

Hemchandracharya North Gujarat University Patan  
Bachelor of Vocation

'Pharmaceutical Chemistry' Semester - II

END TERM Examination, May- 2017

Subject : Physical Chemistry (PC-212)

Date : 02/05/2017

Time: 2 hrs

Maximum Marks:50

**Q.1 Answer any 9 questions. Each question carries 1 mark (9\*1=9Marks)**

1. At very low pressure the real gas behaves as \_\_\_\_\_.
2. Freundlich adsorption is valid over certain range of \_\_\_\_\_.
3. What SI units of Conductance.
4. Energy of quanta  $E =$  \_\_\_\_\_
5. What is quantum yield?
6. Write unit of second order reaction.
7. Unit of entropy \_\_\_\_\_
8. For thermal reaction the free energy change is \_\_\_\_\_.
9. 1 poise = \_\_\_\_\_.
10. Write Michaelis Mentens constant.

**Q. 2 Answer any 5 questions. Each question carries 4 marks (5\*4=20 Marks)**

1. Write application Vander waals equation for real gas.
2. What is Conductance and write application for it's measurements.
3. Derive Gibbs helm-Holtz equation.
4. Brief about Homogeneous and Heterogeneous catalysts.
5. Difference between Photochemical and Thermal reaction.
6. Discuss any one reason having High quantum yield.

**Q.3 Answer any 3 question. The question carries 07 marks (3\*7=21 Marks)**

1. Derive equation for Gibbs adsorption isotherm.
2. Write note on: The Jablenski diagram.
3. Write mechanism and kinetics of enzyme catalysed reaction.
4. Describe briefly about Carnot cycle?