

Registration No : 

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B.Pharm  
15PH701

**7<sup>th</sup> Semester Regular / Back Examination 2019-20**  
**BIOPHARMACEUTICS AND PHARMACOKINETICS**  
**BRANCH : B.Pharma**  
**Max Marks : 100**  
**Time : 3 Hours**  
**Q.CODE : HRB007**

**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)**

- a) What do you mean by Biopharmaceutics?
- b) What is ABC-transporter?
- c) What is AUC? How it is determined?
- d) Differentiate the Zero and 1<sup>st</sup> Order drug absorption process.
- e) Why prodrugs are important in biopharmaceutics.
- f) What is the role of Microsomal enzyme in drug disposition?
- g) What is cellular drinking?
- h) Mention any two approaches by which polar drug targeted to brain.
- i) What is Mammillary model
- j) Define MRT.

**Part- II**

**Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)**

- a) What is renal clearance? Write the mechanism of renal clearance.
- b) Calculate the elimination half life of 1st order kinetics
- c) Describe how drugs are classified on basis of their solubility and permeability, describes with example.
- d) Give the Mathematical Expression of Fick's first law of diffusion.
- e) What is cross over study design mention very briefly?
- f) Explain different stages of Plasma drug concentration-time profile of a drug following oral route of administration.
- g) Name various drug binding site of HSA.
- h) Describe how pH and ionization effecting absorption of drug.
- i) What is partition coefficient, how it is related to absorption of the drug?
- j) Describe transcellular and paracellular transport mechanism
- k) Narrate how Wagner–Nelson model is useful?
- l) Mention the methods for measurement of bioavailability.

**Part-III**

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

- 257 **Q3** 257 What is drug protein binding and its significance? Explain schematically the effect of reversible drug protein binding on distribution and elimination. Write the significance of HSA. **(16)** 257
- Q4** Estimate the pharmacokinetic parameters of IV bolus administration follow one compartment open model. **(16)**
- 257 **Q5** 257 Narrate briefly the processes of metabolism of xenobiotics. 257 257 **(16)** 257
- Q6** Describe various mechanism of drug absorption process. **(16)**

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**B.Pharm  
15PH702**

**7<sup>th</sup> Semester Regular/Back Examination 2019-20**

**PHYTOCHEMISTRY**

**BRANCH : B.Pharma**

**Max Marks : 100**

**Time : 3 Hours**

**Q.CODE : HRB097**

**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)**

- a) What is special isoprene rule? Explain with examples.
- b) What is D and L forms in stereochemistry? Justify with examples.
- c) What is Shinoda test and what for it is used?
- d) What for IR, NMR and Mass spectra are carried out?
- e) Distinguish between cardenolides and bufadienolides.
- f) Write down the hydrolytic products of atropine.
- g) Mention the different visualizing agents used for detection of phytoconstituents.
- h) Write down the structure and uses of vitamin C.
- i) Write down the therapeutic activity of Streptomycin.
- j) Write down the stereochemistry of Citral.

**Part- II**

**Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)**

- a) Write down the different methods of extraction of alkaloids.
- b) Write down the structure elucidation of Menthol.
- c) Write down the sources, chemistry and uses of Folic acid.
- d) Write down the extraction and isolation method of terpenoids.
- e) Elucidate the structure of tropic acid.
- f) Write down the sources, pharmacological properties and uses of Scillaren A and Quabein.
- g) Write down the structural elucidation of Carvone.
- h) Write down the sources, isolation and uses of Morphine.
- i) What are cardiac glycosides? Write down the source, pharmacological properties of digitoxin.
- j) Elucidate the structure of vitamin B<sub>1</sub> chemically.
- k) Write down the therapeutic activity of Penicillin.
- l) Write down the application of spectroscopy in the structure elucidation of organic compounds.

**Part-III**

**Q3 Only Long Answer Type Questions (Answer Any Two out of Four) (16)**

What are terpenoids? Classify it. Elucidate the structure of Citral chemically.

**Q4 (16)**

What are Flavonoids? Classify it with suitable examples. Write down the chemistry and pharmacological properties of Quercetin.

**Q5 (16)**

Define alkaloids and classify it with suitable examples. Elucidate the structure of Ephedrine.

**Q6 (16)**

What are vitamins? Classify it with suitable examples. Elucidate the structure of vitamin A by chemical method.

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B.Pharm  
15PH7037<sup>th</sup> Semester Regular / Back Examination 2019-20

PHARM. ANALYSIS-III

BRANCH : B.Pharma

Max Marks : 100

Time : 3 Hours

Q.CODE : HRB188

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)**

- Differentiate between TLC and HPTLC.
- What is the fingerprint region and its application in IR spectroscopy.
- Mention different ions produced in mass spectrometry during ionization.
- What is Retention time in chromatography?
- What is basic difference between absorbance curve and calibration curve of an analyte?
- Define Hypsochromic shift.
- Write the role of Flame Atomizer in Flame Photometry.
- What is the source of light in Atomic Absorption Spectroscopy?
- What is isobestic point?
- What is TMS?

## Part- II

**Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)**

- Write down the working principle and application of Gas Chromatography.
- Explain in details about instrumentation of Flame Photometry.
- Write down the different methods for preparation of TLC plates.
- Explain the working principle of PMT.
- Write short note on Shielding effect and Deshielding effect.
- Write down the preparation methods of the Column in Column Chromatography.
- Write short note on mobile phase used in HPLC.
- Derive an equation with the help of Beer–Lamberts law.
- Write in details about the solvents used in NMR spectrometer.
- Explain the instrumentation and application of Atomic Absorption Spectroscopy.
- Write down the working principle and explain the instrumentation of mass spectrometry.
- Explain on different types of Gratings used in UV spectroscopy.

**Part-III**

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

257 **Q3** 257 What are the principles involved in UV spectroscopy? Explain in details about the instrumentation and applications of UV spectroscopy. **(16)** 257

**Q4** Explain the principle and instrumentation of NMR spectroscopy. Write a note on structural elucidation of a compound by NMR spectroscopy. **(16)**

257 **Q5** 257 Outline the various types of HPLC techniques. Discuss in details on instrumentation of HPLC. **(16)** 257

**Q6** Describe different sample preparation techniques used in IR spectroscopy. Write down the principle and a short note on different components of IR spectrometer. **(16)**

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**B.Pharm  
15PH704**

**PHARMACOLOGY-III**

**BRANCH : B.Pharma**

**Max Marks : 100**

**Time : 3 Hours**

**Q.CODE : HRB253**

**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)**

- a) Differentiate bacteriostatic and bacteriocidal agents with suitable examples.
- b) Name any two antiretroviral drugs with their uses.
- c) What are Beta-lactum antibiotics? Give one example with its uses.
- d) Name any two laxatives & mention their uses.
- e) Name any two immunosuppressants and write their uses.
- f) Write down the MOA of Sulfonamide.
- g) What are the prominent adverse effects produced by Chloramphenicol?
- h) Name any two appetite stimulant and mention their uses.
- i) What are anabolic steroids? Write their uses.
- j) Mention the physiological role of Calcitonin.

**Part-II**

**Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)**

- a) Discuss on synthesis and pharmacological actions of Thyroid hormone.
- b) Write the mechanism, adverse effects and uses of cotrimoxazole.
- c) Briefly discuss about the mechanism, adverse effects and uses of tetracycline.
- d) Write about the mode of action of Macrolide antibiotics with examples.
- e) Briefly discuss about the pharmacology of Quinine for its antimalarial activity.
- f) Briefly enumerate about the antidiarrhoeal drugs with suitable examples.
- g) Describe briefly about the anti thyroid drugs.
- h) Write a note on oral contraceptives with their uses.
- i) Give a brief note about the Anti-helminthics drugs with suitable examples.
- j) What are prokinetic drugs? Write their uses and adverse effects.
- k) Write briefly about the pharmacology of quinolones.
- l) Write a brief note on pharmacovigilance.

**Part-III**

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

**Q3** Classify anticancer cytotoxic drugs with suitable examples and write the mechanism of 5 Fluorouracil. Discuss general toxicity of cytotoxic drugs. **(16)**

**Q4** Define diabetes mellitus. Classify antidiabetic drugs with suitable examples. Describe the pharmacology of oral hypoglycaemic agents. **(16)**

**Q5** Classify antiulcer drugs with suitable examples. Discuss in detail about proton pump inhibitors with special focus on their adverse effects and uses. **(16)**

**Q6** What is preclinical trial? Discuss briefly about the various steps involved in the new drug development process with the different phases of clinical trial. **(16)**

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**B.Pharm  
15PH705**

**7<sup>th</sup> Semester Regular/Back Examination 2019-20**

**RESEARCH METHODOLOGY**

**BRANCH : B.Pharma**

**Max Marks : 100**

**Time : 3 Hours**

**Q.CODE : HRB333**

**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)**

- a) Define Research.
- b) What is sampling error?
- c) What do you mean by Scale Point?
- d) Explain Double Barrel Question.
- e) What do you mean by Funnel Approach?
- f) What is standard error?
- g) Write the main objectives of Research.
- h) What are the Non-Parametric tests?
- i) Define Hypothesis.
- j) Mention the characteristics of good research report.

**Part-II**

**Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)**

- a) Write the various steps for Research Process.
- b) Describe the different methods of Primary data collection.
- c) What is Chi-square test? Explain it's significance.
- d) Write notes on Nominal and Ordinal scale.
- e) Explain the characteristics of Ideal sample.
- f) Write the various steps for writing a Research Report.
- g) Explain the characteristics of Normal distribution.
- h) Describe Interval and Ratio scale.
- i) Write details about Research question.
- j) What are the different types of Research?
- k) Enumerate the concept of Factor analysis.
- l) Explain the term Null Hypothesis and Alternative Hypothesis.

**Part-III**

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

- Q3** What is Research Design? Describe in details about various types of Research design. **(16)**
- Q4** Define Sampling. Describe the different types of sampling methods in details. **(16)**
- Q5** What is Questionnaire? Write the process of building a questionnaire in details. **(16)**
- Q6** Write the details procedure of Hypothesis testing. **(16)**

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B.Pharm  
15PH706.E:2

7<sup>th</sup> Semester Regular/Back Examination 2019-20  
COSMETIC TECHNOLOGY

BRANCH : B.Pharma

Max Marks : 100

Time : 3 Hours

Q.CODE : HRB438

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)

- a) What is Coupler?
- b) Define primary surfactants with example.
- c) Classify cosmetics according to its use.
- d) Write the composition of eye liner.
- e) Give two examples of anti-dandruff agents.
- f) What is acne and how it occurs?
- g) Differentiate between toothpaste and toothpowder.
- h) Define and classify anti-oxidant.
- i) Name the ingredients which impart absorbency to Face powders
- j) Write the composition of anti-ageing preparation.

Part-II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- a) Discuss about Hair Cream.
- b) Composition and function of hair conditioners.
- c) Composition and importance of dentifrices.
- d) How the Packaging of cosmetics done. Enumerate by citing appropriate examples.
- e) Briefly discuss about Vanishing cream.
- f) Define, classify and importance of humectants
- g) What is SPF, Classify sunscreen agents with examples?
- h) Briefly discuss about Face Powder.
- i) Effect of Light on Stability.
- j) Raw materials and process to prepare skin cleanser.
- k) Classify hair care products. Write the raw materials required to prepare shampoo.
- l) Briefly discuss about lipstick.

Part-III

Q3 Only Long Answer Type Questions (Answer Any Two out of Four) (16)

Write the objectives of quality control. How quality control tests of different cosmetic products are carried out discuss in detail.

Q4 Briefly describe the Anatomy of skin and skin preparations. Write the composition and method of preparation of sunscreen products. (16)

Q5 List out various types of Shaving preparations. Briefly describe the raw materials used in these preparations along with the evaluation parameters. (16)

Q6 Write the classification of Colors used in cosmetics with one example of each. Discuss the general characteristics and raw materials used in Nail polish, with its evaluation. (16)



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B.Pharm  
PH.E.7

**7<sup>th</sup> Semester Back Examination 2019-20**  
**HOSPITAL PHARMACY ADMINISTRATION**

**BRANCH : B.Pharma**

**Time : 3 Hours**

**Max Marks : 70**

**Q.CODE : HB439**

**Answer Question No.1 which is compulsory and any FIVE from the rest.**  
**The figures in the right hand margin indicate marks.**

- Q1 Answer the following questions : (2 x 10)**
- a) What do you mean by ABC Analysis?
  - b) What is the role of pharmacist in patient counseling?
  - c) Differentiate between central Storage and Pharmacy Storage.
  - d) What do you mean by Hospital Formulary?
  - e) Write any two primary sources of drug information.
  - f) What do you mean by MEDIPHOR?
  - g) Define DIC.
  - h) Write the storage conditions for sera and anti-toxins (Liquid State).
  - i) Write any two Principles of Purchasing of drugs of good quality.
  - j) What is recycling of drugs?
- Q2**
- a) Write Shortly about Pharmacopoeal test of sterile Ophthalmic Preparation. (5)
  - b) Discuss Briefly about Pharmacy and Therapeutic committee. (5)
- Q3**
- a) Write briefly about the role and significance of Hospital Formulary Systems. (5)
  - b) Classify Hospitals write their various functions. (5)
- Q4**
- a) Write details about objectives and functions of infection control committee. (5)
  - b) Discuss shortly about the pyrogen test in parenteral preparation. (5)
- Q5**
- a) Write the detail functions of Drug Information System. (5)
  - b) Write the various techniques of inventory control in Hospital Pharmacy. (5)
- Q6** Discuss Details about Facilities required for Manufacturing of Parenteral Preparation. Write details about secondary sources of Drug information. (10)
- Q7** Write in details about structure and Organization of a Hospital. Discuss about Unit Dose Dispensing system of drug distribution in Hospital Pharmacy. (10)
- Q8 Write short Notes on any TWO : (5 x 2)**
- a) EOQ and Estimation of Demand
  - b) Sterility Test
  - c) VED Analysis
  - d) Drug recall