

PARUL UNIVERSITY
FACULTY OF PHARMACY
B.Pharm. Winter 2018-19 Examination

Semester: 2**Subject Code: 08101151****Subject Name: Pharmaceutical Chemistry-II (Physical Chemistry)****Date: 28/11/2018****Time: 2:00 pm to 5:00 pm****Total Marks: 75****Instructions:**

1. Figures to the right indicate full marks.
2. Make suitable assumptions wherever necessary.

Q.1 Essay type Questions. (Any 2 out of 3) (10 marks each) (20)

1. Define radioactivity. Give the detail application of Radiopharmaceuticals in pharmacy.
2. Discuss different types of catalysis? Write a note on characteristic of homogenous and heterogeneous catalyst.
3. What is Order of reaction? Derive reaction rate constant and half life for first order reaction.

Q.2 Short Essay type Questions. (Any 7 out of 9) (5 marks each) (35)

1. Discuss Debye-Huckel theory in detail.
2. Explain principle of Oswald's Viscometer.
3. State and explain Roul't's law of dilute solution.
4. Draw Jablonski diagram. State and explain Lambert- Beer law of Photochemistry.
5. Write a note on Carnot cycle.
6. Write a note on Phase rule.
7. Discuss different types of radiation with its properties.
8. Write a detail note on first law of thermodynamics.
9. Enlist various methods for measurement of radioactivity. Discuss any one in detail.

Q.3 Answer in short. (2 marks each) (20)

1. State and explain Henry's law.
2. Define viscosity. Write units used to express viscosity.
3. Differentiate between Nuclear fusion and Nuclear fission reaction.
4. What is Parachor?
5. Distinguish between Isothermal and adiabatic process
6. Explain acid base enzyme catalysis.
7. What are Colligative properties?
8. Enlist various methods for determination of order of kinetics.
9. State Zeroth law of thermodynamics.
10. Enlist methods for determination of Surface tension.