Class 9 (physics)

Exercise 1 B – Numerical

Q.10. The thimble of a screw gauge has 50 divisions. The spindle advances 1mm when the screw is turned through two revolutions.

    (i) What is the pitch of screw gauge?

    (ii) What is the least count of the screw gauge?

Solution:

    (i) The screw moves by 1mm and its circular scale has 50 divisions,

    Then,   pitch = ½ mm

                               = 0.5mm

    (ii) L.C = PITCH/NUMBER OF DIVISION OF CIRCULAR SCALE.

           = 0.5/50

           = 1/100

           = 0.01mm.

Q. 11. The pitch of a screw gauge is 1mm and its circular scale has 100 divisions. In measurement of the diameter of a wire , the main scale reads 2mm and 45th mark on circular scale coincides with the base line. Find:

i) The least count, and

ii) The diameter of the wire.

Solution:

Given,

PITCH = 1mm   M.S.R = 2mm

N   = 100   p = 45

i)   L.C = PITCH/N

= 1/100

= 0.01 mm or (0.001cm)

ii)   Diameter of the wire = M.S.R + C.S.R

= 2mm + P X L.C

= 2mm + 45 x 0.01mm

= 2.45mm (0.245cm)

Assignment:

Exercise 1: B

Q. No – 19, 21 and 22

Numerical - Q. No - 9,12and 15