

Questions with Answer Keys

MathonGo

Q1 - 2024 (01 Feb Shift 1)

The number of white coloured salts among the following is

- (A) SrSO_4
- (B) $\text{Mg}(\text{NH}_4)\text{PO}_4$
- (c) BaCrO_4
- (D) $\text{Mn}(\text{OH})_2$
- (E) PbSO_4
- (F) PbCrO_4
- (G) AgBr
- (H) PbI_2
- (I) CaC_2O_4
- (J) $[\text{Fe}(\text{OH})_2(\text{CH}_3\text{COO})]$

Q2 - 2024 (29 Jan Shift 2)

A reagent which gives brilliant red precipitate with Nickel ions in basic medium is

- (1) sodium nitroprusside
- (2) neutral FeCl_3
- (3) meta-dinitrobenzene
- (4) dimethyl glyoxime

Q3 - 2024 (29 Jan Shift 2)

On passing a gas, 'X', through Nessler's reagent, a brown precipitate is obtained. The gas 'X' is

- (1) H_2S
- (2) CO_2
- (3) NH_3
- (4) Cl_2

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Questions with Answer Keys

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Q4 - 2024 (29 Jan Shift 2)

The oxidation number of iron in the compound formed during brown ring test for NO_3^- ion is _____.

Q5 - 2024 (30 Jan Shift 1)

Given below are two statements:

Statement-I: The gas liberated on warming a salt with dil H_2SO_4 , turns a piece of paper dipped in lead acetate into black, it is a confirmatory test for sulphide ion.

Statement-II: In statement-I the colour of paper turns black because of formation of lead sulphite. In the light of the above statements, choose the most appropriate answer from the options given below:

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

Q6 - 2024 (30 Jan Shift 1)

The Lassaigne's extract is boiled with dil HNO_3 before testing for halogens because,

- (1) AgCN is soluble in HNO_3
- (2) Silver halides are soluble in HNO_3
- (3) Ag_2S is soluble in HNO_3
- (4) Na_2S and NaCN are decomposed by HNO_3

Q7 - 2024 (30 Jan Shift 2)

Number of metal ions characterized by flame test among the following is _____.

Sr^{2+} , Ba^{2+} , Ca^{2+} , Cu^{2+} , Zn^{2+} , Co^{2+} , Fe^{2+}

Q8 - 2024 (31 Jan Shift 1)

The compound that is white in color is _____.

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Questions with Answer Keys

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(1) ammonium sulphide

(2) lead sulphate

(3) lead iodide

(4) ammonium arsenomolybdate

Q9 - 2024 (31 Jan Shift 1)

Molar mass of the salt from NaBr, NaNO₃, KI and CaF₂ which does not evolve coloured vapours on heating with concentrated H₂SO₄ is _____ gmol⁻¹, (Molar mass in gmol⁻¹ : Na : 23, N : 14, K : 39, O : 16, Br : 80, I : 127, F : 19, Ca : 40)

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Q5 (3) [/// mathongo](#) **Q6 (4)** [/// mathongo](#) **Q7 (4)** [/// mathongo](#) **Q8 (2)** [/// mathongo](#)

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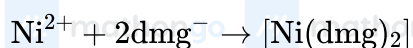
Solutions

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Q1

 SrSO_4 - white $\text{Mg}(\text{NH}_4)\text{PO}_4$ - white BaCrO_4 - yellow $\text{Mn}(\text{OH})_2$ - white PbSO_4 - white PbCrO_4 - yellow AgBr - pale yellow PbI_2 - yellow CaC_2O_4 - white $[\text{Fe}(\text{OH})_2(\text{CH}_3\text{COO})]$ - Brown Red

Q2



Rosy red/Bright Red precipitate

Q3

Nessler's Reagent Reaction :

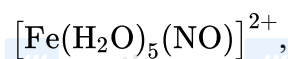


(Nessler's Reagent)

(odine of Millon's base)

Brown precipitate

Q4



Oxidation no. of Fe = +1

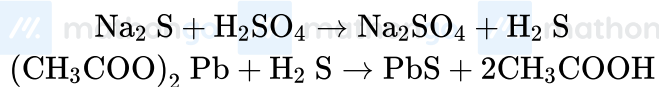
Q5

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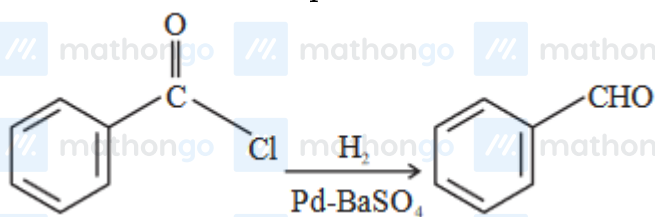
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Solutions

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Black lead
sulphide

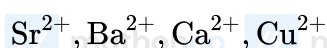


Q6

If nitrogen or sulphur is also present in the compound, the sodium fusion extract is first boiled with concentrated nitric acid to decompose cyanide or sulphide of sodium during Lassaigne's test

Q7

All the following metal ions will respond to flame test.



Q8

Lead sulphate-white

Ammonium sulphide-soluble

Lead iodide-Bright yellow

Ammonium arsenomolybdate-yellow

Q9

CaF_2 does not evolve any gas with concentrated H_2SO_4 .

$\text{NaBr} \rightarrow$ evolve Br_2

$\text{NaNO}_3 \rightarrow$ evolve NO_2

$\text{KI} \rightarrow$ evolve I_2

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