



PHYSICS

BOOKS - MTG IIT JEE FOUNDATION

FOOTSTEPS TOWARDS NEET

Mcq

1. A vehicle travels half the distance (L) with speed V_1 and the other half with speed V_2 , then its average speed is .

A. $\frac{v_1 + v_2}{2}$

B. $\frac{2v_1 + v_2}{v_1 + v_2}$

C. $\frac{2v_1v_2}{v_1 + v_2}$

D. $\frac{(v_1v_2)}{v_1 + v_2}$

Answer: C



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2. A tank with length 10 m. breadth 8 m and depth 6 m is filled with water upto top . If

$g = 10 \frac{m}{s^2}$. And density of water = $\frac{1000kg}{m^3}$,

then the thrust on the bottom is:

A. $(48 \times 10^5) N$

B. $(38 \times 10^4) N$

C. $(18 \times 10^5) N$

D. $(24 \times 10^5) N$

Answer: A



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3. A toy car released with the same initial speed will travel farthest on

A. muddy surface

B. polished marble surface

C. cemented surface

D. brick surface.

Answer: B



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4. A cyclist moving on a circular track of radius 40 m completes half a revolution in 40 s. Its average velocity is

A. zero

B. $4\pi m s^{-1}$

C. $2m s^{-1}$

D. $8\pi m s^{-1}$

Answer: C



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5. Phon is a unit of

A. Wavelength

B. Loudness

C. Frequency

D. Intensity

Answer: B



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6. If a body is charged by rubbing it , its weight

A. remains precisely constant

B. increases slightly

C. decreases slightly

D. may increase slightly or may decrease slightly

Answer: D



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7. Shockwave of earthquakes are called

A. seismic waves

B. spectra waves

C. transverse waves

D. longitudinal waves

Answer: A



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8. A table clock has its minute hand 5 cm long.

Find the average velocity of the minute hand

between 6:00 a.m. to 6:30 a.m.

A. $11 \times 10^{-5} m / s$

B. $5.5 \times 10^{-5} m / s$

C. $9 \times 10^{-5} m / s$

D. $18 \times 10^5 m / s$

Answer: B



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9. Which of the following part protects the eye and gives it shape?

A. Choroid

B. Sclera

C. Yellow spot

D. Ciliary muscles

Answer: B



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10. An ideal mirror

- A. absorbs all the amount of light incident on it
- B. refracts all the light
- C. reflects all the light
- D. none of the above

Answer: C



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11. The one which is not the unit of pressure is

A. newton per square metre

B. pascal

C. dyne per square centimetre

D. kilogram metre per square second.

Answer: D



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12. Which of the following statement about a maglev train is/are not true?

(i) A maglev train does not have wheels.

(ii) Magnets in the track and on the bottom of the train repel to lift up the train above its track.

(iii) Magnetic forces of attraction are used to reduce friction.

(iv) Gravity does not act on a moving maglev train.

A. (ii) and (iv)

B. (i) and (ii)

C. (i), (ii) and (iv)

D. (iii) and (iv)

Answer: D



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13. Which of the following is correct?

A. Only liquids exert pressure.

B. Liquids exert pressure not only at the bottom but also on the sides of the vessel in which they are contained.

C. Only solids exert pressure.

D. Solids exert pressure not only at the bottom but also on the sides of vessel in which they are contained.

Answer: B



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14. If the temperature of a patient is $40^{\circ}C$ his temperature in the Fahrenheit scale will be

A. $118^{\circ}F$

B. $113^{\circ} F$

C. $120^{\circ} F$

D. $115^{\circ} F$

Answer: B



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15. An exploding star may be called

A. Nova

B. Supernova

C. Protostar

D. Neutron star

Answer: B



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16. How many prominent stars are there in the constellation Great Bear?

A. 6

B. 8

C. 7

D. 5

Answer: C



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17. Teflon is used for "non-stick coating in utensils like frying pans because it is a material that offers

A. very large friction

B. very little friction

C. no friction at all

D. none of these

Answer: B



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18. If magnitude of the earthquake measured in Richter scale is 6.7 then the earthquakes is

A. unnoticed

B. felt but not damaging

C. moderate

D. severe

Answer: C



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19. Which of the following is an example of fluid friction?

A. Girl pulling a trolley.

B. A man pushing a stationary box.

C. Trying to pour honey in bottle.

D. All of these.

Answer: C



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20. One sec is defined to be equal to :

A. 1650763.73 periods of the Krypton clock

B. 652189.63 periods of the Krypton clock

C. 1650763.73 periods of the Cesium clock

D. 9192631770 periods of the Cesium clock.

Answer: D



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21. Which of the following is the example of high pitch sound?

A. Buzzing of mosquitoes

B. Beating of a drum

C. Roar of a lion

D. None of these

Answer: A



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22. Which of the following is correct regarding emitted range of frequency of sound?

A. Dolphin - Infrasonic sound

B. Bats - Sonic sound

C. Whale - Infrasonic sound

D. Elephant - Ultrasonic sound

Answer: C



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23. Which of the following is expected to be the best absorber of sound?

A. Cemented wall

B. Wool

C. Wood

D. Metal

Answer: B



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24. The numerical ratio of average velocity to average speed is

A. always less than one

B. always equal to one

C. always more than one

D. equal to or less than one.

Answer: D



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25. In a cell, electrons move from

A. positive electrode to negative electrode

B. negative electrode to positive electrode

C. both (a) and (b)

D. electrons do not move and only negative charge moves from one place to another place.

Answer: B



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26. The electrolyte in dry cell is

A. copper sulphate

B. zinc sulphate

C. sulphuric acid

D. ammonium chloride.

Answer: D



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27. A force of 16 N is distributed uniformly on one surface of a cube of edge 8 cm. The pressure on this surface is:

A. 3500 Pa

B. 2500 Pa

C. 4500 Pa

D. 5500 Pa

Answer: B



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28. The temperature of the sun is measured with

A. platinum thermometer

B. gas thermometer

C. pyrometer

D. vapour pressure thermometer.

Answer: C



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29. When current is passed through molten sodium chloride

A. sodium is deposited at the positive electrode and chlorine gas is formed at the negative electrode

B. sodium is evaporated and chloride ions are formed at the negative electrode

C. sodium is deposited at the positive electrode and chlorine is deposited at the negative electrode

D. sodium is deposited at the negative electrode and the chlorine gas is formed

at the positive electrode.

Answer: D



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30. Lithosphere is broken up into number of plates called

A. seismic plates

B. fault plates

C. tectonic plates

D. none of these

Answer: C



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31. A truck and a car are moving with velocity v towards each other. They collide head in and stops after some time. If the time of collision is 1 sec, which vehicle will have maximum change in momentum?

A. Car

B. Truck

C. Both will have same

D. None of these

Answer: C



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32. A magnet is moved towards a coil (i) quickly (ii) slowly, then the induced e.m.f. is

A. larger in case (i)

B. smaller in case (i)

C. equal to both the cases

D. larger or smaller depending upon the radius of the coil.

Answer: A



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33. Which one of the following can reduce air friction?

- A. Grooves on the tyre of car.
- B. Streamline shape of aeroplane.
- C. Oily surface of the floor.
- D. All of these.

Answer: B



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34. A person is not able to push a box lying on the ground by applying a force. The force

applied by the person is_____ static friction force.

- A. less than
- B. greater than
- C. equal to
- D. none of these

Answer: A



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35. Which of the following is not included in the hazards of earthquake?

A. Occurrence of landslide.

B. Ground failure due to liquefaction.

C. Fires resulting due to the breakage of electric supply.

D. Rain with lightning

Answer: A



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36. A particle in a medium completes 20 vibrations in 2.5 seconds. The frequency of wave is

A. 20 Hz

B. 200 Hz

C. 50 Hz

D. 8 Hz

Answer: D



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37. In which of the following surfaces the laws of reflection apply?

A. Plane surfaces

B. Curved surfaces

C. Both plane and curved surfaces

D. Neither plane nor curved surfaces

Answer: C



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38. An object AB is placed in front of a convex lens at its focus as shown in figure. Which of the ray diagram below correctly depicts the refraction through the lens L?



A. 

B. 

C. 

D. 

Answer: A



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39. Which of the following is correct for the size of image formed by a plane mirror?

- A. Smaller than the object size
- B. Greater than the object size
- C. Same as the object size
- D. Depends on the distance of the object from the mirror.

Answer: C



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40. How many images will be formed by two plane mirrors inclined at an angle of 120° ?

A. Only one image

B. Two images

C. Three images

D. Infinite images

Answer: B



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41. What is the effect on thickness of the lens when the ciliary muscles relax?

- A. It increases
- B. It decreases
- C. It remains same

D. Sometimes it reduces and sometimes increases.

Answer: B



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42. The direction of magnetic field lines produced in a current carrying conductor can be determined by

A. right hand thumb (grip) rule

B. Fleming's left hand rule

C. Fleming's right hand rule

D. Faraday's laws.

Answer: A



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43. Our galaxy Milky Way is

A. an elliptical galaxy

B. a ring shaped galaxy

C. a spiral galaxy

D. a semicircular shaped galaxy.

Answer: C



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44. A particle is moving towards east enters in a magnetic field directed towards north and deflected in vertically downward direction. The charged particle is

A. an electron

B. a proton

C. an alpha particle

D. a neutron

Answer: A



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45. Which planet has its rotation period is longer than its orbital period ?

A. mercury

B. jupiter

C. uranus

D. venus

Answer: D



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