Hemchandracharya North Gujarat University, Patan

Bachelor of Vocation

Pharmaceutical Chemistry Semester - III

End Term Examination, December, 2016

Advanced Analytical Chemistry-I (PC-312)

Time: 2 hrs **Date: 20/12/2016** **Maximum marks: 50**

Q.1 Answer all questions. Each question carries 1 mark **9 marks**

1. Give the expression for distribution coefficient used for solvent extraction.
2. Name any one method used for the separation of drugs from multicomponent systems.
3. Define: eluent and eluate
4. Silica gel G is used as the stationary phase in TLC. What does the 'G' indicate?
5. Give the expression for calculating Rf value for any planar chromatographic technique.
6. A solution of _____ is filled within the glass electrode in a pH meter.
7. A method in which the analyte concentration is measured as a function of the electric potential is called _____.
8. Define: EMF
9. In Kjehdahl's method for nitrogen determination inorganic nitrogen in the sample cannot be determined. (TRUE/FALSE)

Q.2 Answer ANY 5 questions. Each question carries 4 marks. **20 marks**

1. Explain the effect of pH on the extractability of drugs with suitable examples.
2. Classify chromatographic techniques based on mobile phase and separation mechanisms.
3. Explain the following terms in chromatography: Retention time, resolution and column efficiency.
4. Define the following terms used in conductometry: conductance, conductivity, specific conductance and cell constant.
5. Write a note on the applications of potentiometry.
6. Explain the principle of Karl Fischer titration with proper chemical equations.

Q.3 Answer ANY 3 questions. Each question carries 7 marks. **21 marks**

1. Compare and contrast multiple and continuous extraction.
2. Discuss in detail paper chromatography with its principle and procedure.
3. Discuss in detail the working of a combined glass electrode. State its advantages and disadvantages.
4. Explain Kjehdahl's method of nitrogen determination

***********BEST OF LUCK***********