

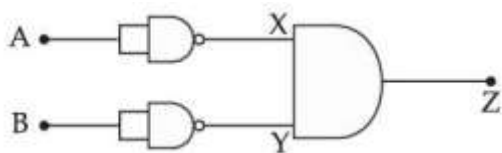
JEE Main 2024 Daily Practice Questions

Physics:

Ques. In a Screw Gauge, the fifth division of the circular scale coincides with the reference line when the ratchet is closed. There are 50 divisions on the circular scale and the main scale moves by 0.5 mm on a complete rotation. For a particular observation, the reading on the main scale is 5 mm, and the 20th division of the circular scale coincides with the reference line. Calculate the true reading.

1. 5.20 mm
2. 5.25 mm
3. 5.15 mm
4. 5.00 mm

Ques. Identify the logic operation carried out by the given circuit:



1. AND Gate
2. OR Gate
3. NAND Gate
4. NOR Gate

Ques. An inductor coil stores 64 J of magnetic field energy and dissipates energy at the rate of 640 W when a current of 8 A is passed through it. If this coil is joined across an ideal battery, find the time constant of the circuit in seconds:

1. 0.2
2. 0.4
3. 0.8
4. 0.125

Chemistry:

Ques. Given below are two statements:

Statement I: Frenkel defects are vacancy as well as interstitial defects

Statement II: Frenkel defect leads to colour in ionic solids due to the presence of F-centres

Choose the most appropriate answer for the statements from the options given below:

1. Both Statement I and II are true
2. Both Statement I and II are false
3. Statement I is true but statement II is false
4. Statement I is false but statement II is true

Ques. Which one of the following methods is most suitable for preparing deionized water?

1. Clark's method
2. Synthetic resin method

3. Calgon's method

4. Permutit method

Ques. Given below are two statements:

Statement I: In the titration between strong acid and weak base methyl orange is suitable as an indicator

Statement II: For titration of acetic acid with NaOH phenolphthalein is not a suitable indicator

In the light of the above statements, choose the most appropriate answer from the options given below:

1. Both Statement I and II are true
2. Both Statement I and II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

Mathematics:

Ques. Out of all the patients in the hospital, 89% are found to be suffering from a heart ailment and 98% are suffering from a lung infection. If $K\%$ of them are suffering from both ailments, then K can not belong to the set:

1. {84, 86, 88, 90}
2. {80, 83, 86, 89}
3. {79, 81, 83, 85}
4. {84, 87, 90, 93}

Ques. Let A and B be independent events such that $P(A) = p$, $P(B) = 2p$. The largest value of p , for which $P(\text{exactly one of } A, B \text{ occurs}) = 5/9$, is:

1. $1/3$
2. $4/9$
3. $5/12$
4. $2/9$

Ques. The number of three-digit even numbers, formed by the digits 0, 1, 3, 4, 6, 7 if the repetition of digits is not allowed, is