



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MEDICAL ENGINEERING

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN MEDICAL ENGINEERING

EHL 2203: HOSPITAL SERVICE SYSTEMS

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2016

TIME: 2 HOURS

DATE: 9 Dec 2016

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

1. a) Considering structural design, explain the **THREE** types of washing machines **10 Marks**
- b) With reference to water quality, explain the following:-
- i) Pure water
 - ii) Clean water
 - iii) Hard water
 - iv) Soft water
 - v) PH **10 Marks**
- c) Describe the uses of the following fittings:-
- i) Union
 - ii) T-Joint
 - iii) Nipple
 - iv) Socket
 - v) 90° Elbow **10 Marks**

Question TWO

- a) Explain the **SIX** important functions of a pump **12 Marks**
- b) Figure 1 shows a double – acting piston pump. Explain how the pump works during pumping process **8 Marks**

Question THREE

- a) Outline the events in the automatic machine washing process **8 Marks**
- b) Differentiate between the following as applied in washing machines:-
- i) Control and automatic control
 - ii) Washing machine and Tumbler drier
 - iii) Pre-wash and main wash **12 Marks**

Question FOUR

- a) State the function(s) of the following
- i) Valve
 - ii) Tap **4 Marks**
- b) Differentiate any **FOUR** materials from which pipes are made from **12 Marks**
- c) Describe the **FOUR** safety examinations that must be done on drinking water **4 Marks**

Question FIVE

a) Describe any **FIVE** groups of tools for plumbing

10 Marks

b) Describe the following washing machine processes/parts

i) Tumbling

ii) Spinning

i) Solenoid valve

ii) Load

iii) Detergent

10 Marks

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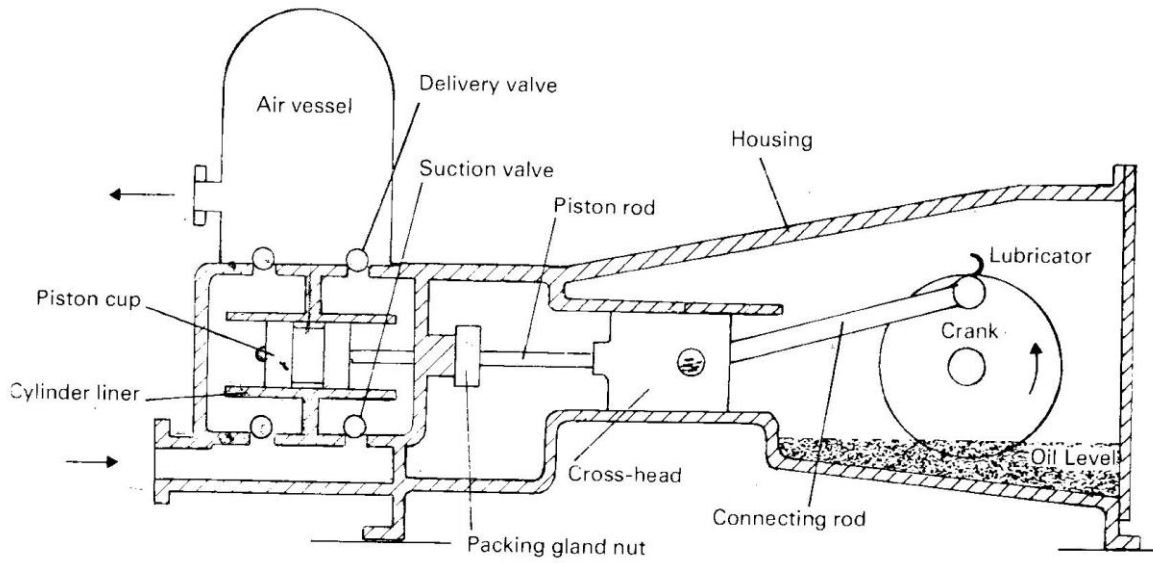


Figure 1: Double – acting piston pump