TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MEDICAL ENGINEERING

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN MEDICAL ENGINEERING

(DME 224 Y3 SII)

ECL 2307: ANAESTHESIA & RESPIRATORY EQUIPMENT

END OF SEMESTER EXAMINATION

SERIES:APRIL2016

TIME:2HOURS

DATE:9May2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attemptquestion ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Question ONE

a) Draw a graphical representation of human spontaneous breathing and show the **EIGHT** static lung volumes **18 Marks**

b) Explain the function(s) of the upper respiratory system/track of human being **6 Marks**

c) List and explain the **THREE** parameters which most gas laws relate to **6 Marks**

Question TWO

a) Explain the **FOUR** functions of the lower respiratory systems/track **12 Marks**

b) List and explain the **TWO** functions of flowmeters/rotameters **8 Marks**

Question THREE

a) List and explain the **TWO** types of vapourisers **8 Marks**

b) Figure 01 shows **THREE** stages of Boyle's vapouriser.

i Name parts marked **1, 2 and 3** **3 Marks**

ii Systematically explain each stage **9 Marks**

Question FOUR

a) List and explain any **FOUR** factors which influence the rate of vapourisation of anaesthetic agent **12 Marks**

b) List and explain the **FOUR** broad physical properties of anaesthetic agents **8 Marks**

Question FIVE

Figure 02 shows technical parts of an anaesthetic machine. Name and explain the function(s) of each of the parts indicated from **1 to 7** **20 Marks**

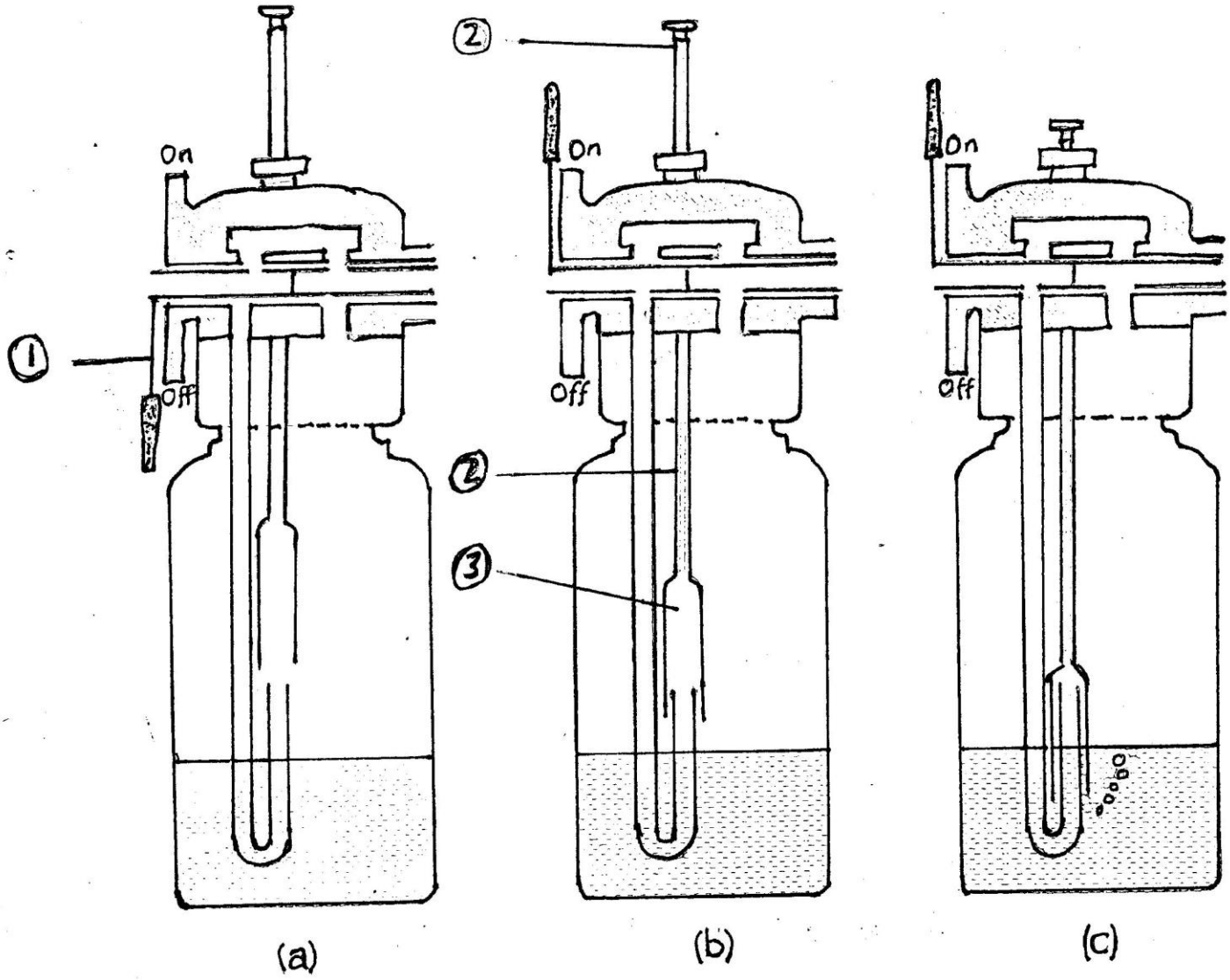

FIG. 01

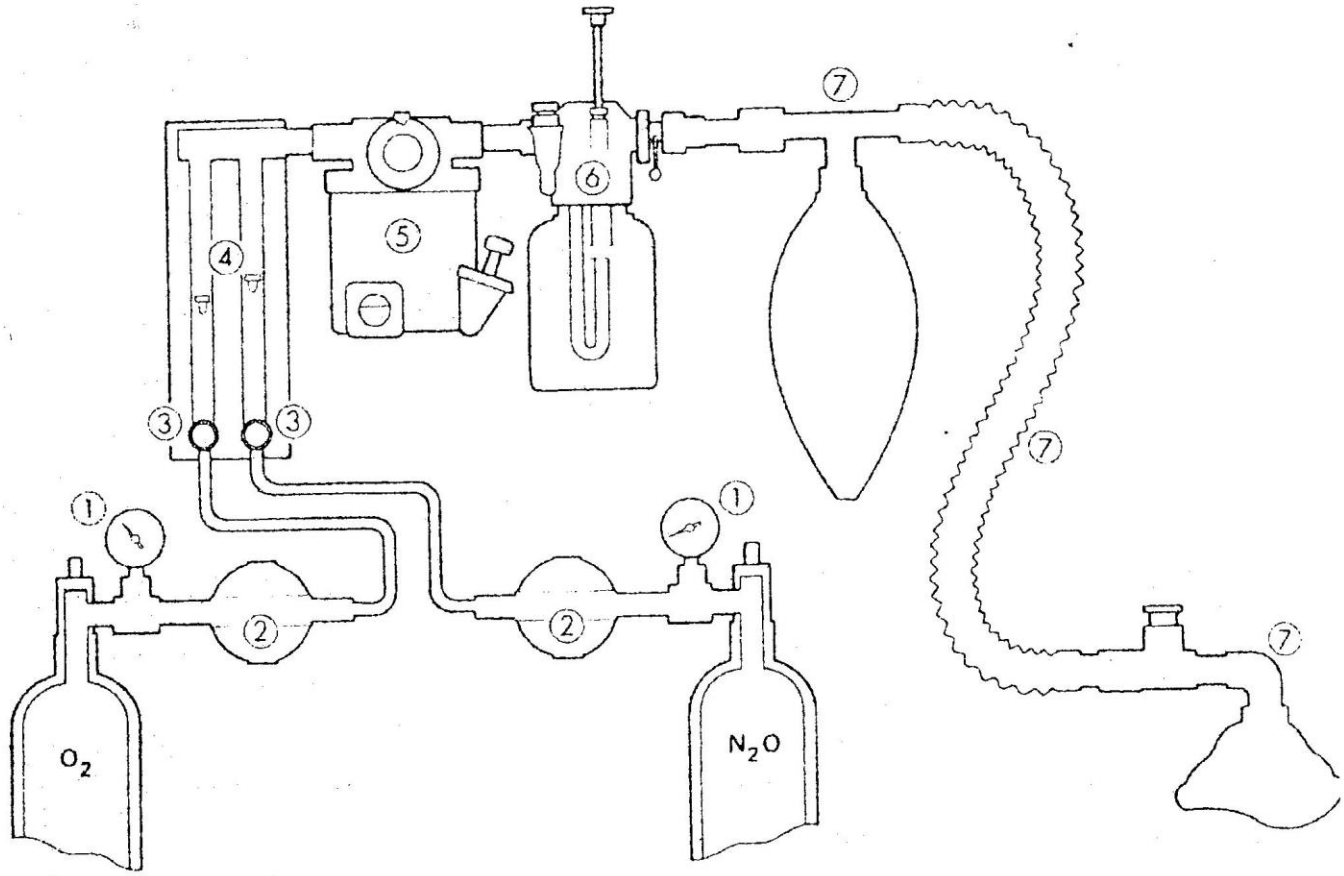

FIG. 02: ANAESTHETIC MACHINE.