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Total Number of Pages: 01

Course: B.PHARM
Sub_Code: BP601T

6th 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 Isoniazid
- 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

6th 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.

Part-I

Q1 Answer the following questions : (2 x 10)

- a) Differentiate between expectorants and antitussives.
- b) Define appetite stimulants and suppressants with examples.
- c) What is Nasal decongestant?
- d) Write the mechanism of Acyclovir.
- e) Write the symptoms of barbiturate poisoning.
- f) Specify the antidotes for lead poisoning.
- g) Define and classify antifungal drugs.
- h) Write different drugs use in Syphilis.
- i) Define immunostimulants with examples.
- j) Write about Osmotic purgatives with examples.

Part-II

Q2 Focused-Short Answer Type Questions- (Answer Any Seven) (5 x 7)

- a) Write the mechanism of action, adverse effects and uses of Theophylline.
- b) Classify anti-emetics. Write the mechanism of action and uses of Ondansetron.
- c) Write the mechanism of action and uses of Cotrimoxazole.
- d) Write the mechanism, adverse effect and uses of Beta-lactam antibiotics.
- e) Write general principles of treatment of poisoning.
- f) Classify anti-diarrhoeal drugs. Write about the anti-secretory agents use in diarrhoea.
- g) 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

6th Semester Regular / Back Examination: 2022-23

SUBJECT: Herbal Drug Technology

BRANCH(S): B.Pharm

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)

- a) Define Asawas and Aristas.
- b) Differentiate Bhasma and Churna.
- c) What are various sources of herbal drugs?
- d) Define pest with two examples.
- e) Write biological source of Amla.
- f) What do you mean by evaluation of herbal drugs?
- g) What do you mean by Bioprospecting?
- h) What is Schedule T?
- i) Define Patent.
- j) 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)

- a) Stability testing of herbal drugs
- b) Herbal skin care, hair care products
- c) Herbal flavors and perfumes
- d) Case study of Curcuma
- e) Principals involved in Ayurveda.
- f) Herb-food interaction
- g) Herbal formulations
- h) Ginseng and Spirulina as health food.
- i) 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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Course: B.Pharm
Sub-Code: BP604T

6th 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)

- Q3** Describe the various methods used to enhance the bioavailability of poorly soluble drugs. **(10)**
- Q4** Discuss different pharmacokinetic parameters for one compartment open model for extravascular administration of drug. **(10)**
- Q5** Explain in details about different theories of drug dissolution. **(10)**
- Q6** 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: BP605T

6th 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

Q1 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

Q2 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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Course: B.Pharm
Sub_Code: BP606T

6th 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)

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

Part-II

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

(5 x 7)

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

Part-III

Long Answer Type Questions (Answer Any Two)

- Q3** Discuss the importance of Good Laboratory Practices. Explain briefly the protocol content of non-clinical laboratory study. **(10)**
- Q4** What are schedule M requirements for waste disposal of pharmaceuticals? Explain any seven methods of waste disposal of pharmaceuticals. **(10)**
- Q5** Discuss in detail the various quality control tests for containers and closures of packaging. **(10)**
- Q6** What is the importance of stability testing? Write in brief stability testing of pharmaceuticals as per Q1A (R2). **(10)**