

Second Term EXAM 2019 Physics Answer Key

Q.1 - kgm/ s

Q.2 - Instrument B

Q.3- 4

Q.4- Figure 2

Q.5 0

Q.6

INERTIA OF REST	INERTIA OF MOTION
AN athlete run some distance before taking long jump	When a carpet is suspended and hit with a stick dust particles come out
When a moving bus is suddenly stopped the passengers fall forward	When the branches of mango tree is shaken mangoes fall just as when branches start moving

Q.7 .a, $a = (v - u / t) = (25 - 15 / 5) = 2 \text{m/ s}^2$

b. $F = ma = 5 \times 2 = 10 \text{N}$

Q.8 .a, Both of them reach simultaneously

b. Acceleration due to gravity doesn't depend on mass

Q.9 $W = mgh = .250 \times 10 \times 1 = 2.5 \text{J}$

Q.10 a, Mass, Acceleration due to gravity

Q.11

A	B	C
INERTIA	Newton first law of motion	mass
IMPULSE	change in momentum	Ns
FORCE	Newton second law of motion	kgm/ s

Q 12

a, passengers show tendency to move forward .

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b, To increase time to reduce force

c, Action and reaction take place in 2 bodies

Q.13, a, The motion of stone dropped from height

b, 0. The weight is used to accelerate the body.

Q.14 a, Mass

b, $KE = \frac{1}{2}mv^2 = \frac{1}{2} \times 30 + 10 \times 4 = 80J$

15. a, uniform motion of body towards circular path

b, A needed of clock, pendulum etc...

16. a, 35 kg m/s

b, 7 m/s

c, Law of conservation of momentum

Q.17 a, Force, displacement

b, Joule

C, cricket ball move forward

. A trolley is being moved by pushing it

Q.18 . a, No

b, 0

c, A. At poles radius is less and g is more.

Q.19 a, Action - The bullet move forward

Reaction - The gun recoil

b, $m = 2 \text{ kg}$ $M = 4 \text{ kg}$ $v = 40 \text{ m/s}$

$V = \frac{mv}{M} = \frac{2 \times 40}{4} = 20 \text{ m/s}$

Q.20 a, 4 times

b, All the bodies in earth attract each other. There is a mutual reaction between all bodies in earth.

c, $F = G \frac{m_1 m_2}{d^2} = G \frac{20 \times 40}{4 \times 4} = G \frac{800}{16} = 50N$

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