KERALA AGRICULTURAL UNIVERSITY

B.Tech (Food .Engg) 2013 Admission
I[st] Semester Final Examination-January 2013

Cat. No: Basc.1104 **Marks: 50**
Title: Engineering Chemistry (2+1) **Time: 2hours**

I Fill in the blanks / True or False/Define **(10 x 1=10)**

1. Calgon is_____
2. The major component of stratosphere is_____
3. SI unit of calorific value is_____
4. _____ is the monomer of Nylon 6
5. Graphite dispersed in water is called_____
6. Fluoride content in drinking water is limited to 1.0mg/L (State True or False)
7. Lower the calorific value ,higher the amount of heat librated and hence better the fuel (State True or False)
8. Define cell constant
9. Define functionality of a polymer
10. Name any two substitutes for CFC

II Write short note on any FIVE questions **(5 x 2=10)**

1. What are Zeolites? What is its significance
2. What will be the potential of a silver electrode dipping in its solution of a 0.02 M concentration at 25^0 C? Given Std. electrode potential of the silver electrode=0.80 V
3. What is Beer –Lambert's law? Give its mathematical expression
4. Differentiate between HCV and LCV
5. What is corrosion? Explain any one method to prevent corrosion
6. What is fly ash? Give its composition
7. What are the different types of fuels? Give example for each
8. Differentiate between thermosetting and thermoplastics

III Answer any FIVE questions **(5 x4=20)**

1. How EMP measurements are used in the determination of end point in acid base titrations
2. Write notes on the following
   a.) PE b) Nylon 6
3. What are the various steps in the treatment of industrial waste water
4. What is hard water? Explain the different types of hardness and their causes
5. What are concentration cells? How are they classified ?Give example for each

6. Differentiate between scale and sludge. How they are formed
7. Explain the analysis of flue gas by Orsat apparatus

IV Answer any ONE question **(10 x 1=10)**

1. Write notes on the following

   a) Eutrophication b) Column chromatography c) USAB process

   b) Deep well injection method

2. a) Discuss the various causes and consequences of air pollution. How can you Control them

   b) Which are the segments of the environment

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