# TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MEDICAL ENGINEERING

**UNIVERSITY EXAMINATION FOR:**

DIPLOMA IN MEDICAL ENGINEERING (DME 315 Y2 S2)

**EHL 2207** : MEDICAL GASES SYSTEMS

END OF SEMESTER EXAMINATION

**SERIES:**APRIL2016

**TIME:**2HOURS

**DATE:**Pick DateSelect MonthPick Year

**Instructions to Candidates**

You should have the following for this examination

*-Answer Booklet, examination pass and student ID*

This paper consists of **FOUR** questions. Attempt any THREE questions.

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

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**Question ONE**

With the aid of a labelled sketch of a medical central Vacuum plant describe its operation (20Marks)

**Question TWO**

(a) Define the term "medical gases" (2Marks)

(b) Tabulate to show color coding identification for any FIVE medical gas cylinders (10Marks)

(c) Sketch and label a medical gases cylinder manifold system (8Marks)

## Question THREE

(a) Describes any FIVE maintenance concerns of an oxygen concentrator machine
(10 Marks

(b) Describe the FIVE effects/uses of medical gases
(10Marks)

## Question FOUR

(a) Describe any SIX alarm display status of a cylinder manifold system
(12Marks)

(b) Describe any FOUR methods that can be used to enhance the efficiency of an oxygen concentrator

(8Marks)

## Question FIVE

(a) List the FOUR classifications of medical/hospital gases giving respective example in each class type.
(8Marks)

(b) Describe the THREE principal requirements that a MPGVI plant systems must fulfill
(6Marks)

(c) A vacuum receiver has free air capacity of 220litres, if it subjected to a vacuum of 390mmHg determine the resultant volumetric throughput capacity.

(6Marks)