

**341316(41)**

B. Pharmacy (3<sup>rd</sup> Semester)  
Examination, Nov.-Dec., 2015

(New Scheme) CSVTUonline.com

**Pharmaceutics - IV**  
(Physical Pharmacy - I)

Time Allowed : 3 hours

Maximum Marks : 70

**Note :** (i) Attempt any five questions.  
(ii) The figures in the right-hand margin indicate marks.

1. What is viscosity? Discuss factors affecting viscosity. Give example of a viscometer. 14
2. Discuss about surface tension and interfacial tension. Discuss the methods for measurement of surface tension. 14
3. What are buffer and buffering capacity? Discuss the use of buffers in pharmaceutical systems. 14
4. Why are colligative properties of liquids important in pharmaceutical science? Discuss about Raoult's law. 14

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5. Discuss first and second law of thermodynamics with derivations. 14
6. What are the states of matter? Describe about critical point and sublimation in brief with suitable example. 14
7. Discuss about Langmuir theory of adsorption. Give derivation. 14
8. Write short notes on (any four) : 3½×4
  - (a) Debye-Huckel theory
  - (b) Buffered isotonic solutions
  - (c) Ideal and real solutions CSVTUonline.com
  - (d) Thermochemical equations
  - (e) Non-Newtonian systems
  - (f) Aerosols
  - (g) Surface active agents