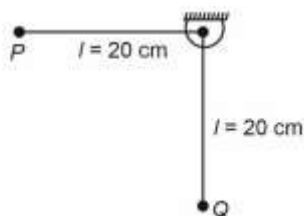


## JEE Main 2024 Daily Practice Questions

### Physics:

**Ques.** Bob  $P$  is released from the position of rest at the moment shown. If it collides elastically with an identical bob  $Q$  hanging freely then the velocity of  $Q$ , just after the collision is ( $g = 10 \text{ m/s}^2$ )



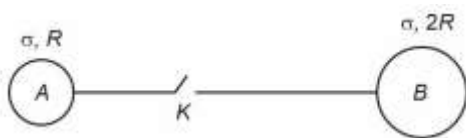
1. 1 m/s

2. 4 m/s

3. 2 m/s

4. 8 m/s

**Ques.** Two conducting solid spheres ( $A$  and  $B$ ) are placed at a very large distance with charge densities and radii as shown:



When the key  $K$  is closed, find the ratio of the final charge densities.

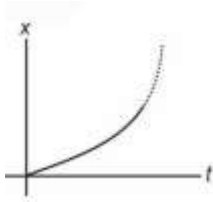
1. 4:1

2. 1:2

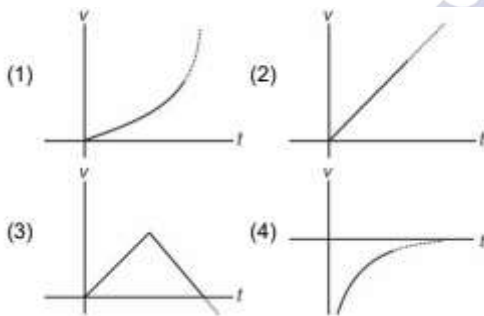
3. 2:1

4. 1:4

**Ques.** Position-time graph for a particle is parabolic and is as shown:



**Choose the corresponding v-t graph:**



**Chemistry:**

**Ques.** Caprolactam when heated at high temperature, gives:

1. Nylon 6, 6

2. Dacron

3. Teflon

4. Nylon 6

**Ques. Inhibitor of cancer growth:**

1. Cisplatin

2. EDTA

3. Cobalt

4. Ethane 1, 2- diamine

**Ques. How many moles of electrons are required to reduce 1 mole of permanganate ions into manganese dioxide?**

**Mathematics:**

**Ques. A die with points (2, 1, 0, -1, -2, 3) is thrown 5 times. The probability that the product of outcomes on all the throws is positive is:**

1. 521/ 2592

2. 16/81

3. 41/288

4. 28/81

$$\lim_{x \rightarrow 0} \frac{\int_0^x \frac{t^3}{1+t^6} dt}{x^4} \text{ equals}$$

**Ques.**

**Ques. The mean and variance of 7 observations are 8 and 16 respectively, if number 14 is omitted then a and b are new mean and variance. The value of a+b is:**

