Q1: 16 March (Shift 2) - Single Correct

Match List-I with List-II

List-I Test/Reagents/Observation(s)	List-II Species detected
(a) Lassaigne's Test	(i) Carbon
(b) Cu(II) oxide	(ii) Sulphur
(c) Silver nitrate	(iii) N, S, P, and halogen
(d) The sodium fusion extract gives black precipitate with acetic acid and lead acetate	(iv) Halogen Specifically

The correct match is:

(1) (a) – (iii), (b) – (i), (c) – (ii), (d) – (iv)

(2) (a) – (i), (b) – (iv), (c) – (iii), (d) – (ii)

(3) (a) – (iii), (b) – (i), (c) – (iv), (d) – (ii)

(4) (a) – (i), (b) – (ii), (c) – (iv), (d) – (iii)

Q2: 16 March (Shift 2) - Numerical

In Duma's method of estimation of nitrogen, 0.1840 g of an organic compound gave 30 mL of nitrogen collected at 287 K and 758 mm of Hg pressure. The percentage composition of nitrogen in the compound is ___ (Round off to the Nearest Integer).

[Given : Aqueous tension at 287 K = 14 mm of Hg]

Q3: 17 March (Shift 1) - Single Correct

Given below are two statements:

Statement-I : Retardation factor (R_f) can be measured in meter/centimeter.

Statement-II : R_f value of a compound remains constant in all solvents.

Choose the most appropriate answer from the options given below:

(1) Statement-I is true but statement-II is false

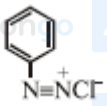
(2) Both statement-I and statement-II are true

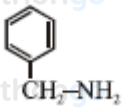
(3) Both statement-I and statement-II are false

(4) Statement-I is false but statement-II is true

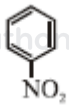
Q4: 17 March (Shift 2) - Single Correct

Nitrogen can be estimated by Kjeldah's method for which of the following compound?

(1) 

(2) 

(3) 

(4) 

Answer Key

Q1 (3) **Q2** (19) **Q3** (3) **Q4** (2)