

7 MOST PROBABLE TOPICS & THEIR ANALYSIS FOR JEE MAINS 2021 APRIL ATTEMPT

CHEMISTRY

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Feb-21

March-21

Topic Name

Introduction &
preparation of carbonyl
compounds

Chapter Name

ALDEHYDES,
KETONES &
CARBOXYLIC
ACIDS

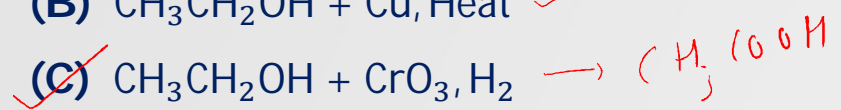
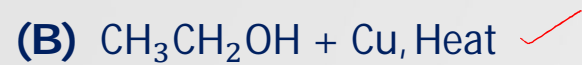
Topic Name

Introduction &
preparation of carbonyl
compounds

Total Questions
04

Total Questions
02

1. Which of the following will not yield acetaldehyde ?



Answer : (C)

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Chapter Name

Topic Name

Topic Name

Preparation & properties
of Aliphatic & Aromatic
Amines

Preparation & properties
of Aliphatic & Aromatic
Amines

AMINES

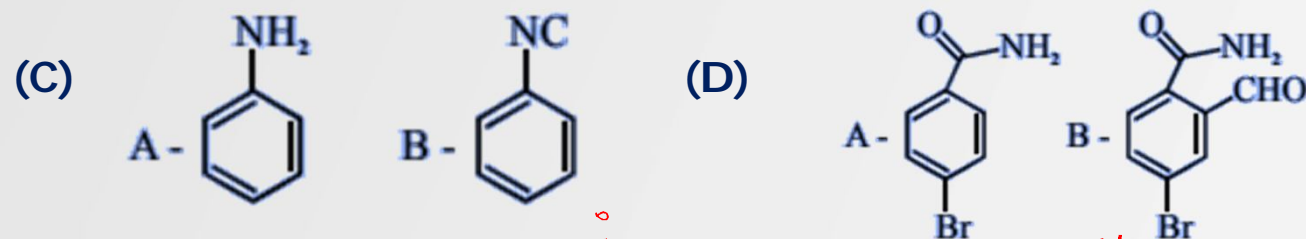
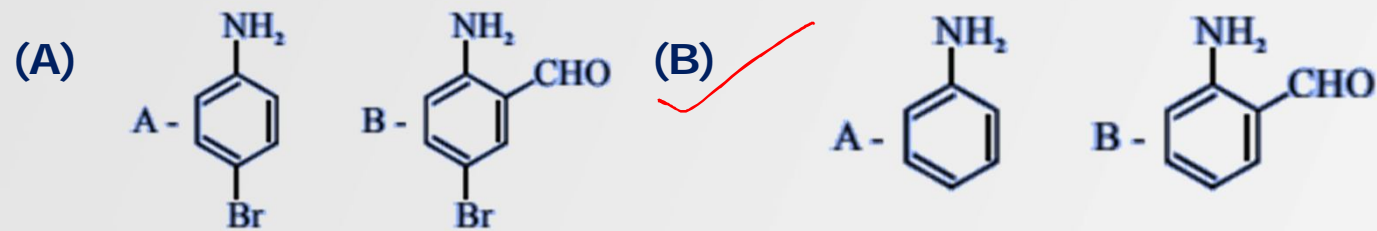
Total Questions

05

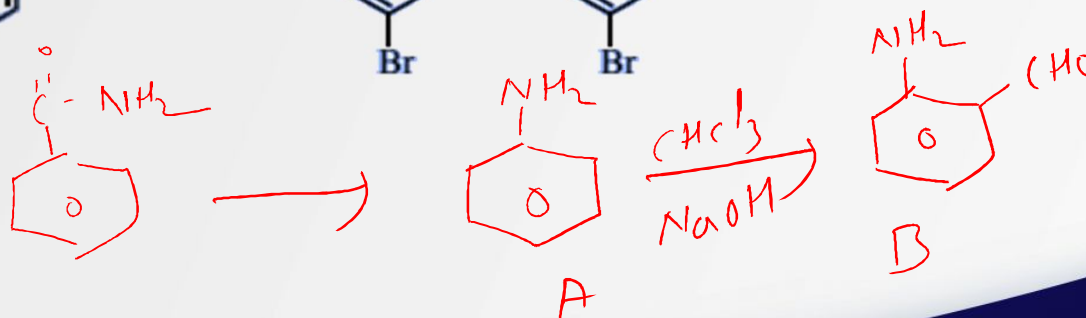
Total Questions

02

2. Hoffmann bromide degradation of benzamide gives product A, which upon heating with CHCl_3 and NaOH gives product B. The structures of A and B are :



Answer : (B)



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Chapter Name

Topic Name

Topic Name

Quantum mechanical
model & Quantum
Numbers

Quantum mechanical
model & Quantum
Numbers

**ATOMIC
STRUCTURE**

Total Questions
02

Total Questions
03

3. The number of orbitals with $n = 5, m_l = +2$ is _____. (Round off to the Nearest Integer.)

Answer : 3 ✓

$$l = 2, m = -2, -1, 0, +1, +2$$

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Topic Name

VSEPR, Bond parameters
& Dipole moment

Chapter Name

**CHEMICAL
BONDING AND
MOLECULAR
STRUCTURE**

Topic Name

VSEPR, Bond parameters
& Dipole moment

Total Questions

04

Total Questions

03

4. The number of species below that have two lone pairs of electrons in their central atom is ____ (Round off to the Nearest integer) SF_4 , BF_4^- , ClF_3 , AsF_3 , PCl_5 , BrF_5 , XeF_4 , SF_6

Answer : 2

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Topic Name

Reduction & Purification
principles of Metallurgy

Chapter Name

**GENERAL
PRINCIPLES &
PROCESSES OF
ISOLATION OF
ELEMENTS**

Topic Name

Reduction & Purification
principles of Metallurgy

Total Questions

03

Total Questions

05

5. Match list-I with list-II : Choose the most appropriate answer from the option given below :

LIST - I

LIST - II

- | | | |
|------------|------------------|----------------------------|
| A. Mercury | _____ | I. Vapour phase refining |
| B. Copper | _____ | II. Distillation refining |
| C. Silicon | _____ | III. Electrolytic refining |
| D. Nickel | _____ | IV. Zone Refining |

(A) A - II , B - IV , C - I , D - III

(B) A - III , B - IV , C - II , D - I

(C) A - I , B - IV , C - II , D - III

(D) A - IV , B - I , C - II , D - III

Answer : (C)

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Topic Name

Methods & preparation of
Halo Alkanes & Halo
Arenes

Chapter Name

**HALO ALKANES &
HALO ARENES**

Topic Name

Methods & preparation of
Halo Alkanes & Halo
Arenes

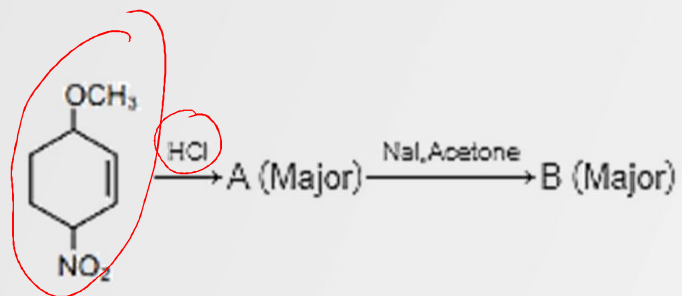
Total Questions

03

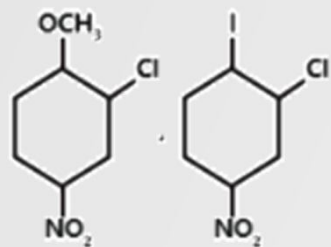
Total Questions

02

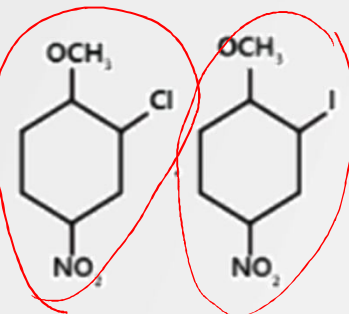
6. Products A and B are :



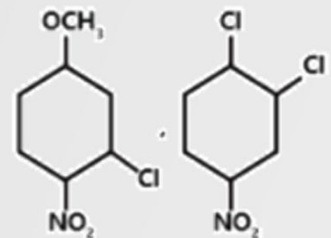
(A)



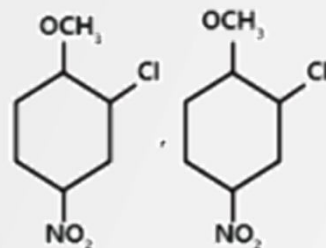
(B)



(C)



(D)



Answer : (B)

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Topic Name

Solubility Product,
Factors & Applications

Chapter Name

IONIC EQUILIBRIUM

Topic Name

Solubility Product,
Factors & Applications

Total Questions

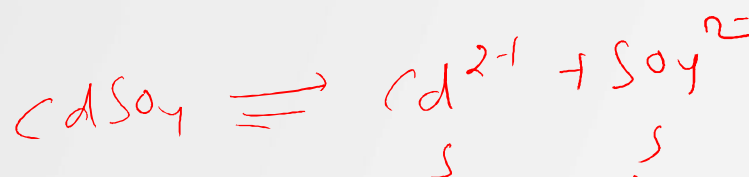
03

Total Questions

03

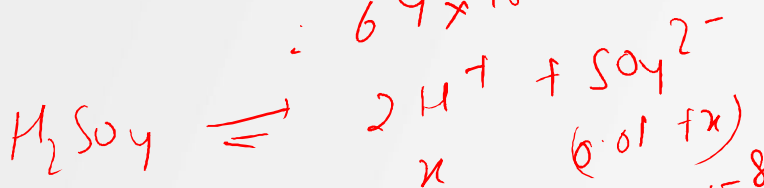
7. The solubility of CdSO_4 in water is $8.0 \times 10^{-4} \text{ mol L}^{-1}$. Its solubility in $0.01 \text{ M H}_2\text{SO}_4$ solution is $\times 10^{-6} \text{ mol L}^{-1}$. (Round off to the Nearest integer) (Assume that solubility is much less than 0.01 M)

Answer : 64 ✓✓



$$s^2 = (8.0 \times 10^{-4})^2$$

$$= 64 \times 10^{-8}$$



$$x(0.01 + x) = 64 \times 10^{-8}$$

$$0.01 + x = 0.01$$

$$x(0.01) = 64 \times 10^{-8}$$

$$x = 64 \times 10^{-6}$$