



M-1612030701030300 Seat No. _____

M. P. M. (Sem. III) (CBCS) Examination

May / June – 2018

Pharmaceutical Analysis - I

Time : 3 Hours]

[Total Marks : 80

- Instructions :**
- (1) Answer and tie up both sections separately.
 - (2) Figure to the **right** indicates marks.
 - (3) Answer the **three** (3) questions from each section.
 - (4) Question **one** (1) and question **five** (5) are compulsory.
 - (5) Draw neat and clean diagrams as required.

SECTION - I

- 1** Answer any **seven** out of **ten** : 14
- 1) Comment on : Complexometric titration is performed in acidic condition.
 - 2) What is primary standard compound? Write common requirements of primary standard compound.
 - 3) Justify: In non-aqueous titration, water is levelling solvent for HCl & differentiating solvent for CH₃COOH.
 - 4) Comment on: Phenolphthalein is colourless below pH 8.3 and above pH 12.
 - 5) Why back titration is necessary in Kjeldahl method for nitrogen estimation?
 - 6) What is difference between titration and standardization?
 - 7) Discuss: External indicator method as end point determination in redox titration.
 - 8) Differentiate iodimetry and iodometry titration.
 - 9) What is ligand in complexometry titration? Classify ligand.
 - 10) What is self indicator? Explain with example.

2	Answer the following questions :	13
	1) What is non-aqueous titration? Write about different types of solvents used in non-aqueous titration.	7
	2) Which are different methods to determined end point in precipitation titration? Write in detail about mohr's method as chemical end point determination method.	6
3	Answer the following questions :	13
	1) Define validation. Enlist different validation parameters. Explain in detail about accuracy and precision.	7
	2) Define error. Discuss in detail about different types of errors.	6
4	Answer the following questions :	13
	1) Discuss in detail about common ion effect.	7
	2) What is pharmaceutical analysis? Give its applications.	6

SECTION - II

5	Answer any two out of three questions :	14
	1) Write a note on EDTA as a hexadentate ligand.	7
	2) Define term indicator. Enlist different theories of indicator. Explain ostwald theory of indicator.	7
	3) What is salt ? Explain hydrolysis of salt in detail.	7
6	Answer the following questions :	13
	1) What is Diazotization Titration ? Write basic principle and end point determination in diazotization titration.	7
	2) Write a short note on redox titration.	6
7	Answer the following questions :	13
	1) Define pH and derive Henderson - Hesselbach equation for acid and base.	7
	2) Which are different methods for writing oxidation-reduction reaction? Write in detail about electron balance method with example.	6

- 8 Answer the following questions : 13
- 1) What is gravimetric analysis? Enlist different 7
techniques in gravimetric analysis. Write in detail about
precipitation technique.
 - 2) What is composition of Karl Fischer reagent ? 6
Write basic principle of Karl Fischer titration. Discuss
role of pyridine & anhydrous methanol in KFR.
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