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Total Number of Pages: 01

Course: B.PHARM  
Sub\_Code: BP601T

6<sup>th</sup> Semester Regular / Back Examination: 2022-23

SUBJECT: Medicinal Chemistry-III

BRANCH(S): B Pharm

Time: 3 Hour

Max Marks : 75

Q.Code:M296

Answer Question No.1 (Part-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)
- What are the sources of Pencillin and Cephalosporins?
  - What are Tetracycline antibiotics?
  - What are Macrolide antibiotics?
  - Mention various types of Prodrugs.
  - What are mutual prodrugs?
  - Why combination of chemotherapeutic agents are used in the treatment of tuberculosis?
  - What is UTI?
  - What are antiviral agents?
  - What are synthetic antifungal agents?
  - Define combinatorial chemistry.

Part-II

- Q2 Focused-Short Answer Type Questions- (Answer Any Seven) (5 x 7)
- Write a brief note on Bioprecursor.
  - Explain Biguanides as antimalarial agents.
  - Explain the SAR of Tetracyclines.
  - Give synthesis of Ciprofloxacin.
  - Give synthesis and uses of Acyclovir
  - Write the synthesis and MOA of Isoniozid
  - Write the SAR of Quinolones and Nalidixic acid.
  - Write down the synthesis of Dapsone.
  - Give synthesis of Miconazole.

Part-III

Long Answer Type Questions (Answer Any Two)

- Q3 Explain the applications of molecular Docking. (10)
- Q4 What are Sulphanamides? Give its Classification. Explain its mechanism of action. (10)
- Q5 Define Anthelmintics and classify it with examples and write synthesis, MOA of diethyl Carbamazine. (10)
- Q6 Explain carrier linked prodrugs in detail. (10)



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Total Number of Pages : 02

Course: B.Pharm  
Sub Code: BP602T

6<sup>th</sup> Semester Regular / Back Examination: 2022-23

SUBJECT: PHARMACOLOGY III

BRANCH(S): B.Pharm.

Time : 3 Hour

Max Marks : 75

Q.Code : M381

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

The figures in the right hand margin indicate marks.

- Q1** **Part-I**  
**Answer the following questions :** (2 x 10)
- Differentiate between expectorants and antitussives.
  - Define appetite stimulants and suppressants with examples.
  - What is Nasal decongestant?
  - Write the mechanism of Acyclovir.
  - Write the symptoms of barbiturate poisoning.
  - Specify the antidotes for lead poisoning.
  - Define and classify antifungal drugs.
  - Write different drugs use in Syphilis.
  - Define immunostimulants with examples.
  - Write about Osmotic purgatives with examples.

- Q2** **Part-II**  
**Focused-Short Answer Type Questions- (Answer Any Seven)** (5 x 7)
- Write the mechanism of action, adverse effects and uses of Theophylline.
  - Classify anti-emetics. Write the mechanism of action and uses of Ondansetron.
  - Write the mechanism of action and uses of Cotrimoxazole.
  - Write the mechanism, adverse effect and uses of Beta-lactam antibiotics.
  - Write general principles of treatment of poisoning.
  - Classify anti-diarrhoeal drugs. Write about the anti-secretory agents use in diarrhoea.
  - Write briefly about the mechanism of action and uses of Fluroquinolones.



- h) Write a detail notes on toxicity studies.
- i) Define biological clock and write their significance leading to chronotherapy.

### Part-III

#### Long Answer Type Questions (Answer Any Two)

- Q3 Discuss the mechanism of gastric acid secretion. Classify antiulcer drugs. Write the pharmacology of Proton Pump Inhibitors. (10)
- Q4 Classify anti-cancer drugs and write the mechanism of action, adverse effects and uses of alkylating agents. (10)
- Q5 Write detail classification of antitubercular drugs and describe the pharmacology of Isoniazid. (10)
- Q6 Define and write note on the following: (2.5 x4)
- a) Genotoxicity,
  - b) Carcinogenicity
  - c) Teratogenicity
  - d) Mutagenicity

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Course: B. Pharm  
Sub Code: BP603T

6<sup>th</sup> Semester Regular / Back Examination: 2022-23

SUBJECT: Herbal Drug Technology

BRANCH(S): B.Pharma

Time : 3 Hour

Max Marks : 75

Q.Code : M435

Answer Question No.1 (Part-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)

- Define Asawas and Aristas.
- Differentiate Bhasma and Churna.
- What are various sources of herbal drugs?
- Define pest with two examples.
- Write biological source of Amla.
- What do you mean by evaluation of herbal drugs?
- What do you mean by Bioprospecting?
- What is Schedule T?
- Define Patent.
- Define standardization.

Part-II

Q2 Focused-Short Answer Type Questions- (Answer Any Seven):  
Prepare Short Notes on any Seven of the Followings:

(5 x 7)

- Stability testing of herbal drugs
- Herbal skin care, hair care products
- Herbal flavors and perfumes
- Case study of Curcuma
- Principals involved in Ayurveda.
- Herb-food interaction
- Herbal formulations
- Ginseng and Spirulina as health food.
- Preparation and standardization of Ghutika



Part-III

Long Answer Type Questions (Answer Any Two)

- Q3 Discuss in detail about Nutraceuticals. (10)
- Q4 Present a note on Good Agricultural Practices in cultivation of medicinal plants. (10)
- Q5 Discuss ICH guidelines for the assessment of herbal drugs. (10)
- Q6 Give a brief account of plant based Industries and Institutions involved in work on medicinal and aromatic plants in India. (10)

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Total Number of Pages : 02

Course: B.Pharm  
Sub\_Code: BP605T

6<sup>th</sup> Semester Regular/Back Examination: 2022-23

SUBJECT: Pharmaceutical biotechnology

BRANCH(S): B.Pharma

Time : 3 Hour

Max Marks : 75

Q.Code : M549

Answer Question No.1 (Part-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**

Answer the following questions :

(2 x 10)

- List out two important advantages of Enzyme Immobilization.
- What are cosmid vectors?
- Write any four properties of Immunoglobulin G.
- What is humoral immunity?
- What is hypersensitivity? Write the types.
- What are transposons?
- Write the use of baffles.
- Write any two advantages of Microbial Biotransformation.
- What is point mutation?
- What are batch culture and continuous cultures?

**Part-II**

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

(5 x 7)

- Discuss about protein engineering.
- Explain the structure of immunoglobulins.
- Describe the Southern blot test. How does it differ from Western blot test?
- Describe the production of monoclonal antibodies by hybridoma technology.
- Write a note on microbial biotransformation in production of steroidal medicinal agents.
- Explain polymerase chain reaction with applications.
- What is Mutation and explain the different types of mutation?
- Describe the production of hormone insulin.
- Discuss in detail about Fermentor and its different parts.



Part-III

Long Answer Type Questions (Answer Any Two)

- Q3 What are biosensors? Explain the types with pharmaceutical applications. (10)
- Q4 Describe the general method of recombinant DNA technology. (10)
- Q5 How does the organization of genetic material differ in prokaryotic and eukaryotic organisms? (10)
- Q6 Explain the production of penicillin G by fermentation technology. (10)

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Total Number of Pages : 02

Course: B.Pharm  
Sub-Code: BP604T

6<sup>th</sup> Semester Regular / Back Examination: 2022-23  
SUBJECT : Biopharmaceutics and Pharmacokinetics  
BRANCH(S): B. Pharma  
Time : 3 Hour  
Max Marks : 75  
Q. Code : M486

Answer Question No.1 (Part-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)

- What is Mean residence time?
- Explain the term apparent volume of distribution.
- Give the importance of therapeutic window of a drug.
- Write down about apparent bioavailability of drug.
- Define clearance.
- What is intrinsic dissolution rate?
- What is effective surface area for drug absorption?
- Write down the significance of AUC.
- Give example of two phase-I reactions.
- Discuss about the clinical significance of protein binding of drugs.

Part-II

Q2

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

(5 x 7)

- Discuss about the various factors causing Non-linearity.
- Describe about the Non renal routes of drug excretion of drugs.
- Write notes on major physiological biological barriers for distribution of drugs.
- Describe briefly about *in-vitro* and *in-vivo* correlation.
- Explain about the various patient related factors for protein-drug binding with suitable examples.
- Explain in details about phase III reactions.
- Describe the importance of Noyes-Whitney equation.
- What is pH partition hypothesis?
- Briefly explain about carrier-mediated transport.





### Part-III

#### Long Answer Type Questions (Answer Any Two)

- 3 Describe the various methods used to enhance the bioavailability of poorly soluble drugs. (10)
- 4 Discuss different pharmacokinetic parameters for one compartment open model for extravascular administration of drug. (10)
- 5 Explain in details about different theories of drug dissolution. (10)
- 6 Discuss about the calculation of loading doses, maintenance doses and their significance in clinical settings. (10)

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Course: B.Pharm  
Sub\_Code: BP606T

6<sup>th</sup> Semester Regular / Back Examination: 2022-23

SUBJECT: Quality Assurance

BRANCH(S): B.Pharm

Time : 3 Hour

Max Marks : 75

Q.Code : M593

Answer Question No.1 (Part-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)

- Write the objectives of ISO-14000.
- What is premarket validation?
- Differentiate between QA and QC.
- Mention the various secondary packing materials.
- What are the elements of QbD program?
- Define TQM with its importance.
- What are the key activities of pharmaceutical warehouse?
- Mention the importance of HEPA filter.
- Classify the type of Complaints.
- Write the purposes of environmental modeling.

Part-II

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

(5 x 7)

- Write a short note on BFR and MFR.
- Write the importance of personal hygiene in pharmaceutical industry.
- Discuss the environmental control and layout of sterile manufacturing area.
- Write the reasons for disqualification of testing facilities.
- Write a short note on quality documents and distribution record.
- How to manage the materials in pharmaceutical industries?
- Briefly discuss the NABL.
- What is validation master plan and validation protocol?
- What is calibration? How to calibrate pH meter?



**Part-III**

**Long Answer Type Questions (Answer Any Two)**

- Discuss the importance of Good Laboratory Practices. Explain briefly the protocol content of non-clinical laboratory study. (10)
- What are schedule M requirements for waste disposal of pharmaceuticals? Explain any seven methods of waste disposal of pharmaceuticals. (10)
- Discuss in detail the various quality control tests for containers and closures of packaging. (10)
- What is the importance of stability testing? Write in brief stability testing of pharmaceuticals as per Q1A (R2). (10)