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**B. Pharmacy 4<sup>th</sup> 3<sup>rd</sup>**  
**Semester**  
**Question Paper**  
**2017-2018**

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**Odd Semester Examination, 2017-18****B.PHARMA. (SEMESTER-III)****UNIT OPERATION-II****Time: 03:00 Hours****Max Marks : 100****Note :** Attempt **all** questions.

1. Attempt **any four** of the following : (4x5=20)
  - (a) What should be the ideal properties of equipment used in various Unit Operations? Explain with example.
  - (b) Write the functioning of Check Valves.
  - (c) Compare the characteristics of Centrifugal Pumps & Reciprocating Pumps.
  - (d) Write a note on Diaphragm Valves.
  - (e) Discuss Piston Pumps.
2. Attempt **any four** of the Following : (4x5=20)
  - (a) What is the various application of Air Conditioning?
  - (b) What the term "Dehumidification" means. Write a note on application of dehumidification in pharmaceutical industry.
  - (c) Define Refrigerant. Discuss various factors basis on which the Refrigerant is selected.
  - (d) Briefly discuss any equipment used for Dehumidification.
  - (e) Effect of Humidity on processing of Pharmaceutical dosage forms.
3. Answer **any four** : (4x5=20)
  - (a) Define Drying. Classify the dryers with suitable example.
  - (b) Describe the construction and working of FBD.

- (c) Explain the principles of Freeze drying. What are its applications in Pharmacy.
- (d) Define Evaporation. Discuss various factors influencing Evaporation.
- (e) Write a note on Multiple Effect Evaporator.

4. Attempt **any two** : (2x10=20)

- (a) Explain the principle and procedures of Molecular distillation. What are its application.
- (b) Differentiate Ideal and Real Solutions. Derive Raoult's law with its application.
- (c) Give Principle of Fractional distillation. What do you mean by Efficiency of fractional Distillation. Discuss a note on Fractionating Column.

5. Attempt **any two** : (2x10=20)

- (a) Define Crystallization. Give the Mier's super saturation theory of crystallization.
- (b) Write down principle, construction, working, advantage and disadvantage of Swenson Walker Crystallizer.
- (c) Write a note on :
  - (i) Characteristics of Crystals
  - (ii) Caking of Crystals and its prevention

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**Odd Semester Examination, 2017-18****B.PHARMA. (SEMESTER-III)****PHARMACEUTICS-III****( PHYSICAL PHARMACY-II )****Time: 03:00 Hours****Max Marks : 100****Note :** Attempt all questions.

1. Attempt **any four** : (4×5=20)
  - (a) Enlist various fundamental and derived properties of powder with application in pharmacy.
  - (b) Define angle of repose and write down how to determine angle of repose.
  - (c) Give coulter count technique for particle volume measurement.
  - (d) Enlist various methods of particle size determination. Discuss sedimentation method.
  - (e) Write short note on pore size and packing arrangement of particle.
2. Attempt **any four** : (4×5=20)
  - (a) Write short note on surface free energy.
  - (b) Define HLB value and give its classification.
  - (c) Discuss various methods for determination of interfacial tension.
  - (d) Define term Nernst and Zeta potential.
  - (e) Write short note on Electrical properties of interface.
3. Attempt **any four** : (4×5=20)
  - (a) Define and classify colloids. Give electrical properties of colloids.
  - (b) Give theories of emulsification emphasizing on stability of emulsions.

- (c) Differentiate between Flocculated and Deflocculated suspension.
- (d) Discuss the importance of wetting in suspension dosage form designing.
- (e) Write short note on protective colloid and their role.

4. Attempt **any two** :

(2×10=20)

- (a) Discuss plastic, pseudoplastic and dilatants flow in detail.
- (b) Classify viscometers and discuss any one in detail.
- (c) Differentiate thixotropy and anti-thixotropy. What are their applications in pharmaceutical formulations?

5. Attempt **any two** :

(2×10=20)

- (a) Give ICH guidelines used in pharmaceutical manufacturing.
- (b) How the stability of medicinal agent are affected by external factors. Give the various degradation pathways.
- (c) Give the importance of shelf life and half life.

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## Odd Semester Examination 2018

## B.PHARMA. (SEMESTER-III)

## ANATOMY, PHYSIOLOGY &amp; PATHOPHYSIOLOGY-III

Time: 03:00 Hours

Max Marks : 100

Note : Attempt all questions, each questions carries equal marks.

1. Attempt only **four** questions : (5x4=20)
  - (a) Draw a labeled diagram of digestive system.
  - (b) Write a note on cirrhosis of liver.
  - (c) Give the names of cranial nerve and describe their functions.
  - (d) Describe the functions of autonomic nervous system
  - (e) Discuss the treatment of burns.
2. Attempt **any four** questions : (5x4=20)
  - (a) Describe the important functions of various parts of brain.
  - (b) Discuss the various functions of small intestine.
  - (c) Write the various reasons for peptic Ulcer.
  - (d) Discuss the emergency treatment of shock.
  - (e) Discuss the physiology of autonomic nervous system.
3. Attempt **any two** question : (10x2=20)
  - (a) Discuss in detail the structure and function of spinal cord.
  - (b) Describe the mechanism of neurohumoral transmission in ANS.
  - (c) Describe the various method of birth control.



4. Write briefly about **any four** of the following : (5x4=20)

- (a) Various kinds of fractures and their treatment.
- (b) Electroencephalogram
- (c) Structure of neuron
- (d) Cerebrum
- (e) Pancreatitis

5. Attempt **any two** question : (10x2=20)

- (a) Write the principal of First AID. Discuss the treatment of snake bites.
- (b) Write the treatment of poisoning for specific poisons.
- (c) Discuss the following : Zollinger-Ellison syndrome, Amoebiasis and Hepatitis.

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## Odd Semester Examination, 2017-18

## B.PHARMA. (SEMESTER-III)

## PHARMACOGNOSY-I

Time: 03:00 Hours

Max Marks : 100

Note : Attempt **all** questions, each question carries **equal** marks.

1. Attempt **any four** question : (5×4=20)
  - (a) Explain various Biological sources of drugs
  - (b) Differentiate organized and unorganized drugs with examples.
  - (c) What is chemical classification of crude drugs? Give its merits and demerits.
  - (d) Write a note on scope and present status of Pharmacognosy.
  - (e) What do you mean by morphological classification of drugs? Give its merits and demerits.
2. Attempt **any four** question : (5×4=20)
  - (a) Discuss the role of types of soils and fertilizers in cultivation of medicinal plants.
  - (b) Describe the feature of Solonaceae family.
  - (c) Discuss about Apocynaceae family.
  - (d) Give brief note on Acacia
  - (e) Discuss about the general methods of pest control and examples of natural pesticides.
3. Attempt **any two** question : (10×2=20)
  - (a) Write in detail causes and types of adulteration.
  - (b) Explain physical evaluation of crude drugs.
  - (c) What are plant growth regulators? Write a brief account on the mechanism of Auxins.



4. Attempt **any two** question :

(10×2=20)

- (a) Enlist the WHO guidelines for standardization of medicinal plants.
- (b) Explain organoleptic evaluation of crude drugs.
- (c) Discuss the factors responsible for cultivation of medicinal plants with examples.

5. Attempt **any two** question :

(10×2=20)

- (a) Write in details pharmacognostic study of Starch
- (b) Write Biological Source, Chemical Constituents and Uses of following drugs.
  - (i) Agar
  - (ii) Tragacanth
  - (iii) Honey
  - (iv) Guar gum
- (c) What are carbohydrates? Give its method of identification.

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