

JEE MAIN SOME BASIC CONCEPTS OF CHEMISTRY — PERCENTAGE COMPOSITION, EMPIRICAL FORMULA AND MOLECULAR FORMULA — PYQS

Max. Marks: 16
Questions: 4

Section A (MCQ) — 2 questions

- Q.1** An oxide of iron contains 69.9% iron, its empirical formula, is:
 (Given : Molar mass of Fe and O are 56 and 16 g mol⁻¹ respectively.)

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

- (1) FeO (2) Fe
- ₂
- O
- ₃
- (3) Fe
- ₃
- O
- ₄
- (4) FeO
- ₃

Scan or tap for the full solution



- Q.2** On complete combustion 1.0 g of an organic compound (X) gave 1.46 g of CO₂ and 0.567 g of H₂O. The empirical formula mass of compound (X) is _____ g. (Given molar mass in g mol⁻¹ C : 12, H : 1, O : 16)

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

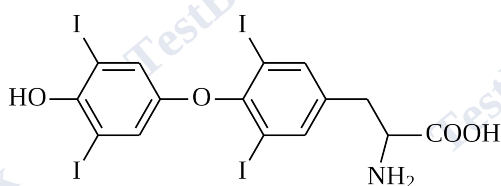
- (1) 60 (2) 45 (3) 30 (4) 15

Scan or tap for the full solution



Section B (Numerical) — 2 questions

- Q.3** Thyroxine, the hormone, has the structure given below



The percentage of iodine in thyroxine is _____ %.
 (nearest integer)
 (Given molar mass in g mol⁻¹ C : 12, H : 1, O : 16, N : 14, I : 127)

[JEE Main 2025 (Online) 7th April Morning Shift]

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- Q.4** Quantitative analysis of an organic compound (X) shows following % composition.

C : 14.5%

Cl : 64.46%

H : 1.8%

 Empirical formula mass of the compound (X) is _____ × 10⁻¹

 (Given molar mass in g mol⁻¹ of C : 12, H : 1, O : 16, Cl : 35.5)

[JEE Main 2025 (Online) 28th January Morning Shift]

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ANSWER KEY

Section A (MCQ) — 2 questions

Ques.	1	2									
Ans.	2	3									

Section B (Numerical) — 2 questions

Ques.	3	4					
Ans.	65	1655					