



The Indian Academy  
Nehrugram DEHRADUN  
Question Bank - 2013-14  
Subject - Physics  
Class - IX

A One Mark Question

[2x10]

- Q1. What is the formula for pressure?
- Q2. What is the nature of the force if it produces small pressure?
- Q3. Name the SI unit of thrust
- Q4. State the tendency of a liquid to exert an upward force when an object is placed on it.
- Q5. Due to which force heavy objects seems lighter in water.
- Q6. Name a liquid having very high density?
- Q7. Name an instrument which is used to determine the purity of Milk?
- Q8. Relative density is very important in determining which quantity?
- Q9. How does work done depends on displacement?
- Q10. Work is which type of a quantity?
- Q11. Write down the relation between work done and height.
- Q12. If  $Q=90^\circ$ , then work done is what?
- Q13. If  $Q=180^\circ$ , then work done will be what?
- Q14. Name the appliance in which  
Chemical energy changes heat  
Energy changes kinetic energy.
- Q16. Particles are very close to each other in which part of longitudinal wave.
- Q17. How will you write 10 cycles per second?
- Q18. Write down the wave equation of a wave.

Q19 curtains are which reflector of sound?

Q20 The other name for "Quantity of sound" is?

B Two marks questions

[2x10]

Q1 Name the two parts of "sonar" apparatus.

Q2 What does it indicate –

- i) When ultrasound waves pass uninterrupted through all parts of iron block.
- ii) When ultrasound waves are not able to pass through a part of the iron block.

Q3 Name two methods used for reducing excessive reverberation in big hall and auditoriums.

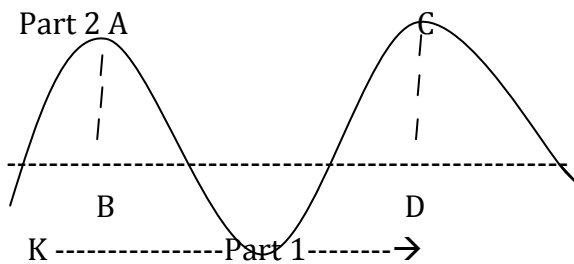
Q4 If the time Interval between two sounds is 0.1 second than name the two sounds?

Q5 Sound board is which type of a board and works on which property of sound?

Q6 What will happen to speed of sound if the humidity of air increases?

Q7 Sound wave travel with a speed of about 330 m/s. What is the wavelength of sound whose frequency is 11 Hertz?

Q8 Label part 1 and part 2



Q9 At which two position of a simple pendulum there is only

- i) Kinetic energy
- ii) Potential energy

Q10 A radio set of 60 watts runs for 40 Hrs. How many units of electrical energy are consumed?

Q11 Fill in the blanks

- i) 1 h.p = ..... W
- ii) 1 h.p. = ..... Kw

Q12 Write the formula, showing how

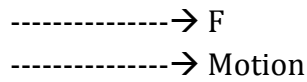
- i) Energy is related to Power
- ii) Theta ( $\theta$ ) is related to work done.

Q13 Calculate the kinetic energy of a body of mass 2 kg moving with a velocity of 0.2 meter per second.

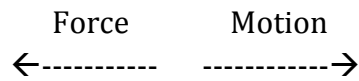
Q14 Name the two quantities on which kinetic energy depends?

Q15 State the nature of the work done when –

i) Force and motion are acting along same direction



ii) Force and motion are acting along opposite direction



Q16 Calculate the work done in lifting 100 Kg of water through a vertical height of 8 Meters  
[Assume  $g = 9.8 \text{ m/s}^2$ ]

Q17 State the following

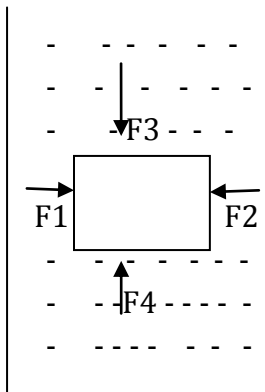
i) Which of the following have average density less than that of the water?

- a) Ship made of Iron
- b) Ship made of Iron and Steel.

ii) Which will provide greater buoyant force?

- a) Heavy ships
- b) Lighter ships

Q18 In this diagram which two forces will cancel out each other.



Q19 Give reason why Tractors have broad tyres?

Q20 A woman is wearing sharp heeled shoes or pencil heeled shoes. If the mass of the woman is 60 Kg and the area of one heel is  $1\text{cm}^2$ , calculate the pressure exerted on the ground. When the woman stands on both the heels [  $g=10\text{m/s}^2$  ]

C Three marks Questions

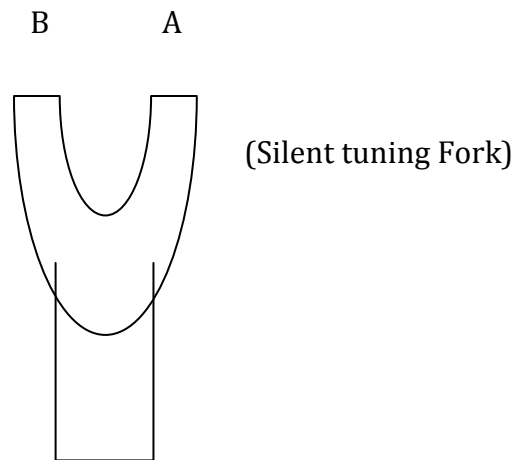
[2x10]

- Q1 i) Define 1 Joule of work.  
In a tug of war team A wins and team B loses.  
Which of these teams does a) positive work b) Negative work.  
Give reasons also.
- Q2 Differentiate between transverse and longitudinal waves and give one example of each.
- Q3 A mass of 10 Kg is dropped from a height of 20cm. Find –  
i) Potential energy just before dropping.  
ii) Kinetic energy just on touching the ground.  
iii) Velocity with which it hits the ground [ $g=10\text{ms}^2$ ]
- Q4 i) State 'Archimedes Principal'.  
ii) The volume of 50g of a substance is  $20\text{cm}^3$ .  
If the density of water is  $1\text{g cm}^{-3}$  will the substance will float or sink?
- Q5 a) If velocity of sound in air is 340 m/s. Calculate  
i) Wavelength when frequency is 256 Hz.  
ii) Frequency when  $\lambda$ (wavelength) is 0.89m  
iii) Frequency when  $\lambda$  (wavelength is 10m.
- Q6 Calculate the electricity bill for a month of April, if 4 bulbs of 40W for 5 Hrs, 4 Tube light of 60W for 5 Hrs, a TV of 100 W for 6 Hrs, a washing machine of 400 W for 3 Hrs are used per day. The cost per unit is Rs 1.80
- Q7 a) A mobile ringing inside a Vacuum chamber cannot be heard outside. Why ?  
b) Represent Transverse wave graphically?  
c) What is meant by loudness of sound? On what factor does it depend?
- Q8 a) The Frequency of a source of sound is 200 Hertz. Calculate the number of times the source of sound vibrates in 1 minutes also calculate the time period.  
b) Which wave property determines  
i) Loudness  
ii) Pitch
- Q9 The Kinetic Energy of an object of mass  $m$  moving with a velocity of 5m/s is 25J. Calculate its kinetic is doubled? What will be its kinetic energy when its velocity is increased three times?
- Q10 State the relationship between frequency and time period of vibrations produced on the surface of water is 2cm. If the wave velocity is 16m/s find its frequency and time period.
- Q11 What does acronym SONAR stands for? What type of wave does it use? State any two uses of SONAR.
- Q12 Write three Applications of Archimedes Principal?

Q13 When does the object  
a) Float b) Sink c) Rise and then float

Q14 State whether the following objects possess kinetic energy, potential energy or both.  
i) A flying aeroplane.  
ii) A ceiling fan in the off position.  
iii) A bird running on the ground.

Q15 Draw the diagram of sound waves in air when  
i) Prong a of tuning fork moves out.  
ii) When prong a of tuning fork moves inwards.  
iii) Vibrating tuning fork.



Q16 Name the three factors which affect the speed of sound.

Q17 Define reflection of sound and state laws of reflection of sound.

Q18 Name the instrument which is used by doctors for listening to the sounds produced within the human body. Draw the diagram of a stethoscope tube and name the type of reflection of sound wave.

Q19 State the range of frequency for  
i) Infrasonic sounds

- ii) Ultrasonic sound
- iii) Sonic sound

Q20 What is ultrasound? What is the difference between ordinary sound and ultrasound?  
State one use of ultrasound.

D Five Mark Questions

[1x10]

- Q1 Define power of a body. State and define the SI unit of power. Two children A and B both weighing 32Kg start climbing up a rope separately reach a height of 8m. A takes 15s and B takes 20s to reach that level. Calculate the amount of work done by A and B.
- Q2 i) Distinguish between loudness and Intensity of sound.  
ii) A submarine emits a sonar pulse, which returns from an underwater cliff in 1.02s. If the speed of sound in salt water is 1531m/s, how far away is the cliff.
- Q3 i) Define kinetic Energy of an object show that work done by a force on an object is equal to the Change in kinetic energy of the object.  
ii) What is the work to be done to increase velocity of the car from 30km/Hr to 60 km/hr if the Mass of the car is 1500 kg.
- Q4 a) Represent graphically two sounds. Waves having same amplitude but different frequencies.  
b) Why we cannot hear an echo in a small room?  
c) A wave pulse on a string moves a distance of 8m in 0.05s  
d) Find the velocity of the pulse  
e) What would be the wavelength of the wave on the string if its frequency is 200 Hz.?
- Q5 a) What is multiple echoes? Write its two important applications.  
b) Draw diagram to represent sound of  
i) High Pitch  
ii) Low Pitch of same loudness
- Q6 i) Give two examples of kinetic energy.  
ii) Give two examples of potential energy.  
iii) An object of mass 10kg is at a certain height above the ground. If the potential energy of the object is 400J, find the height at which the object is with respect to the ground.
- Q7 i) State the law of conservation of energy  
ii) Define Mechanical energy  
iii) Calculate the energy in kwh consumed in 10 Hrs by four devices of power 500 W each.
- Q8 a) What is the meaning of the symbol kwh? What quantity does it represent?  
b) How much electric energy is kwh consumed by an electrical appliance of 100 watt when it is switched on for 60 minutes

- Q9 a) What is the difference between gravitational potential energy and elastic potential energy?  
b) If 784J of work done in lifting a 20kg mass, calculate the height through which it has lifted.  
[g=9.8 m/s<sup>2</sup>]

- Q10 a) State the principle of flotation.  
b) What is the relation between pressure, force and area?  
c) Calculate the pressure when a force of 200N is extended on an area of  
I) 10m<sup>2</sup>  
II) 5m<sup>2</sup>

Section B

A One mark [based on practical's]

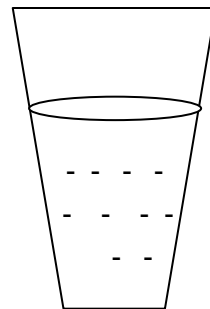
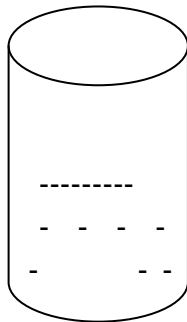
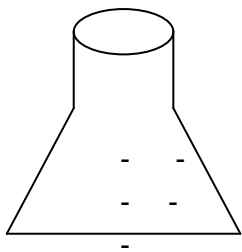
[8x10]

Q1 The density of tap water is less than that of sea water. If an object is immersed completely in both one by one its loss in weight will be

- a) More in sea water
- b) Less in sea water
- c) Equals in two cases
- d) Zero in sea but not so in tap water.

Q2 Three students used three different containers (a), (b) and (c) of different shapes, for finding the loss in weight of solid when dipped in water on dipping a solid sphere in these containers they would observe that the loss in weight is ?

- a) Maximum in (A)
- b) Minimum in (B)
- c) Maximum in (C)
- d) Same in all





(A)

(B)

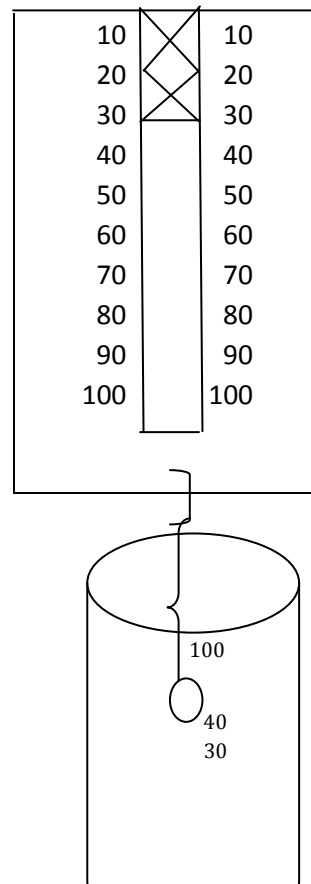
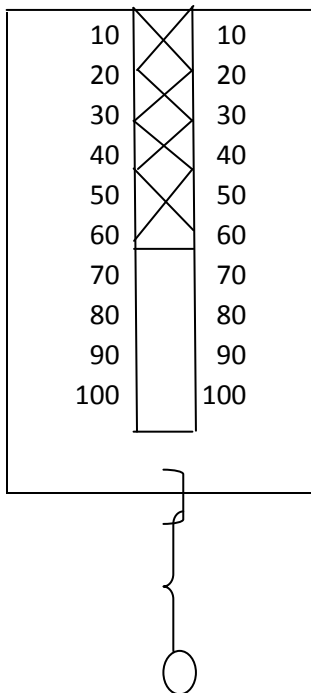
(C)

Q3 In the experiment for determining the velocity of propagation of a pulse in a slinky / string we prefer a long slinky / string

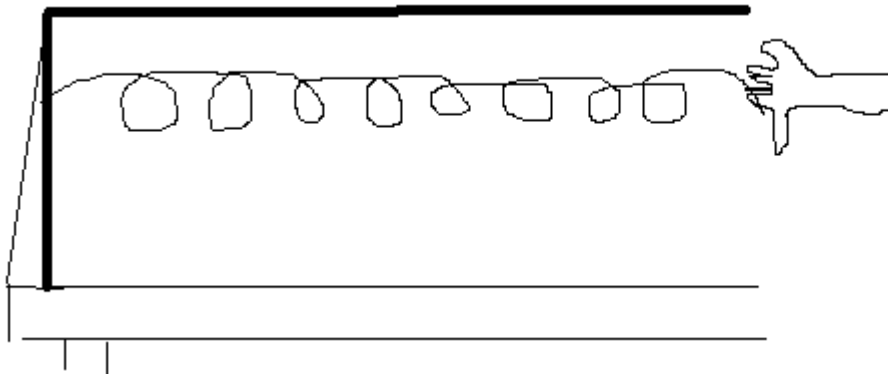
- a) Because pulse cannot be formed in a short slinky/string
- b) Because short/slinky/string is cheap.
- c) So that pulse may move through it easily

Q4 A student notes the following observations in a spring balance which is held as shown the weight of the solid is found out in two ways. The loss in weight

- a) 80 g
- b) 30 g
- c) 60 g
- d) 20g

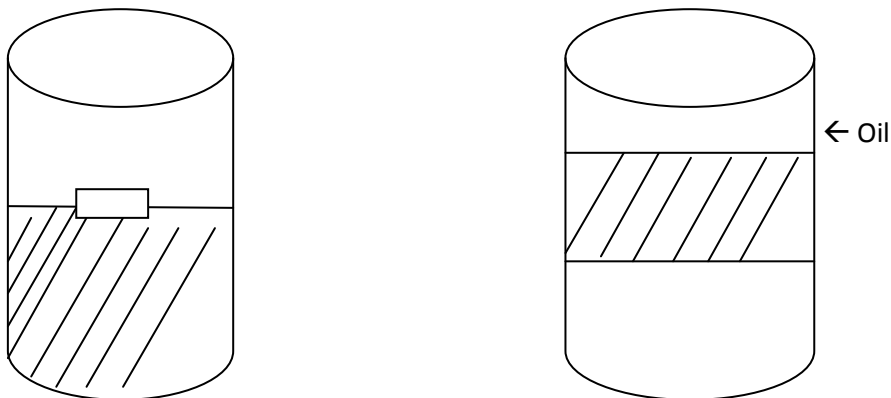


Q5 Seema sets up a slinky on a smooth table top in the manner shown here. He can produce transverse waves in the slinky by moving its free end Q?



- a) At an angle of  $45^\circ$  with the table top
- b) Backward and forward along the length of the slinky
- c) Up and down
- d) Left and right

Q6 A solid of density  $900 \text{ kg/m}^3$  floats in oil as shown in the given diagram. The oil floats on water of density  $1000 \text{ kg/m}^3$  as shown. The density of oil in  $\text{kg/m}^3$  could be





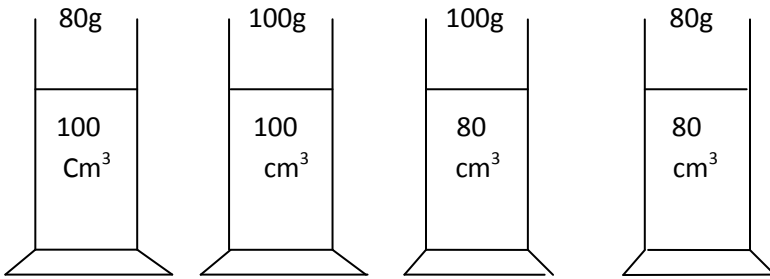
- a) 850            b) 900
- c) 950            d) 1050

Q7. A metal in which even iron can float is

- a) Sodium        b) Magnesium
- c) Mercury       d) Manganese

The diagram represents four measuring cylinders containing liquids. The mass and volume of the liquid in each cylinder are stated which two measuring cylinder could contain an identical liquid

- a) W and X
- b) W and Y
- c) X and Y
- d) X and Z

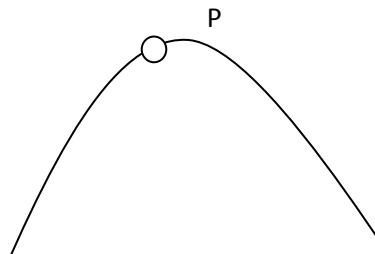


Q8 Water stores in a dam posses

- a) No energy
- b) Electrical energy
- c) Kinetic energy
- d) Potential energy

Q9 A stone is thrown upward as shown in the diagram when it reaches P, which of the following has the greatest value for the stone?

- a) Its acceleration
- b) Its kinetic energy
- c) Its potential energy
- d) Its weight



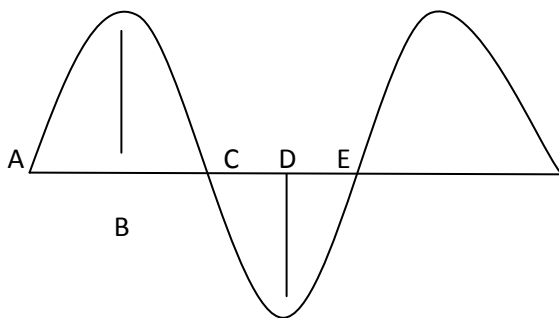
Q10 The following data was obtained for a body of mass 1Kg dropped from a height of 5 meter

Distance above ground	Velocity
5m	0 m/s
3.2m	6 m/s
0 m	10 m/s

Show by law of conservation of energy, the total energy will be

- a) 50 J                                      b) 60 J  
 c) 70 J                                      d) 80 J

Q11 In the sound wave produced by a vibrating tuning fork shown in th diagram half the wavelength is represented by



Q12 A cylinder and a cone have base radius  $r_1$  and  $r_2$  respectively ( $r_1, r_2$ ) are having the same mass then pressure exerted by the cylinder is

- a) Greater than cone  
 b) Less than cone

- c) Equal to cone
- d) Equal to cuboid

Q13 Sound wave can travel

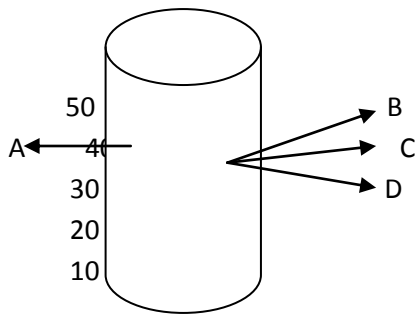
- a) In a material medium only
- b) In vacuum only
- c) In vacuum as well as in a material medium
- d) Neither in vacuum nor in material medium

Q14 To observe and compare the pressure exerted by the three faces of a cuboid on sand, students have chosen the following apparatus. The correct apparatus is

- a) A=Hollow cuboid of Aluminum
- b) B=Solid cuboid of Iron
- c) C=cylinder of plastic
- d) Cuboid of light weight fiber

Q15 The correct way to take the observation is

- a) A
- b) B
- c) C
- d) D



Q16 Apparent loss in weight of a body in a liquid is caused due to

- a) Decrease in mass
- b) Decrease in volume
- c) Upward thrust exerted by the liquid
- d) Decrease in the density

Q17 For the greatest and the least pressure exerted by the cuboid in the experiment "To observe and compare the pressure exerted by solid iron cuboid on sand while resting on its three different faces, the position of cuboid should be

- a) Upright, widest base
- b) Widest base, side base
- c) Upright side base
- d) Widest base, upright

Q18 To compare the pressure exerted by the solid iron cuboid, a student took two 'Cuboid, a having same dimension and same nature of materials after performing the experiments with both the cuboids, she found

- a)  $P_1 = 2p_2$                       b)  $P_1 = p_2$   
 c)  $P_2 = 3p_1$                       d)  $P_2 = 2p_1$

Q19 To find the velocity of the pulse in a string, we need

- a) Only a measuring scale.  
 b) Only a stop clock or a stop watch.  
 c) Both a measuring scale and stop watch.  
 d) Neither measuring scale nor watch.

Q20 The sound of a stop clock received in the ear while doing the experiment of "Reflection of Sound" should be

- a) The direct sound from the clock  
 b) The sound reflected from the ceiling of the laboratory  
 c) The pipe after surface  
 d) Both a and b

Q21 A student performs the experiments of reflection of sound. He/She records following values of the Angle of Incidence and angle of reflection:-

S.No.	Set1	Set2	Set3	Set4	Set5
$\angle i$	$30^\circ$	$40^\circ$	$45^\circ$	$50^\circ$	$60^\circ$
$\angle r$	$60^\circ$	$50^\circ$	$45^\circ$	$50^\circ$	$65^\circ$

The set correctly by him/her are

- a) Set 1 and set 3  
 b) Set 2 and set 3  
 c) Set 3 and set 4  
 d) Set 4 and set 5

Q22 For a body floating on water apparent weight is equal to

- a) Actual weight of the body  
 b) Zero  
 c) Weight of the body minus the weight of the liquid  
 d) None of the above

Q23 A pulse was created in a slinky of length 5m by a group of students. They observed that it returned after reflection, at the point of creation 6 times in 10 seconds and calculated the speed as follows students

Students	A	B	C	D
(m/s)	0.4	0.5	3.0	0.8

The correct speed was calculated by the student

- a) A                      b) B  
 c) C                      d) D

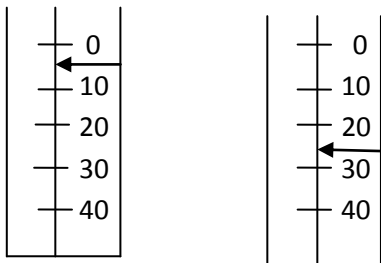
Q24 For a floating body ( $b$ =Buoyant Force,  $W$ =weight of the floating body)

- b)  $B=W$                       b)  $B>W$   
 c)  $B<W$                       d) None of these

- Q25 An Iron cuboid of dimensions 100cm x 50cm x 10cm when placed on a bed of sand will depress the sand bed the most when it is made to lie on the face having dimensions.
- a) 100cm x 10cm      b) 100cm x 50cm  
 c) 50cm x 10 cm      d) None

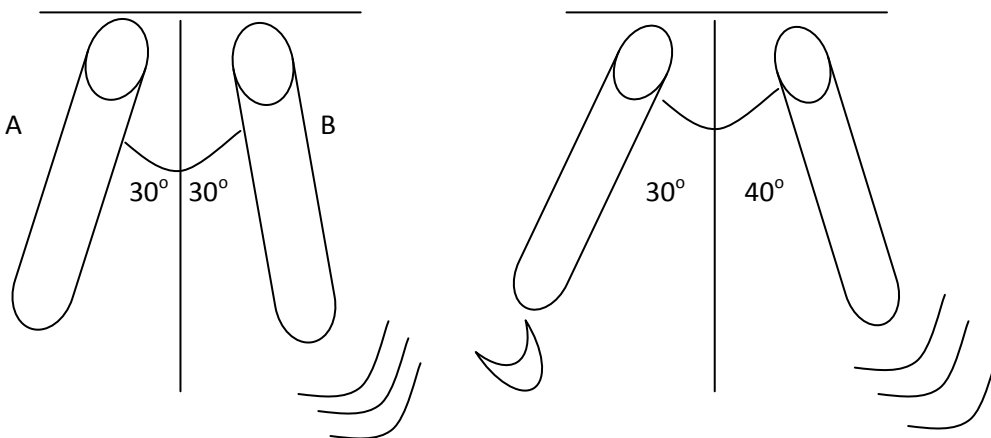
- Q26 The sound received in the ears while doing the experiment, laws of reflection of sound should be calculated the speed as follows
- a) The direct sound from the clock  
 b) The sound reflected from any reflecting surface  
 c) The sound coming through the tube after reflection  
 d) Any of these

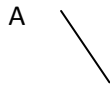
- Q27 The weight of the object is



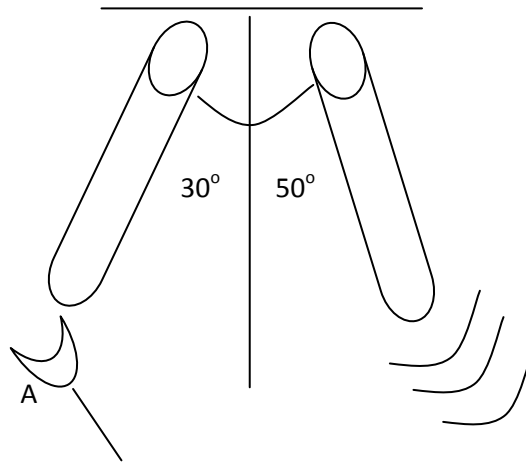
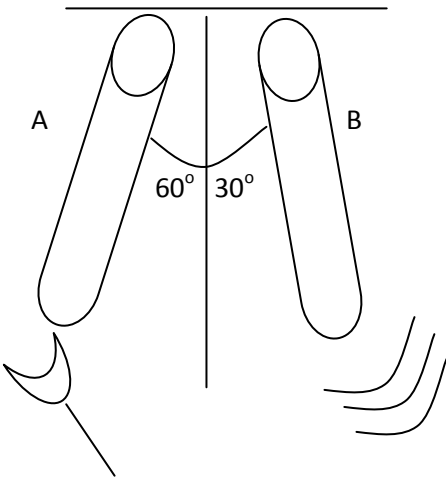
- a) 5N                      b) 25N  
 c) 20N                    d) 30N

- Q28 Which of the following figures below will the sound of a tuning fork hit with rubber pad at end A be maximum at end B





B



Q29 A rectangular box is kept over the table with different faces touching the table. In different cases the block exerts :

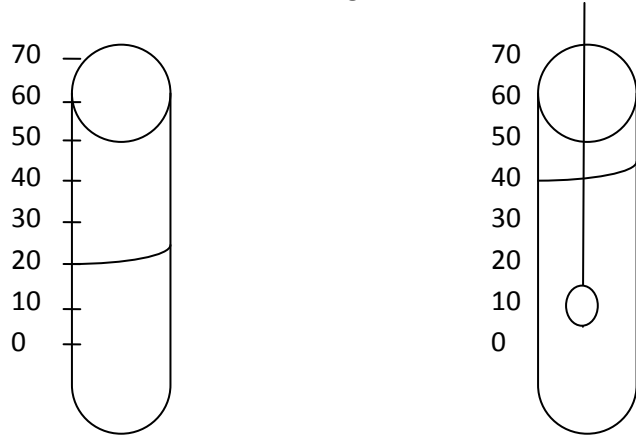
- a) Same thrust and same pressure
- b) Same thrust and different pressure
- c) Different thrust and same pressure
- d) Different thrust and different pressure

Q30 The magnitude of force which produces a pressure of 2500 Pa over a surface area of  $2\text{m}^2$  is

- a) 6000N      b) 5000N
- c) 500N        d) 600N

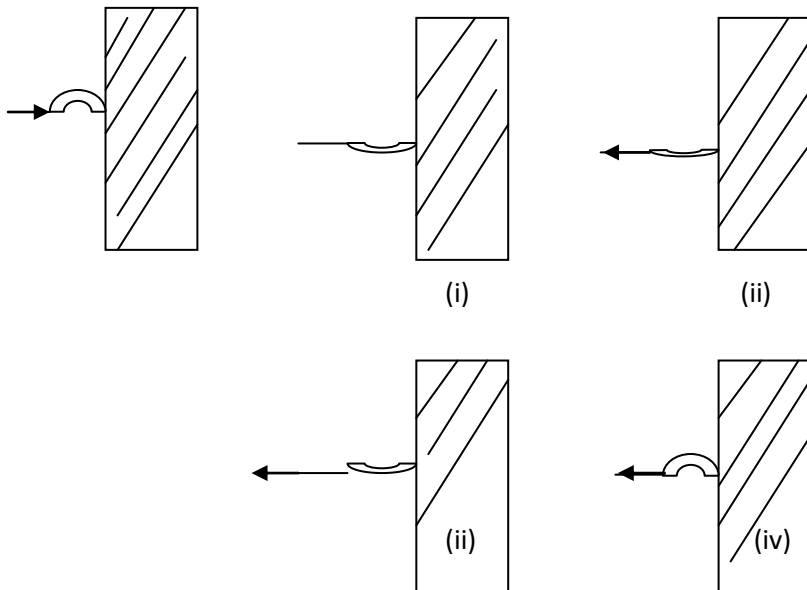


Q31 A student takes the following observations for finding out the volume of a given body. The volume is -



- a) 20ml
- b) 40ml
- c) 60ml
- d) None

Q32 If the pulse chits at the fixed end as shown in the diagram A. Immediately reflected pulse is



- a) (i)
- b) (ii)
- c) (iii)
- d) (iv)

Q33 Student A wear wide base shoes and student B wears narrow base shoes while walking on the ice who will be able to walk easily and comfortable if both the students have equal weights ?

- a) Neither student A and B
- b) Only student B
- c) Only student A
- d) Both A and B

Q34 In a wave motion in string, every particle : -

- a) Oscillates
- b) Displaces from one end to the other end
- c) Does not displace at all
- d) Does not oscillates

Q35 If the density of the object placed in a liquid is equal to the density of the liquid, the object will

- a) Float wholly immersed
- b) Sink
- c) Float
- d) Float completely above the liquid

Q36 Mass can neither be created nor destroyed in law of

- a) Multiple propagation
- b) Conservation of mass
- c) Conservation of energy
- d) Conservation of volume

Q37 While studying the laws of reflection of sound, the student couldn't hear the reflected sound of the clock when one of the piped is raised vertically up which law is violated?

- a) Angle of incidence and reflection are equal
- b) Incident ray, normal and reflected ray lie in the same plane
- c) Both of these
- d) None of these

Q38 While studying the reflection of sound 3 students used different reflecting surfaces. The best result would be obtained by the student using the reflecting surface

- a) Thermocol sheet
- b) A polished, plane metal sheet
- c) A rough card board sheet
- d) A cushioned sheet / chau

Q39 A bird which was resting on a boy's head sitting later rest on the boys head by standing, the boy feels more discomfort because of

- a) Its weight                      b)     Its mass
- c) Force it exerts              d)     The pressure

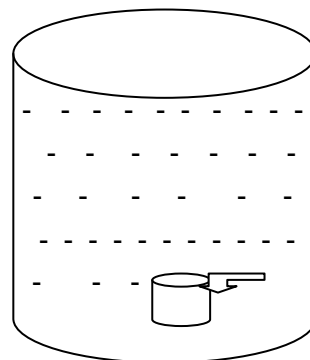
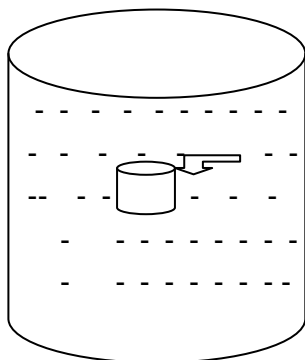
Q40 Two slinky A and B of same length are made up of two different materials. The time taken by 20 pulses to travel in both of them are 70s and 90s respectively.

- a) The pulse travels faster in B
- b) The pulse travels faster is A
- c) This does not decide the speed of the pulse.
- d) The speed of the pulse cannot be decided from this observation.

Q41 We can sense a compression in a slinky if

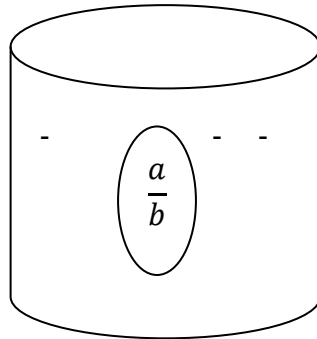
- a) Turns are close to each other
- b) Neither turns are close nor far
- c) Turns are far away
- d) None of these

Q42 A plastic scoop of mass 12gm and density 0.6 gm/c floats in water. How much mass is put inside the scoop to make it sink?



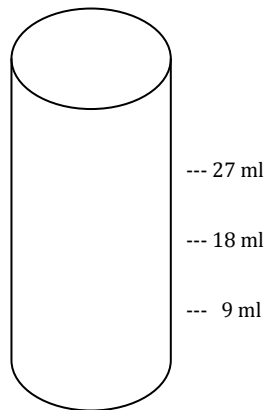
- a) 20 gm      b) 12 gm
- c) 8 gm        d) 16 gm

Q42 The weight of the object is  $W_1$ , the weight of the volume of liquid displaced by part B in the given figure is



- a)  $< W_1$
- b)  $= W_1$
- c)  $> W_1$
- d) None of these

Q43 The no of dimensions required in order to get a least count of 1.5 ml is

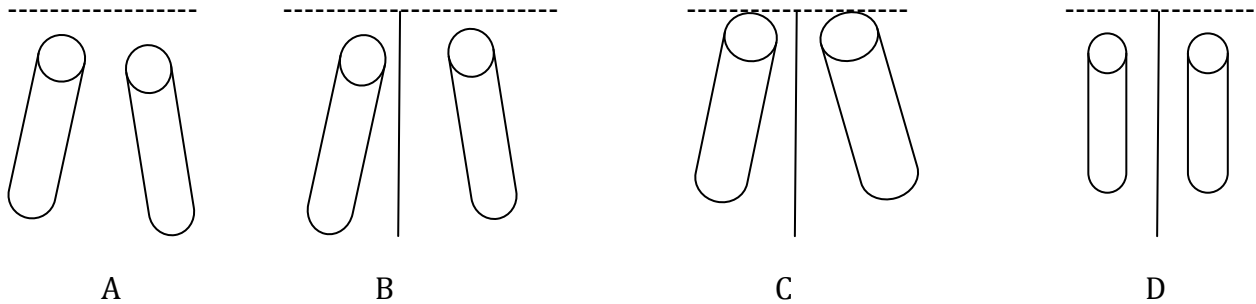


- a) 8              b) 5
- c) 4              d) 7

Q44 When a body is fully or partially immersed in a liquid, it undergoes an apparent loss due to

- a) Decrease in its volume
- b) Decrease in the density of the body
- c) Upward thrust exerted by the liquid
- d) Decrease in its mass.

Q45 To verify the laws of reflection of sound, the set - up of the arrangement needed is the one shown in the figure

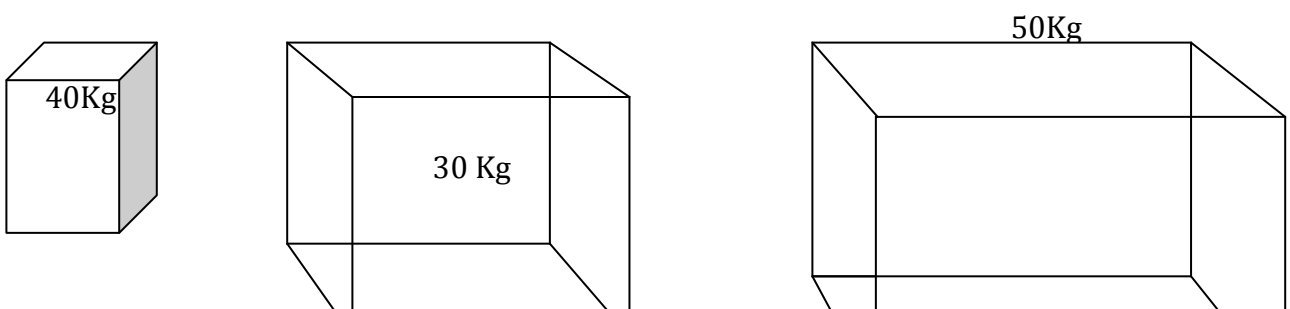


- a) A
- b) B
- c) C
- d) D

Q46 Sound waves can travel

- a) In vacuum as well as in a neutral medium
- b) In a material medium only
- c) In vacuum only
- d) None of these

Q46 If all the 2 blocks exert the same pressure then the dimensions are in the ratio



- a)  $2 \times 4 : 2 \times 1.5 : 5 \times 1$
- b)  $2 \times 2 : 2 \times 1.5 : 5 \times 2$
- c)  $2 \times 2 : 2 \times 1.5 : 5 \times 1$
- d) None of these

Q47 A glass cuboidal has dimensions 10 cm x 10cm x 4 cm. It is kept with its perfect face (10cm x 10cm) in contact with the table. If it is lifted and allowed to rest on the table with its smaller surface (10cm x 4cm) in contact with the table with the pressure exerted will be ?

- a) Increase
- b) Remain unchanged
- b) Decrease
- d) May increase or decrease depending on the shape of table

Q48 A pulse was created in a string of length 5m by four students A, B, C & D. They observed that the pulse returned after reflection at the point of creation 5 times in 10 seconds and calculate the speed.

Students	A	B	C	D
Speed m/s	0.5	2.5	5	10

The student who has reported the speed correctly is

- (a) A
- (b) B
- (c) C
- (d) D

Q49 Slinky is a

- a) Rectangular wire in the shape of cuboids
- b) Straight wire
- c) Coil of wire with several turns in the shape of cylinder
- d) All of the above

Q50 The loss in weight of a solid is more in salty solution than water because

- a) Density of water and salty solution is same
- b) Density of water is less than salty solution
- c) Density of water is more than salty solution
- d) Density can't be compared.

Q51 If the relative density of gold is 19.3, calculate its density

- a)  $193000 \text{ Kgm}^{-3}$
- b)  $19300 \text{ Kgm}^{-3}$
- c)  $1930 \text{ Kgm}^{-3}$
- d)  $193 \text{ Kgm}^{-3}$

Q52 Unit of relative density is

- a)  $\text{Kgm}^{-3}$
- b)  $\text{Kgm}^{-2}$
- c) Kg
- d) No Unit

Q53 The relative density of a liquid is above 19, its small packet is thrown in water. It would

- a) Float
- b) submerged
- c) Sink
- d) None of the above

Q54 What is principal of working of a physical balance?

- a) It works on the principal of moments
- b) It works on the principal of force
- c) It works on the Principal of acceleration
- d) It works on the principal of Newton third law.

Q55 While calculating the density of stone with the help of spring balance & measuring cylinder, few air bubbles were seen sticking to stone when immersed in water.

The presence of air bubbles will lead to the

- a) Increase in density
- b) Submerged
- c) Sink
- d) None of these.

Q56 Two balanced forces acting on a body :-

- a) Do not bring any change in its state of rest or that of uniform motion.
- b) Produce change in the momentum of the body
- c) Produce change in the velocity the body
- d) None of these

- Q57 Density of a solid is  $18300 \text{ Kg/m}^3$ . What would be its relative density?
- a) 1830.
  - b) 183
  - c) 18.3
  - d) 1.83
- Q58 Archimedes Principal is used in making
- a) Aero planes.
  - b) Fast moving trains.
  - c) Space ships
  - d) Submarines
- Q59 It is easier to lift a heavy stone in water because -
- a) Stone loses its mass in water.
  - b) Stone loses its weight in water.
  - c) Stone experiences an up thrust equal to the volume of water displaced.
  - d) Stone experiences an up thrust equal to the weight of water displaced.
- Q60 The volume of a 500 g sealed tin in  $350 \text{ cm}^3$ . What would be the mass of the water displaced by it ?
- a) 500 g      b) 350 g
  - c) 850 g      d) 175000 g
- Q61 When the particles of the medium oscillate perpendicular to the direction of the wave, the wave is said to be
- a) Longitudinal waves
- Q62 The waves produced in the interior of the earth caused by the disturbances inside the earth is called -
- a) Longitudinal wave
  - b) Transverse wave
  - c) Seismic wave
  - d) Electromagnetic wave
- Q63 The distance travelled by the disturbance during one time period is known as
- a) Frequency      b) Amplitude
  - b) Wavelength      d) Wave velocity



Q64 Choose the correct relation

- a) Wave velocity = wave frequency x wave length
- b) Wave frequency = wave velocity x wave length
- c) Wave length = wave frequency x wave velocity
- d) Wave velocity =  $\frac{\text{Wave frequency}}{\text{Wave length}}$ .

Q65 Which of the following is carried by the waves from one place to another?

- a) Mass
- b) Velocity
- c) Wavelength
- d) Energy

Q66 Name the physical Quantity that is transported from one place to other when sound wave travels is

- a) Mass
- b) Energy
- c) Velocity
- d) Density

Q67 The time taken by a particle to complete one vibration is called.

- b) Time period
- b) Wave velocity
- d) Wave length
- d) Density

Q68 A longitudinal wave whose frequency is above the upper limit of audible range 20 Khz is

- c) Infrasonic wave
- b) Ultrasonic wave
- e) Longitudinal wave
- d) transverse wave

Q69 A longitudinal elastic wave whose frequency is below the audible range is

- d) Ultrasonic wave
- b) Infrasonic wave
- f) Longitudinal wave
- d) Transverse wave

Q70 The sound heard after reflection from a rigid obstacle is called.

- e) Echo
- b) Ultrasonography
- g) Ser sonic wave
- d) SONAR

Q71 Sound waves can travel

- f) In vacuum only
- b) In vacuum as well in material

h) In material only    d)    None of these

Q72    Tick mark the correct statement

- i) A pulse is of long duration.
- j) A pulse is a short and sudden disturbance
- k) Clapping of hand once, produce a wave.
- l) A pulse transports mass from one place to another in the medium.

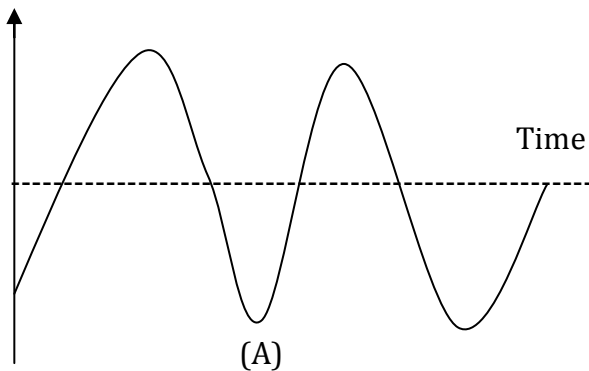
Q73    Tick mark the correct statement

- a) We can generate a transverse as well as longitudinal pulse in a rope
- b) We cannot generate both the type of pulse in a rope / slinky
- c) Only a transverse pulse can be generated in a rope slinky
- d) Only a longitudinal in a rope / slinky

Q74    The speed of the bob of an oscillating pendulum is maximum.

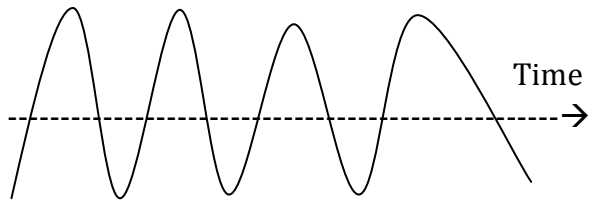
- a) At each of the extreme positions
- b) Between the mean position and the right extreme position
- c) Between the mean position and the right extreme position
- d) At the same position.

Q75    Four students A, B, C, and D drawn figures to show wave shape for a high pitched sound. The best one is wave distance

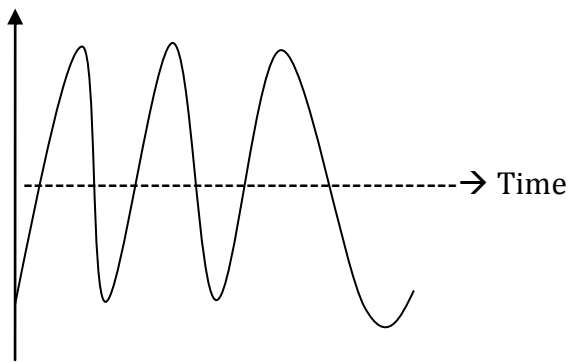


Wave disturbance



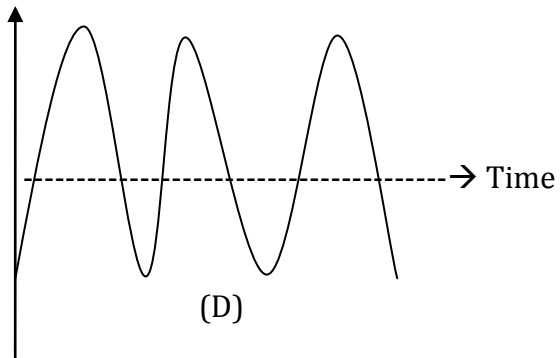


(B)



(C)

Wave disturbance

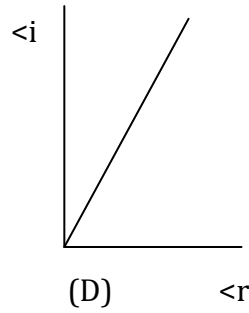
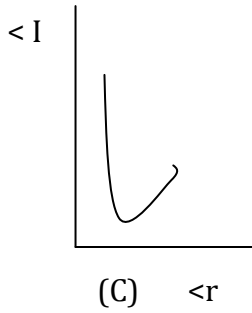
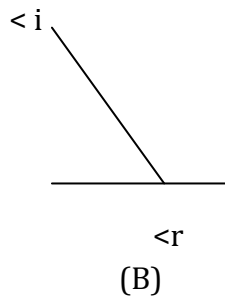
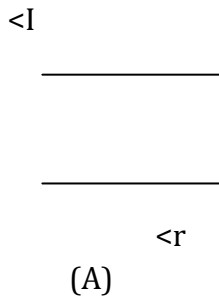


(D)

- (a) A    (b) B  
(c) C    (d) D

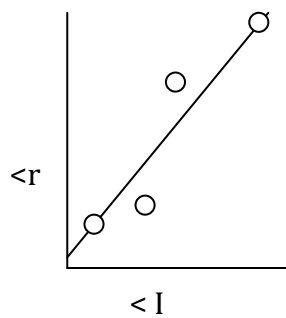
Q76 Which is the correct graph, showing reflection of sound

Two vertical lines are drawn, one on the left and one on the right, defining a space for an answer.



- (a) A            (b) B  
 (c) C            (d) D

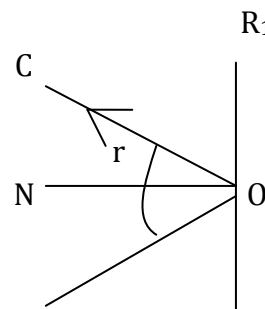
Q77 In fig represents a graph between the angle of incidence and the angle of reflection for a sound wave from the graph we can say



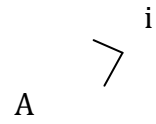
- a) Angle of incidence decrease with the increase in angle of reflection.  
 b) Angle of incidence increases with the decrease in angle of reflection.  
 c) Angle of incidence is always equal to angle of reflection.  
 d) Angle of incidence sometimes increases and sometimes decreases, depending upon the roundness of sound.

Q78 In given figure AO, ON and OC lie in

- a) Different planes.



- b) Same plane.
- c) N and OC in same plane at right angle to plane of AO.
- d) AO and OC is same plane at right angle to plane of ON.

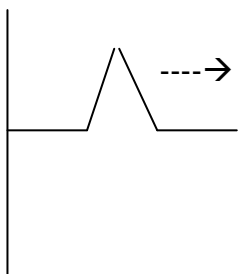
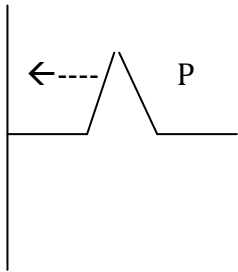


R<sub>2</sub>

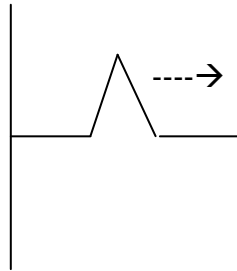
Q79 If the angle of reflection is halved, the angle of reflection will be

- a) halved
- b) doubles
- c) same
- d) four times

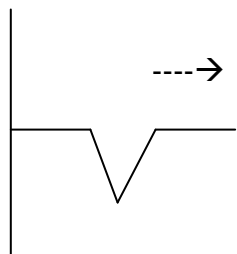
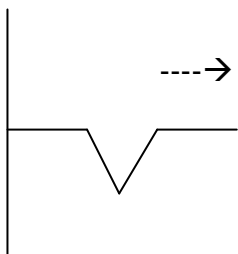
Q80 Choose the correct reflected pulse for a unident pulse P from a rigid support



(a)



(b)



(c)

(d)

(a) A  
(b) C

(b) B  
(d) D