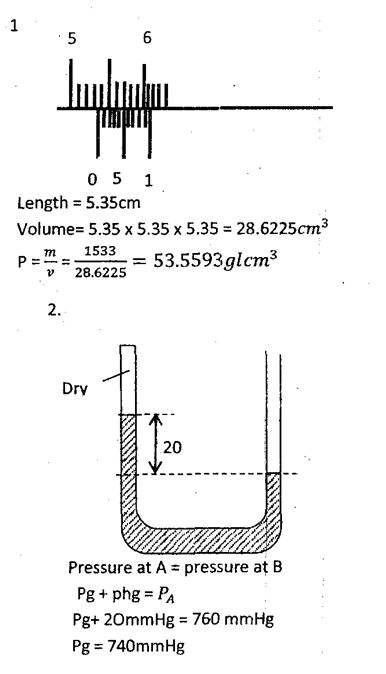
MWAKICAN JOINT EXAMINATION TEAM-MJET

PHYSICS PAPER 1

MARKING SCHEME

FORM 4 2016



**10**

🗸

🗸

🗸

2 cm

Total pressure = atm + ρgh 🗸

= 760mmHg+20mmHg🗸

= 780mmHg🗸

3. This breaks the surface tension🗸of water running over the canvas tent hence increasing adhesive force so

that the tent leaks.

4. Cohesive forces are stronger in solids than in liquids🗸

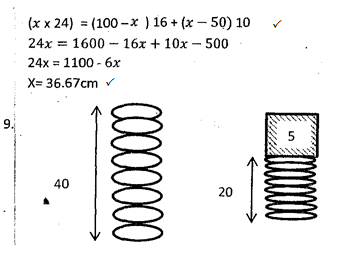
5. In case of fire outbreak, the temperature increases, brass expands more than iron. 🗸

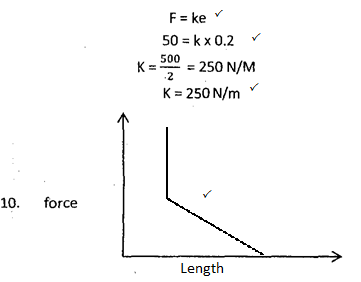
The bimetallic strip bends towards the iron side and makes the contact. 🗸

This completes the circuit causing the electric bell to ring.

6. The metallic chair is a good conductor of heat and gains heat faster🗸 than the wooden bench, which is a poor conductor of heat🗸

7. For a system in equilibrium, the sum of clockwise moments is equal to the sum of anticlockwise moments🗸

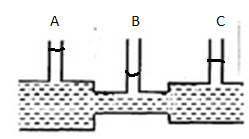




11. The length of the spring reduces as the masses are added until it cannot reduce anymore🗸

12. For a fluid that is non-viscous incompressible and the flow is streamline, then an increase in velocity causes a corresponding decrease in pressure it exerts. 🗸

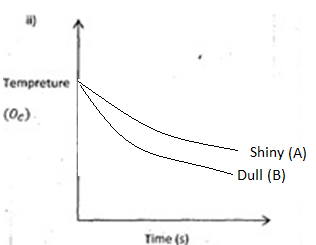
13. a.

 🗸

b. Water level in manometer B is lower than the levels in manometer A and C. Water level in manometer A is the highest hence high pressure compared to B and C. 🗸

14. i. B will have a higher temperature than the water in A. Dull surfaces are good obsorbers of heat

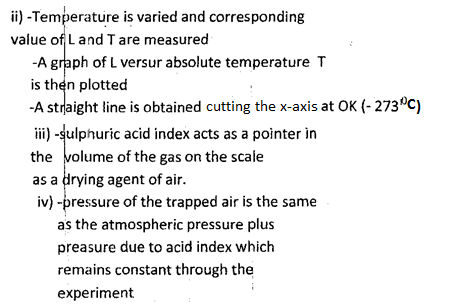
ii.

🗸

15. a. For a fixed mass of gas volume is directly propotional to absolute temperature provided pressure is kept constant. 🗸

b. i) - Length of the air column trapped / volume of air (L) 🗸

- Temperature of the water bath🗸



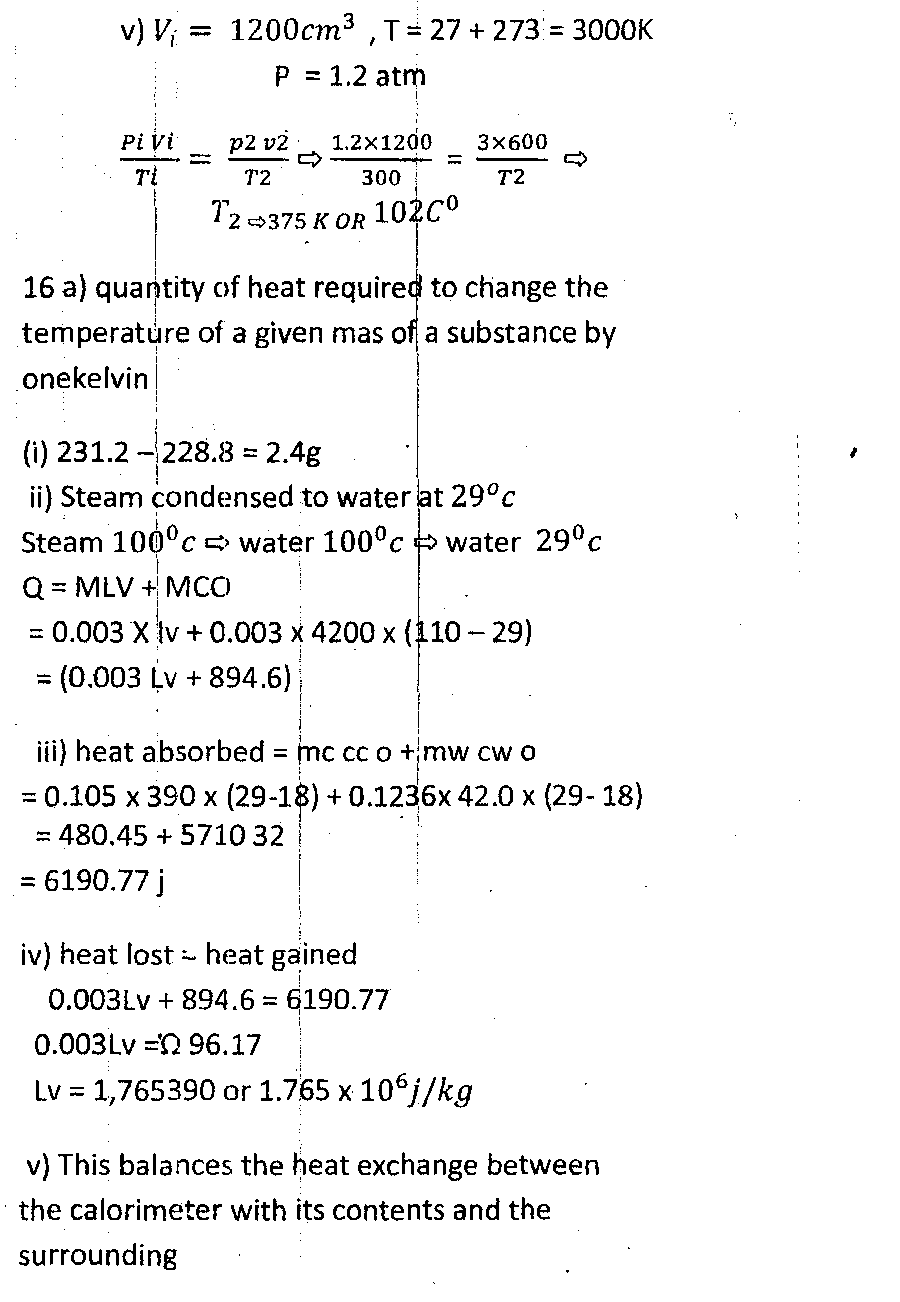
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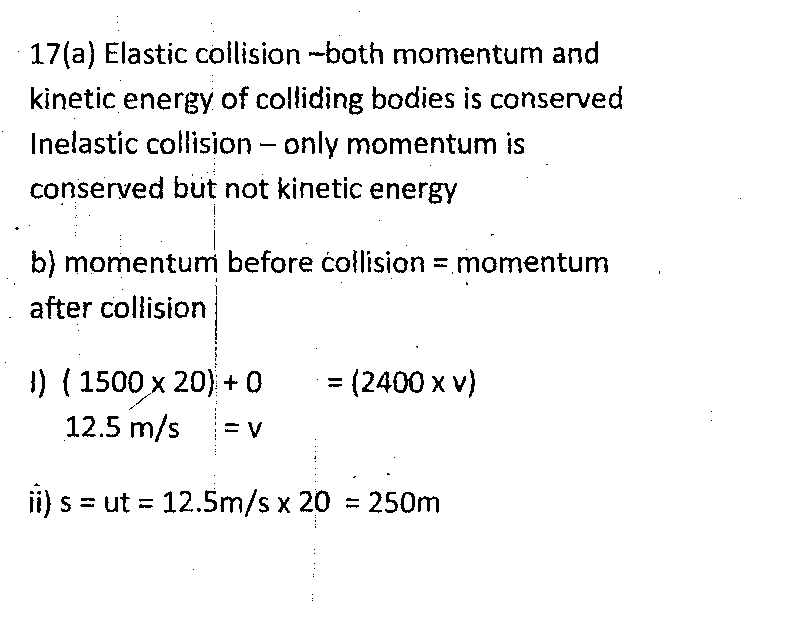
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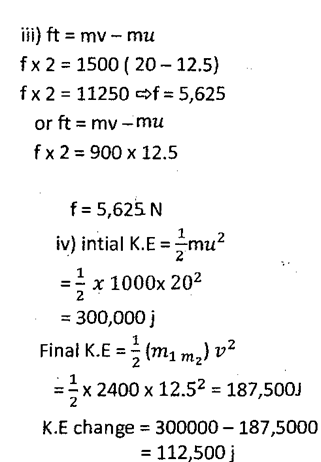
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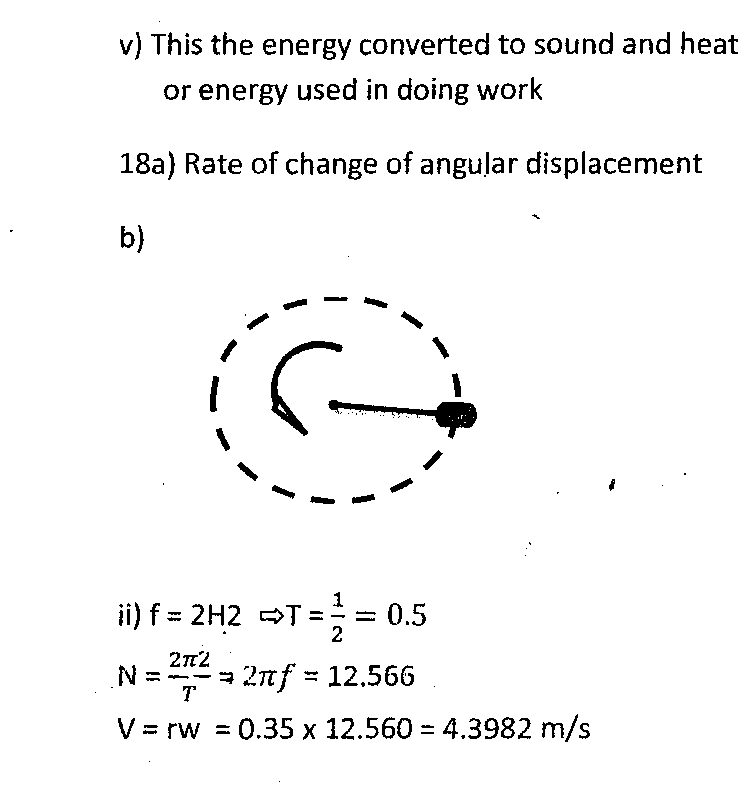
🗸



1020c







**F**

ii) f=2Hz

ω= 2

= 2 x 3.142x2

= 12.56

V= r ω

= 0.35 x 12.56

= 4.3982m/s

