- Pramukh Swami Science & H.D. Patel Arts College, Kadi

Bachelor of Vocation Pharmaceutical Chemistry Semester-II

Internal Examination, March/April-2018,

(PC-212) Physical Chemistry

Time: 2 hours 28/03/2018 Total Marks: 60

Que-1.Answer any 12 questions. Each question carries 1 mark[12]

1. What is First law of thermodynamics? Give the mathematical form.
2. $H_2O_{2\,(l)} \rightarrow H_2O_{(l)} + \frac{1}{2}\, O_{2(g)}$ Is Second order reaction. (True/False)
3. Give the definition of phosphoresce and florescence?
4. what is zero order reaction? Give one example.
5. Give the rate equation for $A+A \rightarrow P$ type Second order reaction?
6. What is beer's law?
7. Give the two example of complex reaction?
8. Give the Equation for quantum efficiency ?
9. Give the Integrated rate equation for fist order reaction?
10. $2No_{2(g)} \rightarrow 2No_{(g)} + O_{2(g)}$ is _____ order reaction?
11. $t\frac{1}{2} = 1/k[A]0$ is half life time for _____ order reaction?
12. Give the definition of Heterogeneous Catalyst?
13. What is Half life time for First order reaction?

Que.2.Answer any fivequestions. Each question carries 4marks [20]

1. What is statement of zeroth law of thermodynamics? Explain it.
2. Explain the third law of thermodynamics.
3. Explain the Absolute temperature scale.
4. Draw the Jablenski diagram and explain it.
5. Describe the rate constant for First order reaction.
6. Explain the characteristic of catalyst.
7. Explain the Nernst heat theorem.

Que.3.Answer any fourquestions. Each question carries7 marks [28]

1. Explain the Determination of Absolute Entropy for solid , Liquid and Gas?
2. Give the Definition of High and Low Quantum Yield ! Explain Two example of quantum efficiency.
3. Explain the Homogeneous and Heterogeneous catalyst.
4. Describe the Second order reaction.
5. Explain the Lambert and Beer low for photo chemistry.
6. Explain the kinetic molecular theory for gas.