Anirban Dhulia

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- Sept 2018

B.Tech 7th Semester

COURSE CODE: 10B13CE742 MAX. MARKS: 15

COURSE NAME: Air Pollution Monitoring and Control

COURSE CREDITS: 3 MAX. TIME: One Hr

Note: *All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.* ***Each question carries equal marks.***

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1. The Indian ambient air quality standards prescribe the permissible maximum annual average concentration of SO_2 for residential areas, as equal to 50μg/m^3. Find the concentration in ppm. (Temperature 20 °C).
2. A high volume sampler operated at 1.57 m/min. The sampling period was 24 h. The filter paper weighed 3.1690 g at the start of the run and 3.5882 g at the end of the sampling period. What is the concentration of the suspended particulate in mg/m^3?
3. A landfill site is producing 300Nm^3 biogas daily. H_2S content of biogas is 0.70 %. Determine the SO_2 emission if this gas is used in internal combustion engine for the generation of electricity.
4. Write short notes on ozone depletion and its dreaded effects on biotic as well as abiotic world.
5. Enumerate the different major air pollutants, their characteristics, sources, and health effects on human beings.
6. What is photochemical smog and how it is formed?
7. "Global warming and climate change – A global environmental challenge". Critically discuss the statement to which you agree or disagree with it.
8. "Biosphere is an ecosystem", discuss critically the statement, explaining the essential components of the biosphere.
9. Explain in brief the impact of humans on the biosphere.
10. Write a note on Air quality index.