

Step Academy official

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STUDENT NAME	
PAPER CODE	42739
TIME ALLOWED	40
Paper Date	24-02-2026



CLASS	New 1st Year (FSC/ICS)
SUBJECT	Chemistry
TOTAL MARKS	25
Paper Type	

Q1. Choose the correct answer.

5X1=5

1. Which gas is used in separating hard water from normal water?

(A) SO_2 (B) H_2S (C) NH_3 (D) NO_2

2. The oxidation state of sulfur in H_2SO_4 is

(A) +1 (B) +2 (C) +4 (D) +6

3. PAN formation starts when _____ reacts with the hydrocarbon.

(A) NO (B) NO_2 (C) O_3 (D) HO^\cdot

4. The most stable species in an acidic environment is

(A) SO_4^{2-} (B) SO_2 (C) H_2S (D) S

5. The drug omeprazole contains _____ group.

(A) Thiol (B) Sulfoxide (C) Bisulfide (D) Sulfone

Q2. Write short answers of the following questions.

5X2=10

1. What is the structure and bonding nature of the ammonia molecule?

2. Why is NO considered a neutral oxide?

3. What are the environmental conditions needed for denitrification?

4. Why can't plants use nitrogen directly from the atmosphere?

5. What is the importance of disulfide bridges?

Q3. Write detailed answers of the following questions.

2X5=10

1. Explain the preparation and basicity of ammonia.

2. Give flowsheet diagram and equations involved in the contact process.