Enrollment No. _____

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

Affiliated to Saurashtra University, Rajkot

SEMESTER END EXAMINATION NOVEMBER – 2017

B.Voc. Pharmaceutical Analysis & Quality Assurance

BVPAQA-301 - INDUSTRIAL ANALYSIS

Duration of Exam – 2:30 hrs ***Semester – III*** ***Max. Marks – 70***

Que. 1 (A) – Answer the following Questions **[10]**

1. Give examples of acidic sulfur compounds.
2. Write full form of ICP-OES.
3. _____ is also known as a colligative method.
4. Which molecular weight is determined by ultracentrifugation and light scattering?
5. Define iodine value.
6. _____ Reagent is used for the estimation of fluoride in drinking water.
7. What is peroxide value?
8. The amount of residual chlorine in water should be _____ppm.
9. Conductivity is the measure of the ability of water to carry the ion.
   (i) True (ii) False
10. As per Indian standard the amount of residual chloride in water should be_____.

Que. 1 (B) – Answer the following Questions **[20]**

1. Define petroleum and write its composition.
2. Briefly explain determination of pour point.
3. Draw the different arrangement of copolymers and polymers based on tacticity.
4. Write relative method and fractionation method for the determination of molecular weight of polymer.
5. What is difference between oil and fat?
6. Give difference between permanent and temporary hardness of water.
7. Describe the origin of oil and fat.
8. Define the following terms.
   i) Density ii) P^H
9. Mache the following pairs

i)	Nitrite nitrogen	a. zincone
ii)	Fluoride	b. PANDS
iii)	Chloride	c. NED + sulfanilamide
iv)	Zinc	d. chlorotex

10. How will you estimate amount of chlorine in drinking water.

Que. 2 – Answer the following Questions (Any Four) **[20]**

1. Explain determination of salt content in petroleum.
2. Write a short note on molecular weight distribution.
3. What is hardness of water? And how will you measure the hardness of drinking water.
4. What is P^H? How will you measure the P^H of drinking water as per Indian standard?
5. Explain saponification of oil and fat
6. Explain process for the determination of nitrite nitrogen in given water sample.

Que. 3 – Answer the following Questions (Any Four) **[20]**

1. Write a short note on types of petrochemicals.
2. What are M_w, M_n, and polydispersity index if a polymer sample contains following molecules?

M_1 Da*	**N**
1,00,000	2
7,00,000	5
4,00,000	10
1,00,000	4
50,000	2
Total	**23**
***Da = Dalton, g/mol**	

3. Explain hydrogenation of oil.
4. Explain process for the determination of magnesium in drinking water.
5. Illustrate the process for the determination of phosphate in given water sample.
6. Explain process for estimation of alkalinity of water.