

20/05/16

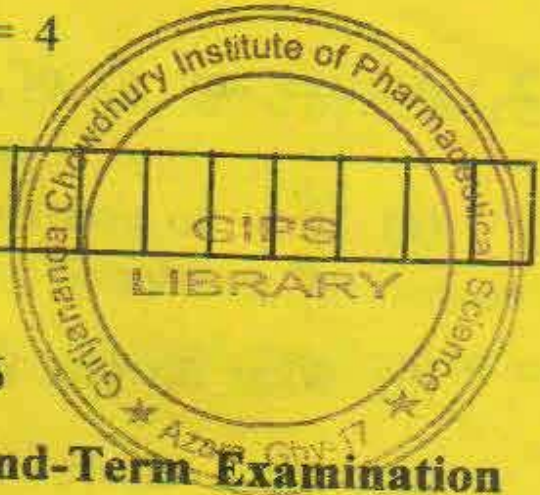
Total No. of printed pages = 4

PY 132401

Roll No. of candidate

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2016



B. Pharm 4th Semester End-Term Examination
PHARMACEUTICS – III
(Physical Pharmacy – II)

Full Marks–100 Pass Marks–35 Time–Three hours

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

1. Write short notes on any *six* of the following questions : 2×6=12
- (a) Carr's index
 - (b) Angle of repose
 - (c) Stokes diameter
 - (d) Plastic deformation
 - (e) Brownian motion
 - (f) Rheopexy
 - (g) Tyndall effect.

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2. Answer any *six* of the following questions :

3×6=18

- (a) How do you calculate average particle size of powders ?
- (b) What do you mean by particle number ?
- (c) Write down effect of temperature on viscosity.
- (d) Explain Dilatant flow.
- (e) What do you mean by lyophilic colloids ?
- (f) Define osmotic pressure.
- (g) What is kinematic viscosity ?

3. Explain any *eight* of the following questions :

5×8=40

- (a) Explain sedimentation technique for the determination of particle size and their distribution with diagram.
- (b) What do you mean by true density and bulk density of powder ?
- (c) Write thixotropy in plastic and pseudo plastic systems.

31/PY 132401

(2)

(d) How viscosity can be measured by Ostwald's U-tube viscometer ?

(e) What do you mean by colloidal dispersion ? Write down pharmaceutical application of colloids.

(f) What do you mean by complexation ? Classify complexes.

(g) Discuss about Fick's second law of Diffusion.

(h) Write down principle of diffusion in biological system.

(i) Explain effect of temperature in drug stability.

4. Briefly explain any *three* of the following questions :

10×3=30

(a) What do you mean by rates and orders of reactions ? Briefly explain about zero order and first order reaction.

(b) What is dissolution ? Briefly explain dissolution study and drug release mechanisms.

31/PY 132401

(3)

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(c) Write briefly about particle size distribution with respect to microscopic method and coulter counter method.

(d) Explain :

(i) Properties of colloids

(ii) Theories of emulsification.