

JEE ADVANCED 2020

CHEMISTRY

JEE Advanced 2020 CRASH COURSE

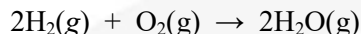
JEE Advanced 2020 crash courses provides a preparation strategy & direction, a speedy revision and getting a high score for JEE Advanced 2020 in 30-60 days. It is a focused course for the JEE Advanced aspirant's full preparation through a final mock test with important exam pattern, solving past questions and emphasize on the formulas to crack the JEE Advanced 2020.

Important problem-solving and revision of all important topics with the last 7 years JEE Advanced analysis. Providing problem-solving tips and tricks for the exam. 100% JEE Advanced pattern questions with detailed solutions. Those questions are the focus on chapters with a high weight. Misconceptions and repeated errors are cleared by the faculties. The questions of complete syllabus designed by the experienced Misostudy faculty team. Boosts confidence in students so that they can score well.

[One Option Correct]

1. 1.020g of metallic oxide contains 0.540g of the metal. Calculate the equivalent mass of the metal and hence its atomic mass with the help of Dulong and Petit's law. Taking the symbol for the metal as M. find the molecular formula of the oxide. The specific heat of the metal is $0.216 \text{ cal deg}^{-1} \text{ g}^{-1}$.
 - (a) M_2O_3
 - (b) M_4O_3
 - (c) M_2O_4
 - (d) M_3O_5
2. A partially dried clay mineral contains 8% water. The original sample contained 12% water and 45% silica. The % of silica in the partially dried sample is nearly.
 - (a) 50%
 - (b) 49%
 - (c) 55%
 - (d) 47%

3. A mixture in which the mole ratio of H_2 and O_2 is 2:1 is used to prepare water by the reaction,



The total pressure in the container is 0.8 atm at $20^\circ C$ before the reaction. Determine the final pressure at $120^\circ C$ after reaction assuming 80% yield of water.

- (a) 0.8054 atm
(b) 0.7864 atm
(c) 0.9744 atm
(d) 0.6964 atm
4. A mixture of $HCOOH$ and $H_2C_2O_4$ is heated with concentrated H_2SO_4 . The gas produced is collected and on treating with KOH solution, the volume of the gas decreases by $1/6$ th. Calculate the molar ratio of the two acids in the original mixture.
- (a) 2:3
(b) 6:5
(c) 4:1
(d) 8:6

[Integer Type Questions]

5. A plant virus is found to consist of uniform cylindrical particles of $150\text{\AA}$ in diameter and $5000\text{\AA}$ long. The specific volume of the virus is $0.75\text{ cm}^3/\text{g}$. If the virus is considered to be a single particle, find its molecular mass.
6. On dissolving 2.0g of metal in sulphuric acid, 4.51g of the metal sulphate was formed. The specific heat of the metal is 0.057 cal g^{-1} . What is the valency of the metal and exact atomic mass ?

[Matrix Matching]

7. Match the Column-X and Column-Y:

Column-X	Column-Y
(a) 1.6g CH_4	(i) 0.1 mol
(b) 1.7g NH_3	(ii) 6.023×10^{23} electrons
(c) $HCHO$	(iii) 40% carbon
(d) $C_6H_{12}O_6$	(iv) Vapour density = 15

[One Option Correct]

8. The ratio of the frequency corresponding to the third line in Lyman series of hydrogen atomic spectrum to that of the first line in Balmer series of Li^{2+} spectrum is
- (a) $\frac{4}{5}$ (c) $\frac{4}{3}$
(b) $\frac{5}{4}$ (d) $\frac{3}{4}$