[Total No. of Questions - 18] [Total No. of Prin(Pages - 2]
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B. Pharmacy 3rd Semester Examination

Pharmaceutical Analysis-I (NS)

BP-231 - 0 DEC 2016

Time : 3 Hours Max. Marks : 70

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

SECTION - A

Note: *Attempt any two of the following:*

1. (a) Define oxidation and reduction reaction. Discuss the theory of redox titration.

   (b) How will you determine the equivalent weight of oxidising and reducing agents using redox titrations?

2. What do you understand by precipitation titrations? Discuss different methods for determination of end point as precipitation titration.

3. (a) Discuss in detail law of Mass Action.

   (b) What are acid-base indicators? Write down the theory of indicators. (2×10=20)

SECTION - B

Note: *Attempt any eight of the following:*

4. Explain primary and secondary standards with suitable examples.

5. What do you understand by common-ion effect? Explain with suitable example.

6. Write a short note on Fajan's method.

7. Name different classes of salt. Discuss the hydrolysis of salt of strong acid and weak base.

8. Discuss with suitable examples titration involving potassium permanganate.

9. Write a short note on redox indicators.

10. Discuss thermogravimetric curves.

11. Define solubility product. The solubility of silver chloride is $0.0015 gL^{-1}$. Calculate the solubility product. [Molecular mass of silver chloride=143.3].

12. Derive Henderson-Hasselbalch equation for calculation of pH of buffer solutions.

13. Explain different types of errors and methods for minimizing them. (8×5=40)

SECTION - C

Note: *Attempt all of the following:*

14. Give the definition and formula of standard deviation.

15. Explain the reason why Mohr's method is carried out at neutral pH.

16. Define accuracy and precision.

17. What is ionic-product of water?

18. Write down the Nernst equation for calculation of electrode potential. (5×2=10)