

Shree Manibhai Virani and Smt. Navalben Virani Science College (Autonomous)

Affiliated to Saurashtra University, Rajkot

SEMESTER END EXAMINATION NOVEMBER – 2016**M.Sc. Chemistry****16PCECC04 - ANALYTICAL CHEMISTRY***Duration of Exam – 3 hrs**Semester – I**Max. Marks – 70*

Part A (5x2= 10 marks)Answer **ALL** questions

1. Briefly explain activated sludge treatment.
2. What is aerobic digestion?
3. How will you measure the functionality of a wet scrubber?
4. Draw the Schematic diagram of Trickling filter
5. What are Intellectual Property Rights (IPR)?

Part B (5X5 = 25 marks)Answer **ALL** questions

- 6a. Which types of inventions are non patentable in India.
OR
- 6b. Calculate Standard deviation for following data: 400, 412, 488, 403
- 7a. Write a note on Liquid-Liquid extraction with suitable example
OR
- 7b. Discuss classification of errors with suitable examples.
- 8a. What are the essential documents to be generated and submitted by a patentee?
OR
- 8b. Explain Fractional distillation with neat diagram.
- 9a. Discuss principle, instrumentation and application cyclone separator with diagram
OR
- 9b. Briefly explain following in brief : (i) oxidation pond (ii) Azeotropic mixture
- 10a. Explain the role of steam distillation in natural product extraction.
OR
- 10b. Explain calibration of pH meter.

Part C (5X7 = 35 marks)

Answer **ALL** questions

11a. Discuss copy rights with its related rights.

OR

11b. Suggest various ways to minimize the errors.

12a. Explain soxhlet extraction method.

OR

12b. Write a note on Electrostatic precipitator.

13a. Calculate r^2 for following set of data.

Concentration	10	20	30	40	50
absorption	2	4	6	8	10

OR

13b. Calculate the value of slop for following

X	0.1	0.2	0.3	0.4	0.5
Y	0.6	1.3	1.7	2.5	3.1

14a Briefly explain copy Trademarks and its related rights.

OR

14b Explain solid phase extraction method.

15a Explain calibration of thermometer meter.

OR

15b Write a note on Wet Scrubber.
