SEMESTER-I

ANALYTICAL TECH& SPECTROSCOPY-I

PRACTICAL SYLLABUS

Course Code:P20/CHE/DSC/104/P **Max Marks :50**
Course Type: DSC-4 **No. of Hrs/Week: 4 Hrs**
No. of Credits:2

COURSE OUTCOME:

- **CO1:** Calibration of weights, pipettes, standard flasks, burette
- **CO2:** The student should have knowledge on Data analysis, Significant figures, Precision and accuracy
- **CO3:** The student will be able to understand practical knowledge on potentiometric titrations with respect to strong acid and strong base.
- **CO4:** Determination of specific rotation of sucrose

1. Calibrations:

(i) Calibration of weights.
(ii) Calibration of pipettes.
(iii) Calibration of standard flasks.
(iv) Calibration of burette.

Physical properties:

Data analysis I: Significant figures, Precision and accuracy

Potentiometry:

Titration of strong acid vs strong base
Titration of weak acid vs strong base
Determination of dissociation constant of a weak acid
Determination of single electrode potential

Polarimetry:

Determination of specific rotation of sucrose
Acid-catalyzed hydrolysis of sucrose (inversion of sucrose)

Reference Books :

1. Khosla, B.D.,Garg, V.C., and Khosla,A.Senior Practical Physical Chemistry.
2. Athawale, V., and Mathur,P. Experimental Physical Chemistry.
3. Vishwanathan, B., and Raghavan,P.S. Practical Physical Chemistry.
4. Sindhu,P.S.Practical in Physical Chemistry.
5. Yadav,J.B.Advanced Practical Physical chemistry.
6. Vogel. (2002).Text book of Quantitative Analysis (6th ed). Pearson educationLtd.

SEMESTER -I

ANALYTICAL TECH & SPECTROSCOPY - I

MODEL PRACTICAL QUESTION PAPER

Course Code:P20/CHE/DSC/104/P **Max Time: 3Hrs**
Credits : 2 **Max Marks: 50 Marks**

1) Write the Principle involved in the given Potentiometric/ Polarimetric Experiments.**(CO4**) **10 M**

2) a) Determine the strength of the given acid using Potentiometer**.(CO3)**

OR

b) Determine the specific rotation of Optically active Compounds**(CO4).**

OR

c)Inversion of cane sugar by Polarimetry. (**CO3 & CO4)** **25 M**

3) Record and Attendance **5 M**

4) Viva Voce (**CO1,CO2, CO3 & CO4)** **10 M**