



# TECHNICAL UNIVERSITY OF MOMBASA

*Faculty of Engineering and Technology*  
**DEPARTMENT OF MEDICAL ENGINEERING**

DIPLOMA IN MEDICAL ENGINEERING  
(DME Y1 S2)

**EHL 2106**

**REFRIGERATION AND AIR CONDITIONING EQUIPMENT II**

END OF SEMESTER EXAMINATIONS

**SERIES:** APRIL/MAY, 2014

**TIME:** 2 HOURS

**INSTRUCTIONS TO CANDIDATES:**

-Question *ONE* is *COMPULSORY*.

-Attempt any other *TWO* questions.

This paper consists of **3 PRINTED** pages

### QUESTION ONE (COMPULSORY)

(a) Describe the following terminologies:-

Halogenated refrigerants

Zeotropic refrigerants

Azeotropic refrigerants. (6 marks)

(b) Describe any **FIVE** adverse effects to the Globe due to depletion of the Ozone (10 marks)

(c) Describe the **FOUR** types of “airs” in respect to an air conditioning unit. (8marks)

(d) Describe any **THREE** differences between a window type and a split unit air conditioning units (6 marks)

### QUESTION TWO

Write a technical procedure for a refrigerant recovery exercise. (20 marks)

### QUESTION THREE

(a) Describe any **FIVE** refrigeration equipment/instruments. (10 marks)

(b) Describe the **FIVE** sources/causes of heat loads in an-air conditioning unit (10 marks)

### QUESTION FOUR

Figure I represent a window type air conditioning unit.

(a) Name the 10 marked features. (10 marks)

(b) Describe its operating principle in 4 (a) (10 marks)

## QUESTION FIVE

- (a) List the **SEVEN** types of Filters found in air conditioning units. **(7 marks)**
- (b) Sketch and label a plenum element of an air conditioning unit. **(5 marks)**
- (c) Describe **FOUR** types of air conditioning units. **(8 marks)**