

Hemchandracharya North Gujarat University, Patan
Bachelor of Vocation

'Pharmaceutical Chemistry' Semester - II

END TERM Examination, April, 2019

Subject: Physical Chemistry (PC-212)

Time: 2 hrs

Date-26/04/2019

Maximum marks: 50

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

- Which of the following is an example of ideal solution
(a) Benzene + Toluene (b) Benzene + Nitrobenzene
(c) Acetic acid + Benzene (d) Acetic Acid + Chloroform
- The packing fraction of BCC is 74%. (True/False)
- What is Internal Energy?
- Match the following.

Column I	Column II
1. $\Delta q = 0$	P. Isothermal Process
2. $\Delta T = 0$	Q. Isobaric Process
3. $\Delta P = 0$	R. Adiabatic Process

- Volume is an intensive property. (True/False)
- Which is the resemble unit of K for first order reaction of thermodynamics
(a) $M S^{-1}$ (b) S^{-1}
(c) $M^{-1} S^{-1}$ (d) $M^{-1} S$
- Which of the following enzyme is used digestion of lipid in human body. (Lipase/Papsin)
- What is Molecularity of reaction?
- What is Phosphorescence?
- Order of reaction may be in negative or fractional. (True/False)

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

- Explain Ideal and Non-ideal solution.
- Explain the First law of thermodynamics.
- Find the packing fraction of BCC and FCC.
- 100 KJ heat is given to a system and it do a work of 80 KJ the find out the change in internal Energy.
- Explain Difference between crystalline and amorphous solids.
- Define (i) Quantum Yield (ii) Florescence

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

- Explain Lambert-Beer's Law.
- Explain Jablenski diagram.
- Explain Second order reaction when $a=b$.
- What is Phase rule? Explain it.