FIRST TERMINAL EVALUATION 2015

STD: IX   PHYSICS   ANSWER KEY

1. Kgm/s

2. Force

3. Frequency is the reciprocal of period

4. C

5. Uniform accelerations

6. i) Force of attraction doubles   ii) Force decreases by ¼ times

7. a) Poles   b) Equator

8. Shorten the length of pendulum, period of pendulum increases with increase in length of pendulum

9. To decrease the rate of change of momentum, hence the force experienced on the body deceases and thereby reduces the impact

10. Coconut with greater in mass, because when the mass of object increases the momentum caused by it also increases

11. (C) Because the force of attraction between two bodies is mutual. Every object in the universe attracts every other object with the same force according to the Newton's law of universal gravitation.

12. Momentum is a characteristic feature of objects in motion. Here the momentum of bullet is greater when it is fired from a gun because of its greater velocity. Velocity is the factor depends on the momentum of object.

13. a) 'A' has higher period and 'C' has higher frequency.   b) As the length of pendulum increases, the period of pendulum increases and frequency decreases

14. a) 4m   b) 6/0.3 = 20Hz   c) v=fλ = 20x4 = 80m/s

15. a) Longitudinal wave   b) Transverse wave   c)

Transverse wave	Longitudinal wave
Particles of the medium vibrates parallel to direction of propagation of wave	Particles of the medium vibrates parallel to direction of propagation of wave
Forms crusts and troughs in the medium	Forms a series of compressions and rarefactions

16.**A**

a) p=mu =0.6x10 =6 Kgm/s

b) p=mv =0.6x0   =0 Kgm/s

c) Rate of change of momentum = change of momentum / time

   = (6-0) / 10 =0.6Kgm/s^2

B

Given, m=0.2kg, u=200m/s, v=0, s=2m

 We know, the equation of motion, $v^2=u^2+2aS$

ie, $0^2=200^2+(2xax2)$,

0=40000+4a,

a=-40000/a,

 ie, a=-10000 m/s^2

17.a) action: backward force on the boat

    reaction: motion of jumper

  b) action: recoil of gun

   reaction: motion of shot

  c) action: backward force on water

    reaction: motion of swimmer

  d) action: release of air from balloon

    reaction: motion of balloon