

**CHINMAYA INTERNATIONAL RESIDENTIAL SCHOOL  
COIMBATORE**

**ENTRANCE EXAM : SAMPLE PAPER  
(FOR ADMISSION TO ACADEMIC YEAR 2014)**

**CLASS: 11 CBSE**

**SUBJECT: PHYSICS**

01. Which of the following can best describe a scalar quantity?

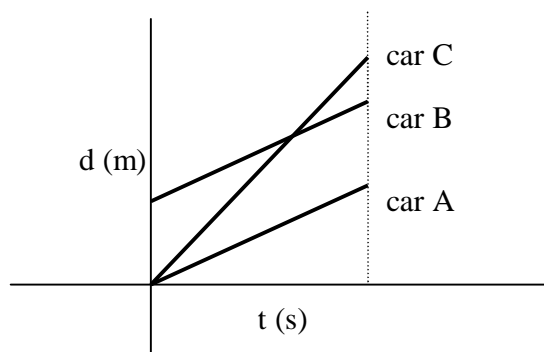
- A. It has only magnitude  
B. It has only direction  
C. It has neither magnitude nor direction  
D. It has both magnitude and direction

02. What is the nature of sound waves?

- A. Transverse  
B. Longitudinal  
C. Latitudinal  
D. None of the above

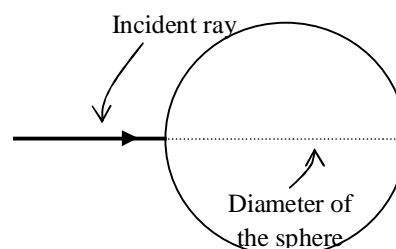
03. The distance-time graph of three cars, A, B and C, is shown below. Which of the following is the correct comparison of the speed of the three cars?

- A. speed A = speed B = speed C  
B. speed A < speed B < speed C  
C. speed A = speed B  $\neq$  speed C  
D. speed C > speed B > speed A



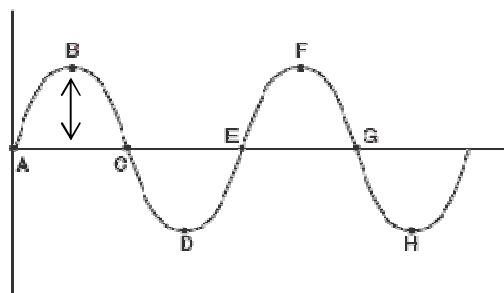
04. White light is incident normally on a spherical glass block as shown below. What will happen to the incident ray upon entering the glass block?

- A. It will undergo refraction and dispersion.  
B. It will undergo dispersion and will not refract.  
C. It will undergo refraction and will not disperse.  
D. It will neither refract nor disperse.



05. A transverse wave is shown in the figure. Refer to the figure and indicate which of the following statement is true?

- A. B is trough, D is crest, AC is the wavelength and the arrow indicates half the amplitude of the wave.  
B. B is crest, D is trough, AE is the wavelength and the arrow indicates the amplitude of the wave.  
C. B is crest, D is trough, AE is the wavelength and the arrow indicates half the amplitude of the wave.  
D. B is trough, D is crest, CE is the wavelength and the arrow indicates the amplitude of the wave.

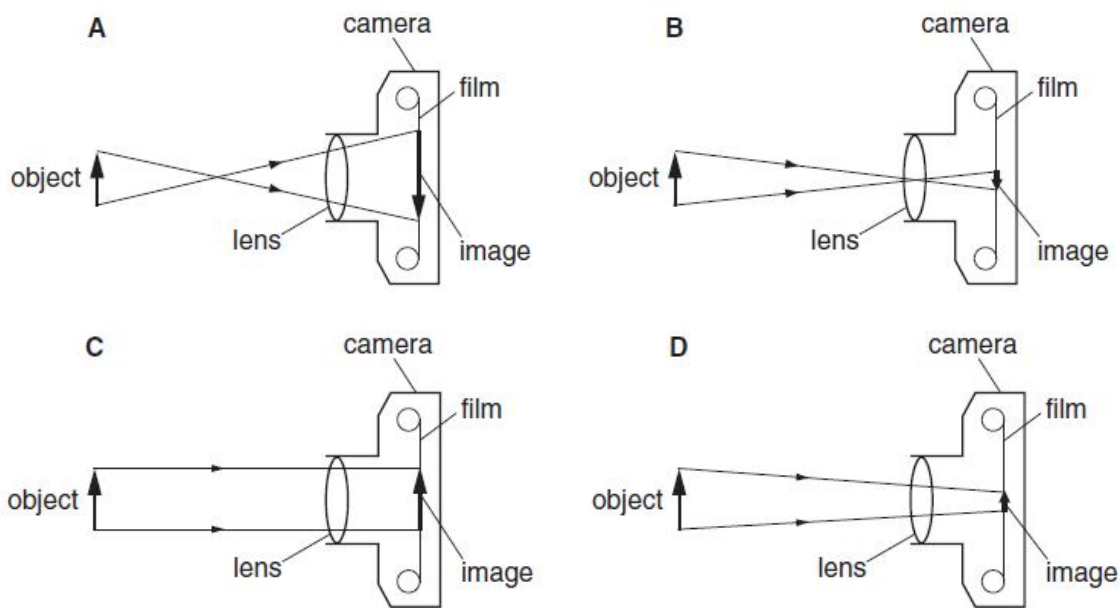


06. A car of mass 800 kg increases its speed from 0 km/s to 90 km/h in 10s. What is the force acting on the car?  
 A. 10000 N      B. 5000 N      C. 2000 N      D. 1000 N

07. What is the refractive index of a glass block, if the speed of light in the glass block is  $2 \times 10^8$  m/s? Given the speed of light in air is  $3 \times 10^8$  m/s.  
 A. 6      B. 5      C. 1      D. 1.5

08. The resistance of a wire of length 'L' is 'R'Ω. What will the resistance be if the length of the wire is increased to '2L' without changing its area of cross-section?  
 A. 4R Ω      B. 2R Ω      C. R/2 Ω      D. R/4 Ω

09. Which diagram correctly shows rays passing through a camera lens?



10. A student makes four circuits. In which circuit are both lamps protected by the fuse?

