Printed Pages: 01 **Sub Code: BP403T**

Paper Id: 150301 **Roll No.** | | | | | | | | | | |

B PHARM
(SEM IV) THEORY EXAMINATION 2018-19
PHYSICAL PHARMACEUTICS II

Time: 3 Hours ***Total Marks: 75***

Note: Attempt all Sections. If you require any missing data, choose suitably.

SECTION – A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a. Define peptization.
b. Explain Schulze -Hardy rule.
c. Give applications of plugflow in formulation.
d. Give example of multipoint viscometer.
e. Define deflocculated suspension.
f. What is term Micro-emulsion.
g. Differentiate between Martin and projected diameter.
h. What are the disadvantage of microscopic method?
i. Give Heckel Equation and its importnace
j. Explain the term kinematic viscostity.

SECTION – B

2. Attempt any two of the following: **2x10 = 20**

a. Explain the non-Newtonian fluisd on the basis of rheogram, molecular mechanism, mathematical equation and suitablexample.
b. Explain the working principle of Andreasen apparatus with the help of a labelled diagram and also give method for size determination.
c. Compute the accelerated stability testing for determination of expiration dating of pharmaceutical dosage forms

SECTION – C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a. Discuss the electrical properties of colloidal dispersion.
b. Explain the derive properties of powders
c. Describe film the theory of emulsion.
d. What is thixotropy. Give its application in depot injection.
e. Explain the working principle of rotational viscometer with the help of a labelled diagram.
f. Define zero order reactions. Give equations for determining shelf life and half-life for the same.
g. Enumerate the difference between flocculated and deflocculated suspensions

Sub Code:BP403T

Paper Id: 910028 Roll No:

B PHARM
(SEM-IV) THEORY EXAMINATION 2019-20
PHYSICAL PHARMACEUTICS-II

Time: 3 Hours *Total Marks: 75*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION – A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a. Define peptization.
b. Explain Schulze -Hardy rule.
c. Give two applications of thixotropy in formulation.
d. Give example of multipoint viscometer.
e. Define deflocculated suspension.
f. Give two examples of Cationic and non ionic surfactant.
g. Differentiate between true density and bulk density.
h. What are the disadvantages of microscopic method?
i. Write the unit of specific rate constant of zero order reaction and second orderreaction.
j. Explain the term expiry date and half life of a drug.

SECTION – B

2. Attempt any two of the following: **2x10 = 20**

a. Explain the different categories of non-Newtonian fluid based on the different pattern of rheogram.
b. Explain the working principle of Andreasen apparatus with the help of a labelled diagram.
c. Compute the accelerated stability testing for determination of expiration dating of pharmaceutical dosage forms

SECTION – C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a. Write about the kinetic & electrical properties of colloidal dispersion.
b. Explain the optical properties of colloids
c. Describe the stress, strain and Heckle equation
d. Write a note on thixotropy.
e. Explain the working principle of Andreasen apparatus with the help of a labelled diagram.
f. Define zero order reactions. Give equations for determining shelf life and half-life for the same.
g. Enumerate the difference between flocculated and deflocculated suspensions

PAPER ID-411818

Subject Code: BP403T

Roll No: | | | | | | | | | | | | | |

BPHARM

(SEM IV) THEORY EXAMINATION 2021-22

PHYSICAL PHARMACEUTICS II – THEORY

Time: 3 Hours *Total Marks: 75*

Notes:

- *Attempt all Sections and Assume any missing data.*
- *Appropriate marks are allotted to each question, answer accordingly.*

SECTION-A

Q.1	Attempt **All** of the following Questions in brief	Marks**(10X2=20)**
a.	Define the term Micro-emulsion.	
b.	What do you understand by the term peptization?	
c.	Mention two examples of cationic and non-ionic surfactant.	
d.	Differentiate between martin and projected diameter.	
e.	Explain the term kinematic viscosity.	
f.	What is deflocculated suspension?	
g.	Give applications of plug flow in formulation.	
h.	Discuss the term expiry date and half-life of a drug.	
i.	Give two applications of thixotropy in formulation.	
j.	Give Heckel Equation and its importance.	

SECTION-B

Q.2	Attempt **ANY TWO** of the following Questions	Marks**(2X10=20)**
a.	Explain in detail the methods for determining particle size by different methods and its application in Pharmaceuticals.	
b.	Explain the non-Newtonian fluid on the basis of rheogram, molecular mechanism, mathematical equation and suitable example.	
c.	Define first and second order reactions. Give equations for determining shelf life and half-life for the same.	

SECTION-C

Q.3	Attempt **ANY FIVE of the** following Questions	Marks **(5X7=35)**
a.	Explain the derive properties of powders.	
b.	Explain the working principle of Anderson apparatus with the help of a labeled diagram.	
c.	Write about the kinetic & electrical properties of colloidal dispersion.	
d.	Write in detail about Particle size distribution with reference to mean particle size calculation.	
e.	Enumerate rheological properties of emulsions and emulsion formulations by HLB method.	
f.	Describe Plastic, elastic deformation and Heckle equation.	
g.	What are formulation of flocculated and deflocculated suspensions. Explain	

PAPER ID-421533

Subject Code: BP403T

Roll No:

BPHARM
(SEM IV) THEORY EXAMINATION 2021-22
PHYSICAL PHARMACEUTICS II – THEORY

Time: 3 Hours *Total Marks: 75*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.
2. Any special paper specific instruction.

SECTION A

1. Attempt *all* questions in brief. 10 x 2 = 20

a.	Classify dispersed systems with examples.
b.	Define peptization with example.
c.	State the Law of Flow.
d.	State the Heckel equation and explain each term involved.
e.	State the nature of flocculated and deflocculated suspensions.
f.	Mention the advantages of microemulsions over emulsions.
g.	Define 'cut diameter of a sieve' with suitable example.
h.	Name the parameters involved in the evaluation of flow properties of a pharmaceutical blend.
i.	What do you mean by 'pseudo-zero order kinetics'?
j.	Mention the role of dielectric constant on the chemical degradation of pharmaceutical products.

SECTION B

2. Attempt any *two* parts of the following: 2 x 10 = 20

a.	Explain the effects of electrolytes, coacervation, and peptization on pharmaceutical colloidal preparations.
b.	Describe in brief the various methods used for the determination of particle size.
c.	Explain the roles of the various physical and chemical factors on the chemical degradation of pharmaceutical products.

SECTION C

3. Attempt any *five* parts of the following: 7 x 5 = 35

a.	Classify colloids and compare the general properties of colloidal dispersions.
b.	Describe the effects of thixotropy in pharmaceutical formulations, with suitable examples.
c.	Describe the theories of emulsification.
d.	State and explain the evaluation parameters used for characterization of the derived properties of powders.
e.	Explain the steps for determination of order of a chemical reaction.
f.	Mention the working principles and applications of capillary, falling sphere, and rotational viscometers used for the determination of viscosity.
g.	Write a brief note on photolytic degradation of pharmaceutical preparations and its prevention.

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B PHARM
(SEM IV) THEORY EXAMINATION 2022-23
PHYSICAL PHARMACEUTICS-II

Time: 3 Hours ***Total Marks: 75***

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 10 x 2 = 20

(a) Define the term "coacervation" in colloids.

(b) Write down the Schulze -Hardy rule with an example.

(c) What is kinematic viscosity?

(d) What is negative thixotropy?

(e) What are multiple emulsions?

(f) Define the term HLB.

(g) What is angle of repose?

(h) Differentiate between true density and bulk density.

(i) Differentiate between a pseudo-zero order andfirst-order reaction.

(j) What do you mean by the term "Photolytic degradation" of a drug?

SECTION B

2. Attempt any *two*parts of the following: 2 x 10 = 20

(a) Illustrate various non-Newtonian systems including plastic, pseudoplastic, dilatant, and thixotropy in pharmaceutical formulations with proper rheograms.

(b) Explain different types of deformation of solids, elastic modulus, and Heckel's equation in detail.

(c) Describe in detail about the methods for determining surface area of particles.

SECTION C

3. Attempt any *five*parts of the following: 5 x 7 = 35

(a) Illustrate the optical and kinetic properties of colloidal dispersion.

(b) Explain any one method for determination of viscosity of Newtonian systems in detail.

(c) Discuss the various signs of instability inan emulsion and methods for its preservation.

(d) Differentiate between flocculated and deflocculated suspensions and methods for formulating any suspension.

(e) Describe the working principle and method for particle size determination using the Andreasen pipette apparatus with its labelleddiagram.

(f) Derive the equation for zero-order reaction and determine the half-life and shelf life of any zero-order reaction using the same equation.

(g) Explain the method involved in the accelerated stability testing for determination of expiration dating of any pharmaceutical dosage form.

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Sub Code: BP- 403 T

B PHARM
(SEM IV) THEORY EXAMINATION 2022-23
PHYSICAL PHARMACEUTICS II

Time: 3 Hours ***Total Marks: 75***

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

(a) Define kinematic viscosity.

(b) Define porosity.

(c) What is peptization?

(d) Draw rheogram of plastic fluid.

(e) What are Newtonian fluids?

(f) Define Feret and Martin diameter.

(g) What is rheopexy?

(h) Name two rotational viscometer.

(i) Define Hausner's Ratio.

(j) Give example of Non-Newtonian fluids.

SECTION B

2. Attempt any *two*parts of the following: **2 x 10 = 20**

(a) Differentiate Newtonian and Non-Newtonian liquids.

(b) What are different methods of determining particle size? Discuss Andreason Pipette method.

(c) Discuss accelerated stability studies.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

(a) What is plug flow? Discuss the viscometer which have the disadvantage of plug flow and how will you minimize it.

(b) Discuss dilatent flow and negative thixotropy.

(c) What are different flow properties of powder? Discuss.

(d) Explain various properties of colloids.

(e) What are colloids write down application of colloids in pharmaceutical system? Discuss briefly about it.

(f) Write down the ideal characteristics of suspension. Discuss sedimentation parameters.

(g) Discuss theories of emulsion.

PAPER ID-411254

Subject Code: BP403T

Roll No:

BPHARMA
(SEM IV) THEORY EXAMINATION 2023-24
PHYSICAL PHARMACEUTICS II – THEORY

TIME: 3 HRS M.MARKS: 75

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 10 x 2 = 20

a.	Define peptization.
b.	Write the importance of pseudo plastics
c.	Define young's modulus.
d.	Write some factors affecting stability of emulsions.
e.	Define dynamic viscosity.
f.	Define porosity.
g.	How dielectric constant affects drug stability.
h.	Write the principle of rotational viscometer.
i.	Write the effect of temperature on viscosity.
j.	Write the optical properties of colloids.

SECTION B

2. Attempt any *two* parts of the following: 2 x 10 = 20

a.	Why colloidal dispersions show electrical properties? Describe some electrical properties of colloids.
b.	How particle size distributions influence the behavior and properties of colloidal systems? Compare between monodisperse and polydisperse.
c.	Enlist the physical factors influencing the chemical degradation of pharmaceutical products.

SECTION C

3. Attempt any *five* parts of the following: 7 x 5 = 35

a.	Explain the kinematic viscosity; How the kinematic viscosity can be measured?
b.	Define deflocculated suspension. Write the properties and method of preparation of deflocculated suspension.
c.	Explain the derived properties of powders.
d.	Write the way to stabilize the medicinal agents against oxidation.
e.	Discuss the accelerated stability testing for pharmaceutical dosage forms.
f.	Define micro emulsion; Write the types and components of micro emulsions.
g.	Compare between plastic and elastic deformation of solids.

BPHARMA

(SEM IV) THEORY EXAMINATION 2023-24

PHYSICAL PHARMACEUTICS II – THEORY

TIME: 3 HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Define peptization.
b.	Write the importance of pseudo plastics.
c.	Define young's modulus.
d.	Write some factors affecting stability of emulsions.
e.	Define dynamic viscosity.
f.	Define porosity.
g.	How dielectric constant affects drug stability.
h.	Write the principle of rotational viscometer.
i.	Write the effect of temperature on viscosity.
j.	Write the optical properties of colloids.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Why colloidal dispersions show electrical properties? Describe some electrical properties of colloids.
b.	How particle size distributions influence the behavior and properties of colloidal systems? Compare between monodisperse and polydisperse.
c.	Enlist the physical factors influencing the chemical degradation of pharmaceutical products.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Explain the kinematic viscosity; How the kinematic viscosity can be measured?
b.	Define deflocculated suspension. Write the properties and method of preparation of deflocculated suspension.
c.	Explain the derived properties of powders.
d.	Write the way to stabilize the medicinal agents against oxidation.
e.	Discuss the accelerated stability testing for pharmaceutical dosage forms.
f.	Define micro emulsion; Write the types and components of micro emulsions.
g.	Compare between plastic and elastic deformation of solids.

PAPER ID-311982

Roll No: | | | | | | | | | | | | | |

BPHARM
(SEM IV) THEORY EXAMINATION 2024-25
PHYSICAL PHARMACEUTICS II – THEORY

TIME: 3 HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	State the electrical properties of the colloidal dispersions.
b.	Define and mention the units of kinematic viscosity.
c.	State the significance of plastic and elastic deformation.
d.	Define Schulze rule
e.	Name the parameters involved in the evaluation of flow properties of a pharmaceutical blend.
f.	What do you mean by 'pseudo-zero order kinetics'?
g.	Differentiate flocculated and deflocculated suspensions.
h.	What do you mean by 'mean particle size' and 'specific surface of particles'?
i.	Define energy of activation
j.	Define peptization with example

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Enumerate the methods for determination of particle size. Explain working principle of coulter counter with labelled diagram
b.	What is accelerated stability testing? Narrate its role in determining the expiry period of a dosage formulation
c.	Explain the roles of the various physical and chemical factors on the chemical degradation of pharmaceutical products.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Explain the coulter counter method for determining the particle volume
b.	State and explain the comparative account of the general properties of colloidal dispersions.
c.	State Heckel equation and explain its pharmaceutical significance.
d.	Explain the steps for determination of order of a chemical reaction.
e.	Classify emulsion. Explain the different theories of emulsion.
f.	Define true density. Discuss true density determination using helium displacement method
g.	Give the principle, working and applications of cup and bob viscometer with clean and neat diagram.

BPharma Bot02

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