



# UNIVERSITY OF THE PUNJAB

Final Prof. A/2015  
Examination: Doctor of Pharmacy  
(Pharm.D.)

Roll No. ....

Subject: Pharmaceutics-IX (Clinical Pharmacy-II)  
PAPER: 2

TIME ALLOWED: 3 hrs.  
MAX. MARKS: 100

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

- Q.1. (a) Write a note on Therapeutic Drug Monitoring (TDM) Process 7
- (b) Discuss problems with irrational use of drugs related to patient diagnosis 8
- (c) Discuss benefits of Essential Drug List 5
- Q.2. (a) Write a detailed note on the TDM of Gentamicin 08
- (b) Discuss underlying principle and criteria of selecting Essential Drug List 07
- (c) Write down the factors affecting TDM 05
- Q 3 Define and describe different types of IHD. How can Nitrates, Beta-Blockers and CCB maintain oxygen supply and demand of myocytes in patients with IHD? Discuss their clinical adverse events. 20
- Q 4 Write about etiology and pathogenesis of gastroenteritis and diarrhea. Describe their treatments strategies. 20
- Q 5 What are the distinct types of DUR? Discuss the importance of each type. 20
- Q 6 Explain effects of Insulin on carbohydrate, Protein & Lipid Metabolism 20
- Q 7 Explain hazards of I/v infusion 20

# UNIVERSITY OF THE PUNJAB



Final Prof. A/2016  
Examination: Doctor of Pharmacy  
(Pharm.D.)

Roll No. ....

Subject: Pharmaceutics-IX (Clinical Pharmacy-II)

TIME ALLOWED: 3 hrs.

PAPER: 2

MAX. MARKS: 100

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

**Q. # 1: (a) Briefly explain the followings (10)**

- (i) Multi-stage sampling      (ii) Systematic sampling with probability proportional to size
- (iii) Components to learn drug use problems
- (iv) Sampling Unit      (v) Impaired glucose tolerance test (IGTT)
- (b) Formulate an algorithm to manage type II diabetic patients and explain the pharmacological options for the management of these patients. (7marks)
- (c) Enlist qualitative methods to study drug use indicators (3 marks)

**Q. # 2: (a) Describe the factors contributing towards irrational use of drugs (6 marks)**

- (b) Formulate drug utilization evaluation criteria of Cimetidine. (6 marks)
- (c) Write a detailed note on therapeutic drug monitoring of Phenytoin (8 marks)

**Q. # 3: (a) Write a note on therapeutic drug monitoring process and the significance of sampling time. (8)**

- (b) Explain with examples cost-benefit and cost-utility analysis in detail (8 marks)
- (c) According to JNC, what are different stages of HTN (4 marks)

**Q. # 4: (a) Write a note on Tetanus. (10 marks)**

- (b) Write a detail note on therapeutic drug monitoring of Lithium (10 marks)

**Q. # 5: (a) Describe the role of Pharmacist in Community Pharmacies. (10)**

- (b) Enlist the sign and symptoms and pathophysiology of Tuberculosis. (10)

**Q. # 6. a) Describe how hepatitis is induced by the following medications (10 marks)**

- i) Acetaminophen
- ii) Isoniazid
- iii) Phenytoin

(b) Define acute kidney injury and describe its stages (3 Marks)

- (c) Write a detailed note on angiotensin converting enzyme inhibitors/angiotensin receptor blockers-induced acute kidney failure (7 Marks)

**Q. # 7. (a) Write down the etiology of common cold. (4 marks)**

- (b) What are pathophysiological differences between different types of IHD (8 marks)
- (c) Describe the pharmacotherapy options used for viral URTIs. (8 marks)

# UNIVERSITY OF THE PUNJAB



Final Prof. 2<sup>nd</sup> A/2016  
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Roll No. ....

Subject: Pharmaceutics-IX (Clinical Pharmacy-II)  
PAPER: 2

TIME ALLOWED: 3 hrs.  
MAX. MARKS: 100

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

**Q. # 1: (a) Briefly explain the followings (10)**

- (i) Pharmaco-economics      (ii) Quality Adjusted Life Years      (iii) Steady State  
(iv) Incretin effect      (v) Stratified Sampling  
(b) Describe Drug Utilization Review Categories and process of establishing review criteria and thresholds. (7 marks)  
(c) Write a brief note on Non-probability Sampling methods. (3 marks)

**Q. # 2: (a)** Write a detailed note on therapeutic drug monitoring of Gentamicin. (8 marks)  
(b) Enlist Pharmaco-economic methodologies for partial, full and humanistic evaluation and discuss with examples cost minimization and cost effectiveness analysis in detail. (8 marks)  
(c) Factors affecting therapeutic drug monitoring (4 marks)

**Q. # 3: (a)** Discuss in detail the diabetic emergencies and how as a pharmacist you can educate and manage these patients (8 marks)  
(b) Write a note on the problems associated with irrational use of drugs related to patient diagnosis? (8 marks)  
(c) What are health facility indicators. (4 marks)

**Q. # 4: (a)** Describe the organization of community pharmacy in detail. (10 marks)  
(b) Enlist the sign and symptoms and mode of transmission of HIV/AIDS and Hepatitis in detail. (10 marks)

**Q. # 5: (a)** Write a detailed note on angiotensin converting enzyme inhibitors/angiotensin receptor blockers-induced acute kidney failure (8 marks)  
(b) Role of a Pharmacist in Drug Utilization Review process (4 marks)  
(c) Write a detail note on therapeutic drug monitoring of Digoxin. (8 marks)

**Q. # 6.** Define chronic kidney disease and describe its stages (5 Marks)  
b) Write a detailed note on analgesics-induced chronic kidney disease (8 marks)  
(c) What is the etiology and clinical presentation of patient afflicted with meningitis (7 marks)

**Q. # 7. (a)** Differentiate between antiplatelet, anticoagulant and thrombolytics used for IHD (7 marks)  
(b) Briefly discuss first line antihypertensive treatment option for black people (8 marks)  
(c) Enlist the names of 1st and 2nd line antibiotics that can be used for URTIs (5 marks)

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Final Prof: Annual - 2017  
Examination: Doctor of Pharmacy  
(Pharm.D.)

Roll No. ....

Subject: Pharmaceutics-IX (Clinical Pharmacy-II)  
PAPER: 2

TIME ALLOWED: 3 hrs.  
MAX. MARKS: 100

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

**Q. # 1: (a) Briefly explain the followings (10)**

- (i) Intensity of Action of a drug      (ii) Cost-utility Analysis      (iii) Compensated Cirrhosis      (iv) Incretin Effect      (v) Hemoptysis  
(b) ) Formulate drug utilization evaluation criteria of Cimetidine (7 marks)  
(c) Differentiate between STEMI & NSTEMI (3 marks)

**Q. # 2. (a) Write a detailed note on the clinical diagnosis and principles of Multi-drug resistant TB treatment (10 marks).**

- (b) Explain briefly the methods involved in Pharmaco-economic evaluation (7 marks)  
(c) Write names of ANY THREE Antiretroviral drugs for the treatment of AIDS (3 marks)

**Q. # 3. Write a detailed note on SOAP and CORE pharmacotherapy plan. (20 marks)**

**Q. # 4. (a) Classify anemia based on the etiologies and red blood cells morphology (10)**

- (b) Write a detailed note on therapeutic drug monitoring of Digoxin (10)

**Q. # 5. (a) Discuss in detail the treatment regimens for HAP (15)**

- (b) Briefly explain health facility indicators (5 marks)

**Q. # 6. (a) What are the therapeutic options for the most common pathogens of meningitis (15 marks)**

- (b) Briefly explain systematic sampling with probability proportional to size (5 marks).

**Q. # 7. (a) What are the managerial, educational and regulatory interventional strategies in ensuring rational use of drugs (8 marks)**

- (b) Write the treatment goals for acute and chronic asthma (5 marks)

(c) What is the basic concept behind essential drug list (EDL), also give brief account of essential Drug List Pakistan (7 marks).



# UNIVERSITY OF THE PUNJAB

Final Prof: 2<sup>nd</sup> Annual - 2017  
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Roll No. ....

Subject: Pharmaceutics-IX (Clinical Pharmacy-II)  
PAPER: 2

TIME ALLOWED: 3 hrs.  
MAX. MARKS: 100

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

**Q. # 1: (a) Briefly explain the followings (10)**

- (i) Negative Chronotropic      (ii) Quality Adjusted Life Years (iii) Sero-conversion
  - (iv) Sampling Frame      (v) Trough Levels
- (b) Describe Therapeutic Monitoring of Single dose and once daily Gentamicin regimen with and without Renal Impairment (7 marks)
- (c) Write a brief note on Stratified Sampling method (3 marks)

**Q. # 2. (a) What are potential complications of Hepatitis B Viral Infection and pertinent treatment options (8 marks).**

- (b) What are WHO core drug use indicators, and describe Patient related indicators in detail (7 marks)
- (c) What are the factors that affect Therapeutic Drug Monitoring (5 marks)

**Q. # 3. a) What are clinical characteristics, symptoms and complications of URTIs ? (10)**

- (b) Define Drug Utilization Review (DUR) and various categories of DUR in detail (7 marks)
- (c) What are the pre-requisites of TDM (3 marks)

**Q. # 4. (a) Discuss the Pharmaco-therapeutic options for HTN in geriatrics (10)**

- (b) Write a detailed note on therapeutic drug monitoring of Lithium (10)

**Q. # 5. (a) Write in detail the antimicrobial treatment options for CAP in different clinical scenarios (15)**

- (b) Write the prevention and treatment of Tetanus. (5 marks)

**Q. # 6. (a) Write a brief note on the treatment and prevention of scabies. (10 marks)**

- (b) What are response-optimized treatment options in chronic HCV patients and how to monitor treatment response (10 marks).

**Q. # 7. (a) Write a note on the diabetes management algorithm for type II diabetes with more emphasis on the role of various Insulin regimens in the management of type-II diabetes (10 marks)**

- (b) Write a note on the predictors, sign and symptoms, and treatment of candida infection (10 marks)



# UNIVERSITY OF THE PUNJAB

Final Prof: Annual – 2018

Examination: Doctor of Pharmacy (Pharm.D.)

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Roll No. ....

Subject: Pharmaceutics-IX (Clinical Pharmacy-II)

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 1: Select the most appropriate option**

**1\*20**

1. Therapeutic drug monitoring (TDM) is required if
  - a) Drug is given in high doses
  - b) Patients with concomitant disease
  - c) Drug has unpredictable toxicity profile
  - d) Both, A & C
2. The length of time for which the drug remains above MEC (minimum effective concentration) is called
  - a) Intensity of action
  - b) Duration of action
  - c) Minimum plasma concentration (C<sub>min</sub>)
  - d) None of the above
3. In TDM, Loading dose (LD) is determined by
  - a) Volume of distribution
  - b) Half-life
  - c) Protein binding
  - d) Clearance
4. In TDM, maintenance dose (MD) is determined by
  - a) Protein binding
  - b) Clearance
  - c) Bio-availability
  - d) Volume of distribution
5. Tetanus vaccine is indicated when a wound is contaminated with:
  - a. Oil
  - b. Acid
  - c. Ethanol
  - d. Soil
  - e. Wine
6. Which of the following hepatitis viruses is not RNA virus?
  - a. Hepatitis A virus
  - b. Hepatitis B virus
  - c. Hepatitis E virus
  - d. Hepatitis G virus

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7. What is the most common manifestation of pulmonary disease in HIV infected patients?
  - a. Pneumonia
  - b. Carcinoma
  - c. Bronchiectasis
  - d. Asthma
8. Which among the following diuretics causes most severe kaliuresis
  - a) Loop Diuretics
  - b) Thiazide
  - c) Mannitol
  - d) Carbonic anhydrase inhibitors
9. Which of following Beta blocker is used in patient with marked bradycardia and tiredness
  - a. Bisoprolol
  - b. Carvedilol
  - c. Pindolol
  - d. Metoprolol
10. Verapamil is associated with following side effect
  - a. Reflex tachycardia
  - b. Gum hypertrophy
  - c. Constipation
  - d. Diarrhea
11. Which of the following antihypertensive is indicated in patients with BPH
  - a. Labetolol
  - b. Indapamide
  - c. Valsartan
  - d. Terazosin
12. Which of the following antihypertensive is indicated in patients with BPH
  - a. Labetolol
  - b. Indapamide
  - c. Valsartan
  - d. Terazosin
13. Which among the following diuretics should be avoided in DM
  - a. Loop Diuretics
  - b. Thiazide
  - c. Potassium Sparing
  - d. Carbonic anhydrase inhibitors

14. Which among the following diuretics is also effective in reducing risk of hip fracture
- Loop Diuretics
  - Thiazide
  - Potassium Sparing**
  - Carbonic anhydrase inhibitors
15. Which of the following should be avoided in NSTEMI
- Heparin
  - Alteplase
  - Clopidogrel
  - Enoxaparin
16. Which of the following drug doesn't result in reflex tachycardia
- Amlodipine
  - Enalapril
  - Nitrate
  - Phentolamine
17. \_\_\_\_\_ decreases theophylline clearance;
- Cimetidine
  - Albuterol
  - Ipratropium bromide
  - Epinephrine
  - Atropine
18. \_\_\_\_\_ has high beta-2 adrenergic selectivity;
- Cimetidine
  - Albuterol
  - Ipratropium bromide
  - Epinephrine
19. Allopurinol is recommended instead of probenecid in the treatment of hyperuricemia in which of the following situations
- When the patient has several large tophi on the elbows and knees
  - When the patient has an estimated creatinine clearance of 15 mL/min
  - When the patient has leukemia and there is concern regarding precipitation of urate
  - All of above
20. Which of the following causes scabies?
- Virus
  - Bacteria
  - Fungi
  - Eight-legged mite



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Final Prof: Annual – 2018

Examination: Doctor of Pharmacy (Pharm.D.)

Roll No. ....

Subject: Pharmaceutics-IX (Clinical Pharmacy-II)  
PAPER: 2 (Part – II)

TIME ALLOWED: 2 Hrs. & 30 min.  
MAX. MARKS: 80

*Attempt this Paper on Separate Answer Sheet provided.*

**Attempt any 4 questions. Each question carry equal marks.**

Q. # 2:

- (a) Write precise note on Candidiasis (10)
- (b) Write a detailed note on therapeutic drug monitoring of Lithium (10)

Q. # 3.

Write a note on Pharmacist work-up of drug therapy (PWDT) (20)

Q.# 4.

- (a) Describe Therapeutic Monitoring of Single dose and once daily Gentamicin regimen with and without Renal Impairment (8 marks)
- b) What are the pharmacological options for Hepatitis B virus (8)
- (c) Write a brief note on Stratified Sampling method (4)

Q. # 5.

- (a) Write down treatment plan for acute coronary syndrome (10)
- (b) Write a detailed note on the non-pharmacological management of Diabetes and role of Pharmacist in its management (10)

Q. # 6.

- (a) Discuss first and second line antimicrobial options for Upper Respiratory Tract Infections (8)
- (b) Explain Cost-benefit analysis. Also discuss the advantages and limitations of this analysis (7)
- (c) How treatment response is monitored in HCV patients (5 marks)

Q. # 7.

- (a) What is the rational approach in the selection of antibiotics for treatment? (4)
- b) What hemodynamic changes occur in the body after the invasion of infectious agent? (8)
- c) Write about the respiratory changes during infection. (8)



# UNIVERSITY OF THE PUNJAB

Final Prof: 2<sup>nd</sup> Annual – 2018

Examination: Doctor of Pharmacy (Pharm.D.)

Roll No. ....

Subject: Pharmaceutics-IX (Clinical Pharmacy-II)

PAPER: 2 Part – II

MAX. TIME: 2 Hrs. 30 Min.

MAX. MARKS: 80

**ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED**

**Attempt any *FOUR* questions. Each questions carry equal marks.**

Q. # 2:

- (a) Write a note on Conjunctivitis (7)
- (b) Formulate drug utilization evaluation criteria of Cimetidine (7)
- (c) What are WHO core drug use indicators, describe only Patient related indicators (6)

Q. # 3.

- (a) Write a detailed note on the clinical diagnosis and principles of Multi-drug resistant TB treatment (10 marks).
- b) Classify hypertension according to JNC and also discuss risk factors of hypertension (10)

Q. # 4.

Write a detailed note on the treatment of acute attack of gout. (20)

Q. # 5.

- (a) Write a detailed note on therapeutic drug monitoring of Digoxin (10)
- (b) Differentiate between angina and myocardial infarction and discuss different types of IHD (10)

Q. # 6.

- (a) Discuss in detail the diabetic emergencies and their management (10)
- b) Briefly discuss treatment plan for meningitis (6).
- (c) What are the pre-requisites of therapeutic drug monitoring (4)

Q. # 7.

- (a) What are the managerial, educational and regulatory interventional strategies in ensuring rational use of drugs (7)
- (b) Pharmacological Treatment of Iron deficiency anemia (7)
- c) Pharmacological Treatment of Vitamin B12 deficiency anemia (6)



# UNIVERSITY OF THE PUNJAB

Final Prof: 2<sup>nd</sup> Annual – 2018

Examination: Doctor of Pharmacy (Pharm.D.)

Roll No. in Fig. ....

Roll No. in Words. ....

Subject: Pharmaceutics-IX (Clinical Pharmacy-II)  
PAPER: 2 Part – I (Compulsory)

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. The clinical significance of TDM becomes limited if
  - a) Significant consequences are associated with too low or high plasma drug conc.
  - b) No well-defined therapeutic plasma drug concentration range exist
  - c) Drug is highly protein bound
  - d) None of the above
2. At steady state, plasma drug concentration is proportional to
  - a) Drug distribution
  - b) Drug elimination
  - c) Receptor site concentration
  - d) All of the above
3. In TDM, for blood sampling, the least variable point in the dosing interval is
  - a) Just after the peak plasma levels
  - b) Just after plasma drug distribution
  - c) Just before the next dose
  - d) None of the above
4. All the following viruses are enveloped except
  - a) Hepatitis A virus
  - b) Hepatitis B virus
  - c) Hepatitis C virus
  - d) Hepatitis D virus
5. Anti-convulsant activity of primidone is due to
  - a) Phenobarbital
  - b) Phenylethylene amine
  - c) Phenyethyl malonamide
  - d) Both A & C
6. Negative chronotropic drugs cause
  - a) Decrease cardiac contraction
  - b) Decrease heart rate
  - c) Decrease cardiac conduction
  - d) All of the above
7. Which one of the followings is NOT considered for studying drug use indicators
  - a) Prescribing
  - b) Patient care
  - c) Health Facility
  - d) Pharmaceutical marketing

8. Which one of the followings is a **vital indicator of patient care**
- a) Dispensing time
  - b) Availability of copy of essential drug list
  - c) Average number of drugs prescribed
  - d) All of the above
9. A pharmaco-economic analysis that measures outcomes based on quality of life years adjusted by utility weights is called
- a) Cost-utility analysis
  - b) Cost-effective analysis
  - c) Cost-minimization analysis
  - d) None of the above
10. Discounting on **costs and benefits** is aimed at
- a) Adjusting the past cost and benefit to present value
  - b) Adjusting the future cost and benefit to present value
  - c) Adjusting the present cost and benefit to future value
  - d) None of the above
11. Gentamicin is preferably given in **ONCE DAILY** regimen
- a) In renal impairment
  - b) Endocarditis
  - c) Severe Burn
  - d) Intra-abdominal Sepsis
12. The aim of drug use evaluation is to
- a) Promote rationale drug use
  - b) Observe pattern of drug use
  - c) How drugs are being used
  - d) All of the above
13. Which one of the following is **NOT** a prescribing indicator
- a) Average number of drugs per encounter
  - b) Percentage of drugs prescribed by generic name
  - c) Percentage of encounters with antibiotics/injections
  - d) Percentage of drugs with brand names
14. Availability of copy of **essential drug list** is considered a
- a) Patient care indicator
  - b) Health facility indicator
  - c) Prescribing indicator
  - d) Both A & B

15. Which of the following vaccines is **contraindicated in patients with HIV infection** due to its potential to cause infection?

- (a) Tetanus
- (b) Influenza
- (c) Varicella
- (d) Haemophilus influenza type B

16. A deficiency of which of these will result in abnormally **large red blood cells** and a condition **called megaloblastic anaemia**?

- a. Oxygen
- b. Vitamin C
- c. Vitamin D
- d. Vitamin B-12 and folic acid

17. Duration of **bacterial upper respiratory tract** infection is

- a. 1-3 days
- b. 3-5 days
- c. 5-10 days
- d. >10 days

18. Antibiotic should be given for **diagnosed bacterial upper respiratory tract** infection for

- a. 7-10 days
- b. 1-3 days
- c. 3-5 days
- d. 5-7 days

19. If the patient's **CURB-65 score is 3** than patient should be treated in

- a. Out-patient Clinic
- b. Out-patient Hospital
- c. In-patient
- d. ICU

20. Most common reason of hospital acquired infection is

- a. S.aureus
- b. S.pneumoniae
- c. H.influenza
- d. M.pneumoniae



# UNIVERSITY OF THE PUNJAB

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

Subject: Pharmacy Practice – VI (Advanced Clinical Pharmacy-II)

Paper: 2 Part – I (Compulsory)

(New Course)

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.**

(20x1=20)

**Q.1. Encircle the correct option.**

1. Extrinsic system of coagulation process is initiated by the activation of
  - a) thromboplastin
  - b) clotting factor VII
  - c) prothrombin
  - d) fibrinogen
2. Drugs that may cause plasma sodium electrolyte disturbances include:
  - a) Prednisolone
  - b) Salbutamol
  - c) propranolol
  - d) All of the above
3. Creatinine clearance:
  - a) is an index used to measure glomerular filtration rate
  - b) measurement involves a 24-hour urine collection
  - c) measurement requires 24-hour monitoring of plasma
  - d) Both A & B
4. Anti-infectives that are used in the triple-therapy regimens to eradicate *Helicobacter pylori* include:
  - a) Metronidazole
  - b) telithromycin
  - c) clarithromycin
  - d) Both A & C
5. Heparin is rapidly acting anticoagulant and interferes with the formation of
  - a) Thrombin
  - b) fibrin
  - c) Factor VII
  - d) prothrombin
6. Digoxin is used in patients with heart failure:
  - a) because it decreases myocardial intracellular ionic calcium
  - b) when there is atrial fibrillation
  - c) because it exerts a positive inotropic effect
  - d) Both B & C
7. Alteplase is used as
  - a) tissue plasmin activator
  - b) fibrinolytic agent
  - c) anticoagulant
  - d) antiplatelet
8. All the following viruses are enveloped except
  - (a) Hepatitis A virus
  - (b) Hepatitis B virus
  - (c) Hepatitis C virus
  - (d) Hepatitis D virus
9. Gentamicin:
  - a) has a broad spectrum of activity
  - b) is contraindicated in hepatic impairment
  - c) therapy may be changed to oral administration when the patient is stabilized
  - d) Both A & C
10. Hematoma is the presence of volume of blood in area around vein causing
  - a) generalized swelling
  - b) swelling in arteries
  - c) swelling in arms
  - d) localized swelling
11. Blastomycosis occurs in respiratory system by exposure to
  - a) toxins
  - b) tuberculous bacillus
  - c) conidia
  - d) exotoxins

P.T.O.

12. Drugs that could significantly interact with thyroxine include:
- a) Warfarin
  - b) Simvastatin
  - c) Ranitidine
  - d) All of the above
13. INR:
- a) is monitored in patients with arthritis
  - b) is monitored in patients receiving warfarin
  - c) stands for international normalized ratio
  - d) B and C only
14. In heart failure:
- a) chest radiographs may show cardiac enlargement
  - b) the pulse rate may indicate arrhythmias
  - c) body extremities are very hot
  - d) Both A & B
15. Which one of the followings is a **vital indicator of patient care**
- a) Dispensing time
  - b) Availability of copy of essential drug list
  - c) Average number of drugs prescribed
  - d) All of the above
16. Diabetic patients should be advised to monitor their condition because they are prone to develop:
- a) retinopathy
  - b) chronic renal failure
  - c) ischemic heart disease
  - d) All of the above
17. Uncomplicated community acquired UTI is 80% of the cases is caused by
- a) E.coli                      b) Klensiella
  - c) Proteus                    d) all the above
18. Cyclosporine:
- a) has an inhibitory effect on T-lymphocytes
  - b) may cause a dose-dependent increase in serum creatinine during the first few weeks of treatment
  - c) causes hyperlipidemia
  - d) A and B only
19. Which ONE of the followings is the most common invasive breast cancer among women
- a. Invasive ductal carcinoma
  - b. Invasive lobular carcinoma
  - c. Inflammatory breast cancer
  - d. Both A & B
20. Chest radiograph finding that suggest inactive tuberculosis disease include
- a. Plural effusion
  - b. Linear opacity
  - c. Consolidation
  - d. None of the above



# UNIVERSITY OF THE PUNJAB

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

Roll No. ....

Subject: Pharmacy Practice – VI (Advanced Clinical Pharmacy-II)

Paper: 2 Part – II (New Course)

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) Describe Therapeutic Monitoring of once daily regimen of Gentamicin with and without Renal Impairment (7 marks)
- (b) Write a brief note on Stratified Sampling method with at least one example (5 marks)
- (c) What are potential serological tests and their interpretation in hepatitis B virus (8 marks)

**Q. # 3.**

- (a) Write a concise note on Pharmacist work-up of drug therapy (PWDT) (7)
- (b) Write a note on HCV screening and pharmacological treatment options (8)
- (c) Draw hyperthyroid management algorithm (5)

**Q.# 4.**

- a) Define Pharmaceutical care (4)
- b) Discuss standards of care for pharmaceutical care practitioners with respect to **assessment, care plan development and follow up evaluation.** (8)
- c) Discuss design of an optimal individualized pharmaco-therapeutic plan and **SMART** approach. (8)

**Q. # 5.**

- (a) Write down treatment plan for acute coronary syndrome (7)
- (b) Write a note on the type I diabetic complication and its management (7)
- (c) How Tuberculosis is diagnosed (6)

**Q. # 6.**

- a) Define superficial and systemic fungal infections (4)
- b) What is Blastomycosis? discuss clinical presentation and treatment. (8)
- c) What are common skin fungal infections? Discuss causes, signs and symptoms, diagnosis and treatment. (8)

**Q. # 7.**

- (a) What is the rational approach in the selection of antibiotics for treatment? (4)
- b) Write a note on main treatment options available for breast cancer patients (8)
- c) Discuss drug therapy problems and its components. (8)

# UNIVERSITY OF THE PUNJAB

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

Subject: Pharmaceutics-IX (Clinical Pharmacy-II) (Old 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 clinical **significance of TDM** becomes limited if
  - a) Significant consequences are associated with too low or high plasma drug conc.
  - b) No well-defined therapeutic plasma drug concentration range exist
  - c) Drug is highly protein bound
  - d) None of the above
2. Drugs that may cause plasma sodium electrolyte disturbances include:
  - a) Prednisolone
  - b) Salbutamol
  - c) propranolol
  - d) All of the above
3. Creatinine clearance:
  - a) is an index used to measure glomerular filtration rate
  - b) measurement involves a 24-hour urine collection
  - c) measurement requires 24-hour monitoring of plasma
  - d) Both A & B
4. Anti-infectives that are used in the triple-therapy regimens to eradicate *Helicobacter pylori* include:
  - a) Metronidazole
  - b) telithromycin
  - c) clarithromycin
  - d) Both A & C
5. A drug that can be used in alcohol withdrawal is:
  - a) beclometasone
  - b) lithium
  - c) diazepam
  - d) risperidone
6. Digoxin is used in patients with heart failure:
  - a) because it decreases myocardial intracellular ionic calcium
  - b) when there is atrial fibrillation
  - c) because it exerts a positive inotropic effect
  - d) Both B & C
7. In TDM, for blood sampling, the **least variable point in the dosing interval** is
  - a) Just after the peak plasma levels
  - b) Just after plasma drug distribution
  - c) Just before the next dose
  - d) None of the above
8. All the following **viruses are enveloped** except
  - (a) Hepatitis A virus
  - (b) Hepatitis B virus
  - (c) Hepatitis C virus
  - (d) Hepatitis D virus
9. Gentamicin:
  - a) has a broad spectrum of activity
  - b) is contraindicated in hepatic impairment
  - c) therapy may be changed to oral administration when the patient is stabilized
  - d) Both A & C
10. Anti-convulsant activity of **primidone** is due to
  - a) Phenobarbital
  - b) Phenylethylene amine
  - c) Phenyethyl malonamide
  - d) Both A & C

11. Diagnosis of gout:
- a) is based on clinical signs
  - b) requires confirmation of urate crystals in the synovial fluid of affected joint
  - c) requires a positive ESR level
  - d) Both A & C
12. Drugs that could significantly interact with thyroxine include:
- a) Warfarin
  - b) Simvastatin
  - c) Ranitidine
  - d) All of the above
13. INR:
- a) is monitored in patients with arthritis
  - b) is monitored in patients receiving warfarin
  - c) stands for international normalized ratio
  - d) B and C only
14. In heart failure:
- a) chest radiographs may show cardiac enlargement
  - b) the pulse rate may indicate arrhythmias
  - c) body extremities are very hot
  - d) Both A & B
15. Which one of the followings is a vital indicator of patient care
- a) Dispensing time
  - b) Availability of copy of essential drug list
  - c) Average number of drugs prescribed
  - d) All of the above
16. Diabetic patients should be advised to monitor their condition because they are prone to develop:
- a) retinopathy
  - b) chronic renal failure
  - c) ischemic heart disease
  - d) All of the above
17. A pharmaco-economic analysis that measures outcomes based on quality of life years adjusted by utility weights is called
- a) Cost-utility analysis
  - b) Cost-effective analysis
  - c) Cost-minimization analysis
  - d) None of the above
18. Cyclosporine:
- a) has an inhibitory effect on T-lymphocytes
  - b) may cause a dose-dependent increase in serum creatinine during the first few weeks of treatment
  - c) causes hyperlipidemia
  - d) A and B only
19. Which of the following should avoided in NSTEMI
- a. Heparin
  - b. Altepase
  - c. Clopidogrel
  - d. Enoxaprin
20. Which among the following diuretics is also effective in reducing risk of hip fracture
- a. Loop Diuretics
  - b. Thiazide
  - c. Potassium Sparing
  - d. Carbonic anhydrase inhibitors



# UNIVERSITY OF THE PUNJAB

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

Roll No. ....

Subject: Pharmaceutics-IX (Clinical Pharmacy-II) (Old 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) Describe Therapeutic Monitoring of Single dose and once daily Gentamicin regimen with and without Renal Impairment (8)
- (b) What are WHO core drug use indicators, and describe Patient related indicators in detail (7)
- (c) What are the factors that affect Therapeutic Drug Monitoring (5)

**Q. # 3.**

- (a) What are clinical characteristics, symptoms and complications of Diarrhea ? (8)
- (b) Define Drug Utilization Review (DUR) and various categories of DUR in detail (7)
- (c) Briefly explain cost-benefit analysis with examples (5)

**Q. # 4.**

- (a) What are compelling indications in hypertension, discuss the Pharmaco-therapeutic options for Hypertensive patients with compelling indications (8)
- (b) Write a detailed note on therapeutic drug monitoring of Lithium (8)
- (c) Write a brief note on Stratified Sampling method (4)

**Q. # 5.**

- (a) Write in detail application of pharmaceutical care plan and how pharmacist can utilize it for improved patient outcomes (8)
- (b) Write the prevention and treatment of Tetanus. (5)
- (c) Write down the factors affecting rationale use of drugs (7)

**Q. # 6.**

- (a) What are the clinical signs and symptoms of various types of Anemia and its management (8)
- (b) What are response-optimized treatment options in chronic HCV patients and how to monitor treatment response (7)
- (c) What are essential drugs and the criteria of selecting drugs for formulating Essential Drug List. (5)

**Q.# 7.**

- (a) Explain the role of a Pharmacist in the treatment and general management of Acetaminophen and Lead poisoning (8)
- (b) What are the usual reasons and methods of assessing patient non-compliance (7)
- (c) Briefly explain cost-utility analysis with examples (5)



# UNIVERSITY OF THE PUNJAB

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

Roll No. ....

Subject: Pharmaceutics-IX (Clinical Pharmacy-II) (Old 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.**

Briefly explain (20)

- Prerequisites of therapeutic drug monitoring (TDM)
- Incretin effect and incretin hormones
- Significance of Anti-HBs and Anti-HBe serological tests
- Difference between Quality adjusted life years (QALYs) and Disability adjusted life years (DALYs)

**Q. # 3.**

- Write a comprehensive note on the assessment of dehydration and laboratory diagnosis of diarrhea (10)
- What are WHO core drug use indicators, explain any THREE complementary indicators (10)

**Q. # 4.**

- What are clinical the characteristics, symptoms and complications of type 2 diabetes? (10)
- How H. pylori is tested using non-invasive method and formulate any two H. pylori eradication regimens approved by FDA (10)

**Q. # 5.**

- What are compelling indications in hypertension, discuss the Pharmaco-therapeutic options for Hypertensive patients with compelling indications (10)
- Discuss etiology base diagnostic approach of Anemia and its management (10)

**Q. # 6.**

- What are the major applications of pharmaceutical care plan and the role of a pharmacist in improving patient outcomes using care plan (10)
- Write about various qualitative methods to study the drug use problems (10).

**Q. # 6.**

- How tuberculosis (TB) is diagnosed and explain the standard pharmacological management of naïve TB patient (10)
- Discuss genotype specific treatment options in HCV patients and how the treatment outcomes are monitored in these patients (10)



# UNIVERSITY OF THE PUNJAB

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

Subject: Pharmaceutics-IX (Clinical Pharmacy-II) (Old Course)  
Paper: 2 Part - I (Compulsory)

Time: 30 Min. Marks: 20

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(20x1=20)

### Q.1. Select the most appropriate option.

1. In METAVIR liver biopsy scoring system – stage F3 is defined by
  - a) Numerous septa without cirrhosis
  - b) Portal fibrosis without septa
  - c) Portal fibrosis with septa
  - d) Cirrhosis
2. The treatment for patient who contracts tetanus is
  - a) Tetanus toxoid
  - b) Tetanus Immunoglobulin
  - c) Antitetanus serum
  - d) Tetanus antibodies
3. Sofosbuvir, given orally in hepatitis C patients, works by targeting
  - a) NS5B protein
  - b) NS5A protein
  - c) NS3/4 protein
  - d) NS7A protein
4. In hepatitis C, viral load fluctuations are expressed as “log” – and a log drop in viral load is considered as
  - a) 2.5-fold decrease
  - b) 10-fold decrease
  - c) 20-fold decrease
  - d) 25-fold decrease
5. The icteric phase during acute phase of hepatitis is characterized by
  - a) Malaise, fatigue, anorexia and hyperalgia etc
  - b) Dark urine, jaundice & clay-colored stools
  - c) Cough and low-grade fever
  - d) The start of recovery
6. Anti-infectives that are used in the triple-therapy regimens to eradicate *Helicobacter pylori* include:
  - a) Metronidazole
  - b) telithromycin
  - c) clarithromycin
  - d) Ciprofloxacin
7. In hepatitis B, positive serology with Hepatitis B envelop antigen (HBeAg) indicates
  - a) Previous infection with hepatitis B or immunization
  - b) Ongoing infection with hepatitis B
  - c) High infectivity, presence of acute active infection
  - d) Current infection, positive in chronic carriers
8. Phenytoin 1mg is equivalent to
  - a) 1.8 mg fos-phenytoin
  - b) 2 mg fos-phenytoin
  - c) 1.5 mg fos-phenytoin
  - d) 2.5 mg fos-phenytoin
9. In TDM, for blood sampling, the least variable point in the dosing interval is
  - a) Just after the peak plasma levels
  - b) Just after plasma drug distribution
  - c) Just before the next dose
  - d) Just after giving the dose
10. All the following viruses are enveloped except
  - a) Hepatitis A virus
  - b) Hepatitis B virus
  - c) Hepatitis C virus
  - d) Hepatitis D virus

11. In *H. pylori* non-invasive testing; in exhaled breath, C-urea breath test detects
- Isotope labelled urea
  - Isotope labelled urease
  - Isotope labelled carbon oxide
  - Isotope labelled carbon dioxide
12. In TB patients, pyridoxine is concurrently given with isoniazid to prevent
- Polyneuropathy
  - Hepatotoxicity
  - Hemolytic anemia
  - Acne
13. Diagnosis of gout:
- is based on GFR
  - is based on clinical signs and requires confirmation of urate crystals in the synovial fluid of affected joint
  - requires a positive ESR level
  - is based on joint pain
14. Presence of a volume of blood in area around vessel characterized by local swelling and discoloration is known as
- Hematoma
  - Extravasation
  - Infiltration
  - Keloid formation
15. Which one of the following is NOT the example of stimulant laxative
- Bisacodyl
  - Senna
  - Castor oil
  - Docusate
16. In patients of duodenal ulcer with bleeding Omeprazole is usually given in high doses for
- 24 hours
  - 48 hours
  - 72 hours
  - 12 hours
17. In patient with diarrhea, blood and mucus in stools is indicative of
- Bacterial etiology
  - Toxic megacolon
  - Invasive organism causing dysentery
  - Bowel perforation
18. A pharmaco-economic analysis that measures outcomes based on quality of life years adjusted by utility weights is called
- Cost-utility analysis
- Cost-effective analysis
- Cost-minimization analysis
- Cost benefit analysis
19. Which of the following should avoided in NSTEMI
- Heparin
  - Alteplase
  - Clopidogrel
  - Enoxaprin
20. Spirometry measures:
- forced expiratory volume
  - exhaled vital capacity
  - total lung capacity
  - inspiratory volume



# UNIVERSITY OF THE PUNJAB

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

Subject: Pharmacy Practice – VI (Advanced Clinical Pharmacy-II)

Paper: 2 Part – I (Compulsory)

(New Course)

Time: 30 Min. Marks: 20

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(20x1=20)

## Q.1. Encircle the correct option.

- Heparin is rapidly acting anticoagulant and interferes with the formation of
  - Thrombin
  - fibrin
  - Factor VII
  - prothrombin
- Gentamicin is preferably given in ONCE DAILY regimen
  - In renal impairment
  - Endocarditis
  - Severe Burn
  - Intra-abdominal Sepsis
- Blastomycosis occurs in respiratory system by exposure to
  - toxins
  - tuberculous bacillus
  - conidia
  - exotoxins
- Chest radiograph finding that suggest inactive tuberculosis disease include
  - Plural effusion
  - Linear opacity
  - Consolidation
  - Exudation
- Compared to multi-drug resistant tuberculosis (MDR-TB), extensive drug resistant tuberculosis (XRD-TB) are resistant to
  - At least isoniazid and rifampicin
  - To rifampicin only
  - To any fluoroquinolones and at least one injectable second line drugs
  - To any injectable second line drugs
- A chemotherapy that a person with cancer receives before primary course of treatment is termed as
  - Hormonal therapy
  - Adjuvant therapy
  - Neo-adjuvant therapy
  - Brachytherapy
- Thyroid gland produces 10 times T<sub>4</sub> to T<sub>3</sub> which is converted in to T<sub>3</sub> by
  - 5'-deiodinase
  - Thyro-peroxidase
  - Tyrosine
  - Iodine
- Panhypopituitarism is a condition due to
  - Loss of anterior pituitary function
  - Gain posterior pituitary function
  - Complete or partial loss of anterior and posterior pituitary function
  - Partial loss of posterior pituitary function
- Which ONE of the following drugs block growth hormone (GH) effects;
  - Bromocriptine
  - Octreotide
  - Pegvisomant
  - Tolvaptan
- The continued secretion of anti-diuretic hormone (ADH) resulted in;
  - Central diabetes insipidus
  - Nephrogenic diabetes insipidus
  - Syndrome of inappropriate anti-diuretic hormone
  - Autism spectrum disorder
- One of the major clinical manifestations of advanced disease in prostate cancer, which spread to the regional pelvic lymph node, is
  - Pelvic and perineal discomfort
  - Irritative voiding
  - Hematospermia
  - Paraparesis
- In DUR criteria, a drug that is contraindicated in any indication must have a percentage threshold of
  - 90%
  - 95%
  - 100%
  - 85%

13. Uncomplicated community acquired UTI is 80% of the cases is caused by
  - a) E. coli
  - b) Klebsiella
  - c) Proteus
  - d) P. aeruginosa
14. Tetanus is caused by Gram positive bacterium
  - a) Clostridium tetanoplasmin
  - b) clostridium tetani
  - c) clostrodium avium
  - d) clostrodium difficle
15. The cephalic phase of insulin secretion is
  - a) Post-absorptive state
  - b) Evoked by sight, smell and taste of food
  - c) The initial insulin burst
  - d) Where insulin rises more gradually
16. In insulin resistance, the rate controlling step in insulin-stimulated glucose disposal in the skeletal muscle is
  - a) Glycogen synthase
  - b) Reduced fatty acid oxidation
  - c) Activation of pyruvate dehydrogenase
  - d) Glucose transport or phosphorylation
17. Which ONE of the following are neuroglycopenic symptoms of hypoglycemia?
  - a) Sweating & trembling
  - b) Drowsiness & palpitations
  - c) Drowsiness & confusion
  - d) Tachycardia & faintness
18. In hyperosmolar hyperglycemic state (HHS) the hallmark of blood glucose concentration is
  - a) Above 250 mg/dL
  - b) Above 600 mg/dL
  - c) Above 180 mg/dL
  - d) Above 126mg/dL
19. Which one of the followings is a vital indicator of patient care
  - a) Dispensing time
  - b) Availability of copy of essential drug list
  - c) Average number of drugs prescribed
  - d) Patient knowledge about disease
20. The class of drugs that prolong the half-life of an endogenously produced glucagon like peptide-1
  - a) Meglitinides
  - b) Thiazolidinediones
  - c) Dipeptidyl peptidase inhibitors
  - d) Biguanides



# UNIVERSITY OF THE PUNJAB

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

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Subject: Pharmacy Practice – VI (Advanced Clinical Pharmacy-II)

Paper: 2

Part – II

(New Course)

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:** Briefly write on the followings (20)

- (a) Building a treatment regimen for MDR-TB
- (b) what is ABC analysis and its significance
- (c) incretin hormones and their role in controlling blood glucose levels
- (d) difference between adjuvant and neo-adjuvant therapy in breast cancer

**Q. # 3.**

- a) Discuss the therapeutic drug monitoring (TDM) of Digoxin. (10)
- (b) What are different types of drug utilization reviews (DUR), formulate the DUR criteria for Cimetidine (10).

**Q.# 4.**

- a) Write a note on the diagnosis and management of hyperosmolar hyperglycemic state (10).
- b) Describe the hazards of intravenous (IV) therapy and the role of a pharmacist in avoiding hazards of IV therapy (10)

**Q. # 5.**

- (a) What are the main causes of hyperthyroidism and the management algorithm of hyperthyroidism (10).
- (b) Draw glycemic control algorithm based on HbA1c levels (10)

**Q. # 6.**

- (a) Write a note on the clinical manifestations, diagnosis and treatment of Tinea cruris and Pityriasis versicolor (10)
- (b) What are WHO drug use core and complementary indicators; write in detail the patient and prescribing indicators of drug use. (10)

**Q. # 7.**

- (a) What are the disorders related to hyperactivity of anterior pituitary; explain any ONE in detail (10).
- b) How to study drug use problems; explain two qualitative methods to study these problems? (10)