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Roll No.

Total No. of Questions : 10]

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B. Pharmacy (Sem. -2nd)

PHARMACEUTICAL CHEMISTRY-II (Physical Chemistry)

SUBJECT CODE : PHM - 1.2.3

Paper ID : [D0109]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 80

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Three** questions from Section - C.

Section - A

Q1)

(15 × 2 = 30)

- a) Parachor.
- b) Dipole moment.
- c) Heat of solution.
- d) Zero order kinetics.
- e) Quantum efficiency.
- f) Quencher.
- g) Eigen value.
- h) Free energy.
- i) Cell constant.
- j) Optical Rotation.
- k) Brownian motion.
- l) Catalyst.
- m) Absolute temperature scale.
- n) Osmosis.
- o) Vander waal constants.

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Section - B

(4 × 5 = 20)

- Q2)** Describe the characteristics of homogeneous and heterogeneous catalysts.
- Q3)** What are the postulates of Quantum Mechanics?
- Q4)** Describe the Freundlich isotherm in detail.
- Q5)** Describe the Debye Huckel theory.
- Q6)** Draw a well labeled Jablonski diagram explaining the fate of photon absorbed.

Section - C

(3 × 10 = 30)

- Q7)** Explain the kinetic theory of gases. Explain the deviations from ideal behaviour.
- Q8)** Derive the Schrodinger Wave Equation.
- Q9)** State and derive the Lambert-Beer law. What are the different types of deviations observed? How are these explained?
- Q10)** Give a detailed account on Phase equilibria and Phase rule.



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