## of tect? (1PHYSICS SSC - I

Time allowed: 2.45 hours

Total Marks: 53

Note: Answer all parts from Section 'B' and all questions from Section-C on the E-sheet.

Write your answers on the allotted / given spaces.

SECTION - B (Marks 33)

Q.2: Attempt all parts from the following. All parts carry equal marks.

(11×3=33)

Identify base and derived quantities from the following:

Volume

Electric Potential

Amount of a Substance

Work Electric Current

Temperature

- Subject - 5 OR 3-10

What do you mean by zero error? How can we calculate errors in case of screw gauge?

1

A car is moving with velocity 'v'. On applying brakes, it comes to rest. Write down three changed equations of motion for the car.

OR

Sketch and tell what do you infer from the graph if an object is moving with uniform acceleration?

**III.**/

Compare circular and rotatory motions with the help of daily life examples.

Are these terms different / same from each other? How?

OR

What happens to speed, velocity and acceleration when an object moves in a circle with uniform speed?



A bullet of 5 gm is fired from a pistol of 1.5 kg. If the recoil velocity of pistol is 1.5 m/s, find the velocity of bullet? 443-28 -

OR

On a mountain peak, the weight of a boy is 360N. If his mass on the surface of the earth is 40kg then calculate the value of 'g' on the mountain peak.



Why it is unsafe to drive a vehicle with worn-out tyres?

OR

Is rolling friction less than sliding friction? In which case do you need smaller force to move the object and why?

W.

What is the difference between states of equilibrium in case of pencil in vertical and horizontal positions? Why it is so?

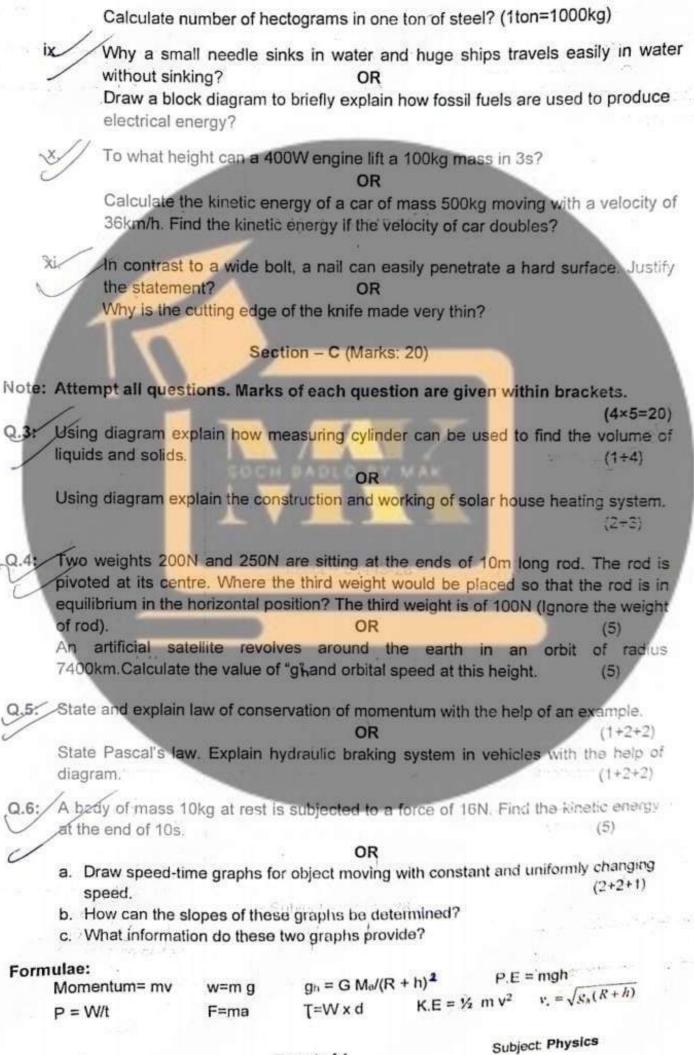
What will be the net torque in the situation if two children are sitting on the see-saw such that they cannot swing?



Communication satellites appear to be stationary with respect to earth. Why?

What do you mean by gravitational field strength? Does it vary from place to place? Write its value near the surface of earth.

viii. At what altitude the value of g would become one ninth of its value on the surface of earth?



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