

SUBJECT : PHARMACEUTICAL ANALYSIS - I

Day : Friday

Date : 16/11/2018

W-2018-4075

Time : 02.00 PM TO 05.00 PM

Max. Marks : 60

N. B. :

- 1) Question No – 1 and 5 are **COMPULSORY**. Out of remaining questions attempt **any Two** from section - I and **any Two** questions from section - II
 - 2) Answers to both the sections should be written in **SEPARATE** answer books.
 - 3) Figures to the right indicate **FULL** marks.
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SECTION - I

- Q.1** Attempt **ANY FIVE** of the following: (10)
- a) What is pKa? Give its significance
 - b) Enlist various methods of concentration expression
 - c) What is the difference between calibration and validation?
 - d) Give procedure for preparation of 0.1M H₂SO₄. With what is it standardized?
 - e) Draw titration graphs for endpoint determination in aq. acid base titrations
 - f) Explain with example primary standards
- Q.2**
- a) Explain in detail various types of neutralization indicators (7)
 - b) Write a note on theory of acid base indicators (3)
- Q.3**
- a) Explain in detail how Buffer solutions resist change in pH (7)
 - b) Write a note on Buffer index (3)
- Q.4** Write short notes on **ANY TWO** of the following:
- a) Leveling and differentiating solvents
 - b) Methods to minimize errors
 - c) Indicators used in non-aqueous solvents

SECTION - II

- Q.5** Attempt **ANY FIVE** of the following: (10)
- a) Explain redox half reaction and how to balance it
 - b) Explain the mechanism of metallochromic indicators
 - c) Explain ligands and sequestering agents
 - d) How is preparation and standardization of 0.1N Iodine performed?
 - e) Explain what is common ion effect
 - f) Explain principle involved in the assay of ferrous sulphate
- Q.6**
- a) Explain various factors affecting stability constants (7)
 - b) Give applications of complexometric titrations (3)
- Q.7**
- a) Give theory of redox titration and discuss in brief various indicators used in redox titrations (10)
- Q.8** Write short notes on **ANY TWO** of the following: (10)
- a) Applications of complexometric titrations
 - b) Comparison between Mohr's method and Volhard's method
 - c) Assay of Ascorbic acid