



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MEDICAL ENGINEERING

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN MEDICAL ENGINEERING

: EHL 2207 MEDICAL GASES SYSTEMS

END OF SEMESTER EXAMINATION

SERIES: AUGUST 2019

TIME: 2 HOURS

DATE: 12 Aug 2019

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 any **THREE** questions.

Do not write on the question paper.

QUESTION ONE

- (a) List any **FIVE** uses of medical compressed air in a hospital setup.

(10Marks)

- (b). Describe any **FIVE** harsh operating conditions under which an Oxygen Concentrator must work, as recommended by WHO.

(10Marks)

QUESTION TWO

- (a) Tabulate to identify in colour and shape the FIVE Centralized medical gases/vacuum at the wall terminal socket outlets.

(15marks)

- (b) List any FIVE Advantages of installing a Liquid Oxygen Plant (VIE) in a Hospital over a Cylinders System.

(5Marks)

QUESTION THREE

- (a) Describe all procedure involved in replenishing an exhausted cylinders manifold system

(14Marks)

- (b) List any SIX pre-qualification requirements for compressed air to acquire the term

“Medical Air”

(6 Marks)

QUESTION FOUR

- (a) Differentiate between:

- i. Ready Use Store and Main Cylinders Store
- ii. Emergency Cylinder Manifold System and Cylinder Manifold System

(8Marks)

- (b) Describe any THREE requirements/recommendations for each of the following

- i. Main Cylinders Store
- ii. Liquid Oxygen(VIE) Plant Compound

(12Marks)

QUESTION FIVE

- (a) With the aid of sketches describe the operation of a medical air twin drying columns.

(12 Marks)

- (c) Describe any FOUR special storage requirement for each of the following

- i) Cyclopropane
- ii) Entonox.

(8 Marks)