

- vii) 200ml sample of water collect for TDS if 20ml aliquot from the given solution diluted up to 100ml. Weight of empty crucible is 17.23gm, weight of crucible with residue is 17.98gm. Calculate the amount of TDS in mg/ml.
- viii) Discuss the radioactive and medical waste.
- ix) Which are the main causes of Soil Pollution?
- Q.3**
- a) Write a note on structure of atmosphere. [06]
- b) Discuss the 'Sea Water Model'. [06]
- [OR]**
- b) Discuss the importance of environmental chemistry. If 29.5 Lit. O_3 sample react with KI solution and liberated I_2 titrated with 42.18 mL. 0.0978 M $Na_2S_2O_3$. Calculate the ppb of O_3 . [06]
- Q.4**
- a) Discuss the source of air pollution. [06]
- b) Discuss the sampling train for air pollution analysis. [06]
- [OR]**
- b) Discuss the analysis of SO_2 in detailed. SO_2 in 15 lit. air sample was absorb and converting to SO_4^{2-} by appropriate treatment. This can precipitates with $BaCl_2$ having concentration 0.04 M, 25.2 mL $BaSO_4$ precipitates removed by filtration and remaining $BaCl_2$ consume 36.0mL, 0.02017 M EDTA for titration to reach the end point. Calculate ppm of SO_2 in given air sample. (Ba=137.33, S=32, Cl=35.5) [06]
- Q.5**
- a) Discuss the various types of water pollutants. [06]
- b) Discuss BOD and its importance. If two blue color water sample each known to contain only one absorption species had following absorption value in 1 cm cell. [06]
- | Wavelength | Abs. Sample 1 | Abs. Sample 2 |
|------------|---------------|---------------|
| 730 nm. | 0.622 | 0.391 |
| 820 nm. | 0.417 | 0.240 |
- Do the water samples contain the same substance? Explain how you know?
- [OR]**
- b) Give the note on water quality and discuss alkalinity, acidity, TDS, TH, DO and COD. [06]
- Q.6**
- a) Give the introductory note on soil pollution. Discuss the waste and pollutant in soil. [06]
- b) Explain solid waste management. Discuss classification of waste and its disposal modes. [06]
- [OR]**
- b) Discuss waste treatment technology and describe (i) in-vessel composting and (ii) MBT [06]

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