Date: **Reg. No.**

QUALITY CHECK FOR SOFT DRINKS

Apparatus Required:

- Travelling microscope
- Transparent liquid (water)
- Reading lens
- Glass beaker
- Pin
- Saw dust

SLO:

To determine the refractive index of the given transparent liquid using travelling microscope

To determain the refractive index of impured liquid

Formula:

The refractive index of liquid

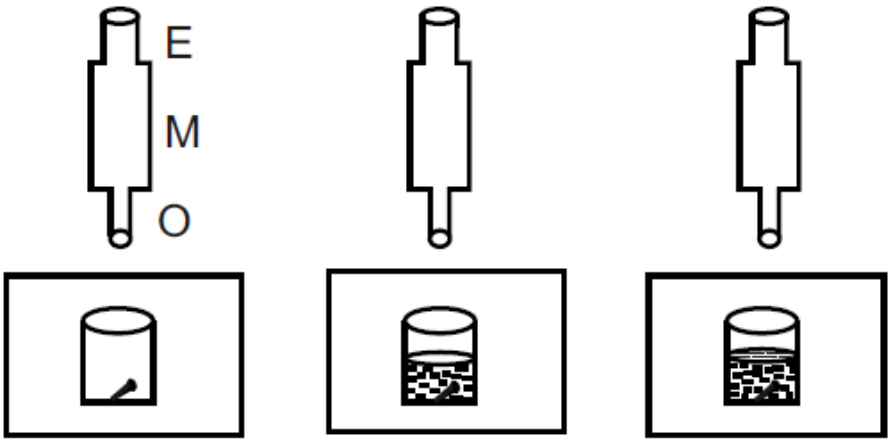
$$\mu = \frac{\text{Real depth of the liquid}}{\text{Apparent depth of the liquid}} = \frac{(C - A)}{(C - B)} \quad \text{(No Units)}$$

where

A is the microscopic reading when tip of the pin is focused directly

B is the microscopic reading when tip of the pin is focused through the liquid

C is the microscopic reading when saw dust sprinkled on the surface of the liquid is focused



(A) (B) (C)

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able 1				**Least count of travelling microscope = _____**								
Volume of water in the beaker	Clear image of tip of the pin **(Reading A)**			lear image of tip of the pin seen through the liquid **(Reading B)**			Clear image of the saw dust scattered on the surface of liquid. **(Reading C)**			C-A	C-B	
	MSR ( )	VSR ( )	OR ( )	MSR ( )	VSR ( )	OR ( )	MSR ( )	VSR ( )	OR ( )			
40 ml												
60 ml												
											Mean	

VSR = VSC × LC ; **O**bserved **R**eading = MSR + VSR

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Result:

Refractive index of the given liquid (water) is found to be_____ (Units)