

NAME:		ROLL NO:		TIME:	15: MIN
SUB:	Chemistry	Date:		CLASS:	1 st Year
SYLLABUS	Chp. 12 (Nitrogen and Sulphur)	T. MARKS	12	OBT. M	

Q. 1 Choose the Correct Answer. Cutting, Erasing, Double Selection is Strictly Prohibited. (1x12=12)

- Despite being the most abundant gas in the Earth's atmosphere, nitrogen does not readily participate in combustion reactions because:
 - It is denser than oxygen.
 - It has a high specific heat capacity.
 - Breaking the $N \equiv N$ bond requires a large amount of energy.
 - It is a noble gas.
- A student heats a solid ammonium salt with a solution of a strong alkali. The gas produced turns damp red litmus paper blue and has a characteristic pungent smell. The gas is:
 - Hydrogen (H_2)
 - Carbon dioxide (CO_2)
 - Ammonia (NH_3)
 - Sulphur dioxide (SO_2)
- The shape of ammonium (ion) is:
 - Pyramidal
 - Triangular planar
 - Tetrahedral
 - Linear
- In a catalytic converter, the conversion of nitrogen oxides (NO_x) into nitrogen gas (N_2) and oxygen gas (O_2) is a process of:
 - Oxidation
 - Reduction
 - Combustion
 - Neutralization
- PAN formation starts when reacts with the hydrocarbon.
 - NO
 - NO_2
 - O_3
 - $HO^\cdot$
- Nitrification is the process by which:
 - Atmospheric nitrogen is converted into ammonia.
 - Nitrate is converted into nitrogen gas.
 - Ammonia is converted into nitrite and then nitrate.
 - Organic nitrogen is converted into ammonia.
- The most stable species in an acidic environment is:
 - SO_4^{2-}
 - SO_2
 - H_2S
 - S
- Which gas is used in separating hard water from normal water?
 - SO_2
 - H_2S
 - NH_3
 - NO_2
- The oxidation state of sulphur in H_2SO_4 in:
 - +1
 - +2
 - +4
 - +6
- The drug omeprazole contains _____ group.
 - Thiol
 - Sulfoxide
 - Bisulfide
 - Sulfone
- Sulphur dioxide (SO_2) produced from the combustion of sulphur can be further oxidized to sulphur trioxide (SO_3) under specific conditions, such as in the presence of a:
 - Catalyst (e.g., vanadium (V) oxide) and high temperature
 - Catalyst (e.g., iron) and low temperature.
 - Strong reducing agent and high pressure.
 - Dilute acid and room temperature.
- Sulphur trioxide (SO_3) is not directly dissolved in water to produce sulphuric acid in the contact process because this reaction is:
 - Too slow.
 - Reversible and would result in a low yield
 - Highly exothermic and produces a mist of sulphuric acid.
 - Requires very high pressures.



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1ST YEAR SOLVED EXERCISE MCQs



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Answer Key

1	C	2	C	3	C	4	B
5	B	6	C	7	A	8	C
9	D	10	B	11	A	12	C