

B.TECH SEM - VI (2007 COURSE) (CHEMICAL ENGG.) :
WINTER - 2017

SUBJECT: INDUSTRIAL POLLUTION CONTROL

Day: **Friday**
Date: **24/11/2017**

Time: **10.00 AM TO 01.00 PM**
Max Marks. 80

W-2017-2498

N.B.

- 1) **Q. No. 1** and **Q. no. 5** are **COMPULSORY**. Out of remaining attempt any **TWO** questions from each Section.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Answers to both the section should be written in **SEPARATE** answer books.
- 4) Use of non – programmable electronic calculator is **ALLOWED**.
- 5) Assume suitable data, if necessary.
- 6) Draw neat diagrams must be drawn **WHEREVER** necessary.

SECTION - I

- Q.1** Write a short note on
- a) Air pollution control act (05)
 - b) Color in waste water (05)
 - c) Flow equalization (04)
- Q.2**
- a) Explain physical, chemical and biological characteristics of industrial waste water. (07)
 - b) What are the types of pollution? How they affect human being. (06)
- Q.3**
- a) What is C.O.D? Explain its method of measurement and industrial significance? (06)
 - b) The liquid effluent from a paper and pulp stream with BOD of 600 mg/lit is to be treated in a stabilization pond 1.25 m deep, with an average retention time of 25 days. The working temperature is 25⁰ C the average rate constant at 20⁰ C is 0.1 / day and temperature coefficient 1.052. Determine effluent BOD. (07)
- Q.4**
- a) How mixing and flocculation is used in waste treatment? Explain applicability with suitable example. (07)
 - b) What is grit? Explain the methods of its removal. (06)

SECTION - II

- Q.5** Write a short note on
- a) Acid rains (05)
 - b) Stabilization pond (05)
 - c) Cyclone separator (04)
- Q.6**
- a) What are aerobic – anaerobic lagoons? Explain their importance with example. (07)
 - b) What is the M.O. used in waste water treatment? Explain their role in detail. (06)
- Q.7**
- a) What are the classifications of air pollutants? Explain their properties in detail. (07)
 - b) What is the effect of air pollution on man and vegetation? Explain in details. (06)
- Q.8**
- a) Explain the control of gaseous pollutants by absorption & adsorption. (07)
 - b) How fabric fillers are used in air pollution control? Explain its importance with example. (06)