



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MEDICAL ENGINEERING

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN MEDICAL ENGINEERING

EHL 2206: STEAM SYSTEMS

END OF SEMESTER EXAMINATION

SERIES: AUGUST 2019

TIME: 2 HOURS

DATE: Pick Date AUGUST 2019

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of Choose No questions. Attempt Choose instruction.

Do not write on the question paper.

Question ONE

a) Figure 1 shows a vertical Autoclave. Name parts marked from 1 to 9 and state the function(s) of each part **18 Marks**

b) With the aid of a sketch, explain the **THREE** methods used to remove/expel air from an autoclave **12 Marks**

Question TWO

In condensate removal from steam line the phrase “steam trap set” is commonly used. Using Standard symbols, sketch the components in their respective positions(in the steam trap set) which comprise steam trap set and state the function(s) of each component **20 Marks**

Question THREE

a) Differentiate the following:-

- i) Steam trap
- ii) Steam separator **4 Marks**

b) Explain any **TWO** reasons why steam is widely used for both heating and drying processes **8 Marks**

c) Describe any **FOUR** considerations for selection of an appropriate disinfectant **8 Marks**

Question FOUR

a) Explain the **THREE** factors which should be considered when selecting/choosing the appropriate steam trap for a condensate removal process **9 Marks**

b) In many cases, the condensate is returned or recycled to the boiler. Explain the advantages of doing so **11 Marks**

Question FIVE

a) With the aid of a diagram/graph, explain the Ethylene Oxide sterilisation process **10 Marks**

b) Using a graph, explain the microbial growth and decline **10 Marks**

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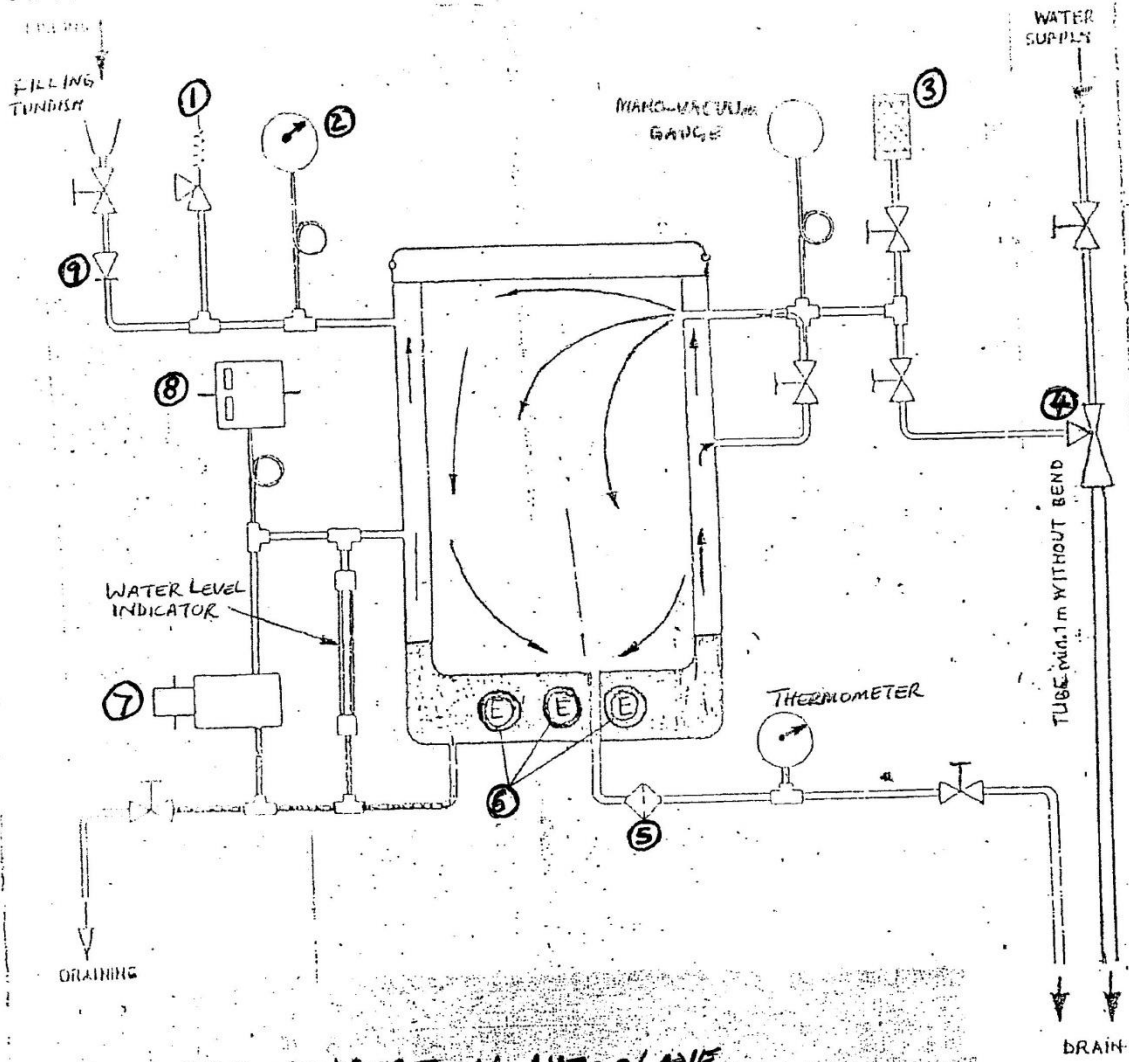


FIG. 01: VERTICAL AUTOCLAVE