**Chapter 14 - MEASURING INSTRUMENTS**

1. Pitch = Distance travelled on the pitch scale

No.of rotations of the head scale

1. Least Count (L.C) = Pitch

No.of divisions on the head scale

**Chapter 15 - LAWS OF MOTION AND GRAVITATION**

1. p = mv

Where p is momentum

m is mass

v is velocity

SI unit of momentum is kg ms-1

1. Rate of change of momentum = Change of momentum = m(v-u)

time t

1. F = ma

Where F is Force and m is mass and a is acceleration

S.I unit of force is Newton

1. m1u1 + m2u2 = m1v1 + m2v2

1. Moment of force = F x d

The unit of moment of force is N m

1. F = Gm1m2

d2

Where G is Gravitational Constant and its value is 6.673×10-11 Nm2kg-2

1. g = GM

R2

Where g is gravity and R is radius of earth

**Chapter 16 - ELECTRICITY AND ENERGY**

1. I = Q

t

Where I is current and its Unit is Ampere (A)

Q is electric charge and its unit is Coulomb (C)

1. Potential difference (V) = Work done

Charge

Or

V = W

Q

S.I Unit of potential difference is volt (V)

1. V = IR

Where V is Potential difference and I is current and R is resistance

The Unit Of Resistance is Ohm

1. Resistors in Series

Rs = R1 +R2 +R3

Resistors in parallel

1 = 1 + 1 + 1

Rp R1 R2 R3

1. Q = It

Where Q is electric charge and I is current and t is time

1. H = I2Rt

Where H is heat and its S.I. Unit is Joule

1. P = VI

Where P is Power and Its S.I Unit is Watt (W)

1. E = mc2

Where E is energy and its Unit is Joule

M is mass and its unit is kg

c is speed of light and its value is 3 X 108 ms-1

**Chapter 17 - MAGNETIC EFFECT OF ELECTRIC CURRENT AND LIGHT**

1. Mirror Formula

1/v + 1/u = 1/f

Where u is object distance

V is image distance

F is focal length

1. μ = sin i

sin r

Where μ is refractive index and i is the angle of incidence and r is the

angle of refraction

1. R= 2f
2. m = Height of the image (h′) = v

Height of the object (h) u

1. P = 1

F

Where P is power of lens and its unit is Dioptre

1. Lens Formula

1 = 1 - 1

f v u