

Registration No :

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Total Number of Pages : 01

B.Pharm  
BP303T

3<sup>rd</sup> Semester Regular Examination 2018-19  
PHARMACEUTICAL MICROBIOLOGY

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 75

Q.CODE : E960

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.

The figures in the right hand margin indicate marks.

Part- A

(2 x 1)

Q1 Objective Answer Type Questions (Answer All)

- a) Define Prokaryotes and Eukaryotes
- b) Define bacteria and fungus
- c) Define virus
- d) Define sterilization
- e) What is gram staining
- f) Give classification of bacteria
- g) Discuss media for culture
- h) What do you mean by zone of inhibition
- i) How would you prevent contamination
- j) What is aseptic room

Part- B

(5 x 1)

Q2 Focused-Short Answer Type Questions- (Answer Any Seven)

- a) How would you isolate pure culture
- b) Explain Sterility Testing
- c) What do you mean by microbial spoilage of products
- d) Discuss bacteriostatic and bactericidal agent
- e) Describe growth of bacteria
- f) What do you mean by clean room. Write use of HEPA filter
- g) How would you evaluate Disinfectant
- h) What are anaerobic and aerobic bacteria
- i) Write names of nine bacteria and 3 fungus

Part-C

Long Answer Type Questions (Answer Any Two)

Q3 Describe methods for sterilization of products

Q4 Describe method for sterility testing

Q5 Describe preservative efficacy test

Q6 Describe antibiotic assay



3<sup>rd</sup> Semester Regular Examination 2018-19  
**PHARMACEUTICAL ORGANIC CHEMISTRY II**  
**BRANCH : B.PHARMA**

Time : 3 Hours

Max Marks : 75

Q.CODE : E861

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.

The figures in the right hand margin indicate marks.

**Part- A****Objective Answer Type Questions (Answer All)****(2 x 10)**

- Write the structure & use of BHC?
- What is Huckel's rule of aromaticity?
- What is use of benzoic acid & Sodium Benzoate?
- What happens when sodium benzoate is heated with sodalime?
- Explain Rancidity of oils.
- Explain why the amino group (NH<sub>2</sub>) acts as an ortho para director?
- What are Drying oils?
- Write the structure & use of Saccharin?
- What is Gatterman reaction?
- Write the structure & use of DDT?

**Part- B****Focused-Short Answer Type Questions- (Answer Any Seven)****(5 x 7)**

- Give reason why ammonia is stronger base than aniline?
- Write a note on: Acidity of Phenol.
- Discuss chlorination of benzene in presence of FeCl<sub>3</sub>.
- Explain Reimer-Tiemann Reaction?
- Discuss the carbylamines and Hofmann rearrangement reaction.
- Mention the general method of preparation of cycloalkanes.
- Write a note on Saponification value and Iodine value?
- Explain why benzoic acid is stronger acid than acetic acid?
- Write five reaction of benzoic acid?

**Part-C****Long Answer Type Questions (Answer Any Two)**

- Q3 Explain Friedel-Craft's alkylation benzene. Give account on nitration of benzene. **(10)**
- Q4 Discuss Bayer's strain theory with suitable examples. **(10)**
- Q5 Illustrate the important steps in Haworth's synthesis of naphthalene. Describe its important chemical reactions. **(10)**
- Q6 Write four method of preparation and four chemical reaction of phenol? **(10)**

Registration No.:

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Total Number of Pages : 01

B.Pharm  
BP304T

3<sup>rd</sup> Semester Regular Examination 2018-19  
PHARMACEUTICAL ENGINEERING

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 75

Q CODE : E1004

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any two from Part-C.

The figures in the right hand margin indicate marks.

**Q1 Objective Answer Type Questions (Answer All) (2 × 10)**

- What are the filter aids? How is it applied for filtration operation?
- State and explain Fourier's law of heat transmission with equation.
- Define unbound moisture content, critical moisture content, and bound moisture content.
- What are the advantages and disadvantages of perforated basket centrifuge?
- What are the laws governing energy and power requirements of mills?
- Why sieve analysis is performed? and what do you mean by the expression (-40+45) sieve size? What is nominal size of aperture?
- Explain vortex formation scientifically in an agitated liquid? What are the means to prevent it?
- Write on advantages of twin shell blender.
- Distinguish between
  - evaporation and distillation,
  - evaporation and drying.
- Write on the principle and the application of steam distillation.



**Part- B**

**Q2 Focused-Short Answer Type Questions- (Answer Any SEVEN) (5 × 7)**

- Discuss on adiabatic and non adiabatic dryers.
- Derive the expression for total time of drying.
- Derive overall heat transfer coefficients from individual coefficients with necessary figure.
- Derive an expression for heat transfer through a cylindrical wall with necessary figure.
- Explain size separation based on sedimentation theory with suitable figure.
- What is the principle of ball mill? and write on the mechanism of grinding in a ball mill.
- Describe the propeller mixer along with its characteristics and flow pattern and various arrangements for mounting of stirrer in the tank.
- Explain the effects of factors that influence evaporation.
- Elaborate the concept of multiple effect evaporator, and what are its advantages?

**Part-C**

**Q3 Long Answer Type Questions (Answer Any TWO) (10)**

Describe the McCabe Thiel method for calculation of number of theoretical plates.

**Q4 (10)**  
Discuss on Flash and molecular distillation.  
Write in detail on principle, construction, working, advantages and disadvantages of spray dryer.

**Q5 (10)**  
Write on theory of corrosion, types of corrosion and their prevention.

**Q6 (10)**  
Derive Bernoulli's equation and what are the applications of Bernoulli's theory.

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## PHYSICAL PHARMACEUTICS-I

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 75

Q.CODE : E917

Answer Question No.1 which is compulsory, any Seven from part-II and any two from part-III.

The figures in the right hand margin indicate marks.

## PART-I

Q1 Answer the following questions : (2 x 10)

- Differentiate between amorphous and crystalline solid.
- Define the term sublimation and boiling point.
- Define Kraft point.
- Define eutectic point. Give one example of eutectic mixture.
- State polymorphism and its application.
- What is HLB? Write any two importance of HLB.
- Define buffer capacity.
- Write down the Henderson-Hasselbalch equation for weak acid and weak base.
- State dipole moment and its significance.
- What is chelating agent? Write two examples.

## PART-II

Q2 Focused-short Answer Type Questions-(Answer any Seven out of Twelve) (5 x 7)

- State and explain Raoult's law. Write down the deviations of the law.
- Write a short note on 'glassy state'.
- Write down the principle and applications of pharmaceutical aerosol.
- Define refractive index. Explain any one procedure to determine it.
- Write briefly physical properties of drug.
- Define CST. Write down its applications.
- Write briefly about biological buffers and its application in pharmacy.
- State and explain paratonic solution.
- Explain Spreading co-efficient and its significance.
- What is complexation? Classify only complexation.
- What is BET equation? Write different types of isotherms.
- State and explain Distribution law.

## PART-III

Q3 Long Answer Type Questions(Answer any Two out of Four) (2+3+5)  
What is interfacial phenomenon? Write different methods to determine surface tension and detail explain any one method.

Q4 Describe the solubility of partially miscible liquids in binary systems with suitable examples. (10)

Q5 What is solubility? Write briefly about factors affecting solubility. (2+8)

Q6 Explain the kinetic of drug-protein binding. Write down its significance. (8+2)