FORM FOUR PHYSICS:OPENER TERM 1 2016

1.List three factors that affect the spring constant.(3mks)

2.List two factors affecting surface tension.(2mks)

3.Give the difference between a scalar and a vector quantity and give examples for each.(2mks)

4.State the principle of moments.(1mk)

5.Give the difference between unstable and neutral equilibrium.(2mks)

6.A uniform metre rule is pivoted at its centre. A force of 65N is applied at a point which is 15cm from one end of the rule. What is the moment of the force? (3mks)

7.Explain why a matatu is more likely to topple over when the roof rack is heavily loaded than when the roof rack is empty.(2mks)

8.State Hooke’s law.(1mk)

9.Define the following;

a)wave (1mk)

b)pulse (1mk)

c)amplitude (1mk)

d)frequency (1mk)

e)period (1mk)

10.a)Define an echo (1mk)

b)State two practical applications of echo sounding under water (2mks)

c)State three factors that determine the pitch of sound from a stringed instrument. (3mks)

d)A young boy claps his hands once at a distance of 500m from a vertical cliff.If the temperature of the surrounding is 100c, how long does it take for him to hear the echo? ( 3mks)

11.Define the following terms

a)streamline flow (1mk)

b)turbulent flow (1mk)

c)Dynamic lift (1mk)

12.List three assumptions necessary to derive the Bernoulli equation. (3mks)

13.State three applications of Bernoulli’s effect. (3mks)

14.State the equation of continuity as applied in fluid flow.(2mks)