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B. PHARM
(SEM-V) THEORY EXAMINATION 2019-20
INDUSTRIAL PHARMACY I

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.	Name the type of drug as per BCS classification.
b.	What are the objectives for study of physiochemical characterization of drug substances?
c.	What is crystal bridging during wet granulation?
d.	What are various non Pharmacopoeial test conducted for evaluation of tablets?
e.	Write in brief about IPQC test for capsule.
f.	Draw the labeled diagram of slugging machine.
g.	Amorphous or crystalline drug which will give more stable dosage form and why?
h.	What are WFI and sterile WFI, how they are different?
i.	What is vapour tap and how it is significant?
j.	Name all types of glass used in pharmaceutical packaging.

SECTION B

2. Attempt any two parts of the following:

2 x 10 = 20

a.	What are various defects in tablets and how they may be rectified, explain in detail?
b.	How hard gelatin capsules shells are filled. Discuss about equipments used and principle for hard gelatin capsule filling.
c.	What are selection criteria for containers and closures for parenteral how you will do cleaning of containers and closures?

SECTION C

3. Attempt any five parts of the following:

5 x 7 = 35

a.	What are various aims and objectives for preformulation, and how to proceed for preformulation?
b.	Write note on physics of tablet.
c.	How to evaluate suspension explain?
d.	Write various advantages and disadvantages for parenteral products.
e.	How particle size of drug may affect development of stable dosage form?
f.	How will you formulate tooth paste, explain and give preparation method for the same.
g.	What are various parts of aerosol valve explain with diagram?

B PHARM
(SEM-V) THEORY EXAMINATION 2020-21
INDUSTRIAL PHARMACY-I

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.	What do you mean by preformulation studies?
b.	How are drugs classified as per BCS?
c.	What is the role of binders in manufacturing tablets?
d.	Define super-disintegrants with examples.
e.	What are the various sizes of capsules available for human use?
f.	What do you mean by Bloom Strength?
g.	Explain significance of isotonicity in parenteral formulations.
h.	Define aseptic processing.
i.	What is the function of propellants in aerosol system?
j.	Define tamper evident packaging.

SECTION B

2. Attempt any twoparts of the following:

2 x 10 = 20

a.	Discuss in detail about various tests which are generally done to maintain the quality control of tablets.
b.	What are the advantages of capsules as dosage form? Discuss in detail about various mechanisms of filling powders in hard gelatin capsules.
c.	Classify different types of Parenteral products. How are parenteral products evaluated for quality control?

SECTION C

3. Attempt any fiveparts of the following:

7 x 5 = 35

a.	What is the significance of pka and pH in preformulation studies?
b.	Discuss the principle and working of Rotary tablet press in detail.
c.	How is coating of tablets beneficial? Discuss working of a coating pan.
d.	Elaborate the process of manufacturing of hard gelatin capsule shell.
e.	How are dry powders for injection prepared by Lyophilization?
f.	What are the various components of Aerosol product? Explain significance of each.
g.	Discuss various quality control tests of Glass as a packaging material.



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B PHARM
(SEM V) THEORY EXAMINATION 2021-22
INDUSTRIAL PHARMACY-1

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.	List various components of pharmaceutical aerosol.
b.	Differentiate between dextrorotatory and levorotatory.
c.	What are basic steps of process of dry granulation?
d.	What are the glidants?
e.	What is deflocculated system?
f.	What are different sources of pyrogen contamination?
g.	What are the factors affecting the drug absorption from ophthalmic route?
h.	Enlist the optimizable properties of powder layering technique?
i.	Why gelatin is the most preferred shell formulating material for capsules?
j.	Which type of glass consume the least volume of acid in Powdered Glass Test?

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

a.	Describe various materials used for packaging of pharmaceutical products with regards to their benefits, limitations and remedy to overcome such limitations.
b.	Illustrate the rotary die process with the help of flow chart, diagram and underlying principle.
c.	Explain the in-process and finished product quality control tests for tablet dosage form based on pharmacopoeia standards and specifications.

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

a.	Explain various processing problems of uncoated tablet and their remedies.
b.	Discuss the evaluation of ophthalmic preparation as per pharmacopoeia standards and specifications.
c.	Illustrate the process to prepare lyophilized parenteral products with the help of well labelled diagram.
d.	Explain equipment for manufacture of pellets with well labelled diagram.
e.	Discuss the application of pre-formulation considerations in the development of tablet dosage form with appropriate industry related case study.
f.	Discuss briefly about formulation of cold cream.
g.	Discuss the in-process and finished product quality control tests for pharmaceutical aerosols based on pharmacopoeia standards and specifications.

B PHARM
(SEM V) THEORY EXAMINATION 2022-23
INDUSTRIAL PHARMACY-I

*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. Distinguish drugs on the basis of BCS classification.
- b. Classify tablets based on route of administration.
- c. Enlist various steps involved in pelletization process.
- d. Determine the base adsorption and minim per gram factor in capsules.
- e. Classify propellants used in aerosols.
- f. Explain significance of isotonicity in ophthalmic preparations.
- g. Enlist the methods used for preparing soft gelatin capsule.
- h. Classify all types of glass used in pharmaceutical packaging.
- i. Define preformulation studies.
- j. Define SPF.

SECTION B

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

- a. Analyze the processing problems encountered during manufacturing of coated tablets and suggest remedies to resolve the same.
- b. Explain the preparation of dry powder by lyophilisation. Evaluate quality control tests for parenterals.
- c. Describe the basic components of a valve and aerosol container and broadly cite their importance.

SECTION C

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

- a. Estimate various quality control tests for aerosols.
- b. Illustrate the application of preformulation studies in development of new chemical compound.
- c. Depict the manufacturing of hard gelatin capsules.
- d. Illustrate the production facilities and various control for manufacturing of parenteral dosage forms.
- e. Predict the legal and official requirements for packaging materials.
- f. Investigate the processing problem encountered during liquid preparation.
- g. Discuss different granulation method.



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BPHARM
(SEM V) THEORY EXAMINATION 2023-24
INDUSTRIAL PHARMACY I- THEORY

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

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

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

a.	Write down the significance of carrying out pre-formulation studies.
b.	Define the role of pKa values in predicting the solubility profile of a drug.
c.	Classify tablets.
d.	State the composition of the enteric coating.
e.	Differentiate between hard and soft gelatin capsules.
f.	How the sizes of capsules are expressed?
g.	Mention the limitations of parenteral products.
h.	Define lyophilization.
i.	State the composition parameters of sunscreens.
j.	Define propellants.

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

a.	Describe the various parameters of the in-process and finished product quality control tests for coated tablets.
b.	State and explain the formulation approaches for ophthalmic preparations.
c.	Explain the roles of various factors influencing the choice of pharmaceutical containers.

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

a.	Describe the chemical properties of the drug substances to be considered in the pre-formulation studies.
b.	Explain formulation considerations of syrups and emulsions.
c.	Describe the parameters of in-process and final product quality control tests for capsules.
d.	Describe the packaging techniques, storage conditions and stability testing parameters for soft gelatin capsules.
e.	Elaborate the importance of adjusting pH and isotonicity for parenteral products.
f.	Explain the formulation requirements and process of palletization for pharmaceutical pellets.
g.	Write a brief note the various evaluation parameters for aerosols.



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BPHARM
(SEM V) THEORY EXAMINATION 2024-25
INDUSTRIAL PHARMACY I- 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 racemization.
b.	Define Angle of Repose.
c.	What are effervescent tablets?
d.	Write examples of two disintegrants
e.	What do you mean by Bloom Strength?
f.	Define minim per gram factor.
g.	Name two methods for sealing of ampoules.
h.	What do you understand by polymorphism?
i.	Enlist the component of Aerosol system.
j.	Define weathering of glass.

SECTION B

2. Attempt any two parts of the following:

2 x 10 = 20

a.	Explain concept and importance of preformulation studies. Discuss preformulation parameters for conventional dosage forms.
b.	How do we classify drugs in BCS? What is the significance of BCS classification?
c.	Write short notes (i) Manufacturing defects in tablets (ii) Evaluation of Pharmaceutical Suspension

SECTION C

3. Attempt any five parts of the following:

7 x 5 = 35

a.	What are the formulation and manufacturing consideration of syrups and elixirs
b.	What are the quality control test for parentals product
c.	What are the various components of film coating solution? Briefly explain working of coating pan along with its modification
d.	What are the advantages of capsules as dosage form? Discuss in detail about preparation of hard gelatin capsule shells and various filling methods.
e.	Elaborate lyophilized product.
f.	Discuss formulation consideration of eye drop and eye ointment.
g.	Discuss about advantages of glass as a container. Write about official quality control tests of glass.



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BPHARM
(SEM. V) THEORY EXAMINATION 2025-26
INDUSTRIAL PHARMACY I- 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 pre-formulation studies and state its objectives.
b.	What is polymorphism? How does it affect drug stability?
c.	Write the significance of BCS classification in formulation development.
d.	Define granulation and mention its types used in tablet manufacturing.
e.	What are the advantages of hard gelatin capsules?
f.	Define is otonicity. Why is it important in parenteral preparations?
g.	What are the essential requirements of ophthalmic preparations?
h.	Write the role of propellants in pharmaceutical aerosols.
i.	What are the functions of surfactants in emulsions?
j.	Mention any four materials used in pharmaceutical packaging.

SECTION B

2. Attempt any two parts of the following:

2 x 10 = 20

a.	Explain pre-formulation studies and discuss various physicochemical properties of drug Substances affecting formulation development.
b.	Describe different granulation methods used in tablet formulation. Add a note on Compression problems during tablet manufacturing.
c.	Explain formulation and manufacturing considerations of syrups, suspensions and emulsions with suitable examples.

SECTION C

3. Attempt any five parts of the following:

7 x 5 = 35

a.	Discuss BCS classification of drugs and its importance in drug formulation.
b.	Explain tablet coating. Discuss types of coating and defects in coating.
c.	Describe production and quality control tests of hard gelatin capsules.
d.	Write a short note on formulation and preparation of pellets and their applications.
e.	Explain formulation of parenteral products and discuss aseptic processing.
f.	Describe formulation and evaluation of ophthalmic preparations.
g.	Write the formulation and preparation method of cold cream and vanishing cream.