B.Tech. SEM -VII (Chemical 2014 Course (CBCS) : WINTER - 2018

SUBJECT – ELECTIVE – III : ADVANCED OXIDATION PROCESSES

Day : Friday **W-2018-2520** Time : 02.30 PM TO 05.30 PM

Date : 23/11/2018 Max. Marks : 60

N.B.

1) All questions are **COMPULSORY.**

2) Figures to the right indicate **FULL** marks.

Q.1 Describe the conventional processes for the treatment of industrial wastewater. **(10)**

OR

Describe the role of OH radicals in the degradation of organic pollutant.

Q.2 Illustrate the mechanism of photo-induced AOP using H_2O_2/UV. **(10)**

OR

Illustrate the mechanism of photo-induced AOP using Ozone /UV.

Q.3 Describe the various semiconductors used in photocatalytic application for waste treatment. **(10)**

OR

Illustrate different types of reactor configurations used in wastewater treatment.

Q.4 Describe Photo-Fenton process for degradation of organic pollutant. **(10)**

OR

Describe merits and demerits of Photo-Fenton process.

Q.5 Explain various AOPs used for wastewater treatment. State the most feasible process among them. **(10)**

OR

Write short notes on:

a) Principle of Sono-chemistry

b) Acoustic Cavitation

Q.6 Justify the statement - "Photocatalysis using TiO_2 is most popular process for wastewater treatment. **(10)**

OR

Illustrate the role of doped and non- doped TiO_2 in AOPs with suitable examples.

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