[Total No. of Questions - 18] [Total No. of Printed Pages - 2] (2124)

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B. Pharmacy 3rd Semester Examination Physical Pharmacy-I (NS) BP-233

Time: 3 Hours

Max. Marks: 70

The candidates shall limit their answers precisely within the answerbook (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note: Attempt any two question from Section A and eight questions from Section B. All questions in Section C are compulsory.

SECTION - A

- What is thermodynamics? Discuss first law of thermodynamics in detail.
- 2. What are solutions? Discuss ideal & real solutions in detail.
- 3. What are accelerated stability studies? How are they conducted? (10×2=20)

SECTION - B

- 4. What is polymorphism? Give its applications.
- 5. Describe eutectic mixtures.
- 6. Give Clausius-clapeyron equation.
- 7. Write applications of thermo chemistry.
- 8. How pharmaceutical buffers are prepared?
- 9. How half life is determined?

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- 10. Give influence of temperature on rate of reaction.
- 11. Discuss gaseous state of matter.
- 12. Differentiate between zero & first order reactions.
- 13. How conductance is measured?

 $(5 \times 8 = 40)$

SECTION - C

- 14. Discuss relative humidity.
- 15. Give Gibbs-Helmholtz equation.
- 16. Discuss molarity & molality.
- 17. Give applications of chemical kinetics.
- 18. What is heat of formation?

 $(2 \times 5 = 10)$