

End Semester Examinations - 2015-16 Even Semester - May 2016

13CH201 Applied Chemistry

Set A

Time : 3 hrs
Total Marks: 100

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1. a. Give an account of electrodialysis with a neat diagram. (10)
b. Calculate the permanent, temporary and total hardness of water sample containing
 $\text{Ca}(\text{HCO}_3)_2 = 85 \text{ mg/l}$; $\text{MgCl}_2 = 35 \text{ mg/l}$; $\text{CaSO}_4 = 60 \text{ mg/l}$. (5)
c. Write note on break point chlorination. (5)
- OR**
2. a. Describe Zeolite process of softening the hard water with a neat diagram.
What are its advantages? (10)
b. Write note on 1.boiler corrosion by dissolved oxygen 2.disadvantages of scales (10)
3. a. Explain the preparation, properties and uses of polyethylene. (10)
b. Give an account of the moulding constituents with examples. (10)
- OR**
4. a. How is bakelite prepared? Write its uses. (8)
b. Write note on the following.
1.drawbacks of raw rubber 2.condensation polymerization. (10)
c. Define biopolymers with examples. (2)
5. a. Give an account of proximate analysis of coal. Write its significances (10)
b. How is CNG prepared? What are its advantages ? (5)
c. Calculate the gross and net calorific value of coal containing carbon - 85% ; hydrogen – 8% ;
Oxygen-0%; Sulphur – 1% latent heat of steam = 587 cal/g (5)
- OR**
6. a. Explain the method of manufacture of gobar gas with a neat diagram. (10)
b. Define octane number. How will you improve the antiknocking value of a fuel? (10)
7. a. Construct and explain the working of $\text{H}_2\text{-O}_2$ fuel cell. (10)
b. Explain differential aeration corrosion with one example. (6)
c. How is corrosion controlled by the use of alloys? (4)
- OR**
8. a. Give an account of lead acid battery with the reactions during discharging. (10)
b. Write about the different factors related to nature of metal influencing corrosion. (10)
9. a. Write note on 1.molybdenum disulphide as lubricant. 2. any four electrical insulators (10)

Wishing you All the Best
