

JEE MAIN PRINCIPLES RELATED TO PRACTICAL CHEMISTRY — QUALITATIVE SALT ANALYSIS OF ANIONS — PYQS

Max. Marks: 20

Questions: 5

Section A (MCQ) — 5 questions

Q.1 Treatment of a gas 'X' with a freshly prepared ferrous sulphate solution gives a compound 'Y' as a brown ring. The compounds X and Y are:

[JEE Main 2026 (Online) 6th April Evening Shift]

- (1) NO and $[\text{Fe}(\text{NO})]\text{SO}_4$
 (2) NO_2 and $[\text{Fe}(\text{NO}_2)]\text{SO}_4$
 (3) N_2O and $[\text{Fe}(\text{N}_2\text{O})]\text{SO}_4$
 (4) N_2O_4 and $[\text{Fe}(\text{N}_2\text{O}_4)]\text{SO}_4$

Scan or tap for the full solution



Q.2 A paper dipped in a dil. H_2SO_4 solution of 'X' upon treatment with SO_2 gas turns into green. The compound 'X' is :

[JEE Main 2026 (Online) 5th April Evening Shift]

- (1) KI-starch (2) KMnO_4
 (3) $\text{Pb}(\text{CH}_3\text{COO})_2$ (4) $\text{K}_2\text{Cr}_2\text{O}_7$

Scan or tap for the full solution



Q.3 Given below are two statements:

Statement-I: Griess-Ilosvay test is used for the detection of nitrite ion, which involves the use of sulphanilic acid and α -naphthylamine reagent.

Statement-II: In the above test, sulphanilic acid is diazotized by the acidified nitrite ion, which on further coupling with α -naphthylamine forms an azo-dye.

In the light of the above statements, choose the correct answer from the options given below

[JEE Main 2026 (Online) 28th January Morning Shift]

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

Scan or tap for the full solution



Q.4 On heating a mixture of common salt and $\text{K}_2\text{Cr}_2\text{O}_7$ in equal amount along with concentrated H_2SO_4 in a test tube, a gas is evolved. Formula of the gas evolved and oxidation state of the central metal atom in the gas respectively are:

[JEE Main 2026 (Online) 21st January Evening Shift]

- (1) $\text{Cr}_2\text{O}_2\text{Cl}_2$ and +3 (2) $\text{Cr}_2\text{O}_2\text{Cl}_2$ and +6
 (3) CrO_2Cl_2 and +6 (4) CrO_2Cl_2 and +5

Scan or tap for the full solution



Q.5 Formation of $\text{Na}_4[\text{Fe}(\text{CN})_5\text{NOS}]$, a purple coloured complex formed by addition of sodium nitroprusside in sodium carbonate extract of salt indicates the presence of:

[JEE Main 2025 (Online) 2nd April Evening Shift]

- (1) Sulphide ion (2) Sulphite ion
 (3) Sulphate ion (4) Sodium ion

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4	5						
Ans.	1	4	4	3	1						