

Roll No. ....

Total No. of Questions : 10]

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J-722 [5367]

[2126]

**B.Pharmacy (Semester - 1<sup>st</sup>)**

**PHARMACEUTICAL ANALYSIS - I (PHM - 1.1.1)**

Time : 03 Hours

Maximum Marks : 80

**Instruction to Candidates:**

- 1) Section - A is **compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Three** questions from Section - C.

**Section - A**

**Q1)**

**(15 x 2 = 30)**

- a) Explain the term 'Accuracy'?
- b) Explain the hydrolysis of salts of strong acid and weak base?
- c) Define 'Molarity' and Explain how do you prepare 1 molar NaOH solution?
- d) Differentiate between primary and secondary standard solutions?
- e) Explain Bronsted acid-base theory?
- f) What is buffer solution? Explain briefly the importance of buffer solutions in pharmacy?
- g) Define common ion effect and give its practical importance?
- h) Explain the concepts of PPM and PPB?
- i) Write notes on universal indicators?
- j) Explain briefly the preparation and standardization of N/10  $\text{KMnO}_4$ .
- k) Differentiate between internal and external redox indicators?
- l) Write notes on digestion and peptisation?
- m) Discuss the organic precipitants in gravimetry?

**P.T.O.**

- n) Explain how do you determine calcium as calcium oxalate by gravimetry?
- o) Define standard deviation and give its formula?

**Section - B**

**(4 x 5 = 20)**

- Q2)** Explain systematic and random errors with suitable examples.
- Q3)** Explain briefly the concept of post precipitation?
- Q4)** Write notes on buffer action and give the significance of Henderson and Hesselbach equation?
- Q5)** Discuss the theory of redox titrations?
- Q6)** Discuss the classification of chemical reactions involved in volumetric analysis?

**Section - C**

**(3 x 10 = 30)**

- Q7)** What are neutralization curves? Explain the titration curves of strong acid and strong base?
- Q8)** Discuss the basic steps involved in gravimetry?
- Q9)** Explain how the end point is detected in redox titrations?
- Q10)** Discuss various sampling techniques used in pharmacy?

