

Total No. of Questions : 18

Total No. of Pages : 02

Pharm.D. (Sem.-1)
PHARMACEUTICAL INORGANIC CHEMISTRY

Subject Code : PD105T/19

M.Code : 78163

Date of Examination : 21-05-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contain EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contain THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

Write briefly:

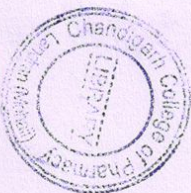
1. Why is alcohol added to the limit test for sulphate?
2. Differentiate between primary and secondary standards.
3. What is accuracy and precision? Give examples.
4. Provide the difference between iodometry and iodimetry.
5. Why is nitric acid added to the limit test for chlorides?
6. Draw the labelled neutralization curve of HCl vs NaOH .
7. Name different kinds of non-aqueous solvents.

SECTION-B

8. Explain the storage and labeling procedure of Oxygen, Carbon dioxide, and Nitrous oxide.
9. Write briefly on the Theory of indicators.

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10. What are respiratory stimulants? Give the preparation and uses of Ammonium Carbonate.
11. Discuss the methodology of Gravimetric analysis using suitable examples.
12. Elaborate Geiger-Muller counter for the measurement of radioactivity.
13. Write a note on titration using potassium permanganate.
14. Discuss the Volhard method for precipitation titration.
15. Write a note on the physiological role of iron, copper, zinc, and molybdenum.

SECTION-C

16. Explain in detail the different types of complexometric titrations with suitable examples.
17. What are Antimicrobials? Write the preparation and assay of chlorinated lime and Boric acid.
18. Define Acidifiers and explain the term "Achlorhydria". Give the preparation, assay and medicinal uses of Ammonium chloride.

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Total No. of Pages : 02

Total No. of Questions : 12

Pharm.D (Sem.-1)
HUMAN ANATOMY & PHYSIOLOGY

Subject Code : PD101T/19

M.Code : 78159

Date of Examination : 07-05-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contains EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contains THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Answer briefly:

- (a) Define the term "epithelial tissue" and provide an example of its location in the body.
- (b) What are the components of eukaryotic cell, and what are their functions?
- (c) Describe the structure of the skeletal system and its functions.
- (d) Describe the composition and functions of lymph.
- (e) What is function of the spleen?
- (f) Define the terms "hypertension" and "hypotension."
- (g) What is the role of the kidney in the urinary system?

SECTION-B

2. Describe the structure and functions of the eye.
3. Explain the anatomy of female reproductive systems.

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4. Discuss the basics of skeletal muscles and how they work in the body.
5. Write a note on cardiac cycle and ECG.
6. Mention various respiratory volumes and capacities.
7. Explain the structure and function of skin.
8. Write a short note on regulation of Menstruation cycle.
9. Explain the endocrine and exocrine role of pancreas.

SECTION-C

10. Define Blood pressure. Write a note on blood pressure. How blood pressure is controlled and regulated?
11. Draw a neat diagram of brain and discuss about the functional areas of cerebrum.
12. Explain the formation of urine. Justify the role of hormones in micturition.

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Total No. of Questions : 12

Pharma D. (Sem-1)

PHARMACEUTICAL ORGANIC CHEMISTRY

Subject Code : PD104T/19

M.Code : 78162

Date of Examination : 17-05-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contain EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contain THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Write briefly :
 - a. Comment on why alcohol is aprotic in nature.
 - b. Stability of dienes.
 - c. Friedel-Craft acylation.
 - d. Conformational and configurational isomers.
 - e. Chlorination of methane.
 - f. Compare the stereochemistry of SN^1 and SN^2 reactions.
 - g. How solubility of organic compounds is determined?

SECTION-B

2. Briefly write on the polarity of molecules and bonds.
3. Define electrophile. Explain briefly about Friedel craft alkylation and Friedel craft acylation reaction with the mechanism.

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4. Add a note on the reaction and mechanisms of the Knoevenagel reaction.
5. Write about the Sasche Mohr theory.
6. Discuss the orientation and reactivity of free radical addition to alkenes.
7. Give the synthesis and medicinal importance of furan.
8. Write the nucleophilic addition of carbonyl compounds with cyanides and hydroxyl amine.
9. Discuss the reaction and synthetic utility of Cannizzaro and Aldol condensation.

SECTION-C

10. Define micropiles. Explain briefly on the mechanism and kinetics of S_N and S_N^2 reactions.
11. Explain the mechanism, kinetics and orientation of E1 and E2 reactions.
12. What are hydrocarbons? Classify them. Discuss the nomenclature of organic compounds.

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Pharm.D (Sem.-1)
PHARMACEUTICS

Subject Code : PD102T/19

M.Code : 78160

Date of Examination : 13-05-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :
SECTION 1

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contain EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contain THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Define the following:

- Galenicals
- Surgical catgut
- Sutures and its types
- Therapeutic incompatibilities
- Throat paint
- Pharmaceutics
- Proof Spirit.

SECTION-B

2. Write down the classification and definition of dosage form.
3. Write note on powders and granules.
4. Write a note on proof spirit and isotonic solution with an example.

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5. Discuss the evaluation test for suspensions.
6. Brief about development of Indian Pharmacopoeia.
7. Mention about method of preparation of suppositories with different bases.
8. What do you know about classification and formulation of suspension?
9. Write about the maceration and percolation process with examples.

SECTION-C

10. Elaborate on the evolution of the British Pharmacopoeia.
11. Provide a comprehensive explanation of the preparation method for suppositories, supported by a clearly labelled diagram.
12. Outline the step-by-step process for producing spirits, tinctures, and extracts.

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Pharma. D. (Sem.-1)
MEDICINAL BIOCHEMISTRY
Subject Code : PD103T/19
M. Code : 78161
Date of Examination : 14-05-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contain EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contain THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Write briefly :

- a) What is the significance of cyclic AMP?
- b) Define co-enzymes with example.
- c) Give the glucose tolerance test and its significance.
- d) Give examples of uncouplers of ETC.
- e) What is jaundice? How it is caused?
- f) What are urinary tract calculi?
- g) How are chlorides determined in body fluids?

SECTION-B

2. Discuss in brief about cell and its biochemical organization.
3. What are iso-enzymes? Give their therapeutic and diagnostic applications.
4. Write a short note on citric acid cycle.

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SECTION-C

10. What are various pathways for carbohydrate metabolism? Discuss various steps involved in glycolysis along with the energetics and significance.
11. Write a detailed note on transamination, deamination and decarboxylation. Also, discuss urea cycle in brief.
12. Write in brief about :
 - a) Beta oxidation
 - b) Protein synthesis
 - c) Liver function tests.

5. Explain the process of ketogenesis and ketolysis.
6. Discuss the process of oxidative phosphorylation.
7. Write a short note on DNA replication.
8. Elaborate various kidney function tests.
9. Explain the basic principles of Radio Immuno Assay (RIA).

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Pharm.D (Sem.-2)
COMMUNITY PHARMACY
Subject Code : PD205T/19
M.Code : 80146
Date of Examination : 13-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contain EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contain THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. What do you mean by community pharmacy?
2. Define OTC medication.
3. Define the term pharmaceutical care.
4. What is the role of the pharmacist in improving adherence?
5. Define WHO.
6. Explain empathy and sympathy to patients.
7. Define patient counseling.

SECTION-B

8. Define pharmaceutical care. Write the function of pharmaceutical care.
9. Define inventory control and explain about the various methods of ABC, VED and lead time.
10. Write about the selection of site, space layout and design of community pharmacy.

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11. What is the treatment and how to prevent Vitamin A deficiency?
 12. Discuss the strategies to improve Rational use of drugs.
 13. Define Balanced diet. Write a note on vitamins deficiency and its prevention.
 14. Explain Pathophysiology and therapy to pyrexia.
 15. Explain Pathophysiology and drug therapy to Ophthalmic symptoms.
- SECTION-C**
16. Name the nutritional deficiencies of diet? Explain the role of pharmacist in nutritional counselling.
 17. Write notes on clinical presentation of the following diseases :
 - (i) Tuberculosis
 - (ii) AIDS.
 18. Write the pathophysiology and common drug therapy to the following diseases :
 - (i) Constipation
 - (ii) Dyspepsia.

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Pharm.D (Sem.-2)
PHARMACEUTICAL MICROBIOLOGY

Subject Code : PD202T/19

M.Code : 80143

Date of Examination : 09-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contains SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contains EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contains THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

Write briefly :

1. Which method is used for microbial assay of antibiotics?
2. Name the media used for sterility testing of parenteral.
3. Enlist antigen-antibody reaction?
4. What is Schick's test?
5. Causative organism of malaria and typhoid.
6. Difference between vaccine and sera.
7. Difference between fungicidal and virucidal.

SECTION-B

8. What is an immunization program and write the importance of booster dose?
9. Write a method for Gram staining for the identification of microbes.

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SECTION-C

10. Write methods for counting bacteria.
11. How evaluation and interpretation of results are done for Vitamin B12?
12. Write the advantages and disadvantages of various methods of sterilization.
13. Write about :
 - a. PCR widal
 - b. Western blot test.
14. Write a note on various media used in culturing of bacteria.
15. Explain cholera in detail.
16. Explain in detail the factor influencing disinfectant.
17. Classify the physical and chemical methods of sterilization.
18. Illustrate various biochemical test used for the identification of bacteria with examples.

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Total No. of Questions : 18

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Pharm.D (Sem.-2)
PHARMACOLOGY-I

Subject Code : PD204T-19

M.Code : 80145

Date of Examination : 11-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contain EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contain THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

Write briefly :

1. Define and classify seizures.
2. Define mucolytics and expectorants.
3. What is bioavailability?
4. What are receptors? Give two examples of Ion channel receptors.
5. What is myasthenia gravis? Name a drug for this condition.
6. Indicate various stages of general anaesthesia.
7. Define with examples, sedatives and hypnotics.

SECTION-B

8. What are pre-anesthetic medications? Discuss in brief.
9. Write a short note on enzyme coupled receptors.

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NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.

10. Discuss the pharmacology of alcohol.
11. Classify various drugs acting on parasympathetic nervous system. Discuss the management of glaucoma.
12. Write a note on benzodiazepines as anti-anxiety agents.
13. Discuss GABAergic drugs used to treat epilepsy.
14. Write a note on oral hypoglycaemics.
15. What is the pathophysiological role of 5-HT?

SECTION-C

16. Classify various routes of drug administration and discuss critically about enteral and parenteral routes along with their advantages and disadvantages.
17. Classify anti-anginal drugs. Describe the complete pharmacology of nitrates.
18. Classify NSAIDs. Describe the complete pharmacology of selective COX-II inhibitors.

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Total No. of Pages : 02

Total No. of Questions : 12

Pharm.D (Sem.-2)
PATHOPHYSIOLOGY

Subject Code : PD-201T-19

M.Code : 80142

Date of Examination : 27-05-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contain EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contain THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Write briefly :

- a) Describe the etiology and pathogenesis of atherosclerosis.
- b) Name the signs and symptoms of peptic ulcer disease.
- c) Mention the complications of hypertension.
- d) Describe the etiology and pathogenesis of Chronic Obstructive Pulmonary Disease (COPD).
- e) Explain the pathogenesis of myocardial infarction.
- f) Describe the etiology and pathogenesis of cirrhosis and alcoholic liver diseases.
- g) Name the signs and symptoms of acute and chronic renal failure and discuss their clinical implications.

SECTION-B

2. Discuss the role of lipid abnormalities in the pathogenesis of atherosclerosis.
3. Explain the signs and symptoms of asthma and chronic obstructive airway diseases.
4. Describe the complications of diabetes mellitus.
5. Discuss the pathophysiology of schizophrenia.
6. Explain the mechanisms and stages of shock.
7. Discuss the biological effects of radiation on living organisms.
8. Describe the etiology and hazards of obesity.
9. Explain the pathogenesis of acute renal failure.

SECTION-C

10. Discuss the etiology and pathogenesis of Parkinsonism, including the role of neurotransmitter dysfunction.
11. Explain the mechanisms of action of drugs used in the management of depression and mania.
12. Describe the etiology, pathogenesis, and complications of infectious hepatitis.



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Total No. of Pages : 02

Total No. of Questions : 18

Pharm.D (Sem.-2)

PHARMACOTHERAPEUTICS-I

Subject Code : PD206T/19

M.Code : 80147

Date of Examination : 15-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contains EIGHT questions. Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contains THREE questions. Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

Write briefly :

1. Renin angiotensin system.
2. Examples of drugs causing risk during pregnancy.
3. Classification of antiarrhythmic drugs.
4. Define glaucoma.
5. Define osteoporosis.
6. Examples of hormone replacement therapy.
7. Write the examples of macro and micro vascular complications of diabetes mellitus.

SECTION-B

8. Write notes on hypertension and write its type and etiology.
9. Write about the management of asthma.

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10. Give short notes on oral contraceptive drugs and its usage.
11. Write notes on role of pharmacist in rational drug use.
12. Write notes on pharmacotherapy of hyperlipidaemia.
13. Write notes on macro and micro vascular complications of diabetes mellitus.
14. Write a short note on electrophysiology of heart.
15. Write the significance of spirometry testing in respiratory diseases.

SECTION-C

16. What is diabetes mellitus? Add elaborately about etiology, clinical manifestations and pharmacotherapy involved in Type 2 diabetes mellitus.
17. Write about hypertension. Define the types clinical manifestations, management of Hypertension.
18. Define angina pectoris. Write the etiology, clinical manifestation pathophysiology and management of angina.

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Total No. of Pages : 02

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Subject Code : PD305T/19

M.Code : 92169

Date of Examination : 22-05-2024

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES:

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contain EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contain THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Write short notes on :

- Write the structure of penicillin G.
- What is renal hypertension?
- What are steroids? Name any one drug containing androstane nuclei.
- Write the structure of any two antithyroid drugs.
- What are anti-hyperlipidemic agents?
- Name any two drugs used for examination of Gall bladder.
- Write the structure and uses of furosemide.

SECTION-B

2. a. Write the SAR and mechanism of action of Quinolones as antibacterial agents.
b. Write the synthesis of norfloxacin.
3. a. What are different classes of antiarrhythmic Drugs? Discuss with examples.

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- b. Write the method of preparation of Ketoconazole?
4. Write the synthetic route and MOA and uses of :

- a. Methotrexate
- b. 5-Fluorouracil.

6.
 - a. Write any two structures of thiouracil derivatives used as antithyroid.
 - b. What is combinatorial chemistry? What are its applications?
7. What are loop diuretics? Give examples.
8. What are anticholinergics? Write the synthesis of thienadazole and albenadazole.
9. Write the briefly about the chemistry and MOA of anticoagulants.

SECTION-C

10. a. What are β -blockers? Outline the synthesis of any one β -blockers.
 - b. What are different drugs used for examination of Liver function?
11. a. Classify sulfonamides based on the duration of action? Give the synthesis of sulfamethaxazole.
 - b. Write the synthesis of Nitrofurantoin.
12. a. Write the structure and uses of Estrogen and Progesterone.
 - b. Explain the MOA and give examples of ACE in inhibitors.

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Total No. of Pages : 02

Total No. of Questions : 18

Pharm.D (Sem.-3)
PHARMACEUTICAL ANALYSIS

Subject Code : PD302T-19

M.Code : 92166

Date of Examination : 11-05-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contains SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contains EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contains THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

Write Briefly :

1. Define Beer-Lamberts Law.
2. Differentiate between accuracy and precision
3. What are the different methods of detecting end point?
4. Explain the effect of solvent on absorption spectra.
5. Elaborate nitrogen rule in mass spectrometry.
6. Define molecular ion peak and base peak in MS.
7. Why CDCl₃ is used as a solvent in NMR spectroscopy instead of CHCl₃?

SECTION-B

8. Discuss in detail the different factors affecting fluorescence and phosphorescence
9. Write a detailed note on detectors used in gas chromatography.

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10. Elaborate about analytical method validation.
11. Write application of UV -visible spectroscopy and spectrophotometry titrations.
12. Describe cationic and anionic interferences encountered in Flame photometry.
13. What is an electromagnetic spectrum? Name the various spectroscopic methods based on electromagnetic radiations.
14. Discuss principle and applications of polarimeter.
15. Elaborate advantages and disadvantages of amperometry over potentiometry.

SECTION-C

16. Give an account of principle and applications of atomic absorption spectroscopy.
17. Compare atomic absorption spectroscopy and flame photometry. Describe cationic and anionic interferences encountered in them. Give pharmaceutical applications.
18. Explain the working principle of flame photometer by drawing its block diagram. Give quantitative pharmaceutical applications of flame photometry.

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Total No. of Pages : 02

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Pharm.D (Sem.-3)

PHARMACOLOGY-II

Subject Code : PD301T-19

M.Code : 92165

Date of Examination : 08-05-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contains EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contains THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Write short notes on :

- (a) Define antiplatelet agents.
- (b) Give examples of thrombolytics.
- (c) What are fluoroquinolones?
- (d) Give examples of antifungal antibiotics.
- (e) What is the mode of action of tetracyclines?
- (f) Write examples of macrolide antibiotics.
- (g) What are genetic codes?

SECTION-B

2. Discuss the pharmacology of Haemopoietics and Plasma Expanders.
3. Write a note on penicillins.
4. Discuss classification, mode of action and pharmacological uses of sulphonamides.

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5. Explain the chemotherapy used for malaria.

6. Write an exhaustive note on chemotherapy of protozoal infections.

7. Discuss pharmacology of immunosuppressants.

8. Explain cellular classification and subcellular organelles.

9. Write a note on recombinant DNA technology.

SECTION-C

10. Discuss in detail the pharmacology of tuberculosis and leprosy.

11. Write a detailed note on various cell signalling processes.

12. Write in brief about :

- (a) Transcription
- (b) DNA replication

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Roll No.
Total No. of Questions : 12

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Pharm.D. (Sem.-3)
PHARMACEUTICAL JURISPRUDENCE

Subject Code : PD304T/19

M.Code : 92168

Date of Examination : 18-05-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contains SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contains EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contains THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Write short notes on :

- a) List four key functions of CDSCO.
- b) Give two recommendations made by the Drug Enquiry Committee.
- c) Brief 'Apprentice Pharmacist' as code of pharmaceutical ethics.
- d) Define Schedule FF. Give two examples.
- e) Define "Registered Pharmacist".
- f) Define the term coca derivatives under NDPS Act.
- g) Write the objectives of the Prevention of Cruelty to Animals Act.

SECTION-B

2. Difference between Prescription and non-Prescription products.
3. Define the term Patent as per the Patent act. Which inventions are not patentable under the Act?

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NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.

4. How are experimental animals to be handled during and after experiments as per CPCSEA guidelines?
5. Define Magic Remedy. Write the classes of advertisements prohibited under the D&MR Act.
6. Discuss the cultivation and production of opium.
7. Write the constitution of the Joint State Pharmacy Council. Enumerate its functions.
8. Explain Central Drugs Laboratory under D & C Act.
9. Write final recommendations of Drug Enquiry Committee.

SECTION-C

10. Define manufacturing in bond. Outline the procedure to be followed in obtaining a license for manufacture in bond including the conditions that are to be fulfilled.
11. Describe in detail the constitution of the Pharmacy Council of India. Discuss in detail education regulation.
12. Write the qualifications, duties, and responsibilities of the drug inspector. Explain the procedure for taking samples by the drug inspector.

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Roll No.
Total No. of Questions : 09

Total No. of Pages : 02

Pharm.D. (Sem.-3)
PHARMACOTHERAPEUTICS-II
Subject Code : PD303T/19
M. Code : 92167
Date of Examination : 15-05-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is consisting of SEVEN questions carrying TWO marks each and students have to attempt any FIVE questions.
2. SECTION-B contains EIGHT questions carrying FIVE marks each and students have to attempt any SIX questions.
3. SECTION-C contains THREE questions carrying FIFTEEN marks each students have to attempt any TWO questions.

SECTION-A

1. Write short notes on :

- a) Which factors should be considered while selecting an antibiotic for treatment of Meningitis?
- b) Briefly discuss the treatment options for management of Gonorrhoea.
- c) Write a note on clinical presentation of Endocarditis.
- d) What are the common adverse effects of cancer chemotherapy?
- e) What are the stages of Breast cancer?
- f) Discuss the principle involved in peritoneal dialysis.
- g) List out diagnostic criteria for viral infections.

SECTION-B

2. Write a note on treatment of early Breast cancer.
3. Explain etiology, risk factors and pathogenesis of Urinary tract infections.

1 | M-92167

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4. Explain the treatment of early and established Rheumatoid Arthritis with the help of an algorithm.

5. Discuss the Pathogenesis of Malaria.

6. Give a brief account on the vaccination for influenza.

7. Classify Leukemia's explain the management of Leukemia's.

8. Describe the various strategies used to treat Osteoarthritis.

9. Write a note on Acute tubular necrosis along with its prevention.

SECTION-C

10. Compare and contrast the hemodialysis and peritoneal dialysis.

11. Define pneumonia. Explain different etiologies of community acquired pneumonia and its management in detail.

12. Discuss histopathology of Psoriasis and explain the management of moderate to severe psoriasis.

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NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.

June-2024

Roll No.

Total No. of Pages : 02

Total No. of Questions : 12

D. Pharma (Post Baccalaureate) (Sem.-4)

CLINICAL TOXICOLOGY

Subject Code : PD406T19

M.Code : 78152

Date of Examination : 15-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contains EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contains THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Write briefly :

- (a) Define an antidote and provide an example of its clinical application.
- (b) What are the methods of gut decontamination used in poisoning cases?
- (c) List the clinical symptoms of acute organophosphorus pesticides poisoning.
- (d) Describe the differences in symptoms between ethanol and methanol poisoning.
- (e) What are the clinical manifestations of acute paracetamol overdose?
- (f) Describe the general management of venomous snake bites as first aid.
- (g) What are the signs and symptoms of amphetamine abuse?

SECTION-B

2. Describe the clinical features of acute antidepressant poisoning and outline the treatment protocol.
3. Discuss the various techniques used for elimination enhancement.

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2 | M-78152

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4. Explain the mechanisms of action of different antidotes and provide clinical applications for at least three specific antidotes.
5. Mention the clinical symptoms, complications, and treatment options for barbiturate and benzodiazepine overdoses.
6. Explain the clinical presentation, complications, and treatment of acute NSAID overdose.
7. Describe the clinical features and management of hydrocarbon poisoning.
8. Explain the signs, symptoms, and treatment of substance abuse for CNS depressants.
9. Discuss the management of poisoning caused by caustic substances.

SECTION-C

10. Describe in detail the management of opiate overdose supportive care measures, and strategies for preventing recurrence.
11. Discuss the pathophysiology, clinical features, and management of acute paracetamol poisoning.
12. Elaborate on the various methods of gut decontamination used in clinical toxicology. Discuss their effectiveness, indications, contraindications, and potential complications.

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Roll No.

Total No. of Pages : 02

Total No. of Questions : 12

Pharm.D. (Sem.-4)
CLINICAL TOXICOLOGY
Subject Code : PD406T/19
M. Code : 93765

Date of Examination : 15-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contains EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contains THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Write short notes on :

- a) Define Clinical Toxicology.
- b) List three common antidotes used in Clinical Toxicology.
- c) Explain the concept of gut decontamination.
- d) Describe the elimination enhancement techniques used in Clinical Toxicology.
- e) What are Toxicokinetic?
- f) Mention two clinical symptoms of opiate overdose.
- g) Name two heavy metals associated with chronic poisoning.

SECTION-B

2. Discuss the signs and symptoms of substance abuse and outline the treatment options for dependence.
3. Explain the clinical manifestations and treatment approach for paracetamol poisoning.

1 | M-93765

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4. Compare and contrast the clinical symptoms of poisoning with methanol and ethanol.
5. Brief down the methods of elimination enhancement.
6. Discuss the clinical symptoms and management of acute poisoning with carbamates.
7. Explain the clinical manifestations and treatment options for chronic lead poisoning.
8. Write a brief note on circumstantial evidence and conditions of suspicion of poisoning.
9. Outline the general management of food poisoning outbreaks.

SECTION-C

10. Describe the clinical manifestations of mushroom poisoning and outline the general management approach.
11. Describe the clinical effects of venomous snake bites and outline the first aid management.
12. Discuss the clinical symptoms and management of acute poisoning with organophosphorous compounds.

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Roll No.

Total No. of Pages : 02

Total No. of Questions : 12

Pharm.D. (Post Baccalaureate) (Sem.-4)
BIOPHARMACEUTICS AND PHARMACOKINETICS

Subject Code : PD405T19

M.Code : 78151

Date of Examination : 19-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contain EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contain THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Write briefly :

- a) Define Biopharmaceutics.
- b) What do you know about importance of dissolution studies?
- c) Describe the significance Fick's law.
- d) Enlist the factors affecting elimination.
- e) Mention about passive diffusion.
- f) Define repetitive Intravenous injection.
- g) What do you mean by IV bolus?

SECTION-B

2. Discuss the various methods to identify drug levels in blood.
3. Describe MRT for various compartment models.
4. Give a brief description on mechanisms of drug absorption.

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NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.

June-2024

5. Mention about the factors affecting binding of drug to their specific site.
6. Describe the Pharmacokinetics study with suitable examples.
7. Give a brief about Michaelis-menten method for estimating parameters.
8. Write a note on absorption of drug from G.I.T.
9. Give your vision for Michaelis-menten method of estimating parameters.

SECTION-C

10. Mention in brief the various factors affecting Protein-drug binding.
11. Give a detail note on methods of bioavailability assessment.
12. What do you know about non-linearity? Also, give brief note on the factors affecting non-linearity.

Roll No.

Total No. of Pages : 02

Total No. of Questions : 12

Pharm.D. (Post Baccalaureate) (Sem.-4)

HOSPITAL PHARMACY

Subject Code : PD402T19

M. Code : 78148

Date of Examination : 21-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of SEVEN questions carrying TWO marks each attempt any FIVE.
2. SECTION-B consisting of EIGHT questions carrying FIVE marks each attempt any SIX.
3. SECTION-C consisting of THREE questions carrying FIFTEEN marks each attempt any TWO.

SECTION-A

1. Write a short note on :

- a) Classify hospitals based on specialty.
- b) Define Hospital Formulary System.
- c) Write two major radiation hazards.
- d) Principles of inventory control.
- e) Inpatient dispensing.
- f) Patient medication profile.
- g) Drug dispensing to in-patients.

SECTION-B

2. Write the functions of pharmacy and therapeutic committee.
3. Discuss the packaging of radio pharmaceuticals.

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4. Name various methods of inventory control and explain the ABC analysis.
5. What are the roles and responsibilities of Hospital Pharmacist?
6. Explain the various types of budgets.
7. Discuss various education and training activities of hospital Pharmacist.
8. Methods of sterilization for sterile products.
9. Discuss the guidelines for setting up a drug information centre.

SECTION-C

10. What is an infection control programme? Briefly explain the organization and functions of infection control committee.
11. Explain the importance of a drug distribution techniques and discuss in detail about unit dose drug distribution method in a hospital.
12. Explain about inventory tools and its application in drug store management.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.

June-2024

Total No. of Pages : 02

Total No. of Pages : 02

Pharm.D. (Post Baccalaureate) (Sem.-4)

Subject Code : PD401T19

M.Code : 78147

Date of Examination : 27-05-2024

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of EIGHT questions carrying TWO marks each.
2. SECTION-B contains EIGHT questions carrying FOUR marks each and students have to attempt any SIX questions.
3. SECTION-C contains THREE questions carrying FIFTEEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Write briefly:
 - a) Explain the role of phenytoin in the management of epilepsy.
 - b) Diagnostic criteria for schizophrenia.
 - c) Differentiate the characteristics of tension and cluster headaches.
 - d) List out the different hepatitis viruses with their mode of transmission.
 - e) Define hemolytic anemia.
 - f) Define obsessive Compulsive disorders.
 - g) Define Pharmacotherapy.

SECTION-B

2. Discuss the Prehospital management of stroke.
3. Discuss the Etiopathogenesis of GERD.



11 M-78147

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4. Write in detail the role of Carbidopa/Levodopa and its motor complications in the management of Parkinson's disease.
5. Clinical presentation of a patient with migraine headache.
6. Write a brief note on Venous thromboembolism.
7. Write about the etiology and risk factors for Peptic ulcer disease.
8. Explain in detail Pharmacological management of Alzheimer's disease.
9. Elaborate on the different resources used in practicing evidence based medicine.

SECTION-C

10. Write a brief note on anxiety rating scales and write about the role of Benzodiazepines in generalized anxiety disorders along with its adverse effects.
11. Discuss briefly about types of Anaemia's and explain the role of parenteral iron supplements in management of iron deficiency anaemia.
12. Explain in detail about the etiology, prevention and pharmacological management of Hepatitis B and write a note on vaccines for Hepatitis B.

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June-2024

Roll No.

Total No. of Pages : 02

Total No. of Questions : 12

Pharm.D. (Sem.-04)

PHARMACOTHERAPEUTICS-III

Subject Code : PD401T/19

M.Code : 93760

Date of Examination : 27-05-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contains EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contains THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

I. Write short notes on :

- (a) Define the two types of strokes.
- (b) What are the primary classes of drugs used to treat schizophrenia?
- (c) What are the common signs of venous thromboembolism?
- (d) Enlist and define two types of affective disorders.
- (e) What are the primary symptoms of anxiety disorders?
- (f) Define evidence-based medicine and explain its importance.
- (g) What are the common side effects of Selective Serotonin Reuptake Inhibitors (SSRIs)?

SECTION-B

2. Enumerate on drug induced Haemolytic anaemia.
3. Classify the types of Hepatitis. Discuss the pathogenesis & treatment of viral hepatitis.
4. Discuss the pathogenesis and treatment of alcoholic liver disease.
5. Discuss aetiology, clinical manifestations and treatment of Insomnia.
6. Write pathophysiology and treatment of Parkinson's disease.
7. Write a short note on management of Neuralgia.
8. Outline the pharmacological treatment of H. Pylori induced peptic ulcers.
9. Discuss the aims and need of evidence-based medicine.

SECTION-C

10. Define and classify Seizures. Add a note on their characteristics and drugs used in management.
11. Discuss about pathophysiology, diagnosis, objective of the treatment and pharmacotherapy of Parkinson's disease.
12. Describe the aetiology and clinical manifestations of Venous thromboembolism. Explain pharmacological treatment of DVT along with algorithm.

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Roll No.

Total No. of Pages : 02

Total No. of Questions : 12

Pharm.D. (Sem.-4)

CLINICAL PHARMACY

Subject Code : PD403T/19

M. code : 93762

Date of Examination : 08-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contain EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contain THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Write short notes on :

- a) Define Clinical Pharmacy and discuss its development and scope.
- b) Explain the role of a Clinical Pharmacist in drug therapy monitoring, focusing on medication chart review and clinical review.
- c) Describe the steps involved in Adverse Drug Reaction (ADR) management.
- d) Discuss the importance and methods of drug information and poison information services.
- e) Explain the significance of medication history in Clinical Pharmacy practice.
- f) Describe the process and importance of patient counselling in Clinical Pharmacy.
- g) Discuss Drug Utilisation Evaluation (DUE). Explain how quality assurance is maintained in Clinical Pharmacy Services.

SECTION-B

2. Analyse a patient's case history and discuss its structure and use in the evaluation of drug therapy.
3. Discuss common medical abbreviations and terminologies used in Clinical practice.
4. Explain the interpretation of haematological tests in the evaluation of disease states.
5. Describe the importance and interpretation of liver function tests.
6. Explain the significance and interpretation of renal function tests.
7. Discuss the role and interpretation of thyroid function tests.
8. Describe the types of tests associated with cardiac disorders and their importance.
9. Explain fluid and electrolyte balance and its importance in Clinical Pharmacy.

SECTION-C

10. Discuss the scope, definition, and aims of pharmacovigilance. Describe the classification and mechanisms of Adverse Drug Reactions (ADRs).
11. Explain the systematic approach in answering Drug Information (DI) queries and the process of establishing a Drug Information Centre.
12. Discuss the activities of clinical pharmacist in a multispecialty hospital.

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June-2024

Roll No.

Total No. of Questions : 18

Total No. of Pages : 02

Pharm.D. (Post Baccalaureate) (Sem.-4)

CLINICAL PHARMACY

Subject Code : PD403T19

M.Code : 78149

Date of Examination : 08-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contain EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contain THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

Write briefly :

1. Components of biomedical literature review.
2. Define electrolytes and its importance.
3. Enlist types of medication errors.
4. Define medication chart review.
5. Explain various types of lung volumes.
6. Spontaneous case studies.
7. What is poison information centre?

SECTION-B

8. Discuss the objectives and guideline of patient medication history interview.
9. Discuss protocol for case presentation.

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10. Elaborate on preparation of written and verbal reports.
 11. Explain the role of pharmacist in management of ADR.
 12. Write a note on liver function tests.
 13. Write a note on drug information resource.
 14. Write a note on types and functions of drug utilization evaluation.
 15. Write a note on quality assurance of clinical pharmacy services.
- SECTION-C**
16. Define ADR (Adverse Drug Reaction). Discuss in detail on its management along with its causality assessment scales.
 17. Describe in details about patient counselling with examples.
 18. Elaborate on various categories of medication errors with examples.

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Roll No.

Total No. of Pages : 02

Total No. of Questions : 12

Pharm. D. (Sem.-4)

HOSPITAL PHARMACY

Subject Code : PD4027/19

M.Code : 93761

Date of Examination : 09-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of SEVEN questions carrying TWO marks each. Students have to attempt any FIVE questions.
2. SECTION-B contains EIGHT questions carrying FIVE marks each and students have to attempt any SIX questions.
3. SECTION-C contains THREE questions carrying FIFTEEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Write briefly :

- a) Write objectives of PTC.
- b) Write a note on pyrogen testing.
- c) Write a note on ABC analysis.
- d) Define budget according to Hahn.
- e) What are multispecialty hospitals?
- f) What is elite pharmacy?
- g) What is bed-side pharmacy?

SECTION-B

2. Explain the organization and management of hospital pharmacy.
3. Explain professional relations of hospital pharmacist with other professionals.
4. Explain Budget preparation.

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SECTION-C

5. What is total parenteral nutrition? Explain its components and compounding of TPN.
6. Explain the management of materials and finance in the Hospital Pharmacy.
7. Write notes on the method of preparation of Ointments.
8. Explain the procedures involved in the purchase of drugs for Hospital Pharmacy.
9. Write notes on Hospital Pharmacy communication.
10. Explain the various methods of inventory control.
11. Explain the Continuing professional development programs in brief.
12. Define sterile area. Describe the layout of sterile product area and how the parenteral are evaluated?

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Total No. of Pages : 03

Total No. of Questions : 12

Pharma.D (Post Baccalaureate) (Sem.-4)
BIOSTATISTICS AND RESEARCH METHODOLOGY

Subject Code : PD404T19

M.Code : 78150

Date of Examination : 11-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contains SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contains EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contains THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Write briefly :
 - a. Calculate the standard deviation for the following data

- 7, 3, 1, 9, and 10
- Define confidence interval.
- Define coefficient of variation with example.
- Define lodger system.
- Give the importance of semilogarithmic plots.
- Give any two assumptions of chi-square test.
- Define alternate hypothesis.

SECTION-B

2. In a correlation study the following values are obtained :

	X	Y
Mean	55	57
Standard Deviation	2.5	3.5
Coefficient of Correlation		0.8

Obtain the two regression equations that are associated with above values.

3. How you will present the data in statistics? Explain with suitable examples

4. Calculate Mean, Median and Mode for the following Data :

Class Interval	0-20	20-40	40-60	60-80	80-100
Frequency	17	28	32	24	19

5. Write a short note on any one method in epidemiology.
6. Describe the salient features of patient record database management in hospital.
7. Give an account of general ledger system and its significance.
8. Describe briefly drug information retrieval and its advantages.
9. Discuss in briefly about histogram, pie chart and scatter plots.

SECTION-C

10. A tea company appoints four salesmen A, B, C and D and observes their sales in three seasons - summer, winter and monsoon. The data is given below :

Seasons	Salesmen				Season's total
	A	B	C	D	
Summer	26	28	29	29	112
Winter	28	29	31	32	120
Monsoon	36	36	21	35	128
Salesmen's total	90	93	81	96	360

June-2024

Total No. of Pages : 03

Total No. of Questions : 12

Pharm.D. (Sem.-4)
BIostatISTICS AND RESEARCH METHODOLOGY
 Subject Code: PHARM404

Subject Code : PD404T/19

M.code : 93763

Date of Examination : 11-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contains SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contains EIGHT questions. Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contains THREE questions. Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Write short notes on :
 - a. Define sample size.
 - b. Define degrees of freedom with example.
 - c. Give two advantages of computerized retrieval data.
 - d. Define alpha error and beta error.
 - e. Calculate the mean for grouped data given below :

Class Interval	0-5	5-10	10-15	15-20	20-25
Frequency	7	3	10	6	4

- f. Define relative risk with example.
- g. Give any three applications for biostatistics.

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SECTION-B

2. Calculate Karl Pearson coefficient of correlation from the given data :

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1 2 3 4 5

Marks in Pharmacotherapeutics	48	35	17	23	47
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Marks in Statistics
45
20
40
25
45

3. Calculate Median and Mode for the following Data :

Class Interval	0-10	10-20	20-30	30-40	40-50
Frequency	7	8	12	9	4

4. Write the salient features of clinical study design.
5. Give an account of inventory control.
6. Describe in brief data graphics of any three.
7. Discuss the advantages of computerized literature retrieval.
8. Explain the prescription discussing process.
9. Write a note on incidence and prevalence.

SECTION-C

10. To study the performance of three detergents and three different water temperatures, the following 'Whiteness' readings were obtained with specifically designed equipment:

Water temperature	Detergent A	Detergent B	Detergent C
Hot water	54	46	58
Warm water	49	52	68
Cold water	47	55	67

Perform a two-way analysis of variance using 5% level of significance (Given $F_{0.05} = 6.94$).



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Roll No.

Total No. of Pages : 02

Total No. of Questions : 12

Pharm.D. (Post Baccalaureate) (Sem.-4)
PHARMACOTHERAPEUTICS-I & II

Subject Code : PD407T19

M.Code : 78153

Date of Examination : 13-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contains EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contains THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Write briefly :

- (a) What is the first-line treatment for hypertension according to current guidelines?
- (b) What is the primary mechanism of action of nitrates in the management of angina pectoris?
- (c) What is the most common type of arrhythmia encountered in clinical practice?
- (d) List two risk factors for chronic obstructive pulmonary disease (COPD).
- (e) What is the target blood glucose level for a diabetic patient before meals?
- (f) What is the mechanism of action of oral contraceptives?
- (g) What is the first-line treatment for bacterial conjunctivitis?

SECTION-B

2. Describe the different types of angina pectoris and their respective treatment strategies.
3. Discuss the principles of rational drug use, including the role of the pharmacist and the essential drug concept.

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NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.

4. Describe the clinical features, diagnosis, and treatment of glaucoma.
5. Discuss the unique considerations in prescribing medications for geriatric patients.
6. Describe the pathophysiology and treatment of type 2 diabetes.
7. Discuss the different types of drug-induced pulmonary diseases and their management.
8. Discuss the pharmacological management of hyperlipidemia.
9. Discuss the pathophysiology and management of hypertension, including lifestyle modifications and pharmacotherapy.

SECTION-C

10. Outline the management of hyperlipidemias, focusing on pharmacological agents and lifestyle modifications.
11. Discuss the guidelines for the rational use of antibiotics in treating infectious diseases.
12. Explain the pathophysiology and treatment of rheumatoid arthritis, including the use of DMARDs and biologics.

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Total No. of Questions : 12

Pharm.D. (Sem.-4)

BIOPHARMACEUTICS & PHARMACOKINETICS

Subject Code : PD405T-19

Paper ID : 93764

Date of Examination : 13-06-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. Section-A contain SEVEN questions answer any FIVE each questions will carry TWO marks.
2. Section-B contain EIGHT questions answer any SIX each questions shall carry FIVE marks.
3. Section-C contains THREE questions answer any TWO each question shall carry FIFTEEN.

SECTION-A

1. Write short notes on :

- Define Bioequivalence and Bioavailability.
- Name the different Pharmacokinetic models.
- Mention the factors causing Non-linearity.
- Describe the different drug levels of blood.
- Explain the Compartment models in short.
- Describe the IV bolus, IV infusion and oral administration.
- Describe Michael menton equation.

SECTION-B

2. Discuss the two compartment open model.
3. Explain the absorption of drugs from gastrointestinal tract

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4. Describe the drug distribution in detail.
5. Discuss the Michael - menton method of estimating parameters.
6. Explain the Repetitive Intravenous injections (One compartment Open Model).
7. Discuss the One compartment model (IV bolus) and (IV infusion).
8. Describe the Statistical Moment Theory.
9. Explain the Compartment Models in brief and also explain the Multiple Dose Regimen.

SECTION-C

10. Discuss the Bioavailability study protocol.
11. Explain the methods of Assessment of Bioavailability.
12. Describe the Non - linear Pharmacokinetics, factors causing non-linearity in brief.

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Roll No.

Total No. of Pages : 02

Total No. of Questions : 12

Pharm. D. (Post Baccalaureate) (Sem.-5)

CLINICAL RESEARCH

Subject Code : PD501T-19

M.Code : 90289

Date of Examination : 30-04-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contain EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contain THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Define :

- a) Adverse event
- b) Fixed Dose Combination
- c) IND
- d) ANDA
- e) Clinical Trial
- f) Clinical Research
- g) Counterfeit Drugs.

SECTION-B

2. Write about the Regularity requirements in the USA for clinical development of drugs.
3. Explain the role of DSMC in safety monitoring during clinical trials.
4. Discuss the role of drug characterization in the drug discovery process.

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SECTION-C

5. Give a detailed account of the phases of clinical trials.
6. Elaborate good clinical practices.
7. Discuss the challenges in the implementation of guidelines.
8. Write about the roles of Auditors and Regulatory authorities in clinical trials.
9. Elaborate CDSCO guidelines.
10. Write about the ICH guidelines for the clinical development of a new drug.
11. Discuss about the ethical guidelines in the clinical research.
12. a) What are the protocols to be followed in designing the clinical study document?
b) Write on Methods of post marketing surveillance.

Roll No.
Total No. of Questions : 12

Total No. of Pages : 02

Pharm.D. (Post Baccalaureate) (Sem.-5)
PHARMACEPIDEMIOLOGY & PHARMACOECONOMICS
Subject Code : PD502T/19
M.Code : 90290
Date of Examination : 03-05-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contain EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contain THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

1. Write briefly :

- a) Give applications of Pharmacoepidemiology.
- b) Identify two common statistics used to describe the relationship between drug exposure and outcomes.
- c) How is confidence interval measured for an odds ratio?
- d) Define spontaneous reporting system.
- e) What are electronic medical records (EMRs)?
- f) Define drug formulary?
- g) What is Markov model.

SECTION-B

2. Discuss the role of monetary units in pharmacoepidemiological research.
3. Describe spontaneous reporting system with its strengths and weakness.

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4. Describe different methods used to measure medication adherence along with their merits and demerits.

5. Discuss the differences between attributable risk and relative risk in assessing the association between drug exposure and adverse outcomes.

6. Mention the strategies to address these challenges and improve the accuracy and reliability of risk assessment in pharmacoepidemiological research.

7. Describe the time-risk relationship in pharmacoepidemiology and how it influences the interpretation of study findings.

8. Write a short note on automated data systems for Pharmacoepidemiological studies.

9. Write a note on drug induced birth defects of Pharmacoepidemiology.

SECTION-C

10. Describe different approaches of outcome measures used in pharmacoepidemiology.

11. Write about Ad Hoc data sources available for Pharmacoepidemiological studies.

12. Discuss the origin and evolution of pharmacoepidemiology and evaluate the need for pharmacoepidemiology in healthcare decision-making.

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Total No. of Pages : 02

Total No. of Questions : 12

Pharm. D. (Post Baccalaureate) (Sem.-5)
CLINICAL PHARMACOKINETIC AND PHARMACOTHERAPEUTIC

Subject Code : PD503T-19

M.Code : 90291

Date of Examination : 06-05-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.
2. SECTION-B contain EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.
3. SECTION-C contain THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.

SECTION-A

I. Answer Briefly :

- Define hepatic clearance
- Give any two applications of population pharmacokinetics
- Role of weight in TDM
- What is first pass metabolism and how it affects the drug action?
- Role of CYP P-450 in drug metabolism.
- Define dose adjustment and its significance.
- What do you mean by drug metabolism?

SECTION-B

2. Explain the role of genetics and drug interaction in TDM.
3. Discuss the effect of hepatic disease on the drug's pharmacokinetics

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4. Write a note on the general approach for dosing regimen adjustment in renal disease.
5. Inhibition and induction of drug metabolism in the pharmacokinetics of drug interactions.
6. Write the correlation between Pharmacokinetics and pharmacodynamics in drug therapy.
7. Explain the effect of hepatic disease on the drug's pharmacokinetics.
8. Discuss the importance of genetic polymorphism of cytochrome P-450 isoenzymes on drug metabolism with suitable examples.
9. Role of genetic polymorphism in drug transport and drug targets.

SECTION-C

10. What are nomograms and tabulations. Explain the role of nomograms and tabulations in the design of dosage regimen. Give their advantages and disadvantages.
11. Explain in detail the general approaches for dosage adjustment in renal and hepatic diseases.
12. Define TDM. Discuss the indications for TDM of drug and explain the role of clinical pharmacist in TDM.

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