

Pharm D IV – Year (6 YDC) (Main & Backlog) Examination, September 2023

Subject: Biopharmaceutics and Pharmacokinetics

Time: 3 Hours

Max. Marks: 70

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. What is Gastric emptying? Explain influence of food on drug absorption.
2. Explain the significance of protein binding of drugs.
3. Give examples for zero order and first order rate processes.
4. Write the significance of apparent volume of distribution.
5. Write a note on method of residuals.
6. The half-life of a drug is 6 hours. Calculate persistence factor and loss factor if the dose is administered (a) every 6 hours and (b) every 12 hours.
7. Write the difference between linear and nonlinear pharmacokinetics
8. Give the application of non-compartmental technique.
9. Explain Latin-square cross-over design.
10. Write a note on *in-vitro* - *in-vivo* correlations levels.

PART – B

Note: Answer any five questions

(5 x 10 = 50 Marks)

11. Write various dosage form related factors affecting the drug absorption.
12. Explain different compartment models along with suitable diagrams and mention their significance.
13. 50-kg woman was given a single IV dose of an antibacterial drug at a dose level of 6 mg/kg. Blood samples were taken at various time intervals. The concentration of the drug was determined in the plasma fraction of each blood sample and the following data were obtained. Assume that it follows one compartment open model. Calculate all possible pharmacokinetic parameters.

Time(Hours)	1	2	3	4	5	6	7
Concentration($\mu\text{g/ml}$)	8	6.3	4.9	4	3	3	2

14. Explain designing of dosage regimen for multiple dosing.
15. What is *Michaelis–Menten* equation? How are V_{max} and K_m obtained from Steady-State Concentration
16. Derive mathematical equations used to calculate pharmacokinetic parameters following IV bolus administration assuming the drug follows two compartment open model.
17. Explain in detail about Statistical Moment Theory and write a note on various moment curves.
18. Explain various methods of measurement of bioavailability.

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Pharm. D I Year (3 YDC) (PB) (Main & Backlog) Examination, September 2023

Subject: Biopharmaceutics and Pharmacokinetics

Time: 3 Hours

Max. Marks: 70

PART - A

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PART - B

Note: Answer any five questions

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FACULTY OF PHARMACY

Pharm D IV – Year (6YDC) (Main & Backlog) Examination, September 2023

Subject: Bio Statistics and Research Methodology

Time: 3 Hours

Max. Marks: 70

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Explain Non parametric test.
2. Explain Null Hypothesis and alternate hypothesis with example
3. Explain primary data with suitable example
4. Explain the randomised clinical trial.
5. Explain Attributable risk.
6. Explain in brief correlation and regression
7. Define discrete and continuous variables.
8. Explain bar graph.
9. Explain Type I and Type II Error
10. Find Mean, Median and mode of given data.

X	33	57	25	32	11	33	42
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PART – B

Note: Answer any five questions

(5 x 10 = 50 Marks)

11. Explain in detail about observational and interventional studies in clinical study design
12. Explain ONE WAY ANNOVA in detail with suitable example
13. (a) Explain box plot construction with suitable example
(b) Draw a histogram for sale of antipyretic drugs over 70 drug stores

Sale of antipyretic drugs (in Rs)	100-200	200-300	300-400	400-500	500-600
No. of drug stores	17	15	12	14	12

14. (a) Explain Student 't' test and its applications.
(b) Write the detail note on SPSS software used in clinical study analysis.
15. Find the Mean, Median, Mode, Standard Deviation, variance, Coefficient of variation, range and Standard Error of Mean of following data obtained from clinical study conducted in hospital for systolic blood pressure in hypertensive patients

145	95	135	125	115	135	165	155	115	110
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16. (a) Explain the role of Computers in community Pharmacy
(b) Explain the role of computers in hospital pharmacy
17. Write in detail the report writing of scientific research project.
18. (a) Using Karl Pearson's method find out the correlation coefficient between data and their frequency

Data (X)	7	10	19	23	16	30	31
Frequency (f)	5	12	15	20	16	26	21

- (b) Write a detail note on drug information storage and retrieval

FACULTY OF PHARMACY

Pharm D I – Year (3-YDC) (Main & Backlog) (PB) Examination, September 2023

Subject: Bio Statistics and Research Methodology

Time: 3 Hours

Max. Marks: 70

PART - A

Note: Answer all the questions.

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1. Explain Non parametric test.
2. Explain Null Hypothesis and alternate hypothesis with example
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- (b) Write a detail note on drug information storage and retrieval

FACULTY OF PHARMACY

Pharm. D I-Year (3 YDC) (PB) (Main & Backlog) Examination, September 2023

Subject: Clinical Toxicology

Time: 3 Hours

Max. Marks: 70

PART-A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Define and give examples of antidotes.
2. What is an "anion gap" and what is its significance?
3. Enumerate the methods of decontamination of poison.
4. Write the uses and MOA of pralidoxime.
5. What are the clinical effects of methanol poisoning?
5. Write notes on diagnosis of radiation poisoning.
6. What are the causes of food poisoning?
7. What are different venomous snake families?
8. Describe about production of snake antivenom.
9. What are hallucinogens? Write the clinical effects of hallucinogens abuse?
10. Write the classification of drugs of abuse.

PART-B

Note: Answer any five questions

(5 x 10 = 50 Marks)

11. List out the methods of elimination of poison. Explain about forced diuresis and hemodialysis.
12. Discuss about clinical features, diagnosis and management of acute poisoning of opiates.
13. Discuss about clinical features, diagnosis and management of acute poisoning of Paracetamol.
14. Discuss about clinical features, diagnosis, treatment of sulfuric acid poisoning.
15. Discuss about clinical presentation, diagnosis and management of chronic arsenic Poisoning.
16. Write notes on mycotoxins poisoning.
17. Discuss about clinical features, diagnosis and management of scorpion stings.
18. Write in detail about alcohol dependence.

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FACULTY OF PHARMACY

Pharm. D IV Year (6 YDC) (Main & Backlog) Examination, September 2023

Subject: Clinical Toxicology

Time: 3 Hours

Max. Marks: 70

PART-A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Define and give examples of antidotes.
2. What is an "anion gap" and what is its significance?
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FACULTY OF PHARMACY

Pharma. D I Year (3YDC) (PB) (Main & Backlog) Examination, September 2023
Subject: Hospital pharmacy

Time: 3 Hours

Max. Marks: 70

PART-A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Classify Hospital based on size.
2. Define Hospital pharmacy.
3. Define Inventory control and list various methods of inventory control.
4. Write a short notes on Pharmacy and Therapeutic committee.
5. Write a short notes on Hospital pharmacy communication-News letter.
6. Write short notes on large volume parenterals.
7. Write a short notes on Individual prescription method.
8. Explain the Role of Pharmacist in Central sterile supply services
9. Define Total Parenteral Nutrition
10. Write short notes on sterile formulations –Small volume.

PART-B

Note: Answer any five questions.

(5 x 10 = 50 Marks)

11. (a) Discuss the roles and responsibilities of Hospital Pharmacist.
(b) Explain the functions of hospital.
12. Explain the drug distribution in the hospital.
13. Explain Hospital committees - Infection committee & Research and ethical committee.
14. Explain the preparation and implementation of budget.
15. Explain Manufacturing of Tablets and Capsules.
16. Explain Continuing professional development programs-Education & Training.
17. Explain Radiopharmaceuticals – Handling & Packaging.
18. Explain Professional Relations & Practices of Hospital pharmacist.

Code No: E-12361

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Pharm D IV Year (6 YDC) (Main & Backlog) Examination, September 2023

Subject: Hospital pharmacy

Time: 3 Hours

Max. Marks: 70

PART-A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

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2. Define Hospital pharmacy.
 3. Define Inventory control and list various methods of inventory control.
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PART-B

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FACULTY OF PHARMACY

Pharm. D I Year (3 YDC) (PB) (Main & Backlog) Examination, October 2023

Subject: Pharmacotherapeutics – III

Time: 3 Hours

Max. Marks: 70

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Differentiate ulcerative colitis & crohns disease.
2. Write a note on use of triptans in migraine.
3. Write a brief note on different scales for rating pain.
4. Classify Anemia's based on morphology of RBC.
5. What are the causes of backwash ileitis?
6. Classify types of stroke based on the mechanism.
7. Classify antipsychotic agents with examples.
8. Write a note on sleep cycles.
9. Define and classify pain.
10. What are the advantages of LMWH over UFH?

PART - B

Note: Answer any five questions.

(5 x 10 = 50 Marks)

11. (a) Write about pharmacist's approach towards evidence based medicine.
(b) Explain the treatment of thrombocytopenia.
12. (a) Write the treatment algorithm for bipolar disease.
(b) Explain the pathogenesis, clinical presentation and management of Helicobacter pylori induced peptic ulcer disease.
13. (a) Explain the pathogenesis, symptoms and management of Alzheimer's disease.
(b) Write the diagnosis and treatment algorithm of hepatitis B infection.
14. (a) Explain the clinical features and pathogenesis of alcoholic liver disease.
(b) Define Anxiety. Explain the clinical features and treatment of panic disorder.
15. (a) Explain in detail about etiopathogenesis of inflammatory bowel disease.
(b) Write a brief note on Haemolytic Anaemia.
16. (a) Explain the management of Acute Ischemic Stroke.
(b) Write a note on management of Obstructive Sleep Apnea.
17. (a) Explain the role of Opioid Analgesics in pain management.
(b) Elaborate the role of 5 amino salicylate derivatives and their various formulations in the treatment of IBD.
18. (a) Write a note on narcolepsy and its management.
(b) Write a note on Jaundice and its management.

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Pharm. D IV – Year (6 YDC) (Main & Backlog) Examination, October 2023

Subject: Pharmacotherapeutics – III

Time: 3 Hours

Max. Marks: 70

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Differentiate ulcerative colitis & crohns disease
2. Write a note on use of triptans in migraine
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FACULTY OF PHARMACY

Pharm D IV – Year (6YDC) (Main & Backlog) Examination, September 2023

Subject: Clinical Pharmacy

Time: 3 Hours

Max. Marks: 70

PART-A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Write a short note on a) Drug Chart review b) Pharmacist intervention.
2. What is the role of clinical pharmacist in ADR management?
3. Write the interpretation of a) Iron deficiency anemia b) Vit B12 deficiency anemia.
4. Define Clinical Pharmacy? Write its applications.
5. Explain Disc-Diffusion method.
6. Write a short note on preparation and documentation of ward rounds.
7. Mention the different types of communication skills with examples.
8. Explain the resources of drug information with examples.
9. Write a short note on Written and verbal reports.
10. Write a note on DUE studies.

PART-B

Note: Answer any five questions

(5 x 10 = 50 Marks)

11. (a) Define Pharmacovigilance and discuss the aims and scope of pharmacovigilance.
(b) Write a note on ADR assessment scales.
12. Explain in detail about laboratory interpretation of renal disorders.
13. (a) Write the types of medication errors with examples.
(b) Note on medication history interview.
14. Explain in detail about Microbiological culture sensitivity tests.
15. Write a note on a) Patient data analysis
b) Quality assurance of clinical pharmacy services.
16. Explain in detail about Critical appraisal of biomedical literature.
17. Write a note on a) Poison information centers. b) Patient counseling.
18. Write a brief note:
(a) SOAP analysis
(b) FARM analysis

FACULTY OF PHARMACY

Pharm D I – Year (3YDC) (Main & Backlog) (PB) Examination, September 2023

Subject: Clinical Pharmacy

Time: 3 Hours

Max. Marks: 70

PART-A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

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PART-B

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(a) SOAP analysis
(b) FARM analysis

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FACULTY OF PHARMACY
Pharm. D IV Year (6-YDC) (Instant) Examination, May / June 2022

Subject: Pharmacotherapeutics - III

Time: 3 Hours

Max. Marks: 70

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

- 1 Write about the etiology of migraine headache
- 2 What are the causes of Backwash ileitis
- 3 Write a brief note on Sickle cell Anemia
- 4 Explain about the maintenance of Remission in IBD
- 5 Write the pharmacological management of Obstructive sleep disorder
- 6 Write about the management of Narcolepsy
- 7 Classify types of stroke based on the mechanism
- 8 Write about the pharmacological management of Alzheimer's disease
- 9 Define early virologic response and sustained virologic response seen in HCV
- 10 Differentiate ulcerative colitis & crohn's disease

PART – B

Note: Answer any five questions.

(5 x 10 = 50 Marks)

- 11 (a) Write about the etiology & risk factors for peptic ulcer disease.
(b) Write about the management of the PUD.
- 12 (a) Write about the patterns of Drug induced liver disorders.
(b) Write briefly about Alcoholic liver disease & its management.
- 13 Discuss in detail about the etiopathogenesis & management of stroke.
- 14 Discuss briefly about types of Anemia's & explain the role of parenteral Iron supplements in management of Iron deficiency Anemia.
- 15 (a) Write the staging of Parkinson's according to Hoehn and yahr scale.
(b) Write in detail about the role of carbidopa/levodopa & its motor complications in the management of Parkinson's disease.
- 16 (a) What are the different types of Bipolar disorders?
(b) Discuss the management of Generalized Anxiety disorder.
- 17 (a) Write briefly about any two drug induced blood disorders.
(b) Discuss in detail about heparin induced thrombocytopenia and its management.
- 18 Explain in detail about Evidence Based medicine & explain the steps involved in applying the evidence based medicine process in pharmacotherapeutic decision.

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**Pharm. D I Year (3 YDC) (Post-Baccalaureate) (Instant) Examination,
May / June 2022**

Subject: Pharmacotherapeutics - III

Time: 3 Hours

Max. Marks: 70

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

- 1 Write about the etiology of migraine headache
- 2 What are the causes of Backwash ileitis
- 3 Write a brief note on Sickle cell Anemia
- 4 Explain about the maintenance of Remission in IBD
- 5 Write the pharmacological management of Obstructive sleep disorder
- 6 Write about the management of Narcolepsy
- 7 Classify types of stroke based on the mechanism
- 8 Write about the pharmacological management of Alzheimer's disease
- 9 Define early virologic response and sustained virologic response seen in HCV
- 10 Differentiate ulcerative colitis & crohn's disease

PART – B

Note: Answer any five questions.

(5 x 10 = 50 Marks)

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(b) Write in detail about the role of carbidopa/levodopa & its motor complications in the management of Parkinson's disease.
- 16 (a) What are the different types of Bipolar disorders?
(b) Discuss the management of Generalized Anxiety disorder.
- 17 (a) Write briefly about any two drug induced blood disorders.
(b) Discuss in detail about heparin induced thrombocytopenia and its management.
- 18 Explain in detail about Evidence Based medicine & explain the steps involved in applying the evidence based medicine process in Pharmacotherapeutic decision.

FACULTY OF PHARMACY
Pharm. D IV Year (6-YDC) (Instant) Examination May 2022

Subject: Biopharmaceutics and Pharmacokinetics

Time: 3 Hours

Max. Marks: 70

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

- 1 Explain the Noyes-Whitney's equation.
- 2 Write a note on binding of drugs to Human Serum Albumin (HAS).
- 3 Write a short note on endocytosis.
- 4 Write the differences between zero order and first order kinetics.
- 5 Show that $C = C_{ss}$ (One compartment open model IV infusion).
- 6 Write various methods to calculate area under curve.
- 7 Write a note on accumulation factor, Loss Factor and Persistence factor.
- 8 What are the causes for the Nonlinearity?
- 9 Write a note on statistical moment theory.
- 10 Write various pharmacodynamics methods for assessing bioavailability.

PART – B

Note: Answer any five questions.

(5 x 10 = 50 Marks)

- 11 Explain in detail about mechanism of drug absorption in G.I.T.
- 12 Explain Biological factors affecting drug absorption.
- 13 How do you determine binding constants and binding sites by graphical methods?
- 14 How do you obtain different pharmacokinetic parameters following intravenous bolus administration of a drug that confers two compartment open model characteristics?
- 15 Describe the pharmacokinetics concept involved in repetitive injection in one compartment open model.
- 16 Explain in detail about non compartmental pharmacokinetics.
- 17 Elaborate the various methods of improving bioavailability of poorly soluble drugs.
- 18 A dose of 184 mg of drug is given intravenously to a healthy volunteer and the following blood data was obtained. Assume that the drug follows one compartment open model. Calculate all possible pharmacokinetic parameters.

Time(Hrs)	1	6	12	24	48	72	96	144
Concentration(mg/L)	137	120	103	76	42	23	12	3.7

FACULTY OF PHARMACY

Pharm. D I Year (3-YDC) (Instant) (Post-Baccalaureate) Examination, May 2022

Subject: Biopharmaceutics and Pharmacokinetics**Time: 3 Hours****Max. Marks: 70****PART – A****Note: Answer all the questions.****(10 x 2 = 20 Marks)**

- 1 Explain the Noyes-Whitney's equation.
- 2 Write a note on binding of drugs to Human Serum Albumin (HAS).
- 3 Write a short note on endocytosis.
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Time(Hrs)	1	6	12	24	48	72	96	144
Concentration(mg/L)	137	120	103	76	42	23	12	3.7

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Pharm. D IV Year (6-YDC) (Instant) Examination May 2022

Subject: Biostatistics and Research Methodology

Time: 3 Hours

Max. Marks: 70

PART – A

Note: Answer all the questions.**(10 x 2 = 20 Marks)**

- 1 Explain the term power of study.
- 2 Calculate Mean and Median from the following data.

X	2	4	6	8	10	12	14
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- 3 Write applications of semi-Logarithmic plot.
- 4 What is Type I and Type II error in hypothesis testing?
- 5 Define median and write its importance.
- 6 Define relative risk and attributable risk.
- 7 Define hypothesis. What are different types of hypothesis?
- 8 Define prevalence and incidence.
- 9 Explain in brief about primary data.
- 10 What are scatter plots?

PART – B

Note: Answer any five questions.**(5 x 10 = 50 Marks)**

- 11 Describe the role of computers.
 - (a) In patient record data base management.
 - (b) Inventory control in hospital pharmacy.
- 12 Explain Two Way ANOVA in detail with suitable example.
- 13 Describe in detail the different types of clinical study designs.
- 14 (a) A hospital evaluated the epidemiology of Type-2 diabetes with 40,000 OPD patients during 2019 and 2020. The information they collected is as shown below. Find out the incidence and prevalence of Type 2 diabetes. (Note- there is no death or reversal of diabetes during 2019-2020).

Year	No. of Patients with Diabetes	Total No. of Patients visited OPD
2019	1780	39640
2020	1826	40000

- (b) Write a procedure for report writing in research methodology.
- 15 (a) Find the Coefficient of Correlation between the variables X and Y using Karl Pearson's method.

X	1	3	4	6	8	9	11	14
Y	1	2	4	4	5	7	8	9

..2.

(b) The following data shows the marks scored by student in tests conducted by university. Express data by using Pie chart.

Test	Test-1	Test-2	Test-3	Test-4	Test-5
Marks	70	85	76	88	92

16 Calculate the standard error mean for following data:

Class Interval	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40
Frequency	2	10	22	25	25	22	10	2

17 A die rolled 100 times showed the following results, find out whether the die is uniform at a level of significance 0.01(χ^2 -2.089)

Number	1	2	3	4	5	6	Total
Observed frequency	17	20	14	15	17	17	100

18 (a) Write a brief note on SPSS.

(b) Give a detailed account of sample size determination.

FACULTY OF PHARMACY

Pharm. D I Year (3-YDC) (Instant) (Post-Baccalaureate) Examination, May 2022

Subject: Biostatistics and Research Methodology**Time: 3 Hours****Max. Marks: 70****PART – A****Note: Answer all the questions.****(10 x 2 = 20 Marks)**

- 1 Explain the term power of study.
- 2 Calculate Mean and Median from the following data.

X	2	4	6	8	10	12	14
---	---	---	---	---	----	----	----

- 3 Write applications of semi-Logarithmic plot.
- 4 What is Type I and Type II error in hypothesis testing?
- 5 Define median and write its importance.
- 6 Define relative risk and attributable risk.
- 7 Define hypothesis. What are different types of hypothesis?
- 8 Define prevalence and incidence.
- 9 Explain in brief about primary data.
- 10 What are scatter plots?

PART – B**Note: Answer any five questions.****(5 x 10 = 50 Marks)**

- 11 Describe the role of computers.
 - (a) In patient record data base management.
 - (b) Inventory control in hospital pharmacy.
- 12 Explain Two Way ANOVA in detail with suitable example.
- 13 Describe in detail the different types of clinical study designs.
- 14 (a) A hospital evaluated the epidemiology of Type-2 diabetes with 40,000 OPD patients during 2019 and 2020. The information they collected is as shown below. Find out the incidence and prevalence of Type 2 diabetes. (Note- there is no death or reversal of diabetes during 2019-2020).

Year	No. of Patients with Diabetes	Total No. of Patients visited OPD
2019	1780	39640
2020	1826	40000

- (b) Write a procedure for report writing in research methodology.
- 15 (a) Find the Coefficient of Correlation between the variables X and Y using Karl Pearson's method.

X	1	3	4	6	8	9	11	14
Y	1	2	4	4	5	7	8	9

..2..

(b) The following data shows the marks scored by student in tests conducted by university. Express data by using Pie chart.

Test	Test-1	Test-2	Test-3	Test-4	Test-5
Marks	70	85	76	88	92

16 Calculate the standard error mean for following data:

Class Interval	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40
Frequency	2	10	22	25	25	22	10	2

17 A die rolled 100 times showed the following results, find out whether the die is uniform at a level of significance 0.01(χ^2 -2.089)

Number	1	2	3	4	5	6	Total
Observed frequency	17	20	14	15	17	17	100

18 (a) Write a brief note on SPSS.

(b) Give a detailed account of sample size determination.

FACULTY OF PHARMACY
Pharm. D IV - Year (6 YDC) (Instant) Examination, May 2022

Subject: Clinical Pharmacy

Time: 3 Hours

Max. Marks: 70

PART - A

Note: Answer all the questions:

(10 x 2 = 20 Marks)

- 1 Define clinical pharmacy.
- 2 What is the significance of Drug therapy monitoring?
- 3 Classify different types of adverse drug reaction.
- 4 Describe term 'Pharmacovigilance'.
- 5 Describe term 'Medication History'.
- 6 Explain verbal and nonverbal communication skills required for patient counseling.
- 7 Write short notes on Drug Information resources.
- 8 Define Medication error.
- 9 Define Patient compliance.
- 10 Define glomerular filtration rate and give its normal value.

PART - B

Note: Answer any five questions:

(5 x 10 = 50 Marks)

- 11 (a) Explain the development and scope of clinical pharmacy.
(b) What is the importance of patient case history in the evaluation of drug Therapy?
- 12 Explain the pharmaceutical care concepts.
- 13 (a) Describe the steps involved in conducting a DUE.
(b) Write a short notes on ward round participation.
- 14 (a) Explain liver function tests.
(b) Explain renal function tests.
- 15 Explain the systematic approach in answering drug information queries.
- 16 Explain different types of medication errors and describe steps taken by a clinical pharmacist to reduce medication errors.
- 17 (a) Write a note on Assessment of causality of ADR's.
(b) What are the functions and objectives of Poison information?
- 18 (a) Explain tests associated with cardiac disorders.
(b) Describe the role of pharmacist in management of ADR.

FACULTY OF PHARMACY

Pharm. D I Year (3 YDC) (Post Baccalaureate) (Instant) Examination, May 2022

Subject: Clinical Pharmacy

Time: 3 Hours

Max. Marks: 70

PART - A

Note: Answer all the questions:

(10 x 2 = 20 Marks)

- 1 Define clinical pharmacy.
- 2 What is the significance of Drug therapy monitoring?
- 3 Classify different types of adverse drug reaction.
- 4 Describe term 'Pharmacovigilance'.
- 5 Describe term 'Medication History'.
- 6 Explain verbal and nonverbal communication skills required for patient counseling.
- 7 Write short notes on Drug Information resources.
- 8 Define Medication error.
- 9 Define Patient compliance.
- 10 Define glomerular filtration rate and give its normal value.

PART - B

Note: Answer any five questions:

(5 x 10 = 50 Marks)

- 11 (a) Explain the development and scope of clinical pharmacy.
(b) What is the importance of patient case history in the evaluation of drug Therapy?
- 12 Explain the pharmaceutical care concepts.
- 13 (a) Describe the steps involved in conducting a DUE.
(b) Write a short notes on ward round participation.
- 14 (a) Explain liver function tests.
(b) Explain renal function tests.
- 15 Explain the systematic approach in answering drug information queries.
- 16 Explain different types of medication errors and describe steps taken by a clinical pharmacist to reduce medication errors.
- 17 (a) Write a note on Assessment of causality of ADR's.
(b) What are the functions and objectives of Poison information?
- 18 (a) Explain tests associated with cardiac disorders.
(b) Describe the role of pharmacist in management of ADR.

FACULTY OF PHARMACY
Pharm. D IV-Year (6 YDC) (Instant) Examination, May 2022

Subject: Clinical Toxicology

Time: 3 Hours

Max. Marks: 70

PART - A

Note: Answer all questions:

(10 x 2 = 20 Marks)

- 1 What is tobacco amblyopia? Write the signs and symptoms of tobacco dependence.
- 2 Define toxicokinetics.
- 3 Write a note on arterial gases.
- 4 What are the signs and symptoms of amphetamine abuse?
- 5 What are caustics and mention any two examples of each?
- 6 Write a note on carbamate poisoning.
- 7 Define antidote and mention at least two examples.
- 8 List out clinical features for paracetamol overdose.
- 9 Write the management of radiation poisoning.
- 10 What are hallucinogens? Mention clinical features of its overdose.

PART - B

Note: Answer any five questions:

(5 x 10 = 50 Marks)

- 11 Explain general principles involved in the management of poisoning.
- 12 (a) Discuss the clinical features and management of acute pesticide poisoning.
(b) Write a note on activated charcoal.
- 13 (a) Describe the management of tricyclic antidepressant poisoning.
(b) Write a note on overdose of NSAIDs.
- 14 (a) Classify poisonous snakes. Discuss the management of viper poisoning.
(b) Give a brief note on mushrooms.
- 15 (a) Describe the management of mercury poisoning.
(b) Discuss the investigations in petroleum toxicity.
- 16 Differentiate the acute and chronic poisoning of:
(a) Hallucinogens
(b) Morphine
- 17 (a) Explain clinical applications of antidotes in detail.
(b) Enumerate the clinical features and complications of fungal food poisoning.
- 18 Give a detailed note on:
(a) cannabis abuse
(b) Tobacco abuse.

FACULTY OF PHARMACY

Pharm. D I-Year (3 YDC) (Post Bacalaureate) (Instant) Examination, May 2022

Subject: Clinical Toxicology

Time: 3 Hours

Max. Marks: 70

PART - A

Note: Answer all questions:

(10 x 2 = 20 Marks)

- 1 What is tobacco amblyopia? Write the signs and symptoms of tobacco dependence.
- 2 Define toxicokinetics.
- 3 Write a note on arterial gases.
- 4 What are the signs and symptoms of amphetamine abuse?
- 5 What are caustics and mention any two examples of each?
- 6 Write a note on carbamate poisoning.
- 7 Define antidote and mention at least two examples.
- 8 List out clinical features for paracetamol overdose.
- 9 Write the management of radiation poisoning.
- 10 What are hallucinogens? Mention clinical features of its overdose.

PART - B

Note: Answer any five questions:

(5 x 10 = 50 Marks)

- 11 Explain general principles involved in the management of poisoning.
- 12 (a) Discuss the clinical features and management of acute pesticide poisoning.
(b) Write a note on activated charcoal.
- 13 (a) Describe the management of tricyclic antidepressant poisoning.
(b) Write a note on overdose of NSAIDs.
- 14 (a) Classify poisonous snakes. Discuss the management of viper poisoning.
(b) Give a brief note on mushrooms.
- 15 (a) Describe the management of mercury poisoning.
(b) Discuss the investigations in petroleum toxicity.
- 16 Differentiate the acute and chronic poisoning of:
(a) Hallucinogens
(b) Morphine
- 17 (a) Explain clinical applications of antidotes in detail.
(b) Enumerate the clinical features and complications of fungal food poisoning.
- 18 Give a detailed note on:
(a) Cannabis abuse
(b) Tobacco abuse.

FACULTY OF PHARMACY
Pharm. D IV-Year (6 YDC) (Instant) Examination, May 2022

Subject: Hospital Pharmacy

Time: 3 Hours

Max. Marks: 70

PART - A

Note: Answer all the questions:

(10 x 2 = 20 Marks)

- 1 Write a note on organization of a hospital.
- 2 Write about Hospital formulary.
- 3 What is the importance of Hospital pharmacy newsletters?
- 4 Write short notes on ABC Analysis.
- 5 Write about Unit dose drug distribution method.
- 6 Write short notes on manufacturing creams.
- 7 Define Budget.
- 8 Define Hospital Pharmacy.
- 9 Write short notes on pharmacy therapeutic committee.
- 10 Explain major functions of Hospital.

PART - B

Note: Answer any five questions:

(5 x 10 = 50 Marks)

- 11 Explain the professional relation of Hospital pharmacist with other professionals.
- 12 Write about the significance of continuing professional development programs in Hospital.
- 13 Define PTC and give its composition and detailed account on its role in Hospital pharmacy.
- 14 Write a note on preparation of budget of a hospital pharmacy.
- 15 (a) Write about organization of Hospital pharmacy unit in a hospital.
(b) Explain role and responsibilities of Hospital pharmacist.
- 16 (a) Explain manufacture of ointments.
(b) Explain Total parenteral nutrition.
- 17 Explain Handling and packaging of Radio pharmaceuticals.
- 18 (a) Explain the role of pharmacist in central sterile supply services.
(b) Explain the distribution of Narcotics and other controlled substances.

FACULTY OF PHARMACY

Pharm. D I-Year (3 YDC) (Post Baccalaureate) (Instant) Examination, May 2022

Subject: Hospital Pharmacy

Time: 3 Hours

Max. Marks: 70

PART - A

Note: Answer all the questions:

(10 x 2 = 20 Marks)

- 1 Write a note on organization of a hospital.
- 2 Write about Hospital formulary.
- 3 What is the importance of Hospital pharmacy newsletters?
- 4 Write short notes on ABC Analysis.
- 5 Write about Unit dose drug distribution method.
- 6 Write short notes on manufacturing creams.
- 7 Define Budget.
- 8 Define Hospital Pharmacy.
- 9 Write short notes on pharmacy therapeutic committee.
- 10 Explain major functions of Hospital.

PART - B

Note: Answer any five questions:

(5 x 10 = 50 Marks)

- 11 Explain the professional relation of Hospital pharmacist with other professionals.
- 12 Write about the significance of continuing professional development programs in Hospital.
- 13 Define PTC and give its composition and detailed account on its role in Hospital pharmacy.
- 14 Write a note on preparation of budget of a hospital pharmacy.
- 15 (a) Write about organization of Hospital pharmacy unit in a hospital.
(b) Explain role and responsibilities of Hospital pharmacist.
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(b) Explain Total parenteral nutrition.
- 17 Explain Handling and packaging of Radio pharmaceuticals.
- 18 (a) Explain the role of pharmacist in central sterile supply services.
(b) Explain the distribution of Narcotics and other controlled substances.

Code No. 12467

FACULTY OF PHARMACY
Pharm. D IV-Year (6 YDC) (Main & Backlog) Examination, October
2021

Subject: Hospital Pharmacy

Time: 2 Hours

Max. Marks: 70

Note: Answer any six questions from Part-A. Answer any four questions from Part-B.

PART- A (6x5=30 Marks)

- 1 Define Hospital
- 2 Define Hospital pharmacy
- 3 Define Budget
- 4 What is the importance of Hospital pharmacy newsletter?
- 5 What is unit dose drug distribution?
- 6 Explain the role of pharmacist in central sterile supply services.
- 7 Write a brief note on Total parenteral nutrition.
- 8 Write short notes on manufacturing of creams.
- 9 Write about Hospital formulary.
- 10 Explain the major functions of Hospital.

PART- B (4x10=40 Marks)

- 11 Define inventory control and explain various methods of inventory control ABC, VED, EOQ, lead time, safety stock.
- 12 Explain professional relation of Hospital pharmacist with other professionals.
- 13 Explain Budget preparation and implementation.
- 14 Write short notes on Hospital committees.
 - (a) infection committee
 - (b) Research ethical committee
- 15 Explain the significance of continuing professional development programs in a Hospital.
- 16 Explain Handling and packaging of Radiopharmaceuticals.
- 17 Explain manufacture of ointments, liquids, and granules.
- 18 (a) Explain the organization of Hospital pharmacy.
 - (b) Explain roles and responsibilities of Hospital pharmacist.

FACULTY OF PHARMACY

Pharm. D IV Year (6-YDC) (Main & Backlog) Examination, October 2021

Subject: Pharmacotherapeutics – III

Time: 2 Hours

Max. Marks: 70

Note: Answer any six questions from Part A, Answer any four questions from Part B.

PART – A (6 x 5 = 30 Marks)

- 1 Explain about diagnostic criteria for Ischemic stroke
- 2 Discuss in detail about the etiology & prevention of Hepatitis B
- 3 Classify anti psychotic agents with examples
- 4 Discuss in detail about the diagnostic criteria for Epilepsy
- 5 Write a note on use of triptans in migraine
- 6 Write about Zollinger Ellison's syndrome
- 7 Write a brief note on different scales for rating pain
- 8 Write the clinical presentation of viral Hepatitis
- 9 Differentiate tension and cluster headaches
- 10 Write a short note on Venous Thromboembolism

PART – B (4 x 10 = 40 Marks)

- 11 (a) Discuss briefly about the etiopathogenesis of GERD.
(b) Represent pharmacological management of GERD with an algorithm.
- 12 (a) Classify Antipsychotic agents with examples.
(b) Explain in detail about adverse effects of antipsychotic agents used in the management of Schizophrenia.
- 13 Define evidence based medicine & write briefly about the significance of validity and the types of bias in evidence based medicine.
- 14 (a) Explain in detail about etiopathogenesis Alcoholic liver disease.
(b) Write a note on any one drug induced blood disorder.
- 15 (a) Write in detail about the etiopathogenesis & management of Crohn's disease.
(b) Write a brief note on Hepato renal syndrome.
- 16 Write a brief note on Anxiety rating scales & write about the role of Benzodiazepines in Generalized anxiety disorders along with its adverse effects.
- 17 Explain in detail about the etiology, prevention & pharmacological management of Hepatitis B & Write a note on vaccines for Hepatitis B.
- 18 (a) Discuss in detail about the diagnostic parameters of Anemia.
(b) Write a brief note on Haemolytic Anemia.

FACULTY OF PHARMACY
Pharm. D IV-Year (6 YDC) (Main & Backlog) Examination, October
2021

Subject: Clinical Toxicology

Time: 2 Hours

Max. Marks: 70

Note: Answer any six questions from Part-A. Answer any four questions from Part-B.

PART- A (6x5=30 Marks)

- 1 Write a note on arthropod strings.
- 2 List the clinical features in cannabis poisoning.
- 3 Write a note on food poisoning.
- 4 Explain antidote administration in ethanol poisoning.
- 5 What is antidote? Explain.
- 6 Write the symptoms and complications of snake bite.
- 7 What is salicylism? Write the management of salicylate overdose.
- 8 What is elimination enhancement?
- 9 Write a note on management of lead poisoning.
- 10 What are common modes of antidote administration?

PART- B (4x10=40 Marks)

- 11 (a) Discuss in detail about gut decontamination.
(b) Explain the role of toxicokinetics in the management of poisoning.
- 12 Describe the clinical features and management of paracetamol poisoning and add a note on acetyl cysteine.
- 13 Explain in detail about clinical features and management of iron toxicity.
- 14 (a) Discuss radiation poisoning in detail.
(b) How to manage PEG toxicity?
- 15 (a) Enumerate the clinical features of mycotoxin poisoning.
(b) Write the management barbiturates.
- 16 (a) Discuss the clinical features of opioid abuse.
(b) Write a note on alkali poisoning.
- 17 (a) Classify poisonous mushrooms. Write in detail about mushroom poisoning.
(b) Give a note on supportive care.
- 18 (a) Enumerate the clinical features of HCl toxicity and discuss its management.
(b) Write a note on clinical features of hallucinogens.

FACULTY OF PHARMACY
Pharm.D IV Year (6-YDC) (Main & Backlog) Examination, October 2021

Subject: Biopharmaceutics and Pharmacokinetics

Time: 2 Hours

Max. Marks: 70

PART – A

Note: Answer any six questions.

(6 x 5 = 30 Marks)

- 1 Explain about apparent volume of distribution and its significance.
- 2 Explain about the significance of protein binding of drugs.
- 3 Write a note on Phase I reactions.
- 4 Explain about BCS (Biopharmaceutical Classification System).
- 5 Write a note on mammillary model.
- 6 Define bioavailability. Write a note on absolute bioavailability and relative bioavailability.
- 7 Explain about transfer constants and hybrid first order constants in two compartment open model IV Bolus administration.
- 8 Write a note on dose ratio and principle of superposition.
- 9 Explain about Latin square design in bioequivalent study.
- 10 Write a note on mean residence time (MRT) for one compartment model.

PART – B

Note: Answer any four questions.

(4 x 10 = 40 Marks)

- 11 Define drug absorption. Explain the various factors influencing GI absorption of a drug.
- 12 Define the term biotransformation. Explain Phase II reactions with suitable examples.
- 13 Define Pharmacokinetics. Explain in detail about various methods/models used for analysis of pharmacokinetic data.
- 14 How do you obtain different pharmacokinetic parameters following intravenous bolus administration of a drug that confers one compartment open model characteristics?
- 15 Explain in detail about multiple dosage regimen kinetics.
- 16 Explain in detail about bioequivalence study protocol.
- 17 Define Nonlinear Pharmacokinetics. Explain Michaelis Menten equation with respect to the estimation of K_m and V_{max} .
- 18 A drug was administered by rapid IV injection to a 70 kg male adult. Blood samples were withdrawn over a period of 7 hours and the following blood data was obtained. Assume that the drug follows two compartment open model.
Calculate A , α (alpha), β (beta), K_E , K_{12} and K_{21} .

Time (Hrs.)	0	0.25	0.5	0.75	1	1.5	2	2.5	3	4	5	6	7
Concentration (mg/L)	70	53.8	43.3	35	29.1	21.2	17	14.3	12.6	10.5	9	8	7

FACULTY OF PHARMACY
Pharm.D IV Year (6-YDC) (Main & Backlog) Examination, October 2021

Subject: Biostatistics and Research Methodology

Time: 2 Hours

Max. Marks: 70

PART – A

Note: Answer any six questions.

(6 x 5 = 30 Marks)

- 1 Explain point prevalence and period prevalence.
- 2 Explain secondary data with example.
- 3 Define Two Tailed test.
- 4 Define and explain the significance of confidence interval.
- 5 Explain scatter plot.
- 6 Explain Null Hypothesis.
- 7 Define Level of Significance and power of study.
- 8 Enumerate the advantages of graphical representation of data.
- 9 Define median with suitable example.
- 10 Find mean and mode of following data;

X	17	13	15	17	18	10	17	14
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PART – B

Note: Answer any four questions.

(4 x 10 = 40 Marks)

- 11 Explain One Way ANOVA with suitable example.
- 12 (a) Explain the steps involved in construction of box plot.
(b) Write a short note on histogram construction.
- 13 Write a note on:
 - (a) Computer application in hospital pharmacy.
 - (b) Computer application for pharmaceutical care in community pharmacy.
- 14 (a) Write a detail note on SAS software.
(b) Find the mean, standard deviation, variance, coefficient of variation and range of following data obtained from clinical study conducted in hospital for post meal blood sugar in diabetes patients.

165	90	135	125	105	135	165	155	115	110
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- 15 (a) Write a detail note on drug information storage and retrieval.
(b) The table given below shows the data obtained during outbreak of smallpox:

	Attacked	Not attacked	Total
Vaccinated	31	469	500
Not vaccinated	185	1315	1500
Total	216	1784	2000

Test the effectiveness of vaccination in preventing outbreak. Test your results with the help of χ^2 at 5% level of significance (Table value of χ^2 at level of significance 5% is 3.841)

..2.

- 16 (a) Explain Research and Research Methodology.
(b) Distribution of patients according to blood group is given below, express data by using Pie chart.

Blood group	Number of patients
A	43
B	37
AB	14
O	6

17 Explain in detail about Paired and Unpaired t test with suitable example.

18 Write a detail essay on clinical study designs.

FACULTY OF PHARMACY
Pharm.D IV-Year (6 YDC) (Main & Backlog) Examination, October 2021

Subject: Clinical Pharmacy

Time: 2 Hours

Max. Marks: 70

Note: Answer any six questions from Part-A. Answer any four questions from Part-B.

PART- A (6x5=30 Marks)

- 1 Write a note on scope of clinical pharmacy.
- 2 What are the Drug information resources required by a poison information center?
- 3 Define pharmacovigilance.
- 4 Define Medication error.
- 5 Define Patient compliance.
- 6 Define Glomerular filtration rate and give its normal value.
- 7 Write short notes on fluid and electrolyte balance.
- 8 Write short notes on Drug information Resources.
- 9 What are the predisposing factors responsible for causing adverse drug reaction?
- 10 Explain verbal and non verbal skills required for patient counseling.

PART- B (4x10=40 Marks)

- 11 Write short notes on:
 - (a) Use of the critical evaluation of biomedical literature.
 - (b) Patient counseling techniques.
- 12 Explain the pharmaceutical care concepts.
- 13 Discuss in detail various hematological tests and their significance in patient care.
- 14 Discuss in brief
 - (a) Barriers to patient counseling
 - (b) Types of medication errors and their prevention
- 15 Discuss in detail regarding the preparation of written and verbal reports for providing drug information.
- 16 Write a short notes on:
 - (a) Components of medication History
 - (b) Drug utilization evaluation
- 17
 - (a) Write a note on Assessment of causality of ADR's.
 - (b) What are the functions and objectives of poison information centre?
- 18
 - (a) Define clinical pharmacy and explain development and scope of clinical pharmacy.
 - (b) What is the importance of patient case history in the evaluation of Drug therapy?

FACULTY OF PHARMACY

Pharm. D. (6 YDC) IV – Year (Instant) Examination, July

Subject: Hospital Pharmacy

Time: 2 hours

Max. Marks: 70

Note: Answer any six questions from Part-A and any four questions from Part-B.

Part – A (6 x 5 = 30 Marks)

1. Define Hospital formulary system and write significance of Hospital formulary system.
2. Explain the terms (a) Emergency outpatient (b) Ambulatory patient.
3. Give a note on nuclear pharmacy.
4. Define powders. Explain any two types of powders.
5. Write the composition of Research and Ethics committee.
6. Define and classify hospital.
7. Define and discuss the functions of Drug Information Center.
8. Define Inventory control and write a note on lead time.
9. Define floor stock dispensing.
10. Explain the professional skills required for hospital pharmacist.

Part – B (4 x 10 = 40 Marks)

11. Write in detail the steps involved in procurement and ware housing of drugs in Hospital Pharmacy.
12. Define Radiopharmaceuticals. Explain the role of Pharmacist in handling and packaging of Radiopharmaceuticals.
13. Write about (a) Manufacturing of tablets.
(b) Various methods of sterilization.
14. (a) Discuss the developing therapeutic guidelines in Hospital Pharmacy.
(b) Explain the newsletter in Hospital Pharmacy communication.
15. Define Hospital pharmacy. Explain the layout of Hospital Pharmacy.
16. (a) Define PTC. What are the objectives of pharmacy and therapeutic committee?
(b) Explain the role of pharmacist in PTC.
17. Write a note on drug distribution in (a) Individual prescription method.
(b) Unit Dose.
18. (a) Write a note on VED analysis, EOQ and stock.
(b) Explain the role of Pharmacist ion central sterile supply service.

FACULTY OF PHARMACY

Pharm. D. (6 YDC) IV – Year (Instant) Examination, July

Subject: Pharmacotherapeutics - III

Time: 2 hours

Max. Marks: 70

Note: Answer any six questions from Part-A and any four questions from Part-B.

Part – A (6 x 5 = 30 Marks)

1. Define Zollinger Ellison syndrome.
2. Classify different types of pain with examples.
3. Write about the different hepatitis viruses with their mode of transmission.
4. What are the causes of venous thromboembolism?
5. Write about Clinical presentation of a patient with migraine headache.
6. What are different types of sleep disorders and its causes?
7. Write about the different scales for rating depression.
8. Write about H.pylori induced Peptic ulcer.
9. Classify Anemia's based on morphology of RBC's.
10. Write the international classification of Epileptic Seizures.

Part – B (4 x 10 = 40 Marks)

11. (a) Write about the etiology and risk factors for Peptic ulcer disease.
(b) Write about the pharmacotherapy to eradicate Helicobacter pylori.
12. List out the lifestyle modifications to manage GERD. Explain acid suppression therapy in management of GERD.
13. (a) Write a detail note on the steps to incorporate evidence based medicine in pharmacotherapeutic decision making.
(b) Write briefly the significance of validity and the types of bias in evidenced based medicine.
14. (a) Write the clinical presentation of Parkinsonism.
(b) Write the staging of Parkinson's according to Hoehn and Yahr scale.
15. (a) Explain in detail about heparin induced thrombocytopenia and its management.
(b) Write about the uses and adverse effects of benzodiazepines in generalized anxiety disorder.
16. Explain in detail about pharmacologic strategies used for primary and secondary stroke prevention.
17. (a) Write briefly on any two drug induced blood disorders.
(b) Write a brief note on Hemolytic Anemia.
18. (a) Represent an algorithm for the treatment of schizophrenia.
(b) Explain the Adverse effects of antipsychotics used in management of Schizophrenia.

FACULTY OF PHARMACY

Pharm. D. (6 YDC) IV – Year (Instant) Examination, July

Subject: Clinical Toxicology

Time: 2 hours

Max. Marks: 70

Note: Answer any six questions from Part-A and any four questions from Part-B.

Part – A (6 x 5 = 30 Marks)

1. Mention the clinical features of methanol poisoning.
2. Write a note on antidote in the management of iron poisoning.
3. Discuss the envenomation of arthropod poisoning.
4. Explain the role of decontamination in the general management of poisoning.
5. Define the terms drug abuse and drug dependence.
6. Write the clinical features of organochlorines.
7. Discuss the Antidote for ethanol poisoning.
8. List out different poisonous snakes.
9. Define toxicokinetics.
10. Explain the management of CNS depressants.

Part – B (4 x 10 = 40 Marks)

11. Discuss the gut decontamination in general management of poisoning.
12. Discuss in detail about venomous snake poisoning.
13. Write a note on (a) supportive care in poisoning (b) Mycotoxin poisoning.
14. Enumerate the signs and symptoms and management of Petroleum products and PEG poisoning.
15. Describe the clinical features and management of lead and mercury poisoning.
16. Write in detail about the management of LSD and tobacco abuse.
17. Discuss the evaluation and management of inorganic acid poisoning.
18. Explain the treatment for opioid poisoning.

FACULTY OF PHARMACY

Pharm. D. (6 YDC) IV – Year (Instant) Examination, July

Subject: Biopharmaceutics & Pharmacokinetics

Time: 2 hours

Max. Marks: 70

Note: Answer any six questions from Part-A and any four questions from Part-B.**Part – A (6 x 5 = 30 Marks)**

1. Explain about Pore transport in absorption of drugs.
2. What is first pass metabolism?
3. Explain about washout period.
4. Explain perfusion rate limited drug distribution.
5. What is the importance of method of residuals?
6. Define the terms Bioavailability and Bioequivalence.
7. Discuss the terms Pharmacokinetics and Pharmacodynamics.
8. How is body tissues classified in a two compartment model?
9. Discuss the causes of non-linearity with examples.
10. Explain about Mean residence time.

Part – B (4 x 10 = 40 Marks)

11. Define absorption. What are the various Physico Chemical factors affecting rate of absorption.
12. Explain Phase I pathways of biotransformation.
13. What are Pharmaco Kinetic models? What is the importance and utility of developing such models? Explain briefly the types of Pharmacokinetic models.
14. Derive the equations for one compartment open model intravenous infusion. Explain in detail how can the steady state drug concentration be achieved more quickly.
15. What is non linear Pharmacokinetics? Explain the Michaelis-Menten method in estimating the parameters.
16. Describe the protocol and procedure for bioavailability studies.
17. Explain about multiple dosage regimen in repetitive intravenous injection.
18. A 50 kg woman was given a single IV dose of an antibacterial drug at a dose level of 6 mg/kg. Blood samples were taken at various time intervals. The concentration of the drug was determined in the Plasma fraction of each blood sample and the following data was obtained. Assume that it follows one compartment open model. Calculate all possible pharmacokinetic parameters.

Time(h)	0.25	0.5	1.0	3.0	6.0	12	18
Plasma collected (Mg/MI)	8.21	7.87	7.23	5.15	3.09	1.11	0.4

FACULTY OF PHARMACY**Pharm. D. (6 YDC) IV – Year (Instant) Examination, July****2021 Subject: Biostatistics & Research Methodology****Time: 2 hours****Max. Marks: 70****Note: Answer any six questions from Part-A and any four questions from Part-B.****Part – A (6 x 5 = 30 Marks)**

1. Define correlation and write the properties of coefficient of correlation.
2. List the important distributions and elaborate on the normal distribution.
3. Write the properties of Mean and Median. Give the equations to compute SEM, CV, SD and Variance.
4. Write the advantages and disadvantages of Non parametric tests.
5. Write a note on Case Studies.
6. Define Relative Risk and Attributable Risk.
7. Write various sources of Drug Information.
8. Define the terms: Significance level and Confidence level.
9. Explain one tailed and two tailed tests.
10. What are Scatter Plots? What information will you get from them?

Part – B (4 x 10 = 40 Marks)

11. (a) Explain in One-way ANOVA.
- (b) Construct Pie chart from the following data obtained in Sieve analysis of Nifedipine powder sample.

Mesh size(mm)	425	180	150	90	75	<75
% retained	50.1	27.2	10.4	6.0	5.1	1.2

12. (a) Describe the construction of Histogram and Semilog Plots.
- (b) Find out Pearson's coefficient from the following data:

Height(M)	1.88	1.80	1.85	1.77	1.73	1.83
Weight(Kg)	96	77.7	100.9	79.0	73.0	84.5

13. (a) Explain the features and uses of EPI-INFO.

- (b) Using Linear Regression model find out slope and y-Intercept from the data given

Concentration (%)	1	2	4	8
Optical Density	0.24	0.66	1.15	2.34

14. (a) The following data shows the number of children qualified in an entrance exam before and after taking coaching.

Before Coaching	85	70	40	65	80	75	55	20
After Coaching	75	50	50	40	20	65	40	25

Using Sign test at 5% significance level, find out whether there is significant difference between the values. (Given Critical Value:1).

- (b) Write a note on cohort studies.
15. (a) Write about computerization of Hospital Pharmacy.
 (b) Define: Point estimation and Interval estimation.
16. (a) Write the steps in Hypothesis Testing.
 (b) Describe Research Report Writing.
17. (a) A Physician claims that Jogger's Maximal Volume Oxygen uptake is greater than the average of all adults. A sample of 15 Joggers has a Mean of 40.6 ml/kg and A.S.D of 6 ml/kg. If the average of all adult is 36.7 ml/kg. Is there enough evidence to support the physician's claim at 5% significance level (Given critical value: 2.624).
 (b) Write the procedure to calculate Spearman's Rank Correlation coefficient.
18. (a) Explain the Hypothesis testing using Chi-Square test.
 (b) Explain the terms: Predictor, Response Variable, IQR, Midhinge.

FACULTY OF PHARMACY

Pharm. D. (6 YDC) IV – Year (Instant) Examination, July

2021 Subject: Clinical Pharmacy

Time: 2 hours

Max. Marks: 70

Note: Answer any six questions from Part-A and any four questions from Part-B.

Part – A (6 x 5 = 30 Marks)

1. Write about scope of Clinical Pharmacy.
2. Write about Medication chart review.
3. Write about the Quality assurance of clinical Pharmacy services.
4. Write about test associated with Cardiac disorders.
5. Write about microbial culture sensitivity test and its importance.
6. Write a note on patient data analysis.
7. Define drug information and classify drug information resources available with examples.
8. Define Pharmacovigilance.
9. Define Pharmaceutical care.
10. Write a note on the information to be documented during Medication History interview.

Part – B (4 x 10 = 40 Marks)

11. (a) Explain Liver function tests.
(b) Explain renal function tests.
12. Explain the systematic approach in answering Drug information queries.
13. Explain critical evaluation of biomedical literature.
14. Define Medication error and explain the type of Medication errors.
15. (a) Explain process of pharmaceutical care.
(b) Explain communication skills required for conducting patient counseling.
16. Explain Drug Utilization Evaluation (DUE) and review (DUR).
17. (a) Explain scope and development of clinical pharmacy.
(b) Write short notes on Ward round participation.
18. Explain Reporting, Evaluation, Prevention, Monitoring and Management of Adverse Drug Reaction.
