

UG Odd Semester (CBCS) Exam., December—2016

PHARMACEUTICAL SCIENCE

(3rd Semester)

Course No. : BPH-301 (C)

(Physical Pharmacy)

Full Marks : 75

Pass Marks : 30

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

Answer **five** questions, selecting **one** from each Unit

UNIT—I

1. (a) Explain the following :
Evaporation; Sublimation; Deposition; Condensation; Freezing.
- (b) What is matter? Compare and contrast different states of matter. $5+1+9=15$
2. Write notes on the following : $7\frac{1}{2}+7\frac{1}{2}=15$
- (a) Polymorphism
- (b) Applications of liquid crystals

UNIT—II

3. Briefly state the difference between the terms surface tension and interfacial tension. Describe different methods of determining surface and interfacial tensions. $3+12=15$
4. Write notes on any *two* of the following : $7\frac{1}{2}\times 2=15$
- (a) HLB values
- (b) Surfactants
- (c) Critical micelle concentration

UNIT—III

5. (a) Define saturated, supersaturated and unsaturated solutions. What are different expressions of solubility?
- (b) What are different factors affecting solubility of gases in liquids? $(3+6)+6=15$
6. What are non-Newtonian systems? Explain plastic, pseudoplastic and dilatant flow in detail. Name any two types of viscometer. $1+12+2=15$

(3)

UNIT—IV

7. What is Micromeritics? Describe the applications of Micromeritics in pharmacy. Explain different methods of particle size measurement. $1+5+9=15$
8. Write notes on the following : $7\frac{1}{2}+7\frac{1}{2}=15$
- (a) Evaluation of powder flow
 - (b) Particle size and size distribution

UNIT—V

9. What are colloids? Describe the pharmaceutical applications of colloid. $1+14=15$
10. Write notes on any *two* of the following : $7\frac{1}{2}\times 2=15$
- (a) Types of colloid
 - (b) Stability of emulsions
 - (c) Flocculation

★ ★ ★