JEE Main 2024 Daily Practice Questions

Physics:

Ques. If a planet has a mass equal to 16 times the mass of Earth and a radius equal to 4 times that of Earth. The ratio of the escape speed of the planet to that of Earth is

1. 2:1

2. 1:2

3. √2:1

4. 4:1

Ques. If the proton and α particle are moving with accelerating potential differences of 2 V and 4 V respectively. Find out the ratio of their de-Broglie wavelength:

1. 1:2

2. 2:1

3. 4:1

4. 1:4

Ques. A particle under SHM having amplitude A. Find the ratio of potential energy and KE of x= A/2 from the mean position.

1. 1:3

2. 1:2

3. 1:1

4. 4:1

Chemistry:

Ques. How much water (in litre) is added to 1 litre of HCL solution of pH= 1 to make its pH= 2?

Ques. Light of wavelengths 400nm is used for the photoelectric effect.

Metal	*Li*	*Na*	*K*	*Mg*	*Cu*
Work function	*2.42*	*2.3*	*2.25*	*3.7*	*4.8*

Ques. The most probable speed of gas B at 90K is the same as the root mean square speed of gas A (Molar mass = 40) at 600K. Calculate the molar mass of gas B.

Mathematics:

Ques. Two circles having radius r_1 and r_2 touch both coordinate axes in the first quadrant line x + y = 2 makes intercept 2 on both circles. The value of $r_1^2 + r_2^2 - r_1r_2$ is:

1. 8

2. 7

3. 5

4. 2

Ques. The sum of coefficients of the first 50 terms of the expression $(1-x)^{100}$ is:

1. 0

2. $^{99}C_{49}$

3. $1/2^{100}C_{50}$

4. $-{}^{99}C_{49}$

Ques. Number of 5 digit numbers formed using digits 0, 1, 3, 5, 7, and 9 which are greater than 40, 000 (repetition is not allowed) and divisible by 5 is equal to:

1. 100

2. 120

3. 240

4. 360