JEE Main 2024 Daily Practice Questions

Physics:

Ques. Let Y_1 be the ratio of molar specific heat at constant pressure and constant volume for a monoatomic gas and let Y_2 be this ratio for a diplomatic gas. Find Y_1/Y_2.
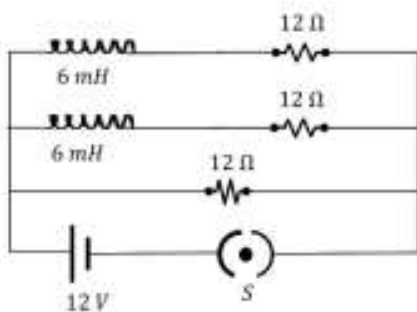
1. 21/25

2. 7/3

3. 25/21

4. 3/7

Ques. The distance of Earth from the sun is 1.5×10^8 km. If the time period of an imaginary planet is 2.83 years, then its distance from the sun comes out to be $n \times 10^8$ km. Find n.

Ques. For the given electrical circuit, the switch 's' is closed at t=0. Find the current (in A) drawn through the battery at a steady state.

Chemistry:

Ques. In which of the following metal extractions both Oxidation and Reduction processes are involved?

Ques. Find out the order of reaction of decomposition of $AB_3(g)$ using the given information.

Initial Pressure (mmHg) of AB_3 (g)	50	100	200	400
$t_{1/2}$ (sec)	4	2	1	5

1. 0

2. 1

3. 2

4. 3

Ques. The number of Peptide bonds present in Tripeptide VAL- PRO- GLY is:

1. 1

2. 2

3. 3

4. 4

Mathematics:

Ques. The sum of the coefficients of the first three terms in the expansion of $(X- 3/x^2)^n$ is 376. The coefficient of X^4 is:

1. 695

2. 410

3. 405

4. 395

Ques. Total number of numbers formed using digits 3, 5, 6, 7, and 8 (without repetition) which are greater than 7000, is equal to:

1. 148

2. 168

3. 144

4. 124

Ques. A 5x5 matrix whose each entry is either 0 or 1, is such that the sum of the entries of each column as well as each row is 1. Number of such matrices is:

1. 30

2. 60

3. 90

4. 120