

## F1 PHYSICS ASSIGNMENT MAY 2020

1. Define pressure and state its S.I unit.  
(2mks)
2. State the reason why it may not be possible to suck liquid into your mouth using a drinking straw on the surface of the moon. (1mk)
3. Explain why stiletto heel sink further into the ground compared to normal shoes.  
(2mks)
10. Explain why walking on a murrum road in bare feet is more painful than walking on sand.  
(2mks)
  4. The total weight of a car with passengers is 25000N. The area of contact of each of the FOUR tyres with the ground is  $0.025\text{m}^2$ .  
  
Determine the
    - i.) minimum car tyre pressure.
    - ii.) Maximum car tyre pressure
5. The lift pump is effective for pumping water as long as the well is less than 10m deep. Explain.
6. The reading on a mercury barometer at Mombasa is 760mm. Calculate the pressure at Mombasa (density of mercury =  $1.36 \times 10^4 \text{ Kg m}^{-3}$ )
8. State the three factors upon which the pressure in liquids depends. (3mks)
9. State any two instruments that can be used to measure pressure. (2mks)
10. State one property of a barometer liquid and explain its effects.
11. A box weighs 400N and its base has an area of  $2\text{m}^2$ . Calculate the pressure exerted on the ground. (2mks)
12. The height of the mercury column in a barometer at a place is 74cm. What would be the height of a column of a water barometer at the same place? (Density of mercury is  $13.2\text{g/cm}^3$  and water  $1\text{g/cm}^3$ .) (3mks)