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Total Number of Pages : 01

B.Pharm
BP301T

3rd Semester Regular/Back Examination 2019-20

PHARMACEUTICAL ORGANIC CHEMISTRY II

BRANCH : B.Pharma

Max Marks : 75

Time : 3 Hours

Q.CODE : HRB519

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

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- Write the structure and use of BHC.
- Define acid value. Mention its significance.
- Why fats are solid and oils are liquid?
- What is Kolbe's reaction?
- Why '-NO₂' group acts as meta directing?
- What happens when benzoic acid is heated with hydrazoic acid?
- Why amines are basic in nature?
- Phenol is an acid, but does not react with NaHCO₃. Why?
- Write the structure and uses of saccharin.
- What is Freund's method?

Part- B

Q2 Only Focused-Short Answer Type Questions- (Answer Any FIVE out of SEVEN) (5 x 7)

- Explain Reimer-Tiemann's reaction.
- Ammonia is stronger base than aniline. Give reason.
- Write note on hydrogenation and hydrolysis of oil.
- Briefly explain saponification value and RM value.
- Discuss the effects of substituents on acidity of Phenol.
- Discuss the various general methods of preparation of aromatic amines.
- Write short note on the Kekule structure of benzene.
- Mention the general method of preparation of cycloalkanes.
- Explain the effect of substituents on electrophilic substitution reaction of benzene.

Part-C

Q3 Only Long Answer Type Questions (Answer Any TWO out of FOUR) (10)

- Discuss the mechanism of nitration reaction and Friedelcraft's acylation reaction of benzene. (10)
- Write the important steps in Haworth's synthesis of naphthalene. Describe its important chemical reactions. (10)
- Explain Bayer's strain theory. Mention its limitations. (10)
- Write any five methods of preparation and five chemical reactions of phenol. (10)



3rd Semester Back Examination 2019-20

PHARM. ENGINEERING-I

BRANCH : B.Pharma

Max Marks : 100

Time : 3 Hours

Q.CODE : HB591

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part-I

Q1 Only Short Answer Type Questions (Answer All-10)

(2 x 10)

- Define overall heat transfer co-efficient.
- Distinguish between evaporation and distillation.
- What are the application of drying in pharmacy?
- Define critical moisture content.
- What are the advantages of size reduction?
- What is filter aid? How does it function?
- What do you mean by vertex? How it can be prevented.
- Differentiate between macro mixing and micro mixing.
- What are standard sieves?
- How steam distillation process differs from simple distillation?

Part-II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)

(6 x 8)

- Draw a neat and labelled diagram of a shell-and-tube heat exchanger and describe its construction.
- Describe the rate of drying curve.
- Explain the working and application of cyclone separator.
- Discuss the principle, construction and uses of spray dryer.
- Write a short note on planetary mixer.
- Describe the principle and working of Silverson mixer emulsifier.
- Write in brief the theories of size reduction.
- Discuss the construction and working of tray dryer.
- Explain principle and working of sieve shaker machine.
- Write down the principle and application of steam distillation.
- Describe the factors influencing evaporation.
- Write the procedure to prepare water for injection.

Part-III

Q3 Only Long Answer Type Questions (Answer Any Two out of Four)

Define Fourier's Law. Write about derivation and applications of Fourier's Law.

290

(16)

Q4 Explain the principle, construction, working and use of fluidized bed dryer.

(16)

Q5 Describe the construction, working, advantages and disadvantages of ball mill.

(16)

Q6 Write the principle, construction, working, uses, advantages and disadvantages of plate and frame filter press.

(16)

3rd Semester Regular/Back Examination 2019-20
PHARMACEUTICAL MICROBIOLOGY
BRANCH : B.Pharma
Max Marks: 75
Time : 3 Hours
Q.CODE : HRB671

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 10)

Q1 Only Short Answer Type Questions (Answer All-10)

- a) Differentiate prokaryotes and eukaryotes.
- b) Why for streak plate method is carried out?
- c) Write the composition of nutrient agar.
- d) Draw a suitable design for construction of aseptic area.
- e) Define preservatives with few examples.
- f) Differentiate disinfectants and antiseptics.
- g) What is germ theory of disease?
- h) Write four different factors influencing disinfectant action.
- i) What do you know about HEPA?
- j) Name four different methods for quantitative measurement of bacterial growth.

Part-B

(7 x 5)

Q2 Only Focused-Short Answer Type Questions- (Answer Any SEVEN out of NINE)

Discuss briefly on the followings :

- a) Phenol coefficient test
- b) Growth pattern of bacteria with growth curve
- c) Isolation methods for pure cultures
- d) Gram's staining
- e) Animal cell culture
- f) Sterility indicators
- g) IMViC tests
- h) Replication of virus
- i) Classification of fungi

Part-C

Only Long Answer Type Questions (Answer Any TWO out of FOUR)

- Q3** Describe the structure of bacteria with help of a labeled diagram. (10)
- Q4** What is sterilization? Discuss in detail physical methods of sterilization. (10)
- Q5** Discuss microbial assay of antibiotics. (10)
- Q6** What do you mean by microbial spoilage? Write different sources of microbial contaminants. (10)

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B.Pharm
BP302T

3rd Semester Regular/Back Examination 2019-20
PHYSICAL PHARMACEUTICS-I

BRANCH : B.Pharma

Max Marks: 75

Time : 3 Hours

Q.CODE : HRB592

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 10)

Q1 Only Short Answer Type Questions (Answer All-10)

- What do you mean by thermodynamic solubility of drugs?
- Differentiate between real and ideal solution.
- Define CST and miscibility temperature.
- What is aerosol? List two applications.
- What is dipole moment? How is it related to aqueous solubility?
- State Henderson-Hasselbalch equation for weak acid and weak base.
- How does drug-protein binding affect the absorption and metabolism of drugs?
- What are Chelates? How is it useful in pharmacy?
- What do you mean by buffer capacity?
- Define isotonic and hypotonic solution.

Part-B

(5 x 7)

Q2 Only Focused-Short Answer Type Questions- (Answer Any SEVEN out of NINE)

- Write down the factors affecting the solubility of gas in liquid.
- State and explain Raoult's law.
- Discuss eutectic mixtures and its importance in formulations.
- Write a short note on 'glassy state'.
- Explain spreading co-efficient with suitable equation.
- What is HLB? What are its applications in pharmacy?
- Briefly explain about Langmuir isotherm with its derivation.
- Define Sorensen's pH scale. Write down different methods of determination of pH.
- Write down the capillary rise method for determining surface tension.

Part-C

Q3 Only Long Answer Type Questions (Answer Any TWO out of FOUR)

State and explain distribution law. Write down its limitations and applications. (10)

Q4 Discuss in brief about the measurement and applications of refractive index. (10)

Q5 State buffer solutions. Derive buffer equation and write its application in pharmacy. (10)

Q6 Define complexation. Briefly explain about inclusion complex. (10)

