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**B.E. / B.TECH. DEGREE EXAMINATIONS, MAY 2017**  
**SECOND SEMESTER**

**CY16252 – CHEMISTRY FOR TECHNOLOGISTS**

*(Biotechnology)*

**(Regulation 2016)**

**Q. Code: 374882**

**Time: Three Hours**

**Maximum : 100 Marks**

Answer **ALL** questions

**PART A - (10 X 2 = 20 Marks)**

1. Mention any four parameters of Water for Textile Wet Processing Industry.
2. Give the differences between BOD and COD.
3. What do you mean by the term interface?
4. What is meant by the term foaming and how is it eliminated?
5. Mention the significances of iodine value.
6. Name the two types of greases based on the thickener.
7. Hydrogen peroxide is an ideal oxidant. Justify.
8. Higher dose of bleaching powder should not be added to drinking water. Why?
9. Define term chromophore with an example.
10. Write the assumptions of Witt's theory.

**PART B - (5 X16 = 80 Marks)**

11. (a) (i) Discuss the process of demineralization with a neat diagram. (8)  
How are the exhausted cation and anion exchange resins regenerated?
- (ii) Explain the process of desalination by electrodialysis with a neat (8)  
diagram. Mention the advantages and disadvantages of it.

(OR)

- (b) (i) How is hardness of water determined by EDTA method? (10)  
(ii) Write a note on boiler troubles and its remedies. (6)

12. (a) (i) Discuss the various factors, which affect the adsorption of a gas on solid adsorbent. (8)  
(ii) Enunciate on the applications of adsorption studies. (8)

(OR)

- (b) (i) Write a note on adsorption isotherms. (8)  
(ii) Write a note on the role of adsorption in foaming and defoaming. (8)

13. (a) (i) Elaborate any two types of mechanism of lubrications. (8)  
(ii) How is cloud point and pour point determined? (8)

(OR)

- (b) (i) Write a note on the following properties of lubricants (8)  
1) viscosity and viscosity index 2) cloud and pour point.  
(ii) How do graphite and molybdenum disulphide act as lubricants? (8)

14. (a) (i) How is strength of hydrogen peroxide determined? (8)  
(ii) Write a note on the following auxiliaries (8)  
i) bleaching powder ii) sodiumhypochlorite

(OR)

- (b) Write the methodology by which available chlorine in NaOCl is estimated. (16)

15. (a) Write any two synthesis and applications of azo dyes. (16)

(OR)

- (b) (i) How are dyes classified based on applications? (8)  
(ii) Write a note on the relation between color and constitution. (8)