



UNIVERSITY OF THE PUNJAB

Fourth Prof. A/2015

Examination: Doctor of Pharmacy (Pharm.D.)

Roll No.

Subject: Pharmaceutics-V (Clinical Pharmacy-I)

PAPER: 2

TIME ALLOWED: 3 hrs.

MAX. MARKS: 100

NOTE: Attempt any FIVE questions. All questions carry equal marks.

Q. # 1: (a) De-abbreviate the followings (10)

- | | | | | |
|-----------|------------|------------|----------|----------|
| (i) ABVD | (ii) ANC | (iii) BHS | (iv) CLD | (v) GTT |
| (vi) MDRD | (vii) ISDN | (viii) MIC | (ix) US | (x) SOAP |

(b) Define the following terms (10)

- | | | | |
|--------------------------|-----------------------|-----------------------|-------------------------|
| (i) Anoxemia | (ii) Dyschezia | (iii) Eclampsia | (iv) Ileus |
| (v) Osteomalacia | (vi) Sjogren syndrome | (vii) Gaucher Disease | (viii) Thrombocytopenia |
| (ix) Xenotransplantation | (x) Pseudophakia | | |

Q. # 2: (a) Briefly explain the followings (10)

- | | | |
|----------------------------|---------------------|-------------------------|
| (i) Randomization | (ii) Blinding | (iii) Quantitative data |
| (iv) Influencing variables | (v) Null hypothesis | |

(b) Write a detailed note on types and design of clinical studies, experimental and observational. (10)

Q. # 3: (a) Write a note on the importance and design of a clinical trial. (10)

(b) Discuss ethical consideration that justifies clinical research (5)

(c) Discuss the risk factors that precipitate drug-drug interactions and how these can be reduced. (5)

Q. # 4: (a) A customer came to your pharmacy and asked for 10 Tab Crestor™ (Rosuvastatin). Provide pharmaceutical care plan by using "SOAP". (7)

(b) What are the therapeutic uses & dosage schedule of drug sitagliptin? (7)

(c) What are the therapeutic uses & dosage schedule of drug of bevacizumab? (6)

Q. # 5: (a) Enlist the examples of Adverse Drug Reactions in Geriatrics due to polypharmacy (7)

(b) Explore the mechanism of drug induced torsades de pointes arrhythmia and write the name of drugs that have been withdrawn from market. (7)

(c) Briefly, explain type A and B ADRs with examples. (6)

Q. # 6. Write a note on disease caused by the followings

(i) Acetaminophen (8)

(ii) Amiodarone (6)

(iii) Nicotinic Acid (6)

Q. # 7: Explain Hypotension under following headings. (20)

(i) Selected drugs and toxin causing hypotension

(ii) Physiological de-arrangements resulting in hypotension

(iii) Complications

(iv) Differential diagnosis (v) Treatment



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PAPER: 2

TIME ALLOWED: 3 hrs.
MAX. MARKS: 100

NOTE: Attempt any FIVE questions. All questions carry equal marks.

Q.1 : (a) Write a detailed note on pharmacokinetics mechanisms of drug-drug interactions (12)
(b) Discuss the importance of study population issues, outcome and influencing variables selection in designing clinical trials (8)

Q.2 : (a) Explain primary drug literature with examples. Write a note on its advantages and disadvantages. (8)
(b) What are the normal ranges of vital physiological parameters that should be monitored for a patient presented in an emergency department (ED)? (8)
(c) Write a note on TYPES of clinical trials (4)

Q3: (a) An unconscious patient is admitted to ED with MAP 50 mmHg, pulse 35/min, PCWP 2 mm Hg and lactic acid 7 mmol/L. Write down diagnose and treatment protocol for this patient. (12)
(b) Enlist four ADRs in pediatrics due to altered metabolism. (4)
(c) Classify ADRs based on pregnancy category (4)

Q4: (a) Write a detailed note on the use of computers in retail pharmacies. (10)
(b) Write a note on drug-induced diarrhea. (10)

Q5: (a) Describe the responsibilities of a clinical pharmacist regarding clinical pharmacokinetics. (10)
(b) What are the precautions, contraindication and administration guidelines for Morphine? (10)

Q6: (a) What is blinding in clinical trials? Explain (7)
(b) Differentiate between hemorrhagic and ischemic stroke and discuss its treatment protocol. (7)
(c) Highlight any five ADRs in geriatrics. (6)

Q 7: (a) Describe the hepatitis induced by following medications (10)
(i) Acetaminophen
(ii) Isoniazid
(iii) Phenytoin
(b) Define chronic kidney disease and describe its stages (3)
(c) Write a detailed note on analgesics-induced chronic kidney disease (7)



UNIVERSITY OF THE PUNJAB

Fourth Prof. 2nd A/2016

Examination: Doctor of Pharmacy (Pharm.D.)

Roll No.

Subject: Pharmaceutics-V (Clinical Pharmacy-I)

PAPER: 2

TIME ALLOWED: 3 hrs.

MAX. MARKS: 100

NOTE: Attempt any FIVE questions. All questions carry equal marks.

- Q. 1:** (a) Explain pharmacodynamics drug-drug interactions with suitable examples. (8)
(b) Compare and discuss the significance and procedural differences of different phases of clinical trials (7)
(c) Role of pharmacist in the management of drug interactions (5)
- Q. 2:** (a) Write a note on Extended Rawlins-Thompson classification of ADRs. (5)
(b) How can the following drugs induce ADRs in patients with cardiovascular diseases? (10)
(i) Celecoxib (ii) Atenolol (iii) Tranexamic acid
(iv) Diclofenac (v) Immediate-release Nifedipine
(c) Enlist the name of drugs that have been withdrawn from market due to *torsades de pointes* arrhythmia. (5).
- Q. 3:** (a): Write a detailed note on the use of computers in hospital pharmacies. (10)
(b) Differentiate between primary, secondary and tertiary literature with examples. (10)
- Q. 4:** (a) Briefly describe the responsibilities of a clinical pharmacist in hospital. (10)
(b) What are the therapeutic uses and withdrawal effects of diazepam? (10)
- Q. 5:** (a) Write a note on drug-drug interactions at drug distribution and transport level. Justify with examples. (8)
(b) An IDDM patient is admitted to the ED with the symptoms of nausea, vomiting, SOB, pulse 116/min, B.P 92/70 mmHg, BSR 545 mg/dl, R.R 30 breaths/min and labored with fruity odor. Write down diagnose and treatment protocol for this patient. (12)
- Q. 6:**(a) Define acute kidney injury and describe its stages (3)
(b) Write a detailed note on angiotensin converting enzyme inhibitors/angiotensin receptor blockers-induced acute kidney failure. (7)
(c) Write the contents and process of taking patient's medical history. (6)
(d) What is research literature review? Write all the steps involved in literature search. (4)
- Q. 7:** (a) Write a note on patient-related factors affecting ADRs with examples. (8)
(b) What are the predisposing factors of *torsades de pointes* arrhythmia and how can we treat this condition? (8)
(c) What is ABCD in emergency treatment? Briefly explain (4)



UNIVERSITY OF THE PUNJAB

Fourth Prof: A/2017

Examination: Doctor of Pharmacy (Pharm.D.)

Roll No.

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PAPER: 2

TIME ALLOWED: 3 hrs.

MAX. MARKS: 100

NOTE: Attempt any FIVE questions. All questions carry equal marks.

Q.N0#1: Write a note on Drug-drug interactions at pharmacodynamics levels with at least three example, and how these interactions can be harmful and beneficial in a clinical setting.(10marks)

(b) Drug-drug interactions at elimination level.(5marks)

(c) Generate a flow diagram of various study designs in clinical research.(5marks)

Q.N0#2:(a) What is a drug information? Write the resources utilized for drug information retrieval.(10marks)

(b) Describe three clinical differences among different types of Statins.(6marks)

(c) How can quinolones induce cardiovascular disease.(4marks)

Q.N0#3:(a)Classify Drug-drug interactions, Also describe, with examples, Drug-drug interactions at Absorption, and Distribution levels(15marks).

(b) Briefly, explain the major differences in procedures,from recruitment, design, sub-types and dosing, between Phase II and Phase III clinical Trails.(5marks)

Q.N0#4:(a) What is Beers criteria? Give any five examples for potentially inappropriate Medication use in older Adults.(8marks)

(b) Write the names of predisposing factors of ADRs?(4marks)

(c) Give one example for each type of ADRs?(4marks)

(d) Differentiate between hemorrhagic and ischemic stroke?(4marks)

Q.N0#5(a) What is paradoxical effect of Benzodiazepines?(6marks)

(b) Write a note on withdrawal syndrome of Benzodiazepines. Also give withdrawal protocol?(7marks)

(c) Discuss Risk based categorization of Antiepileptics? (7marks)

Q.N0#6(a) What are the predictors of Drug induced acute kidney injury?(5marks)

(b) Classify chronic kidney disease as per the kidney disease improving global outcomes guidelines? (5marks)

(c) Write a detail Note on cisplatin induced Nephropathy?(10marks)

Q.N0#7:(a)An unconscious patient is admitted in ED with high grade fever, leukocytosis, MAP 50mmHg,pulse 35/min, PCWP 2mm Hg and lactic acid 7 mmol/L. Write down diagnose and treatment protocol for this patient.(12marks)

(b) Write down any 4 ADRs in pediatrics due to altered metabolism.(4marks)

(c) Enlist the name of Drugs which can cause *torsades de pointes arrhythmia*.(4marks)s



UNIVERSITY OF THE PUNJAB

Fourth Prof: 2nd Annual - 2017
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PAPER: 2

TIME ALLOWED: 3 hrs.
MAX. MARKS: 100

NOTE: Attempt any FIVE questions. All questions carry equal marks.

Q.NO.1: (a) Write a detailed note on the merits and demerits of the research study question, and how to turn a research question into a proposal taking into account the bias, confounding, ethics, planning and selection of variables. (15 marks)

(b) Briefly, describe how pharmacist can manage drug-drug interaction in clinical settings. (5marks)

Q.#NO.2: (a) Discuss second Generation Cephalosporins. (5 marks)

(b) Discuss warnings and precautions of Adrenaline use. (7 marks)

(c) What is CORE and PRIME? (8 marks)

Q.#NO.3: (a) Write about the utilization of computer in hospital and clinical pharmacy. (10 mark)

(b) Describe three clinical differences among different types of corticosteroids. (6 marks)

(c) How can vasodilator drugs induce cardiovascular diseases? Give examples of two drugs (4marks)

Q.#NO.4: (a) Classify ADRs in older adults according to Bear's criteria. Give one example under each. (8 marks)

(b) Classify the drugs according to the severity of ADRs in pregnancy and give few examples (6marks)

(c) What are the predisposing factors of torsades de pointes arrhythmia. (6marks)

Q.#NO.5: (a) What are major difference between induction and inhibition due to drug-drug interaction at metabolism level, and describe in detail enzyme induction process with at least three examples. (10 marks)

(b) Explain with examples the difference between synergism, potentiation and additive effects due to drug-drug interactions. (7 marks)

(C) Name three inhibitors of CYP-enzymes (3 marks)

Q.#NO.6 (a) A patient is presented in ED with left side paralysis, cognitive deficit, headache,

B.P 165/95 and alter level of consciousness. CT scan shows hypo intense dark area. Write down diagnose and treatment protocol for this patient. (12 marks)

(b) Write down different ADRs in pediatrics due to altered metabolism. (8 marks)

Q.#NO.7 (a) Write a note on the predictors of drug induced hepatitis. (10 marks)

(b) Write a note on phenytoin induced hepatotoxicity. (10 marks)



UNIVERSITY OF THE PUNJAB

Fourth Prof: Annual – 2018

Examination: Doctor of Pharmacy (Pharm.D.)

Roll No.

Subject: Pharmacy Practice-V (Clinical Pharmacy-I) (New Course)

TIME ALLOWED: 2 Hrs. & 30 min.

PAPER: 2 (Part – II)

MAX. MARKS: 80

Attempt this Paper on Separate Answer Sheet provided.

Attempt any 4 questions. Each question carry equal marks.

- Q. No 2 (a): Define adverse drug reactions according to WHO. (5)
- Q. No 2 (b): Explain the classification of ADRs on DoTS-system. (5)
- Q. No 2 (c): What are different types of adverse drug reactions? (10)
- Q. No 3 (a): Write a note on Pharmacodynamic Drug-drug interactions with at least three examples, and how these interactions can be harmful and beneficial in clinical settings. (10)
- Q. No 3 (b): Give three examples of drug-drug interaction due to enzyme inhibition on drug metabolism level. (5)
- Q. No 3 (c): What is the significance of Randomization, Blinding and Sample size in clinical study design? (5)
- Q. No 4 (a): Define Asthma and discuss about the types. (4)
- Q. No 4 (b): Write about the investigation / diagnosis of Asthma. (6)
- Q. No 4 (c): Summarize stepwise management of Asthma in adults. (10)
- Q. No 5 (a): Classify acute kidney injury as per AKIN (Acute Kidney Injury Network) criterion. (5)
- Q. No 5 (b): Write a detailed note on non-steroidal anti-inflammatory drugs (NSAIDs) induced acute kidney injury. (15)
- Q. No 6 (a): What are different types of clinical trials? Describe different phases of clinical trials with key differences. (10)
- Q. No 6 (b): Give three examples of drug-drug interactions at drug distribution levels and how these can be overcome. (7)
- Q. No 6 (c): What are different reporting statements for clinical studies? (3)
- Q. No. 7 Write notes on any **TWO** of the following:
- a) What are different types of IHD? Briefly describe treatment options for angina. (10)
- b) Discuss online pharmaceutical care services and globalization. (10)
- c) Drug information sources and utilization of clinical drug literature. (10)



UNIVERSITY OF THE PUNJAB

Roll No.

Fourth Prof: Annual – 2018

Examination: Doctor of Pharmacy (Pharm.D.)

Subject: Pharmacy Practice-V (Clinical Pharmacy-I) (New Course)
PAPER: 2 Part – I (Compulsory)

TIME ALLOWED: 30 min.
MAX. MARKS: 20

Attempt this Paper on this Question Sheet only.

Please encircle the correct statement. Each MCQ carries 1 Mark. This Paper will be collected back after expiry of time limit mentioned above.

Q. No 1: Select the appropriate answer

Marks: 20

| | |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <i>The area within the pharmacy practice dealing with patient care with particular emphasis on drug therapy and ensuring safe and effective use of drugs is known as:</i> i. Pharmaceutical care ii. Community pharmacy iii. Clinical pharmacy iv. Rational drug use |
| 2 | <i>The co-operative patient centered system for achieving specific and positive patient outcomes from the responsible provision of medicines is known as:</i> i. Patient-care ii. Pharmaceutical care iii. Drug therapy iv. Therapy management |
| 3 | <i>Following is one of the examples of Type-B adverse drug reactions:</i> i. Gastric dysfunction ii. Hypersensitivity iii. Bleeding disorder iv. Nausea |
| 4 | <i>Polymorphisms coding for drug transporters, drug-metabolizing enzymes and drug receptors are categorized as factors for ADR susceptibility as:</i> i. Pharmacodynamic ii. Pharmacokinetic iii. Pharmacological iv. Pharmacogenetic |
| 5 | <i>A scheme used for the reporting of adverse drug reactions is known as:</i> i. Spontaneous reporting scheme ii. ADR reporting scheme iii. Pharmacovigilance iv. ADR response form |
| 6 | <i>The failure of the heart to pump sufficient blood to meet the metabolic needs of body is termed as:</i> i. Ischemic heart disease ii. Hypertension iii. Heart failure iv. Myocardial infarction |
| 7 | <i>In clinical trials, the strongest evidence of clinical efficacy is provided by:</i> i. Randomized cross-over clinical trials ii. Randomized controlled laboratory study iii. Randomized controlled trials iv. Non-randomized controlled clinical trials |
| 8 | <i>The test drug is considered clinically effective and compared with commonly used treatment:</i> i. In Phase II trial ii. In Phase III trial iii. In phase IV trial iv. Both II and III trials |
| 9 | <i>During drug-drug interactions, the drug whose action is modified is called:</i> i. Object drug ii. Precipitating drug iii. Modified drug iv. Inducers |

(P.T.O.)

| | |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | <i>In patient with MI, the plasma level of which enzyme is raised?</i> i. CK-MM ii. CK-BB iii. CK-MB iv. All of above |
| 11 | <i>Non selective beta-blockers can adversely affect the patient with:</i> i. Diabetes ii. Asthma iii. COPD iv. All of above |
| 12 | <i>Verapamil and beta-blocker administered concomitantly results in:</i> i. Tachycardia ii. Bradycardia iii. Hyperkalemia iv. Hypokalemia |
| 13 | <i>Which one of the following is emergency condition of IDDM?</i> i. MI ii. DKA iii. STEMI iv. NSTEMI |
| 14 | <i>The source of drug information that is acquired from journals is:</i> i. Primary source ii. secondary source iii. Tertiary source iv. Abstracts |
| 15 | <i>Text books can be source of drug information and are considered as:</i> i. Primary source ii. Secondary source iii. Tertiary source iv. All above |
| 16 | <i>Which one of these is selective COX-2 inhibitor?</i> i. Aspirin ii. Ibuprofen iii. Naproxen iv. Celecoxib |
| 17 | <i>A patient with lower abdominal pain, no weight loss and normal colonoscopy, is most likely suffering from?</i> i. Colonic carcinoma ii. Ulcerative colitis iii. Irritable bowel syndrome iv. Crohn's colitis |
| 18 | <i>Asthma caused in response to allergens is known as:</i> i. Extrinsic asthma ii. Intrinsic asthma iii. Mixed asthma iv. COPD |
| 19 | <i>Severe disability, dyspnoea at rest (unable to carry on physical activity without discomfort) are characteristic features of congestive heart failure of:</i> i. Class I ii. Class II iii. Class IV iv. Class III |
| 20 | <i>Computer based prescribing of drugs is termed as:</i> i. e-health ii. e-Rx iii. CDSS iv. CPOE |



UNIVERSITY OF THE PUNJAB

Fourth Prof: 2nd Annual – 2018

Examination: Doctor of Pharmacy (Pharm.D.)

Roll No.

Subject: Pharmacy Practice-V (Clinical Pharmacy-I) (New Course)

PAPER: 2 Part – II

MAX. TIME: 2 Hrs. 30 Min.

MAX. MARKS: 80

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Note: Attempt Any Four (4) Questions

- Q. No 2 (a): Define ADRs according to FDA. (4)
- Q. No 2 (b): What is the mechanism of reporting and monitoring of ADRs? (8)
- Q. No 2 (c): Discuss ionic mechanism of toxicity at cellular level. (8)
-
- Q. No 3 (a): Define Heart failure. (4)
- Q. No 3 (b): Classify heart failure according to New York Heart Association. (8)
- Q. No 3 (c): Discuss the treatment of heart failure with Digoxin and ACE-inhibitors. (8)
-
- Q. No 4 (a): Write any five clinical differences among different types of Macrolides. (10)
- Q. No 4 (b): How can pharmacist participate in pharmacotherapy decision making? (10)
-
- Q. No 5 (a): Write a note on CORE, PRIME and FARM pharmacotherapy plans. (10)
- Q. No 5 (b): Write a brief note on NSAIDs-induced peptic ulcer disease. (10)
-
- Q. No 6 (a): Describe drug-drug interaction due to enzyme induction at drug metabolism level. (6)
- Q. No 6 (b): What are different types of clinical study designs and arrange them in order of their clinical significance? (6)
- Q. No 6 (c): Describe with examples drug-drug interactions at elimination and transport levels. (8)
-
- Q. No 7: Write notes on any **TWO** of the following: (10)
- What are different types of IHD? Briefly describe treatment options for angina. (10)
- Drug information centre. (10)
- Clinical Pharmacy and role of clinical pharmacist. (10)



UNIVERSITY OF THE PUNJAB

Fourth Prof: 2nd Annual – 2018

Examination: Doctor of Pharmacy (Pharm.D.)

Roll No. in Fig.

Roll No. in Words.

Subject: Pharmacy Practice-V (Clinical Pharmacy-I)
PAPER: 2 Part – I (Compulsory) (New Course)

MAX. TIME: 30 Min.

MAX. MARKS: 20

Signature of Supdt.:

Attempt this Paper on this Question Sheet only.

Please encircle the correct option. Division of marks is given in front of each question.

This Paper will be collected back after expiry of time limit mentioned above.

Q.1. Encircle the right answer cutting and overwriting is not allowed. (1x20=20)

| | |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <i>Anti-cholinergic drugs, propantheline, when co-administered with digoxin can:</i> i. Decrease digoxin absorption ii. Increase digoxin metabolism iii. Increase digoxin absorption iv. None of the above |
| 2 | <i>Which one of the followings CYP enzyme convert Codeine to Morphine?</i> i. CYP3A5 ii. CYP2D6 & CYP2C19 iii. CYP2D6 iv. Both, A & C |
| 3 | <i>Co-administration of Phenytoin with Isoniazid resulted in increased plasma concentration of Phenytoin due to:</i> i. Enzyme induction – CYP2C19 ii. Enzyme inhibition – CYP2C9 iii. Enzyme inhibition – CYP2D6 iv. All of the above |
| 4 | <i>All of the following provide acid suppression similar to omeprazole 20 mg every day except:</i> i. Lansoprazole 30 mg every day ii. Pantoprazole 40 mg every day iii. Rabeprazole 20 mg every day iv. Famotidine 20 mg twice a day |
| 5 | <i>Which of the following amphotericin B (AmB) product has higher likelihood to cause acute kidney injury?</i> i. AmB lipid complex ii. liposomal AmB iii. AmB colloidal dispersion iv. AmB desoxycholate |
| 6 | <i>The term _____ is used to broadly refer to kidney diseases that involve structures in the kidney outside the glomerulus.</i> i. Reduced renal perfusion ii. Glomerulonephritis iii. Nephrolithiasis iv. Tubulointerstitial nephritis |
| 7 | <i>Verapamil and beta-blocker administered concomitantly result in:</i> i. Tachycardia ii. Bradycardia iii. Hyperkalemia iv. Hypokalemia |

| | |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8 | <p><i>Which one of the following is emergency condition of IDDM?</i></p> <ul style="list-style-type: none"> i. MI ii. DKA iii. STEMI iv. NSTEMI |
| 9 | <p><i>In case of shock, the level of _____ increases:</i></p> <ul style="list-style-type: none"> i. Acetic acid ii. Butaric acid iii. Lactic acid iv. Fumaric acid |
| 10 | <p><i>Which of the following antihypertensive is indicated in patients with BPH?</i></p> <ul style="list-style-type: none"> i. Labetolol ii. Indapamide iii. Valsartan iv. Terazosin |
| 11 | <p><i>Abrupt withdrawal of Beta-blockers can induce IHD by:</i></p> <ul style="list-style-type: none"> i. Platelet aggregation ii. Vasoconstriction iii. Tachycardia iv. Increase Pre and After load |
| 12 | <p><i>Which of the following antibiotic can induce torsades de pointes arrhythmia?</i></p> <ul style="list-style-type: none"> i. Clarithromycin ii. Amoxicillin iii. Tetracycline iv. Sulfonamide |
| 13 | <p><i>Verapamil is associated with following side effect:</i></p> <ul style="list-style-type: none"> i. Reflex tachycardia ii. Gum hypertrophy iii. Constipation iv. Diarrhoea |
| 14 | <p><i>Selective COX-2 inhibitors can induce IHD by:</i></p> <ul style="list-style-type: none"> i. Platelet aggregation ii. Vasoconstriction iii. Tachycardia iv. Increase Pre and After load |
| 15 | <p><i>CCB immediate release nifedipine can induce IHD by:</i></p> <ul style="list-style-type: none"> i. Platelet aggregation ii. Vasoconstriction iii. Reflex Tachycardia iv. Increase Pre and After load |

| | |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16 | <i>Idiosyncrasy has been classified as an ADR of:</i> <ol style="list-style-type: none"> Type A Type C Type B Type D |
| 17 | <i>Congestive heart failure is characterized by: -</i> <ol style="list-style-type: none"> Decreased supply of blood to myocardium Distention in the left ventricle Ischemic disease Infarction |
| 18 | <i>Chronic obstructive pulmonary disease is characterized by:</i> <ol style="list-style-type: none"> Irreversible changes in lungs Reversible changes in bronchioles Distention in the lungs Bronchitis |
| 19 | <i>Abstracting and indexing have been categorized as:</i> <ol style="list-style-type: none"> Primary source of drug information Secondary source of drug information Tertiary source of drug information None of above |
| 20 | <i>The drugs with toxic potential that are avoided during pregnancy are termed as:</i> <ol style="list-style-type: none"> High risk drugs Toxic drugs Teratogenic drugs Carcinogenic drugs |



UNIVERSITY OF THE PUNJAB

Fourth Prof: 2nd Annual – 2018

Examination: Doctor of Pharmacy (Pharm.D.)

Roll No.

Subject: Pharmaceutics-V (Clinical Pharmacy-I) (Old Course)
PAPER: 2

MAX. TIME: 3 Hrs.
MAX. MARKS: 100

NOTE: Attempt any FIVE questions. All questions carry equal marks.

- Q. No 1 (a) Define the following:
Drug-Drug Interactions (4)
Drug-Food Interactions (4)
- Q. No 1 (b) Explain the drugs interacting through pharmacokinetic mechanism with reference to (give examples):
i. Changes in gastric pH
ii. Complexation and chelation (12)
iii. Increased GI motility
iv. Decreased GI motility
v. Alteration of intestinal flora
vi. Role of P-glycoprotein
- Q. No 2 (a) Explain the behavior of drugs when given together at the hepatic level with reference to Inducers, Inhibitors and Substrates. (12)
- Q. No 2 (b) Discuss the drugs interacting with herbal drugs. (8)
- Q. No 3 (a) Discuss utilization of clinical drug literature and role of pharmacist. (10)
- Q. No 3 (b) Discuss use of computers in clinical pharmacy (10)
- Q. No 4 (a) What is drug information? What are different sources of information? (10)
- Q. No 4 (b) What are pharmaceutical factors considered to be the cause of ADRs? (10)
- Q. No 5 (a) Discuss ADRs in pediatric patients. (10)
- Q. No 5 (b) Discuss Drug induced Ischemic heart diseases. (10)
- Q. No 6 (a) Write a note on treatment protocol of diabetic ketoacidosis. (10)
- Q. No 6 (b) Define clinical pharmacy and discuss the role of clinical pharmacist in healthcare setting (10)
- Q. No 7 (a) What are main components of drug profile, discuss with one example. (10)
- Q. No 7 (b) Write a note on clinical trials. (10)



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Fourth Prof: Annual-2019

Subject: Pharmacy Practice-V (Clinical Pharmacy-I) (New Course)

Paper: 2 Part - I (Compulsory)

Time: 30 Min. Marks: 20

Roll No. in Fig.

Roll No. in Words.

Signature of Supdt.:

ATTEMPT THIS PAPER ON THIS QUESTION SHEET ONLY.

Division of marks is given in front of each question.

This Paper will be collected back after expiry of time limit mentioned above.

Q.1. Encircle the correct option.

(20x1=20)

- 1) In clinical trials, the strongest evidence of clinical efficacy is provided by
 - a) Randomized cross-over clinical trial
 - b) Randomized controlled laboratory study
 - c) Randomized controlled clinical trial
 - d) Non-randomized controlled clinical trial
- 2) The test drug is considered clinically effective and compared with commonly used treatment
 - a) In Phase II trial
 - b) In Phase III trial
 - c) In Phase IV trial
 - d) Both, II & III trials
- 3) During drug-drug interactions, the drug whose action is modified is called
 - a) Object drug
 - b) Precipitating drug
 - c) Modified drug
 - d) Inducers
- 4) Anti-cholinergic drugs, propantheline, when co-administered with digoxin can
 - a) Decrease digoxin absorption
 - b) Increase digoxin metabolism
 - c) Increase digoxin absorption
 - d) None of the above
- 5) Which one of the followings CYP enzyme convert Codeine to Morphine
 - a) CYP3A5
 - b) CYP2D6 & CYP2C19
 - c) CYP2D6
 - d) Both, A & C
- 6) Co-administration of Phenytoin with Isoniazid resulted in increased plasma concentration of Phenytoin due to
 - a) Enzyme induction - CYP2C19
 - b) Enzyme inhibition - CYP2C9
 - c) Enzyme inhibition - CYP2D6
 - d) All of the above
- 7) In phase I clinical trial the dose of a drug is
 - a) Sub-therapeutic
 - b) Sub-therapeutic but ascending
 - c) Therapeutic
 - d) A & C
- 8) Which one of the followings is **NOT** considered for inclusion or exclusion criteria in a clinical trial
 - a) Age
 - b) Gender
 - c) Economic status
 - d) Occupation
- 9) Power analysis will help a researcher to
 - a) Determine a sample size
 - b) Determine population distribution
 - c) Determine confidence interval
 - d) Determine scientific validity
- 10) The energy (Kcal) provided by per gram of glucose monohydrate is
 - a) 3.8 Kcal
 - b) 3.4 Kcal
 - c) 4 Kcal
 - d) Both A & B

- 11) A non-selective beta-blocker that has been extensively studied and used in decreasing portal pressure include
- a) Timolol
 - b) Sotalol
 - c) Misoprostol
 - d) Propranolol
- 12) Which one of the following is the most specific non-invasive test for H. pylori
- a) Endoscopy
 - b) Endoscopy with biopsy
 - c) C-Urea breath test
 - d) Serology
- 13) The concept of pharmaceutical care was given by Hepler and Strand in
- a) 1967
 - b) 1980
 - c) 1990
 - d) 2003
- 14) A qualitatively normal but augmented response to a drug with a predictable pharmacology is known as
- a) Side effect
 - b) Tachyphylaxis
 - c) Type-A ADR
 - d) Augmented effect
- 15) Idiosyncrasy has been categorized as
- a) Type B ADR
 - b) Side effect
 - c) Bizarre
 - d) Tolerance
- 16) High blood pressure according to 7th Report of the Joint National Committee on detection, evaluation and treatment of high blood pressure, is
- a) SBP = 120mmHg
 - b) SBP > 140mmHg
 - c) DBP > 90mmHg
 - d) Both b & c
- 17) European Guidelines for the management of hypertension were issued in June 2007 by the European Society of Hypertension jointly with the European Society of Cardiology set over all goal for blood pressure management as
- a) 120/70mmHg
 - b) 110/80mmHg
 - c) 120/90mmHg
 - d) 140/90mmHg
- 18) Drug of choice for the treatment of hypertension in patients with diabetes mellitus is
- a) ACE-inhibitors / ARBs
 - b) Furosemide
 - c) Calcium channel blockers
 - d) Beta-blockers
- 19) Mismatch between demand and supply of oxygen to myocardium is termed as
- a) Infarction
 - b) Dysfunction
 - c) Imbalance
 - d) Ischemia
- 20) Drug of choice in congestive heart failure is
- a) Amlodipine
 - b) Digoxin
 - c) Metoprolol
 - d) Losartan potassium



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Fourth Prof: Annual-2019

Roll No.

Subject: Pharmacy Practice-V (Clinical Pharmacy-I) (New Course)
Paper: 2 Part - II

Time: 2 Hrs. 30 Min. Marks: 80

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Note: Attempt any *FOUR* questions. Each question carries equal marks.

- | | | |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Question No. 2 | a. Define adverse drug reactions according to Krach and Lasanga and FDA. | 04 |
| | b. Briefly discuss Rawlins-Thompson classification of ADRs. | 08 |
| | c. Discuss briefly the concept of safety in the context of drugs. | 08 |
| Question No. 3 | a. Classify Drug-drug interactions. A describe, with examples, drug-drug interactions at absorption levels. | 07 |
| | b. Briefly, explain the major differences in procedures, from recruitment, design, sub-types and dosing, between Phase II and Phase III Clinical Trials. | 05 |
| | c. Discuss types of drug induced liver diseases based on patterns of liver injury and how it's diagnosed. | 08 |
| Question No. 4 | a. Discuss how treatment responses are monitored in Hepatitis C and pan-genotypic direct acting anti-viral in patients with and without liver cirrhosis. | 10 |
| | b. Explain with examples the differences between synergism, potentiation and additive effects due to drug-drug interactions. | 07 |
| | c. Name three inhibitors of CYP-enzymes. | |
| Question No. 5 | a. Define Pharmaceutical Care. | 04 |
| | b. Draw the pharmaceutical care cycle. | 08 |
| | c. Discuss CORE, FARM and PRIME. | 08 |
| Question No. 6 | a. Write a detailed not on the merits and demerits of a research study question, and how to turn a research question into a proposal taking into account the bias, confounding, ethics, planning and selection of variables. | 12 |
| | b. Briefly, describe the management of portal hypertension. | 05 |
| | c. Tabulate differences between duodenal and gastric ulcer. | 03 |
| Question No. 7 | a. Define hypertension and discuss briefly the management goals. | 06 |
| | b. What are compelling indications? How antihypertensive therapy is carried out in the presence of compelling indications. | 10 |
| | c. Define the following: | |
| | i) Ischemic heart disease | 04 |
| | ii) Congestive heart failure | |
| | iii) Myocardial infarction | |
| | iv) Portal hypertension | |



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Fourth Prof: Annual-2019

Roll No.

Subject: Pharmaceutics-V (Clinical Pharmacy-I) (Old Course)

Paper: 2

Time: 3 Hrs. Marks: 100

Note: Attempt any FIVE questions. Each question carries equal marks.

- | | | |
|----------------|-----------------------------------------------------------------------------------------------------------------------------|-------|
| Question No. 1 | a) Define Drug-Drug Interactions, Object Drug and Precipitant Drug. | 06 |
| | b) Give complete details of interaction between CLOPIDOGREL and ASPIRIN. | 06 |
| | c) What are patient susceptibility factors for drug Interactions? | 08 |
| Question No. 2 | a) Explain the role of P-Glycoprotein with respect to drug interactions | 06 |
| | b) What are elimination interactions? How elimination interactions are exploited for treatment of Aspirin Poisoning? | 08 |
| | c) How drugs causing enzyme induction and enzyme inhibition are implicated in our clinical practice? Explain with examples. | 06 |
| Question No. 3 | a) Define Drug Information. | 06 |
| | b) What are different sources of drug information? | 08 |
| | c) How drug information query should be handled in a drug information center? | 06 |
| Question No. 4 | a) Define Adverse Drug Reactions (ADRs). How ADRs are alphabetically classified? | 08 |
| | b) Explain spontaneous reporting scheme for the reporting of ADRs. | 06 |
| | c) Discuss cohort studies for the evaluation of ADRs. | 06 |
| Question No. 5 | a) Define Clinical Pharmacy | 05 |
| | b) Write down the role of clinical pharmacist in detail. | 15 |
| Question No. 6 | a) What are strategies for evaluating information requests? | 08 |
| | b) Give names of information resources. | 06 |
| | c) Explain the primary sources for drug information and its importance. | 06 |
| Question No. 7 | Write a note on TWO of the following: | 10+10 |
| | a) Therapeutic drug monitoring of Vancomycin | (20) |
| | b) Role of pharmacist in emergency | |
| | c) Clinical trials | |



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Fourth Prof: Annual-2021

Roll No.

Subject: Pharmacy Practice-V (Clinical Pharmacy-I) (New Course)
Paper: 2 Part - II

Time: 2 Hrs. 30 Min. Marks: 80

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Note: Attempt any *FOUR* questions. Each question carries equal marks.

- Q.2. a) Define clinical pharmacy and elaborate the points in drug use process 12
b) Give the normal values and clinical significance of the following: (2*4=8)
I. Sodium
II. Potassium
III. AST
IV. Serum Creatinine
- Q.3. a) Write down different types of clinical trials. Describe different phases of clinical trials with key differences 12
b) Explain the types, cause, specific sign & symptoms and management of diarrhea 08
- Q.4. a) Write a detailed note on the merits and demerits of a research study question, and how to turn a research question into a proposal considering the bias, confounding, ethics, planning and selection of variables 12
b) Briefly, describe the diagnosis and clinical management of portal hypertension 08
- Q.5. a) Define hypertension according to JNC-7 04
b) What are compelling indications that dictate the pharmacological treatment of hypertension 08
c) Define COPD and write the treatment plan for a patient 08
- Q.6. a) Discuss types of drug induced liver diseases based on patterns of liver injury and how its diagnosed 10
b) Classify Drug-drug interactions. Describe, with examples, drug-drug interactions at Absorption levels 10
- Q.7. a) Define Adverse Drug Reaction (ADRs) according to WHO and FDA 05
b) Define Pharmaceutical Care and discuss briefly PWDT 05
c) Discuss susceptibility factors affecting ADRs in context of age & pharmacogenetics 10



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Fourth Prof: Annual-2021

Subject: Pharmacy Practice-V (Clinical Pharmacy-I) (New Course)

Paper: 2

Part - I (Compulsory)

Time: 30 Min. Marks: 20

Roll No. in Fig.

Roll No. in Words.

Signature of Supdt.:

ATTEMPT THIS PAPER ON THIS QUESTION SHEET ONLY.

Division of marks is given in front of each question.

This Paper will be collected back after expiry of time limit mentioned above.

Q.1. Encircle the correct option.

(20x1=20)

1. The normal value of serum albumin is
 - a) 1-4 g/dL
 - b) 4-6 g/dL
 - c) 1-2 g/dL
 - d) 1-5 g/dL
2. Normal specific gravity of urine is
 - a) 1.003-1.035
 - b) 0.1-1.0
 - c) 1-2
 - d) 1-3
3. Normal value for Potassium is
 - a) 1.25-2.5mmol/L
 - b) 2.5-8.0 mmol/L
 - c) 3.4-5.0 mmol/L
 - d) 1.0-3.0 mmol/L
4. _____ are the antihypertensive drugs that cause hyperkalemia
 - a) ACE-inhibitors
 - b) Fluoroquinolones
 - c) Macrolides
 - d) Penicillins
5. Antacids tend to reduce the absorption of drugs that absorb in acidic environment such
 - a) Penicillins
 - b) Aminoglycosides
 - c) NSAIDs
 - d) Ketoconazole
6. Situations that can potentially lead to drug interactions include
 - a) Multiple drug therapy
 - b) Multiple prescribers
 - c) Patient compliance
 - d) Patient disease
7. Asians are at greatest risk of all racial groups for genetic polymorphism in which one of the following
 - a) CYP2D6
 - b) CYP3A4
 - c) CYP2C19
 - d) CYP1A2
 - e) CYP1A4
8. Which one of the following agents represents an angiotensin II receptor antagonists?
 - a) Trandopril
 - b) Carvedilol
 - c) Inbresartan
 - d) Amlodipine
9. When spironolactone is used in a patient with heart failure, it works through what primary mechanism?
 - a) Positive inotropic effect
 - b) Positive chronotropic effect
 - c) Aldosterone antagonism
 - d) Negative inotropic effect
10. Myocardial oxygen demand is increased by all of the following except
 - a) Exercise
 - b) Smoking
 - c) Cold temperature
 - d) Metoprolol

11. Which of the following agents used in Prinzmetal angina has spasmolytic actions, which increase coronary blood supply?
 - a) Nitroglycerine
 - b) Diltiazem
 - c) Timolol
 - d) Isosorbide mononitrate
12. Because of proven beneficial effects on cardiac remodeling, a particular group of agents is now indicated as first line therapy in a wide array of HF patients. Which of the following is a representative of this group?
 - a) Hydrochlorothiazide
 - b) Ramipril
 - c) Losartan
 - d) Carvedilol
13. Which one of the following tests is used at home to assess therapy and determine if a patient with asthma should seek emergency care?
 - a) Forced expiratory volume in 1 sec (FEV1)
 - b) Forced vital capacity (FVC)
 - c) Total lung capacity (TLC)
 - d) Peak expiratory flow rate (PEFR)
14. HCl and intrinsic factor are secreted by
 - a) Parietal cells
 - b) Chief cells
 - c) Mucus secreting cells
 - d) Goblet cells
15. Which one of the followings is the common cause of diarrhea in infants?
 - a) Cryptosporidium
 - b) Shigellosis
 - c) Rotavirus
 - d) Vibrio cholera
16. Which anti-motility agent can be used in acute diarrhea to have symptomatic relieve?
 - a) Diphenoxylate
 - b) Bismuth sub-salicylate
 - c) Norfloxacin
 - d) None of the above
17. Type-A ADRs are characterized by which of the following?
 - a) Idiosyncratic reactions
 - b) A function of patient susceptibility
 - c) Caused by drug-drug interactions
 - d) Death
18. Type-B ADRs are
 - a) Generally serious and can be life threatening
 - b) A result off the known pharmacology of the drug
 - c) Usually unpredictable
19. In patient with diarrhea, blood and mucus in stools is indicative of
 - a) Bacterial etiology
 - b) Toxic megacolon
 - c) Invasive organism causing dysentery
 - d) Bowel perforation
20. All the following viruses are enveloped except
 - a) Hepatitis A virus
 - b) Hepatitis B virus
 - c) Hepatitis C virus
 - d) Hepatitis D virus