**TECHNICAL UNIVERSITY OF MOMBASA**

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF PURE & APPLIED SCIENCES

# UNIVERSITY EXAMINATION FOR:

**DIPLOMA IN ANALYTICAL CHEMISTRY**

## DAC 15S

ACH 2211 : PHOTOGRAPHY AND CRYOGENIC TECHNIQUES

SPECIAL SUPPLEMENTARY EXAMINATION

**SERIES:** AUGUST 2017

**TIME:** 2 HOURS

**DATE:** Pick Date Select Month Pick Year

**Instructions to Candidates**

You should have the following for this examination

*-Answer Booklet, examination pass and student ID*

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

**Do not write on the question paper.**

---

## Question ONE

**(a) Briefly discuss the features of chloride type of print developing out paper. (8marks)**

**(b ) State FOUR types of film filters. (4marks)**

**(c)Explain features and use of wide angle photographic lens. (4marks)**

**(d) Discuss briefly panchromatic type of film (6marks)**

**(e) Define cryogenic fluids. (2marks)**

**(f) State THREE (i) groups of flammable hazards of cryogenic fluids. (ii) uses of cryogenic fluids. (6marks)**

**Question TWO**

**(a) Give THREE types of developing out paper and their emulsion coating. (6marks)**

**(b) State (i) THREE filters that are made from transparent plastics. (ii) THREE chief enemies of a camera.**

**(iii) THREE types of cryogenic fluids. (9marks)**

**Question THREE**

**(a) State (i) TWO ways of correcting " coma" a type of defect that occur in double convex lens. (4marks)**

**(ii)FIVE examples of inert gases that can be used as cryogenic liquids (5marks)**

**(b)Discus the following types of photographic lens. (i) Rectilinear lens (ii) Zoom lens (6marks)**

**Question FOUR**

**(a) Briefly discuss hyperpanchromatic type of film. (9marks)**

**(b) Give THREE (i) Examples of flammable gases that are used as cryogenic fluids**

**(ii) Health hazards associated with cryogenic fluids. (6marks)**

**Question FIVE**

**(a) Define the following terms associated with cryogenic fluids. (i) Cryosurgery. (ii) Cryoelectronic.**

**(iii) Cryobiology. (3marks)**

**(b) State THREE uses of cryogenic gases. (6marks)**

**(c ) State the sensitivity and use of the following developing out papers. (i) bromide (ii) chloride**

**(iii) chlorobromide. (6mrks)**