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)