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## NSO Level 2 Class 9 Paper 2013 - 14 Questions and Answers Part 1

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Question16 A rubber ball is dropped from a height of 5 m on a plane. On bouncing it rises to 1.8 m. The ball loses its velocity on bouncing by a factor of

- A.  $\frac{3}{5}$
- B.  $\frac{2}{5}$
- C.  $\frac{16}{25}$
- D.  $\frac{9}{25}$

Question17 A body projected vertically from the earth reaches a height equal to earth's radius before returning to the earth. The power exerted by the gravitational force is greatest.

- A. At the highest position of the body.
- B. At the instant just before the body hits the earth.
- C. It remains constant throughout
- D. At the instant just after the body is projected.

Question18 Read the given statements and select the correct option.

Statement-1: The stars twinkle, while the planets do not.

Statement-2: The stars are much bigger in size than the planets.

- A. Both statements-1 and 2 are true and statement-2 is the correct explanation of statement-1.
- B. Both statements-1 and 2 are true but statement-2 is not the correct explanation of statement-1.
- C. Statement-1 is true, and statement-2 is false.
- D. Both statements-1 and 2 are false.

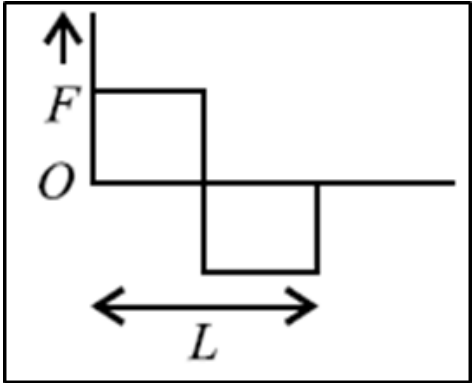
Question19 Sound waves travel at  $350 \text{ m s}^{-1}$  through warm air and at  $3500 \text{ m s}^{-1}$  through brass. The wavelength of a 700Hz acoustic wave as it enters brass from warm air

- A. Decrease by a factor 10.
- B. Increase by a factor 20.
- C. Increase by a factor 10.
- D. Decrease by a factor 20.

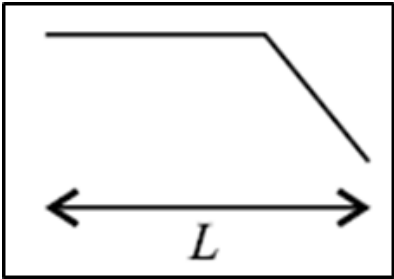
Question20 Density changes are responsible for which method of thermal energy transfer?

- A. Conduction only
- B. Convection only
- C. Radiation only
- D. All of these

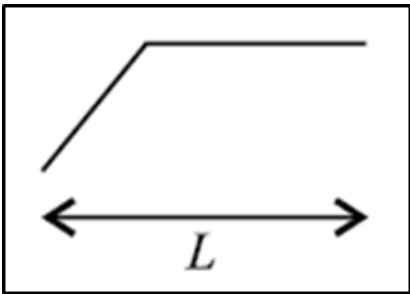
Question21 A person used force F, shown in figure to move a load with constant velocity on a surface. Identify the correct surface profile.



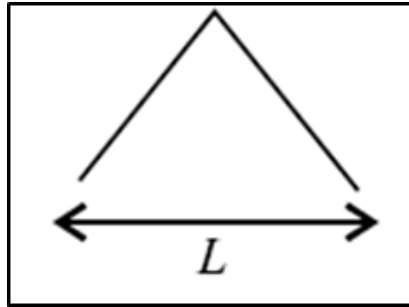
A.



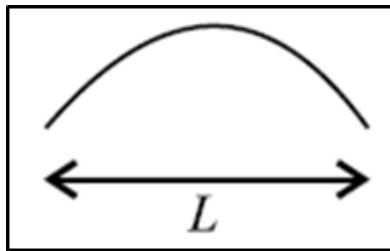
B.



C.



D.



Question22 A shell in flight, explodes into four unequal parts.

Which of the following is conserved?

- A. Potential energy
- B. Momentum
- C. Kinetic Energy
- D. Both A and C

Question23 A cricket ball of mass 150 g moving with a speed of 126 km/h hits at the middle of the bat, held firmly at its position by the batsman. The ball moves straight back to the bowler after hitting the bat. Assuming that collision between ball and bat is completely elastic and the two remain in contact for 0.001 s, the force that the batsman had to apply to hold the bat firmly at its place would be \_.

- A. 10.5N
- B. 21N
- C.  $1.05 \times 10^4 \text{ N}$
- D.  $2.1 \times 10^4 \text{ N}$

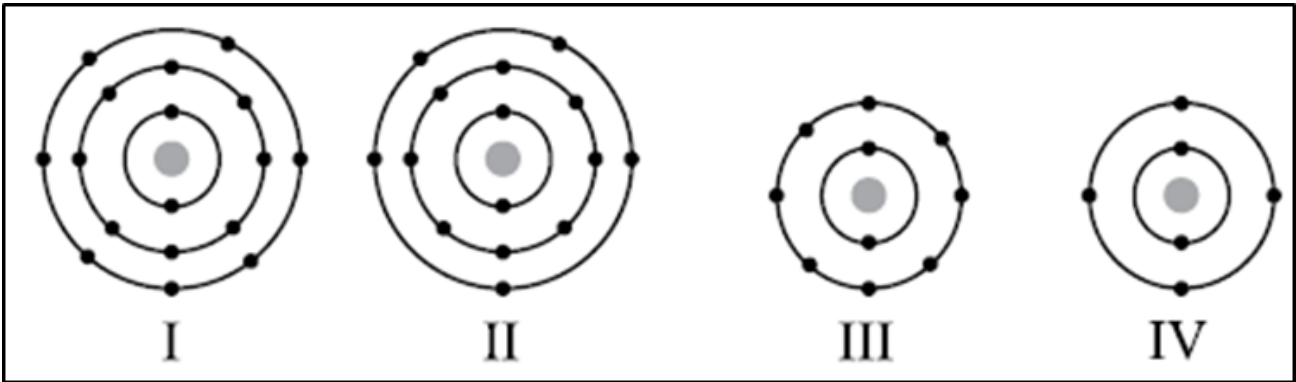
Question24 Three different objects of masses  $m_1$ ,  $m_2$  and  $m_3$  are allowed to fall from the same point O along three different frictionless paths. The speeds of the three objects, on reaching the ground, will be in the ratio of

- A.  $m_1 : m_2 : m_3$
- B.  $m_1 : 2m_2 : 3m_3$
- C.  $\frac{1}{m_1} : \frac{1}{m_2} : \frac{1}{m_3}$
- D. 1: 1: 1.

Question25 The speed of a wave in a certain medium is 960m/s. If 3600 waves pass over a certain point of the medium in 1minute, the wavelengths.

- A. 2m
- B. 8m
- C. 4m
- D. 16m

Question26 Schematic atomic structures of the elements I, II, III and IV are given below. The elements with highest and least valencies respectively are\_.



- A. II, I
- B. I, III
- C. III, IV
- D. IV, III

Question27 Which of the following are correctly matched?

	MATERIAL	HETEROGENEOUS MIXTURE	HOMOGENEOUS MIXTURE	PURE SUBSTANCE
(i)	Rubber	×	×	√
(ii)	Mercury	×	×	√
(iii)	Sugar solution	×	√	×
(iv)	Cheese	×	√	×

	MATERIAL	HETEROGENEOUS MIXTURE	HOMOGENEOUS MIXTURE	PURE SUBSTANCE
(v)	Sodium chloride	×	×	√
(vi)	Butter	√	×	×

Table Supporting: NSO Level 2 Class 9 Paper 2013 - 14 Questions and Answers Part 1

- A. (iv) only
- B. (ii) and (iii) only
- C. (i) , (v) and (vi) only
- D. (ii) , (iii) , (v) and (iv) only