

**Question 12**

- (i) (b) Centripetal force. [1]  
(ii) (a) towards the centre of the circular path. [1]

**Question 13**

- (i) (d) 20 J [1]  
(ii) (b) 10 J [1]  
(iii) (c) 30 J [1]  
(iv) (c)  $10\sqrt{3}$  [1]

**Question 14**

- (d) 0.5 [1]

**Question 15**

- (a) it changes the direction of applied effort conveniently. [1]

**Question 16**

- (b) 2 [1]

**Question 17**

- (d) Power = Force x Velocity [1]

**Question 18**

- (c) ultrasonic waves are used. [1]

**Question 19**

- (c) Echo cardiogram. [1]

**Question 20**

- (i) (b) 0.5 s [1]  
(ii) (d) 80 m [1]  
(iii) (b) 0.5 s [1]  
(iv) (a) 0.05 s [1]

**Question 21**

- (a) 1 : 1 [1]

**Question 22**

- (b)  $10^7$  [1]

**Question 23**

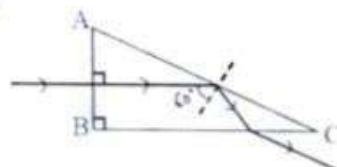
- (i) (b) kinetic energy of body A is greater than kinetic energy of body B. [1]  
(ii) (c) 2 : 5 [1]

**Question 24**

- (i) (b)  $47^\circ$  [1]  
(ii) (c) The ray at the surface AD is travelling along the radius of the curved part [1]  
(iii) (a)  $43^\circ$  [1]  
(iv) (b)  $43^\circ$  [1]

**Question 25**

- (i) (d)  $30^\circ$  [1]  
(ii) (b) [1]



Answer: \_\_\_\_\_

**Question 1**

(b) the size of the prism.

[1]

**Question 2**

(c) the speed of light in a vacuum is 2.4 times the speed of light in the diamond.

[1]

**Question 3**

(c) No, as the image formed will be virtual.

[1]

**Question 4**

(a) NQ

[1]

**Question 5**

(c) red

[1]

**Question 6**

(d) 400 nm to 800 nm

[1]

**Question 7**

(i) (d) the image will be real and magnified.

[1]

(ii) (a) to correct hypermetropia.

[1]

(iii) (b) +30 cm

[1]

(iv) (c) -0.5

[1]

**Question 8**

(c)  $1 \text{ Nm} = 10^7 \text{ dyne cm}$

[1]

**Question 9**

(c) negative work.

[1]

**Question 10**

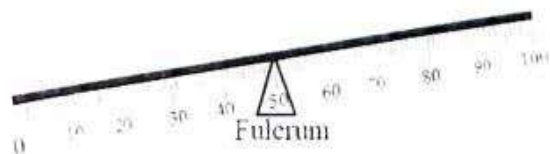
(b) light to chemical.

[1]

**Question 11**

(a)

[1]



**Question 12**

(i) (b) Centripetal force.

(ii) (a) towards the centre of the circular path.

**Question 13**

(i) (d) 20 J

[1]

(ii) (b) 10 J

[1]

(iii) (c) 30 J

[1]

