

Faculty of Science
B.Sc (Chemistry) III-Year, CBCS –VI Semester
Regular Examinations –June/July, 2022
PAPER: Medicinal Chemistry

Time: 3 Hours

Max Marks: 80

Section-AI. Answer any *eight* of the following (8x4=32 Marks)

1. What are Chemotherapeutic and Pharmacodynamic agents? Give an example for each.
2. Define the Terms a) Pharmacokinetics b) Pharmacophore?
3. What are Infectious Diseases ? Write about Air-borne diseases.
4. What are Enzymes ? Give any two general characteristics of Enzymes?
5. What is an Agonist drug ? Explain with an example.
6. Explain Lock and key model of Enzyme action?
7. Write the Synthesis of Tolbutamide ? Give its Therapeutic action?
8. What are Anesthetics? How are they classified?
9. Give the Synthesis and Therapeutic activity of Sulphanilamide?
10. What are Neurotransmitters? Give two examples?
11. Write about the functions of Calcium and Zinc?
12. What are Thyroid Hormones ? Give their functions?

Section-B

II. Answer the following questions (4x12=48 Marks)

13. (a) Explain about Metabolism of Drugs?
(OR)
(b) Discuss about the Various Routes of drug administration?
14. (a) Explain the Competitive and Non-Competitive Enzyme Inhibition with examples?
(OR)
(b) Explain the Structure Activity Relationship study of Sulphanilamide?
15. (a) Explain the Synthesis and Therapeutic activity of Chloroquine and Omeprazole?
(OR)
(b) Explain the Synthesis and Therapeutic activity of Paracetamol and Aspirin?
16. (a) What are SSRI's ? Give the Synthesis and Therapeutic activity of Fluoxetine?
(OR)
(b) What are Vitamins? Give their classification? Write the Sources and Deficiency diseases of A,D,E and K Vitamins?

Faculty of Science

B.Sc. (Chemistry) III-Year, CBCS –VI Semester Backlog Examinations –Jan, 2023

PAPER: Advanced Chemistry

Time: 3 Hours

Max Marks: 80

Section-A

- I. Answer any *eight* of the following questions (8x4=32 Marks)
1. Write the differences between labile and inert complexes?
 2. Explain closo and nido structures of boranes?
 3. Write the differences between water and ammonia as a solvent?
 4. Write the characteristics of pericyclic reactions?
 5. What is retro synthesis explain with suitable example?
 6. How the geometry of the substrate will affect the selectivity of product formation?
 7. Define polymer with a suitable example?
 8. Define Thermosetting and thermoplastic polymers?
 9. Write the difference between natural and synthetic polymers?
 10. Write the principle on which potentiometric analysis works?
 11. Write a short note on Voltametry?
 12. Write the differences between specific conductance and equivalent conductance?

Section-B

- II. Answer the following questions (4x12=48 Marks)
- 13.(a) Write a note on SN^1 and SN^2 reactions in complexes
(OR)
(b) Write a short note on symmetric elements in molecules
- 14.(a) Write the classification of stereo selective reactions with suitable examples
(OR)
(b) Explain any one pericyclic reaction by FMO theory
- 15.(a) Write a short note on kinetics of free radical polymerization?
(OR)
(b) Explain how do we find out number average and weight average molecular weights of a polymer?
- 16.(a) Write a short note on potentiometry?
(OR)
(b) Write a short note on conductometry?

Faculty of Science

B.Sc (Chemistry) III-Year, CBCS –VI Semester Regular Examinations –June, 2023

PAPER: Advanced Chemistry (Optional)

Time: 3 Hours

Max Marks: 80

Section-A

- I. Answer any *eight* of the following questions (8x4=32 Marks)
1. What are labile and inert complexes?
 2. Define axis of symmetry and give example.
 3. What are nido and arachno boranes?
 4. Define synthon and synthetic equivalent.
 5. What is linear and convergent synthesis?
 6. Write the retro synthetic analysis of acetophenone.
 7. Define condensation polymerization with example.
 8. Write about its biodegradable polymers.
 9. Define Tacticity and Atacticity.
 10. Define specific conductivity and equivalent conductivity.
 11. Write about normal hydrogen electrode.
 12. Write about the types of voltametric techniques.

Section - B

- II. Answer the following questions. (4x12=48 Marks)
13. (a) Explain trans effect and its applications.
(OR)
(b) Explain about the reactions in liquid Ammonia.
 14. (a) What are pericyclic reactions ? Explain its types.
(OR)
(b) Define and explain enantiometric excess and diastereometric excess.
 15. (a) Explain chain polymerization and coordination polymerization
(OR)
(b) Write the industrial application of
(i) polyethylene (ii) poly vinyl chloride (iii) Teflon.
 16. (a) Write about (i) Quinhydrone electrode (ii) Saturated calomel electrode
(OR)
(b) Explain the determination of Aspirin with KOII(Conductometrically).

Faculty of Science

B.Sc (Chemistry) III-Year, CBCS –VI Semester Regular Examinations –June, 2023

PAPER: Advanced Chemistry (Optional)

Time: 3 Hours

Max Marks: 80

విభాగం - ఎ

I. ఈ క్రింది ఏవైనా ఎనమిది ప్రశ్నలకు సమాధానములు వ్రాయండి. (8x4=32 Marks)

1. క్రియాశీల మరియు జడత్వ సంశ్లేషాలనగానేమి?
2. అక్షసౌష్ఠవతను నిర్వచించి ఉదాహరణ ఇవ్వండి.
3. నిడో మరియు అరాక్నో బోరేన్ లు అనగానేమి?
4. సింథాన్ మరియు సంశ్లేషణల్యాన్ని నిర్వచించండి.
5. లీనియర్ మరియు కన్వర్జెంట్ సంశ్లేషణ అనగానేమి?
6. ఎసిటోఫినోన్ యొక్క రెట్రోసంశ్లేషణను వ్రాయండి.
7. సంఘటన పాలిమరీకరణాన్ని నిర్వచించి ఉదాహరణనివ్వండి.
8. క్లయాకృత పాలిమర్ ల గురించి వ్రాయండి.
9. టాక్సిసిటీ మరియు ఎటాక్సిసిటీలను నిర్వచించుము.
10. విశిష్ట వాహకత మరియు తుల్యాంక వాహకతలను నిర్వచించుము.
11. నార్మల్ హైడ్రోజన్ ఎలక్ట్రోడ్ గురించి వ్రాయండి.
12. వోల్టామెట్రిక్ పద్ధతుల రకాలను గూర్చి వ్రాయండి.

విభాగం - బి

II. ఈ క్రింది ప్రశ్నలకు సమాధానములు వ్రాయండి. (4x12=48 Marks)

13. (a) ట్రాన్స్ ప్రభావం మరియు దాని అనువర్తనాలను వివరించండి.
(లేదా)
(b) ద్రవ అమ్మోనియాలోని చర్యలను వివరించండి.
14. (a) పెరిసైక్లిక్ చర్యలనగానేమి? వాటి రకాలను వివరించుము.
(లేదా)
(b) ఎనాన్డియోమరిక్ ఆధిక్యం మరియు డయాస్టెరియోమరిక్ ఆధిక్యాలను నిర్వచించి వివరించండి.
15. (a) శృంఖల పాలిమరీకరణము మరియు సమన్వయ పాలిమరీకరణములను వివరించండి.
(లేదా)
(b) (i) పాలిఎథిలీన్ (ii) పాలివైనైల్ క్లోరైడ్ (iii) టెఫ్లాన్ యొక్క పారిశ్రామిక అనువర్తనాలను వ్రాయండి.
16. (a) (i) క్విన్ హైడ్రోజన్ ఎలక్ట్రోడ్ (ii) సంతృప్తి కాలోమల్ ఎలక్ట్రోడ్ ల గురించి వ్రాయండి.
(లేదా)
(b) కండక్టిమెట్రిక్ విధానం ద్వారా KOH తో ఆస్పిరిన్ ను నిర్ణయించుటను వివరించండి.

Faculty of Science

B.Sc (Chemistry) III-Year, CBCS –VI Semester Backlog Examinations –Jan, 2023

PAPER: Medicinal Chemistry

Time: 3 Hours

Max Marks: 80

Section-A

I. Answer any *eight* of the following questions (8x4=32 Marks)

1. Define the Terms a) Drug b) Pharmacodynamics?
2. Write about Nomenclature of drugs?
3. What are Pharmacodynamic agents? Give two examples?
4. What is Enzyme Inhibition? Give its classification?
5. Explain any two factors that effect the Enzyme activity?
6. What is an Antagonist drug? Explain with an example?
7. What are Antibiotics? Give the Semi-Synthesis of Penicillin-G?
8. What are Local Anesthetics? Give the synthesis of Benzocaine?
9. What are Antacids? Give example?
10. What are Neurotransmitters? Give two examples?
11. Write the functions of Sodium and Potassium?
12. What are Hormones? Give two examples?

Section-B

II. Answer the following questions (4x12=48 Marks)

13. (a) What is a Disease? Write about Air-borne and Water-borne Diseases?
(OR)
(b) Explain about the Metabolism of drugs?
14. (a) Explain the Structure Activity Relationship study of Sulphanilamide?
(OR)
(b) Explain about the binding role of -OH and -NH₂ functional groups in Drug-Receptor Interactions?
15. (a) Explain the Synthesis and Therapeutic activity of AZT and Paracetamol?
(OR)
(b) What are Anesthetics? How are they classified? Give the synthesis of Benzocaine?
16. (a) What are Vitamins? Give their classification? Write the Sources and Deficiency diseases of A,D,E and K Vitamins?
(OR)
(b) Explain the Synthesis and Therapeutic activity of Salbutamol and Atenolol?

Faculty of Science

B.Sc (Chemistry) III-Year, CBCS-VI Semester Regular Examinations -June, 2023

PAPER-I: Medicinal Chemistry

Time: 3 hours

Max Marks: 80

Section-A

- I. Answer any *eight* of the following questions (8x4=32 Marks)
1. What is Disease? Give examples of some common diseases.
 2. Write about pharmacophore.
 3. What is Generic name and Trade name? Give examples.
 4. Write about the factors affecting enzyme action.
 5. What are enzyme Inhibitors? Write its importance.
 6. Write the mechanism of drug action.
 7. Define Anesthetics. Give its classification.
 8. Write about the Antipyretic drugs.
 9. Write the synthesis of Penicillin-G.
 10. Write a note on Levodopa.
 11. Write the sources and deficiency disorders of Vitamin-D
 12. Write the sources and deficiency disorders of micronutrients Na, k.

Section-B

- II. Answer the following questions (4x12=48 Marks)
- 13.(a) Define Drug. Explain the classification of drugs based on structure and therapeutic activity with examples.
- (OR)
- (b) Explain ADMET (Absorption, Distribution, Metabolism, Elimination and Toxicity).
- 14.(a) Explain the types of Enzyme inhibitions with examples.
- (OR)
- (b) Explain drug receptor interactions involved in drug receptor complex.
- 15.(a) Write the synthesis and therapeutic activity of (i) Sulphanilamide (ii) Chloroquin
- (OR)
- (b) Explain about the Antidiabetic and Antiinflammatory drugs.
- 16.(a) Write the sources, deficiency disorders and remedy of Vitamin-A and Vitamin-B
- (OR)
- (b) Explain about Carbimazol, Salbutamol and Dopamine drugs.
