

ii. Area of the patch covered by the oil(2mks)

iii. Length of the molecule(2mks)

6. Define the term moment of a force about a point and its SI units.(2mks)

7. A uniform meter rule is balanced by masses 20g and 80 g hung from its ends. Find the position of its pilot.(2mks)

8. A water wave travels 2m in five seconds. If the frequency of the wave is 10Hz, calculate:
a) speed of the wave(2mks)

b) Wave length of the wave.(2mks)

9. A pupil standing between two parallel cliffs yelled once. She hears one echo after one second and another after 4 seconds

a. If the distance between the cliff is 840m , calculate the speed of sound in air(3mks)

b. What is the distance of the pupil from one of the cliffs(2mks)

10. Differentiate between streamline flow and turbulent flow? (2mks)

11. A pipe has a cross-section area of 49cm^2 at one end and cross-sectional area of 16cm^2 at the other end. If water gets in the pipe through the wider end with velocity of 7m/s. Calculate the velocity of water at narrow end.(3mks)

12. Differentiate between volume flux and mass flux.(2mks)

13. State and explain two dangers of Bernoulli's effect.(3mks)

14. A body moves 3000 meters due east in 40s then 4,000 due north in 60s. calculate.(4mks)
Its average speed

Its average velocity for the whole journey

15. A ball is thrown from the top of cliff 40m height with a horizontal velocity of 20m/s calculate:

(a) The time taken by the ball to strike the ground.(2mks)

(b) The distance from the foot of the cliff to where the ball strikes the ground.(2mks)

(c) The vertical velocity at the time it strikes the ground (take $g = 10\text{m/s}^2$)(2mks)