

Roll No.
Total No. of Questions : 12

Total No. of Pages : 02

Pharm.D. (Sem.-01)
PHARMACEUTIAL ORGANIC CHEMISTRY
Subject Code : PD-104T-19
M.Code : 78162

Date of Examination : 17-01-2023

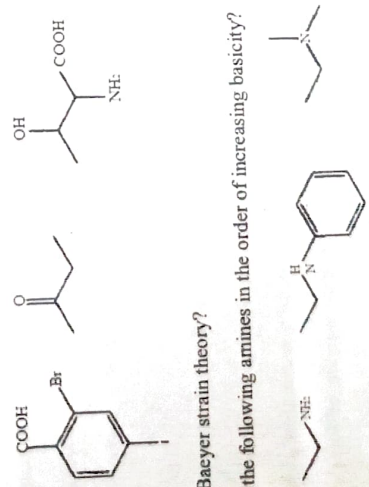
Time : 3 Hrs. Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

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

SECTION-A

- a) What is Tautomerism?
b) What is rearrangement of Carbocation?
c) What are the factors affecting the melting and boiling point of Organic Compounds?
d) What is IUPAC nomenclature of following compounds



- e) What is Baeyer strain theory?
f) Arrange the following amines in the order of increasing basicity?

- g) What is dehydration of alcohols?

SECTION-B

- What is isomerism? What are different types of isomerism in organic molecules?
- What is the role of substituents in influencing the acidic nature of carboxylic acid? Discuss with examples. Which of following is more acidic :
a) trifluoroacetic acid and acetic acid
b) Bromo acetic acid and acetic acid
c) Propanoic acid and Benzoic acid.
- Discuss the structure of benzene? Provide evidence in support of the structure of benzene?
a) What is aromaticity?
b) Discuss the classification of carbohydrates.
- What is Baeyer's strain theory?
b) What is Friedal craft alkylation?
- What are aromatic nucleophilic substitution reaction? Discuss its various mechanism.
a) Why are phenol acidic in nature?
b) What is esterification?
- What are the difference between alkyl nucleophilic substitution and acyl nucleophilic substitution reaction?
b) What is Kolbe's synthesis?

SECTION-C

- What are SN1 substitution reaction? Discuss
b) Differentiate between SN1 and SN2 substitution reaction?
- What is role of substituents of aromatic ring in controlling the aromatic electrophilic substitution reaction?
b) What is Hoffman degradation of amides?
- What are the general methods of preparation of alicyclic compounds?
b) What is crossed aldol condensation?



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Roll No.

Total No. of Pages : 02

Total No. of Questions : 18

Pharma. D. (Sem.-1)
MEDICINAL BIOCHEMISTRY
Subject Code : PD103T-19
M.Code : 78161
Date of Examination : 14-01-2023

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. What is facilitated diffusion?
2. Biochemical importance of mitochondria.
3. Define enzyme induction.
4. Define glycogenesis.
5. Define ketolysis.
6. Initiation codon.
7. Metabolic causes of Jaundice.

SECTION-B

8. Describe the structure and biochemical function of ATP.
9. IUB classification of enzyme and explain the mechanism of enzyme action.
10. Discuss the hormonal regulation of carbohydrate metabolism.
11. What is oxidative phosphorylation? Comment on uncouplers of ETC.

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12. What is genetic code? Describe the dictionary of amino acid code words in mRNA.
13. Describe the *de-novo* synthesis of pyrimidine nucleotide.
14. Discuss the principle and application of ELISA.
15. Write short note on electrolyte balance.

SECTION-C

16. Give detail on kidney function test and its diagnostic application.
17. a. Describe the reactions, energetics and anaplerotic nature of TCA cycle.
b. Briefly describe the metabolic disorders of carbohydrate metabolism.
18. a. Describe the reactions of urea cycle and its metabolic disorder.
b. Describe the diagnostic applications of enzyme.

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Total No. of Pages : 02

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Pharm.D (Sem.-2)
PHARMACOLOGY-I
Subject Code : PD-204T-19
M. Code. : 80145
Date of Examination : 24-12-2022

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. a) What are the contraindications of beta-blockers?
b) What are the uses of anti-arrhythmic agents?
c) Classify General anaesthetics.
d) Write therapeutic use of Barbiturates.
e) What is a prodrug? Explain with examples.
f) Which drugs are used as anti-tussive agents?
g) What are nasal decongestants? Classify them.

SECTION-B

2. Elaborate oral contraceptives.
3. Classify H1-receptor antagonists with examples based on their clinical uses.
4. Discuss the drug used in the management of Glaucoma.

5. Explain the concept of pharmacokinetics and pharmacodynamics with the help of suitable examples.
6. Enlist various types of drug interactions. Write in detail on pharmacokinetic drug interaction.
7. Explain different types of seizures. Describe the mechanism of action and therapeutic use of anticonvulsants.
8. Classify non-selective COX inhibitors. Describe, how they produce analgesic-antipyretic and anti-inflammatory effects.
9. Classify antihypertensive drugs along with their action and side-effects.

SECTION-C

10. Classify antiparkinsonian drugs. Why is L-dopa combined and used with carbi-dopa in the treatment of Parkinsonism?
11. Explain in detail antithyroid drugs.
12. Discuss the etiology of angina. Explain in brief the types of angina. Describe the mechanism of action, therapeutic use and adverse effect of Nitroglycerine.



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DSC-2022

**Pharm.D (Sem.-2)
PHARMACOTHERAPEUTICS-I**

Subject Code : PD-206T-19

M.Code : 80147

*Date of Examination : 20-12-2022

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

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

1. Write briefly :

a) Explain the role of inhaled beta agonists in the management of asthma.

b) Define rational drug use. Explain the role of pharmacist in rational drug use.

c) Define Osteoclast and Osteoblast.

d) List the risk factors for congestive cardiac failure.

e) Mention any four Fibrolytic agents.

f) Enlist diagnosis tests, used for myocardial infarction.

g) What is Thyroid storm?

SECTION-B

2. Discuss the various factors in selecting drug dosage regimens in paediatric population.

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SECTION-C

10. Explain the etopathogenesis, pharmacotherapy for cardiac arrhythmia with treatment algorithm.

11. Explain in detail about etiology, clinical manifestations and treatment of hyperthyroidism.

12. Explain in detail about etiology, pathophysiology, clinical manifestations and management of chronic open angle glaucoma.

3. Discuss the difference between Chronic Bronchitis and Emphysema based on clinical manifestations.

4. Explain hormone replacement therapy in detail.

5. Explain the therapeutic management of Angina Pectoris.

6. Define and classify hypertension according to JNC guidelines. Explain the etiology and pathogenesis.

7. Differentiate lung volume tests and lung capacities with a neat illustration.

8. Explain the role of diuretics and sympathomimetics in congestive cardiac failure.

9. Differentiate between STEM and NSTEM. Mention the significance of ECG in myocardial infarction.

Roll No.

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Pharm.D (Sem.-2)
PHARMACOGNOSY & PHYTOPHARMACEUTICALS

Subject Code : PD-203T-19

M.Code : 80144

Date of Examination : 08-07-22

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

Write briefly :

- 1) Give two examples of drugs obtained from mineral sources.
- 2) Define Palisade ratio.
- 3) Give the source and use of Honey.
- 4) Who coined the term Pharmacognosy?
- 5) Name four plant pesticides.
- 6) Name some fertilizers used commonly in cultivation process with examples.
- 7) Write the chemical constituent of Bees wax and Agar.

SECTION-B

- 8) Give the chemical classification of crude drugs with examples.
- 9) Explain the scope of pharmacognosy.

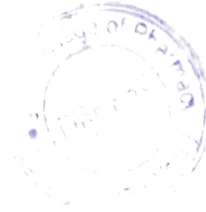
1 | Page

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- 10) Define cultivation. Explain various factors affecting cultivation of medicinal plants.
- 11) Explain the cell wall components and their significance.
- 12) Describe the macroscopy and microscopy of Senna with a note on its adulterants.
- 13) What are fibres? Write in detail about any one plant fibre.
- 14) Write in detail about any two carbohydrate containing drugs.
- 15) Write a note on Plant growth regulators.

SECTION-C

- 16) Explain in detail about natural pesticides.
- 17) Define and classify Proteins. Write a note on chemistry, method of extraction and method of analysis.
- 18) Explain the different methods of adulteration of crude drugs.



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Roll No. _____

Total No. of Pages : 02

Total No. of Questions : 18

Pharm.D (Sem.-2)
PATHOPHYSIOLOGY
Subject Code : PD-201T-19
M.Code : 80142

Date of Examination : 04-07-22

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

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

SECTION-A

1. How Widal test is different from Typhi dot test?
2. Define pathological apoptosis? Give example.
3. How diabetes is different from hyperglycemia?
4. What are autoimmune diseases? Give examples.
5. Define Metastasis. Give example.
6. How peptic ulcer is different from peptic erosion?
7. What are negative symptoms of Schizophrenia? Give example.

SECTION-B

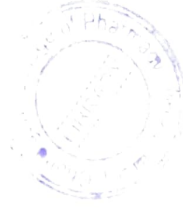
8. Describe wound healing process.
9. What is MHC? Explain its role in autoimmune diseases.

11

10. Explain pathophysiology of asthma.
11. Classify cancer with suitable examples.
12. Explain pathophysiology of septic shock.
13. Write a short note on microvascular complication of diabetes.
14. Explain pathophysiology of peptic ulcer.
15. Write a short note on acute renal failure.

SECTION-C

16. Define inflammation. Explain cellular events of acute inflammation.
17. Define and classify the hypersensitivity reactions in detail.
18. Explain pathophysiology of Parkinson disease.



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Roll No. of Questions : 18

Total No. of Pages : 02

D. Pharma (Sem.-4)
CLINICAL TOXICOLOGY
 Subject Code : 4.6
 M.Code : 71574
 Date of Examination : 24-12-22

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

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

SECTION-A

1. What are the symptoms of opioid abuse?

2. What are the methods of gut decontamination?

3. How paracetamol is toxic in nature?

4. Describe specific antidotes of organophosphate poisoning.

5. Enlist the first aid methods in snake bite.

6. What is toxicokinetics?

7. What are the supportive care methods in clinical toxicology?

SECTION-B

8. Explain the symptoms and management of benzodiazepine poisoning.

9. What are the clinical symptoms of iron poisoning? How is it treated?

10. Write a brief note on food poisoning.

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SECTION-C

- What are the harmful effects associated with tobacco consumption? How its abuse may be overcome?
- What is methanol poisoning? What are its symptoms? How is it managed?
- What are the harmful effects associated with inorganic acids? What is the treatment in these patients?
- What are the methods to enhance the elimination of toxins from the body?
- Write a note on antidotes and their applications.
- Write a note on general principles involved in the management of poisoning.
- Write a note on plant poisoning.
- Explain the different supportive care methods in case of toxicity.

Dec-2022



2 | M 71572

- 16. Write notes on:
 - a) Statistical Softwares
 - b) Presentation of Data.
- 17. Write a descriptive note on computer applications in hospital pharmacy.
- 18. a) Compare Mann Whitney U test and Wilcoxon signed rank test.

SECTION-C

- 13. Compare Correlation and Regression analysis.
- 14. Write a note on computerized prescription dispensing process.
- 15. Give advantages of drug information retrieval system.

Analys the data to test whether adoption is influenced by education of the farmer. (At 5% level of significance : $X_1^2 = 5.991, X_2^2 = X_3^2 = 7.815, X_4^2 = 9.488$)

Adoption	Education		
	Nil to low	Medium	High
Illiterate	6	24	9
Primary	6	9	6
Middle and higher education	6	8	11

- 11. Describe elements of designing methodology for research proposal
- 12. The data collected by extension workers for adoption of improved practices of wheat cultivation is given below:

Classes	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequencies	24	18	16	15	12	8	5	2

- 10. Calculate the variance and standard deviation of the following data :

- 9. Write a note on sample size determination.
- 8. What is an Observational study? What is the best design for an observational study?

SECTION-B

- 7. Define Null hypothesis and Level of significance.
- 6. How statistical methods can be used in epidemiological studies?
- 5. Write uses of computers for pharmaceutical care in community pharmacy.
- 4. Describe case studies.
- 3. Give types of computerized accounting system.
- 2. Distinguish between paired and unpaired student t-test.

- 1. What are Non-parametric tests? Can Kruskal Wallis test be applied for testing significance between two independent groups?

SECTION-A

- 1. SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks.
- 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.

INSTRUCTION TO CANDIDATES :

Time : 3 Hrs Max. Marks : 70

Date of Examination : 20-12-22

Pharm.D (Sem.-4)
BIOSTATISTICS AND RESEARCH METHODOLOGY
Subject Code : 4.4
M.Code : 71572

Total No. of Pages : 03

Total No. of Questions : 18

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Roll No.:

b) The following data represent the number of units of production per day in five different laboratories using four different types of Equipment:

Laboratories	Equipment Type			
	A	B	C	D
1	36	42	49	32
2	34	40	54	41
3	32	36	46	30
4	33	38	42	33
5	38	42	41	38

- i) Test whether the mean productivity is the same for the different equipment type.
- ii) Test whether the 5 laboratories differ with respect to mean productivity.

(At 5% level of significance; $F_{3,16} = 3.24$; $F_{4,16} = 3.01$)

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Total No. of Pages : 02

Total No. of Questions : 18

Pharm.D (Sem.-4)
CLINICAL PHARMACY
Subject Code : 4.3
M.Code : 71571
Date of Examination : 17-12-22

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTION TO CANDIDATES :

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

SECTION-A

1. What is the main aim of pharmacovigilance?
2. Enlist common types of medication errors?
3. What is poison information centre?
4. Describe any one biochemical marker of renal injury.
5. Enlist cardiac function tests.
6. What is the scope of clinical pharmacy?
7. What do you mean by drug utilization review?

SECTION-B

8. What are the different methods of reporting adverse drug reactions?
9. Write a note on different thyroid function tests.
10. Write a note on drug utilization review.

10. What are the common medical terminologies used in clinical practice?
11. What are the methods to overcome medication errors?
12. What is the organization of drug information centre?
13. What is patient counseling? What is its importance?
14. What is the importance of communication skills in clinical practice?
15. Write a note on a concept of pharmaceutical care.

SECTION-C

16. How adverse reactions may be classified? Explain the role of a pharmacist in the management of adverse effects.
17. Write a note on microbiological culture sensitivity tests. What is its importance in disease diagnosis and evaluation of treatment?
18. Write a note on biomedical literature.



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DEC-2022

Roll No.

Total No. of Pages : 02

Total No. of Questions : 12

Pharm. D (Sem.-4)
HOSPITAL PHARMACY
Subject Code : 4.2
M.Code : 71570

Date of Examination : 15-12-22

Max. Marks : 70

Time : 3 Hrs.

INSTRUCTIONS TO CANDIDATES :

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

SECTION-A

1. Answer briefly :

- Units of radioactivity
 - VED analysis
 - Buffer stock
 - Primary care
 - Difference between LVP and SVP
 - Downward air flow system
 - 1000 clean room area.
- SECTION-B**
- Briefly discuss the unit dose dispensing system.
 - Discuss the drug basket system.
 - Explain the factors affecting make or buy decisions of non-sterile preparations.

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5. What are the functions of Central sterile supply system?

6. Explain the objectives of hospital pharmacy.

7. Draw a lay out plan and flow chart of materials in 750 bedded hospital.

8. How Hospital Formulary is prepared?

9. Describe the purchase procedure to be adopted in hospitals.

SECTION-C

10. Discuss the drug distribution system in indoor patient department of 1000 bedded hospital?

11. Discuss the functions of PTC.

12. What are the objectives of inventory control and how these objectives are met?

Roll No.

Total No. of Questions : 18 Total No. of Pages : 02

Pharm.D (Sem.-2)
PHARMACEUTICAL MICROBIOLOGY
Subject Code : PD-202T-19
M.Code : 80143

Date of Examination : 13-07-22

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. Write any four applications of Microbiology.
2. What is envelope in virus?
3. Name two gram positive bacteria.
4. Explain 'Heating to red hot' as a method of sterilisation.
5. Define immunity.
6. Write signs and symptoms of dengue.
7. What is pour plate method, write its uses.

SECTION-B

8. Classify bacteria on the basis of oxygen, pH and temperature requirements. Add note on the effect of hyper and hypotonicity on bacteria.

9. Describe bacterial growth curve.
10. Write principle and procedure of Acid-fast staining.
11. Write briefly on various techniques used for identification of bacteria with emphasis on Biochemical tests?
12. Write the procedure of Redial Walker's co-efficient test.
13. Write the production, mechanism of action, demerits and applications of UV radiations.
14. Write a note on immunization programme.
15. Mention the causative organism, mode of transmission, signs and symptoms, diagnosis and treatment of Typhoid.

SECTION-C

16. Write principle and method of microbiological assay of vitamin B12 by titrimetric method.
17. Differentiate between gram positive and Gram negative cell wall. Add a note on principle and procedure of Gram's staining technique.
18. Write in detail the structure of different types of antibodies with neat labeled diagram.



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Pharm.D (Sem.-2)

PHARMACOLOGY-I

Subject Code : PD-204T-19

M. Code. : 80145

Date of Examination : 15-07-22

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

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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 partial agonist and antagonist.
2. Define mucolytic.
3. Name the hypertensive drugs used in hypertensive crisis and pregnancy.
4. Classify CNS stimulants and cognition enhancers.
5. Write the clinical use of antihistaminics.
6. Write pharmacological action of valproate.
7. Explain the factors modifying drug effects.

SECTION-B

8. Classify parasymphathomimetics. Write MOA and therapeutic uses of ACh.
9. What is myasthenia gravis? Discuss its drug therapy.

10. Enlist basic processes involved in pharmacokinetics and explain various factors biotransformation of drugs.

11. Classify Antipsychotropic drugs. Write the mechanism of action, therapeutic use, and adverse effects of haloperidol.
12. Write a short note on stages of General anaesthetics.
13. Enumerate cardiac glycosides. Describe the pharmacological action of digitalis in CHF.
14. What are autocoids? Discuss the pharmacological actions of Lipid derived autocoids.
15. Write a note on active and passive transport.

SECTION-C

16. Enumerate antihyperlipidaemic drugs. Describe in brief the pharmacological action of statins.
17. Describe the detail about the insulin. Enlist various insulin analogues. Classify oral hypoglycemic drugs with the mechanism of action.
18. Explain in detail bronchodilators and expectorants.



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Total No. of Questions : 18 Total No. of Pages : 02

Pharm.D (Sem.-2)
PHARMACOTHERAPEUTICS-I
Subject Code : PD-206T-19
M. Code : 80147
Date of Examination : 11-07-22

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. Mention the diagnostic tests for conjunctivitis.
2. Define Pseudo hypertension and emergency hypertension.
3. Why would nocturnal hypoglycaemia because elevated blood glucose level in morning.
4. Define Graves disease.
5. Write Young's formula.
6. What are the risks associated with valproate treatment in pregnancy?
7. Differentiate between bacterial and viral conjunctivitis.

SECTION-B

8. What is atherosclerosis? Explain the management of atherosclerosis.
9. Define angina pectoris. Describe its aetiology and pathogenesis.

10. Explain WHO's interventions or guidelines for promoting rational drug use.
11. Discuss the various factors to be considered while prescribing the drugs in geriatrics.
12. Enumerate drug induced pulmonary diseases. Explain pharmacotherapy of any one of them.
13. Discuss the treatment objectives with the use of HRT in post-menopausal women.
14. What is atherosclerosis? Explain the management of atherosclerosis.
15. Write the-treatment algorithm for NSTEMI.

SECTION-C

16. Discuss management of hypertension with treatment algorithm. Enumerate the risk factors and complications of Hypertension.
17. Explain in detail about treatment of osteoporosis in postmenopausal women along with its treatment algorithm.
18. Explain in detail about etiology, clinical manifestations and treatment of hypothyroidism.



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Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

Pharm.D (Sem.-3)
PHARMACEUTICAL JURISPRUDENCE
Subject Code : PD304T-19
M. Code : 92168
Date of Examination : 23-12-22

Max. Marks : 70

Time : 3 Hrs.

INSTRUCTIONS TO CANDIDATES :

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

SECTION-A

- Write briefly :
 - Spirit store
 - Illicit traffic
 - Black fluids
 - Contract research
 - Registered medical practitioner
 - Schedule V
 - Patent cooperative treaty

SECTION-B

- Explain the constitution of state pharmacy council.
- Discuss the conditions of import license.
- Explain the conditions of grant of license for drugs specified in schedule C, C1 and x?
- What are restricted licenses? What are the conditions for this, discuss?

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SECTION-C

- Explain the process of registration of pharmacists as per THE PHARMACY ACT.
- Define the term alcohol. Discuss the procedure that should be followed for :
 - Obtaining spirit for manufacture from warehouse or distillery
 - Issue of spirit for manufacture in bond
 - Stocking and storage of medicinal preparations containing alcohol.
 - Discuss various licensing authorities, their functions and duties according to drugs and cosmetics act.

- What are the general labeling conditions of Schedule c1, Schedule G, schedule H, Schedule G and Schedule P, according to drugs and cosmetics act?
- Write a note on the central drug laboratory.
- Write a note on power to issue warrant and authorization entry, search and seizure according to Narcotics drugs and psychotropic substances act.
- Write a note on calculation of ceiling price of a scheduled formulation.

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Dsc-2022

Roll No.

Total No. of Questions : 18

Total No. of Pages : 02

Pharm.D (Sem.--3)

PHARMACOLOGY-II

Subject Code : PD-301T-19

M.Code : 92165

Date of Examination : 21-12-2022

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 thrombolytic agents with examples.
2. Write about the resistance mechanisms developed by organisms against penicillins.
3. What are the adverse effects of sulfonamides?
4. What is the mechanism of action of chloramphenicol?
5. What are tumor suppressor genes?
6. Define the terms immunostimulants and genetic code.
7. What is the functioning of nucleosomes and histones?

SECTION-B

8. Write in detail about the steps involved in translation in prokaryotes.
9. Describe about the role of phosphoinositol-3, 4-bisphosphate in signal transduction.

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10. Define mutations, deletions and amplifications.
11. Write the advantages of cephalosporins over penicillins.
12. Classify Diuretics with suitable examples. What are antidiuretics?
13. Differentiate between acute toxicity and chronic toxicity.
14. Write the Pharmacology of Warfarin and Heparin.
15. Write detailed note on eukaryotic DNA replication.

SECTION-C

16. Discuss MAPK signaling pathways in eukaryotic cells. What are biosensors?
17. Give an account of pharmacology of Anthelmintic drugs.
18. Write in detail about :
 - a) Gene expression
 - b) Gene mutations.

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Disc-2022

Roll No.

Total No. of Pages : 02

Total No. of Questions : 18

Pharm.D (Sem.-3)

PHARMACEUTICAL ANALYSIS

Subject Code : PD-302T-19

M.Code : 92166

Date of Examination : 19-12-22

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. Define the term retention volume and resolution.
2. What is hypochromic effect?
3. Write any two applications of conductometric titrations.
4. Describe the role of G.I.P in quality assurance.
5. Define auxochrome. Give examples.
6. Define the terms Diffusion Current and Limiting Current.

7. "A molecular absorption spectrum is composed of broad bands but an atomic absorption spectrum is composed of discrete lines." Why?

SECTION-B

8. Define the terms Absorbance and Transmittance. How are these related to each other?
9. What is the principle of HPLC? Write a detailed account on its instrumentation.

10. What is ISO? Describe its role in quality assurance.

11. What is Beer-Lambert's Law? Discuss various deviations affecting the linear relationship between concentration and absorbance.

12. Write a detailed note on equipment for paper and gel electrophoresis. Give its applications.

13. Comment upon various types of electrodes used in potentiometric titrations.

14. What is the principle of X-ray spectroscopy? Give a detailed account on its applications.

15. Describe the analytical method validation.

SECTION-C

16. Write a detailed note on adsorption and partition column chromatography. Comment upon the factors affecting column efficiency and various applications of partition chromatography.

17. Give the detailed view of theoretical aspects involved, instrumentation and applications of amperometric titrations.

18. Write a note on various sources of IR radiations, monochromators used, sample handling in IR and detectors used in IR spectroscopy.



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Dec-2022

Roll No.

Total No. of Pages : 02

Total No. of Questions : 18

Pharm.D (Sem.-3)
PHARMACOTHERAPEUTICS-II
Subject Code : PD-303T-19
M. Code : 92167
Date of Examination : 16-12-22

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. What are narrow spectrum and broad spectrum antibiotics? Give an example of each.
2. What is syphilis? Name a drug for this condition.
3. What is casual prophylaxis in malaria? Give an example of casual prophylactic.
4. What is rheumatoid arthritis? Name a drug for this condition.
5. Define meningitis and endocarditis?
6. What is Eczema? Name a drug for this condition.
7. What is dialysis? Name different types of dialysis.

SECTION-B

8. Write a note on primary (first line) drugs for tuberculosis.
9. Write a note on etiopathogenesis of chronic renal failure.
10. Write a note on gonorrhoea and its drug therapy.

11. Write a note on leukemia and its pharmacotherapy.
12. Write a note on pharmacotherapy of chemotherapy induced nausea and vomiting
13. Add a brief note on antifungal drugs.
14. Describe pharmacotherapy of gout.
15. Write a note on drug therapy of UTI.

SECTION-C

16. Discuss in detail about drug therapy of HIV infection.
17. What is malaria? Discuss critically about anti-malarial drugs.
18. Discuss etiopathogenesis and pharmacotherapy of respiratory tract infections.



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Roll No.

Total No. of Questions : 18

Total No. of Pages : 02

Pharm. D (Sem.-3)
PHARMACEUTICAL FORMULATIONS

Subject Code : PD-306T-19

M.Code : 92170

Date of Examination : 14-12-22

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

Answer the following :

1. What are Film coated tablets.
2. What do you mean by SVPs.
3. Give different ointment bases which can be used in suppositories.
4. Mention the pharmacopoeial limit for disintegration time of uncoated tablets and enteric coated tablets.
5. What is the limit for particulate matter in SVPs?
6. What are the advantages of transdermal drug delivery systems.
7. Define Implants.

SECTION-B

8. Enlist different types of ointment bases along with their key feature.
9. Give an account on ocular drug delivery systems.

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10. Give in detail about official tests conducted on uncoated and coated tablets.
11. Write a note on transdermal drug delivery system.
12. Discuss different types of emulsions along with their advantages and disadvantages.
13. Give a schematic representation for filling of soft gelatin capsules.
14. Describe in detail about tests conducted for evaluation of suspensions.
15. Give an account of sterilization process of SVPs.

SECTION-C

16. Give an account on containers used for parenterals. Discuss different quality test conducted for parenterals.
17. Discuss the factors influencing the percutaneous absorption of drugs. Mention various physical and chemical methods used for enhancing drug penetration through skin.
18. What are flocculated and deflocculated suspensions? Discuss the quality control tests conducted on suspensions.

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Total No. of Pages : 02

Total No. of Questions : 18

Pharma.D (Sem.-3)
MEDICINAL CHEMISTRY

Subject Code : PD-305T-19

M.Code : 92169

Date of Examination : 12-12-22

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 the structure of Ethambutol.
2. Write the structure of Chlorambudil.
3. What is Bio-isosterism?
4. What is Hyperthyroidism? What are different anti-thyroid drugs?
5. What is Hypertipidaemia?
6. What are β -blockers? What is mechanism of action?
7. What is High-throughput screening?

SECTION-B

8. Give the names of three important drugs that specifically interfere with viral nucleic acid replication. Discuss the synthesis of one such drug selected by you.
9. a. What is prodrug? Explain with examples?
b. What is subcutaneous mycosis?
c. Write the structure of Ketoconazole.

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10. a. What are loop diuretics? Discuss mechanism of action with examples.
b. What are calcium channel blockers? Write examples and synthesis of any one calcium channel blockers.
11. a. What are β -lactamase inhibitors? Discuss their mechanism of action with examples.
b. What are carbapenems? Write structure of any one carbapenems.
12. a. What are different classes of Antiarrhythmic Drugs? Discuss with examples.
b. Classify the Glucocorticoids on the basis of their pharmacological activities. Give the structure, chemical name, and uses of at least ONE potent Compound from each category.
13. Name three important antimalarials derived from 8-amino-6-methoxy quinoline nucleus. Give their structure, chemical name, uses and the synthesis of any one drug.
14. Classify diuretic agents and discuss the mode of action and SAR of CA-inhibitors and loop diuretics.
15. What are drug-receptor interactions? What are different types of binding exist in drug-receptor interactions with examples?

SECTION-C

16. a. Discuss the mechanism of Blood Coagulation.
b. What is single photon emission computed tomography?
17. a. What are oral hypoglycemic agents? Discuss the chemistry and SAR of sulphonyl urea derivatives.
b. Discuss the structure activity relationship of Penicillin.
18. a. What is fluorine radiochemistry?
b. Discuss the Antisymphatic drugs Propranolol Hydrochloride. Write its method of synthesis from alpha naphthol and epichlorohydrin.

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