mm	03
03	Alu-plastic compression pipe of Φ 16	10 m	09	Brass compression couple of Φ 16	01
04	Brass compression Tee of Φ 16	03	10	Pipe clips	05
05	Simple faucet tap	01	11	Flexible connection pipe ND 15	02
06	Brass compression fitting of Φ 16	03	12	Plastic plugs of diameter 10mm	05