केवल मूल्यांकनकर्ता के उपयोग हेतु!

माध्यमिक शिक्षा मण्डल, मध्यप्रदेश, भोपाल

32 पृष्ठीय

केवल परीक्षक द्वारा भरा जावे। प्रश्न क्रमांक के सम्मुख प्राप्तांकों की प्रविष्टी करें।

प्रश्न क्रमांक	पृष्ठ क्रमांक	प्राप्तांक (अंकों में)	प्रश्न क्रमांक	पृष्ठ क्रमांक	प्राप्तांक (अंकों में)
1			17		
2			18		
3			19		
4			20		
5			21		
6			22		
7			23		
8			24		
9			25		
10			26		
11			27		
12			28		
13					
14					
15			कुल प्राप्तांक		
16					

परीक्षक एवं उपमुख्य परीक्षक द्वारा भरा जावे →

प्रमाणित किया जाता है कि अन्दर के पृष्ठों के अनुरूप मुख्य पृष्ठ पर अंकों की प्रविष्टी एवं अंकों का योग सही है।
निर्धारित मुद्राः नाम, पदनाम, मोबाईल नम्बर, परीक्षक क्रमांक एवं पदांकित [illegible] नाम की मुद्रा लगाएं।

उप मुख्य परीक्ष[illegible] भर एवं निर्धारित मुद्रा

[illegible] हस्ताक्षर, एवं निर्धारित मुद्रा

मुक्ति विजय सि[illegible]
प्रा० उ० मा० वि० अरो० पी० क्र[illegible]
मोबा० - 8602365152 परी० पंजी० क्र०...

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C.M.[illegible]se Shahnagar, Panna
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प्रश्न क्र.

Question-1

i) Infinite

ii) $K_2Cr_2O_7$

iii) Nickel (Ni)

iv) $RI > RBr > RCl > RF$

v) Testosterone

प्रश्न क्र.

Question - 2

i) Solution

ii) 2

iii) Titanium

iv) C_6H_5CHO

v) $H_2N - CH_2 - CH_2 - NH_2$

Hormones

प्रश्न क्र.

Question-3

i) Molarity (M)

ii) s^{-1} or min^{-1}

iii) fehling solution B (Rochelle Salt)

iv) Fishy

v) Cyclic

vi) Tripeptide

प्रश्न क्र.

Question-4

i) True

ii) False

iii) True

iv) False

v) True

vi) True

प्रश्न क्र.

Question-5

i) Silicon - Semiconductor

ii) $K_4[Fe(CN)_6]$ - Counter ions

iii) Lucas reagent - Conc. HCl & $ZnCl_2$

iv) Formic acid - Red ants

v) Monosaccharides - Reducing sugars

प्रश्न क्र.

Question - 6 - OR

Chief sources of protein are -

i) Milk
ii) Pulses
iii) Soya chunks
iv) Egg & meat

Question - 7 OR

Faraday's 1st law of electrolysis -

Amount of chemical reaction that takes place in an electrolytic cell is directly proportional to amount of electricity or charge passed through circuit.

$$\Rightarrow \text{G.eq.} \propto q$$

$$\Rightarrow \text{G.eq.} = \frac{q}{F}$$

where,
G.eq. = Gram equivalents

योग पूर्व पृष्ठ

प्रश्न क्र.

Question - 8

Elementary reactions:-

Reaction that takes place in a single - step without formation of an intermediate, are called elementary reaction.

Ex- $2HI \xrightarrow{Au} H_2 + I_2$

Question - 9

Two characteristics of interstitial compounds are -

i) They are chemically inert.

ii) They have high - melting & high boiling points.

प्रश्न क्र.

Question - 10

Homoleptic complex -

Coordination compounds which consists of only one kind of ligand are called Homoleptic complex.

Example - $[Co(NH_3)_6]Br_3$

Question - 11 OR

i) $K_2[PdCl_4]$

potassium tetrachlorido palladiumate (II)

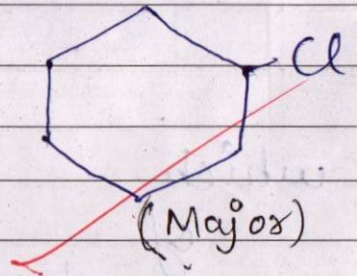
ii) $[Cr(NH_3)_3(H_2O)_3]Cl_3$

triamminetriaqua chromium (III) chloride

प्रश्न क्र.

Question - 12

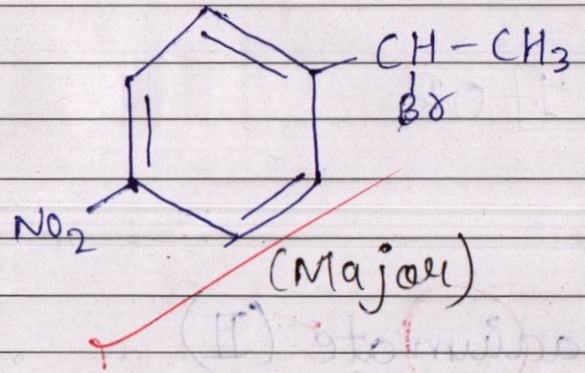
i)



+ $SO_2\uparrow$ + $HCl\uparrow$

(Major)

ii)



+ HBr

(Major)

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Question-13.

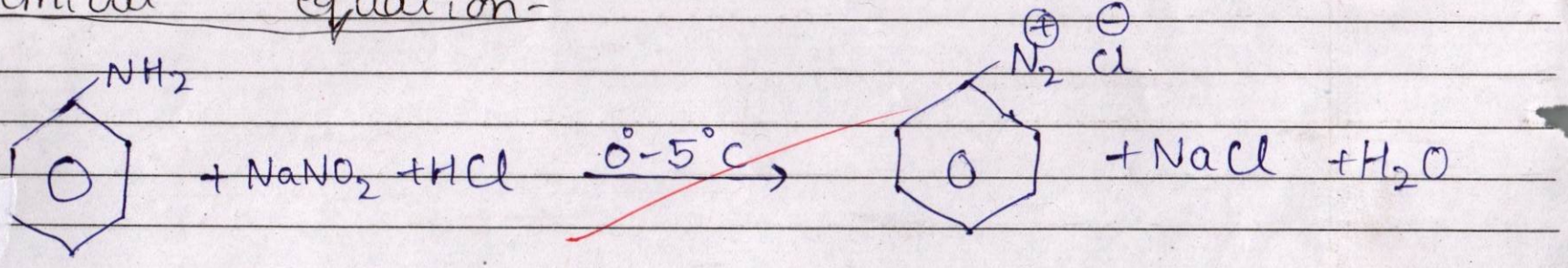
Diazotisation-

Diazotisation is the process of converting Aniline into Diazonium salt, by reacting Aniline with $NaNO_2$ & HCl at low temperature.

Reason to be not stored-

Diazonium salt is not stored because it's very unstable and may react with moisture present in atmosphere to convert into phenol.

Chemical equation-



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[Question-14]

Characteristics of molecularity -

i) Molecularity is defined only for elementary reactions.

ii) Molecularity cannot be 0 or negative.

iii) Molecularity is always a natural number, it cannot be fractional

iv) Molecularity is a theoretical concept.

प्रश्न क्र.

Question - 15

Transition elements possess variable oxidation states, their ns & (n-1)d orbital is involved in bond formation. They also form complexes & interstitial compounds. Because of all these reasons, compounds of transition elements are strongly bonded. Therefore, it is difficult to isolate atoms from them & hence, they exhibit higher enthalpies of atomisation.

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Question-16 OR

Three effects of tetrachloromethane for humans-

i) Carbon tetrachloride can be used as anaesthetic for humans.

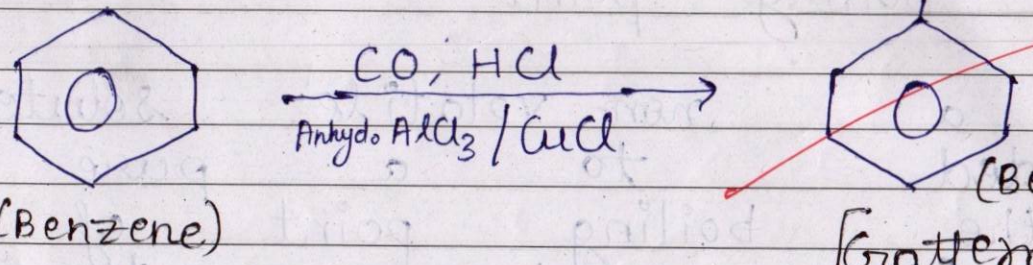
ii) It's large intakes can cause prolonged dizziness & weakness

iii) On oxidising, it get converted into phosgene gas which may even cause death.

प्रश्न क्र.

Question - 17

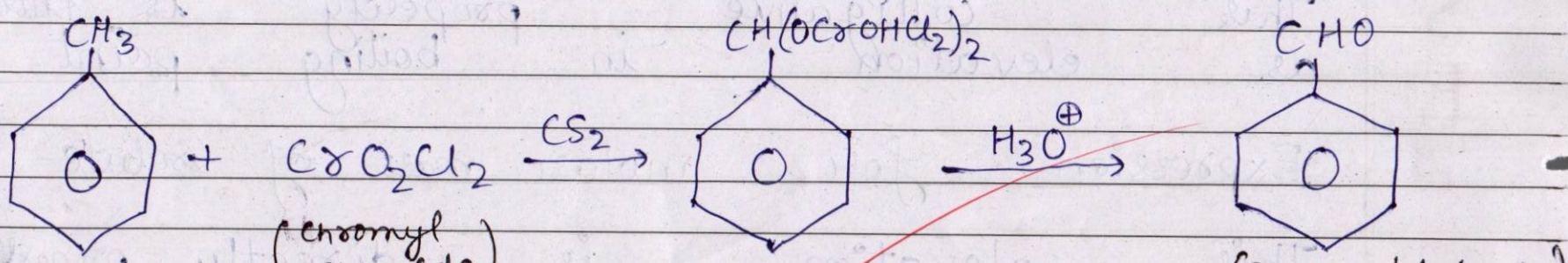
i)



(Benzene) → (Benzaldehyde)

[Gattermann-Koch $R^{x}n$]

ii)



(Toluene) → (Benzaldehyde)

[Etard $R^{x}n$]

प्रश्न क्र.

Question - 18

Elevation in boiling point -

Whenever a non-volatile solute is added to a pure solvent, the boiling point of solution is always greater than that of pure solvent. This colligative property is known as elevation in boiling point.

Expression for molar mass of solute -

This elevation is directly proportional to molality of solution.

$$\Rightarrow \boxed{\Delta T_b \propto m}$$

$$\Rightarrow \Delta T_b = K_b m$$

[where, K_b = ebullioscopic constant]

17

प्रश्न क्र.

$$\Rightarrow \Delta T_b = K_b \times \frac{n_b}{W_A(Kg)}$$ [molality = $\frac{\text{moles of solute}}{\text{mass of solvent (Kg)}}$]

$$\Rightarrow \Delta T_b = K_b \times \frac{W_b \times 1000}{M_b \times W_A(g)}$$ [moles = $\frac{\text{Given mass}}{\text{molar mass}}$]

$$\Rightarrow M_b = \frac{K_b \times W_b \times 1000}{\Delta T_b \times W_A}$$

Where,
all the masses are in grams.

B
S
E

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Question - 19

B
S
E

Given,

$CuSO_4 \longrightarrow Cu^{2+} + SO_4^{2-}$

$i = 1.5$ A

$t = 10$ mins. $= 600$ sec.

To find,

W_B of copper = ?

Calculation,

We know that,

M_B of copper ≈ 63 g

Now, By Faraday's I^{st} law of electrolysis

$\Rightarrow$ G. eq. $= \frac{q}{F}$

$\Rightarrow n_B \cdot n = \frac{q}{F}$ [G.eq. = moles × n where, n = no. of electrons exchanged]

प्रश्न क्र.

$$\Rightarrow \frac{W_B}{M_B} \times n = \frac{it}{F} \quad \left[\text{moles} = \frac{W_B}{M_B},\ q = it\right]$$

$$\Rightarrow \frac{W_B}{63} \times 2 = \frac{1.5 \times 600}{96500} \quad [\text{Given, } n=2 \text{ from cell } R^x n]$$

$$\Rightarrow W_B = \frac{1.5 \times 6 \times 63}{2 \times 965}$$

$$\Rightarrow W_B = \frac{9 \times 63}{2 \times 965}$$

$$\Rightarrow W_B = \frac{567}{1930}$$

$$\Rightarrow \boxed{W_B \approx 0.294\ g}$$

प्रश्न क्र.

Question - 20

i) $CH_3-CH_2-CH_2-O-CH_3 + HBr \longrightarrow$

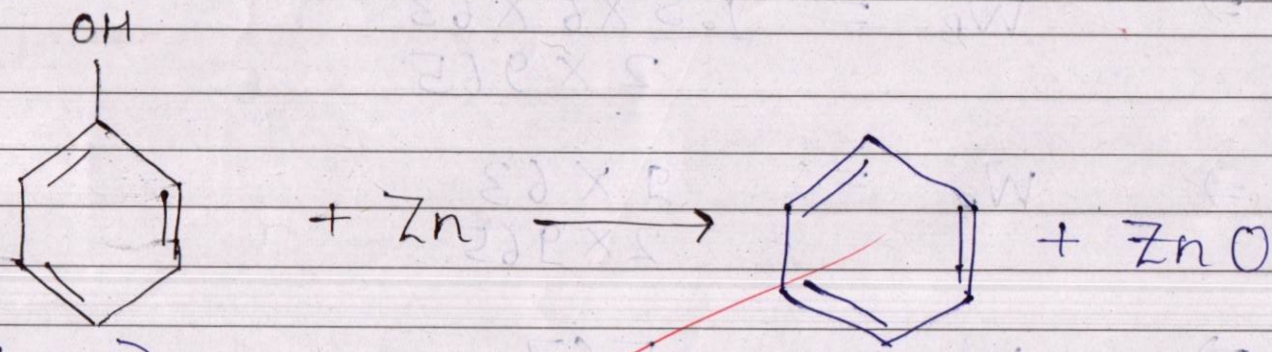
[Ethyl-methyl Ether]

$CH_3-CH_2-CH_2-OH + CH_3Br$

[Propyl alchohol] [methyl Bromide]

B
S
E

ii)



[Phenol] [Benzene]

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iii) $CH_3 - CH = CH_2 \xrightarrow{H_2O/H^{\oplus}} CH_3 - \underset{OH}{\underset{|}{CH}} - CH_3$

[Propene] [Iso-propyl alcohol]

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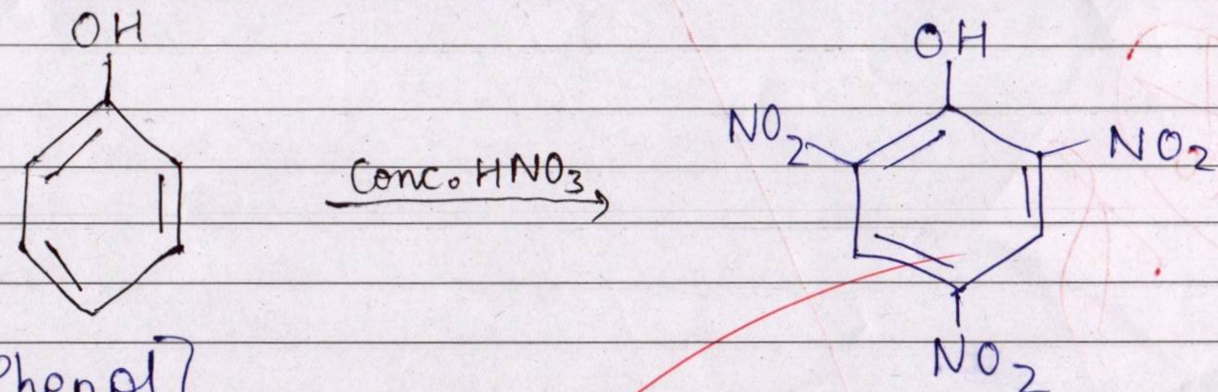
iv)



[Phenol] [Picric acid]

BSE