



# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of Jkuat)

*Faculty of Applied & Health Sciences*

DEPARTMENT OF PURE AND APPLIED SCIENCES

**CERTIFICATE IN SCIENCE LABORATORY TECHNOLOGY (CSLT 2010)**

**END OF SEMESTER EXAMINATION**

**LABORATORY PRACTICE**

**SERIES: AUGUST/SEPTEMBER 2011**

**TIME: 2 HOURS**

**Instructions to Candidates:**

You should have the following for this examination

- *Answer booklet*

Answer question **ONE (COMPULSORY)** and choose any other **TWO** questions

This paper consist of **TWO** printed pages

## QUESTION ONE

Explain the following:

- a) Methods or ways through which poisons can enter into a worker in the laboratory (8 marks)
- b) State any FOUR hazards related to use of cryogenic fluid (4 marks)
- c) Discuss the characteristic and use of:
  - i) Soft glass
  - ii) Hard glass(4 marks)
- d) Describe the care and maintenance of the following laboratory equipments.
  - i) Microscope (4 marks)
  - ii) Balance (4 marks)
- e) Hazards associated with cryogenic fluids (6 marks)

## QUESTION TWO

- a) Describe the safety precaution to be followed when working in a laboratory (14 marks)
- b) Explain safety precautions when using cryogenic fluid (6 marks)

## QUESTION THREE

- a) Name and explain the basic steps in glass ware manufacture (8 marks)
- b) Explain the following terms as used in glass blowing:
  - (i) Annealing (2 ½ marks)
  - (ii) Tempering (2 ½ marks)
  - (iii) Devitrification (2 marks)
  - (iv) Bloom (2 marks)
- c) Explain how a capillary tube can be made in a laboratory using a glass tubing (3 marks)

## QUESTION FOUR

- a) Draw and explain the working principle of single lens reflex camera (14 marks)
- b) Explain the care and maintenance of cameras (6 marks)

## QUESTION FIVE

- a) Draw and label a Dewar Vessel used to store liquid helium (6 marks)
- b) List FOUR uses of cryogenic fluids (4 marks)
- c) Describe safety precautions when working with cryogenic fluids (10 marks)