
Knowledge Resource & Relay Centre (KRRC)

AIKTC/KRRC/SoP/ACKN/QUES/2019-20/

Date: 02/08/2022School: SoP-CBCSBranch: SoPSEM: VIII

To,
Exam Controller,
AIKTC, New Panvel.

Dear Sir/Madam,

Received with thanks the following **Semester/Periodic** question papers from your exam cell:

Sr. No.	Subject Name	Subject Code	Format		No. of Copies
			SC	HC	
1	Pharmaceutical Chemistry III	BPH_C_801_T		✓	
2	Pharmaceutics IV	BPH_C_802_T		✓	
3	Clinical Pharmacy	BPH-E-807-T		✓	
4	Pharmacovigilance	BPH-E-808-T		✓	
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Note: SC – Softcopy, HC - Hardcopy

(Shaheen Ansari)
Librarian, AIKTC

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Sem - VIII

215/22

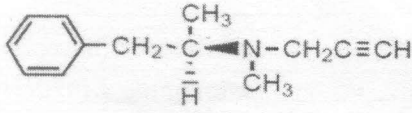
Subject: BPH_C_801_Pharmaceutical Chemistry-III (CBCS)

Year and Sem: Final Year B. Pharm, Semester VIII

Duration: 3 hours

Total marks:80

- N.B.: 1. All questions are compulsory
 2. Figures to right indicate full marks
 3. Draw structures wherever required.

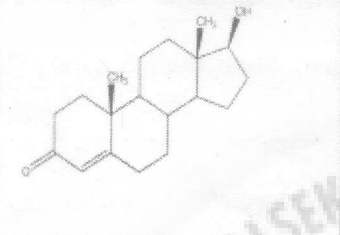
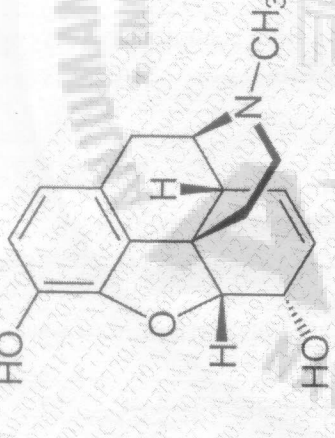
Q. 1	Choose appropriate option for following multiple choice based questions.	20 Marks
1	Example of highly selective agonist of the $\alpha 1$ -subunit-expressing GABAA receptors containing an imidazopyridine is,	
a	Zaleplon	
b	Zolpidem	
c	Indiplon	
d	Eszopiclone	
2	Example of the drugs containing Azaspirodeccanedione and suppressing serotonergic activity is,	
a	Buspirone	
b	Procyclidine	
c	Oxazepam	
d	Amantidine	
3	1-{1-[4,4-bis(4-fluorophenyl)butyl]-4-piperidyl}-2-benzimidazolinone is IUPAC name of	
a	Risperidone	
b	Droperidol	
c	Pimozide	
d	Sulpiride	
4	Mode of action of Ramelteon is -----	
a	Melatonin receptor antagonist	
b	Dopamine antagonist	
c	Melatonin receptor agonist	
d	Dopamine agonist	
5	Given drug is used to treat. 	
a	Alzheimer's disease	
b	Pain	
c	Parkinson's disease	
d	Myasthenia gravis	

6	Which of the following antidepressant drug gives antipsychotic drug after N substitution?	
a	Amitriptyline	
b	Amoxapine	
c	Sertraline	
d	Fluoxetine	
7	Which of the following process is involved in metabolism of Clomipramine?	
a	Epoxide formation	
b	Hydrolysis	
c	N-Demethylation	
d	Oxidation	
8	Carbamate ester group is present in the _____ drug	
a	Bethanechol	
b	Atropine	
c	Parathion	
d	Ecothiophate	
9	Amino acid required for the biosynthesis of Norepinephrine is	
a	L-Phenylalanine	
b	D-Phenylalanine	
c	L-Tyrosine	
d	D-Tyrosine	
10	4-amino-6,7-dimethoxyquinazoline ring system attached to a piperazine ring is present in which drug:	
a	Prazosin	

b	Phentolamine	
c	Phenoxy-benzamine	
d	Tolazoline	
11	In catecholamines, α -methyl substitution will result in	
a	Increase in activity	
b	Loss of activity	
c	MAO inhibition	
d	COMT resistance	
12	Select the incorrect option from the following.	
a	Aminoalcohol ether: Benztropine	
b	Aminoalcohol ester: Cyclopentolate	
c	Aminoalcohol: Procyclidine	
d	Aminoamide: Dicyclomine	
13	For Acetylcholine SAR choose the correct statement:	
a	Introduction of methyl group on β carbon increases nicotinic activity	
b	Introduction of methyl group on α carbon increases muscarinic activity	
c	There should be not more than five atoms between the nitrogen and the terminal hydrogen atom for maximal muscarinic potency.	
d	Nitrogen atom can be replaced by arsenic or sulfur	
14	Which of the following drug belongs to Indole acetic acid chemical class?	
a	Indomethacin	
b	Aspirin	
c	Mefenamic acid	
d	Celecoxib	
15	Rituximab drug is a:	
a	Co-stimulation modulator	
b	Interleukin 1 antagonist	
c	Uricosuric agent	
d	TNF inhibitor	

16	Which of the following is flexible opioid?	
a	Meperidine	
b	Nalorphine	
c	Codeine	
d	Morphine	
17	Which of the following drug synthesis involves reaction of 2-methoxy naphthalene with acetyl chloride in presence of AlCl ₃ ?	
a	Mefenamic acid	
b	Diclofenac	
c	Naproxen	
d	Ibuprofen	
18	Which of the following drug is COX-II inhibitor?	
a	Valdecoxib	
b	Piroxicam	
c	Nabumetone	
d	Mefenamic acid	
19	Which one of the following has maximum of mineralo-corticoid effect	
a	prednisone	
b	aldosterone	
c	betamethasone	
d	triamcinolone	
20	Presence of which of the following group in synthetic testosterone derivative avoid the metabolism of 17 β -OH group.	
a	17 α -CH ₃ group	
b	9 α -F group	
c	4 β -OH group	
d	11 β -OH group	

Q.2A	Answer any one of the following two questions	12 Marks
a	i. Discuss development of Z drugs with respect to the groups responsible for α -1 selectivity (structures required).	3 Marks
	ii. Give schematic representation for synthesis of Nitrazepam along with reagents and reaction conditions.	3 Marks
	iii. Give structure of a reversible AChE inhibitor with equipotent metabolite used for Alzheimer's disease.	3 Marks
	iv. What do you understand by Ageing which is observed in Organophosphates. Explain with relevant structures.	3 Marks

b	<p>i. Write the name and structure of NSAID belonging to the series of 4-hydroxy-1,2-benzothiazine carboxamide. Highlight the significance of the heterocyclic ring present for inhibition of cyclooxygenase activity.</p> <p>Outline all metabolites for Diclofenac and indicate whether they are active or inactive.</p>	6 Marks				
	<p>ii. With respect to the following structure what will happen if,</p> <div data-bbox="289 562 1143 813" style="border: 1px solid black; padding: 5px;">  <table border="1" data-bbox="634 568 1138 801"> <tbody> <tr> <td>1. methyl group is added at 17th position</td> </tr> <tr> <td>2. 3-keto group is removed</td> </tr> <tr> <td>3. C-19 methyl group is removed</td> </tr> <tr> <td>4. 17th hydroxyl group is oxidized</td> </tr> </tbody> </table> </div> <p>Name and give structure of corticosteroid with low salt retention property. Mention the therapeutic use</p>	1. methyl group is added at 17 th position	2. 3-keto group is removed	3. C-19 methyl group is removed	4. 17 th hydroxyl group is oxidized	6 Marks
1. methyl group is added at 17 th position						
2. 3-keto group is removed						
3. C-19 methyl group is removed						
4. 17 th hydroxyl group is oxidized						
Q. 2B	Answer any four of the following five questions	48 Marks				
a	<p>i. Answer the following with respect to scaffold given below</p> <div data-bbox="289 1155 630 1603" style="text-align: center;">  </div> <ol style="list-style-type: none"> 1. Give the name, structure and comment on activity when 3-hydroxy group is replaced with 3-methoxy group. 2. Comment on activity when methyl group on N is substituted with group containing cyclopropyl ring 3. Give the name and structure of a drug of the class obtained after removal of ether bridge. 4. Identify chiral carbons. Specify its stereochemical configuration <p>Give the structure of meperidine and give any two structural modifications that led to active analogs</p>	6 Marks				

	ii. Match the following and write structures of the drugs mentioned in column 1		6 Marks
	Paroxetine	Phenyl alkyl amine scaffold	3-dibenz[b,e]oxepine-11 (6H) ylidene-N,N-dimethyl-1-propanamine
	Imipramine	Oxa congener of Amitryptiline	Contains two chiral centers and only S,S-diastereomer is most active
	Doxepine	Phenoxy phenyl alkyl amine scaffold	N-demethyl metabolite is NET inhibitor
	Sertraline	Dihydrodibenzazepine scaffold	Converting Secondary amine to tertiary amine reduces SERT affinity by 100 times
b	i. Outline the synthesis of diethylstilbestrol (DES) with all reagents and reaction conditions		3 Marks
	ii. Explain why DES exhibits estrogenic activity inspite of absence of steroidal nucleus.		3 Marks
	iii. Give suitable justifications with relevant structures for the following:		6 Marks
	- Effect of ring substitutions in Clonidine on its activity		
	- Acebutalol exhibits long duration of action.		
c	i. Give name and the structure for a prodrug showing dopamine receptor agonist activity. This prodrug must be given in combination with which other drug? Give justification.		6 Marks
	ii. Answer the following:		6 Marks
	1. Depict mechanism of phenoxybenzamine.		
	2. With relevant structure and justification explain the effect of introduction of methyl group at alpha carbon in phenyl ethanolamine.		
d	i. Give chemical classification of antipsychotics. Write name and structure of one example in each class.		6 Marks
	ii. Give schematic synthesis for Chlorpromazine. Discuss development of antidepressant drug from Chlorpromazine.		6 Marks
e	i. Comment with justification and suitable structures wherever required for the following structural changes done in acetylcholine structure:		6 Marks
	1. Increasing the ethylene bridge to four carbons.		
	2. Addition of α -methyl substitution on Ethylene Bridge.		
	3. Conversion of acetyl group to propionyl group		
	4. Replacement of acetyl group with carbamoyl group		
	ii. Write a short note on Drugs used for treatment in Gout.		6 Marks
	Name any two cytokine inhibitors along with their mechanism of action		

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Sem - VIII

05/05/22

Final Year B. Pharm Sem VIII (CBCS)
Pharmaceutics IV – Descriptive Question Set
Semester Examination- FH2022
Academic Year 2021-2022

Set II

Sr No	Questions		Options
1	Which is a secondary route of parenteral administration	a	intravenous
		b	subcutaneous
		c	intramuscular
		d	intrauterine
2	In matrix devices, an increased porosity results in _____ drug release	a	increased
		b	decreased
		c	constant
		d	unpredictable
3	Antibacterial enzyme in the tears is	a	Liposomes
		b	Lipoprotein
		c	Lysozyme
		d	Lipase
4	Advantages of Parenterals	a	Quick onset of action
		b	Painful
		c	Difficult to reverse the physiological effect
		d	Requires skilled personnel
5	This is the layer of Cornea	a	Retina
		b	Stroma
		c	Epidermis
		d	Dermis
6	Buffers used in parenterals	a	acetates
		b	chlorates
		c	sulphates
		d	benzoates
7	Soft contact lenses are made up of	a	Cellulose acetate butyrate
		b	Cellulose acetate phthalate
		c	Polymethyl methacrylate
		d	Hydroxy ethyl methacrylate
8	Dissolution controlled DDS are governed by	a	Noyes-Whitney equation
		b	Michaelis-Menten equation
		c	Henderson Hasselbalch equation
		d	Arrhenius equation
9	In sterility test of Parenterals, fluid thioglycollate	a	Aspergillus niger

	medium is used for	b	Clostridium sporogenes
		c	Candida albicans
		d	Bacillus subtilis
10	pH dependent polymer used for colon targeting	a	Eudragit
		b	lactose
		c	starch
		d	HPMC
11	Requirement of floating drug delivery system is	a	high density
		b	larger particle size
		c	smaller particle size
		d	low density
12	Lacrisert used in management of	a	Dry eye syndrome
		b	Conjunctivitis
		c	Glaucoma
		d	fungal infection
13	Which of the following system requires drilling orifice in the dosage form?	a	Floating delivery system
		b	Push-pull osmotic pump
		c	orodispersible tablets
		d	mouth dissolving system
14	Which of the following used as enteric resin in microencapsulation	a	Cellulose Acetate phthalate
		b	Polyvinyl Chloride
		c	Polyvinyl Pyrrolidone
		d	Sodium Carboxymethyl cellulose
15	Phase separation – Coacervation can be brought about by all these processes except:	a	Non Solvent addition
		b	Temperature change
		c	Congealing
		d	Salt addition
16	Which of the following is water insoluble coating material	a	Ethyl cellulose
		b	Polyvinyl Pyrrolidone
		c	Sodium Carboxymethyl cellulose
		d	Gelatin
17	When a drug following one compartment open model, is administered as IV bolus injection, the pharmacokinetic parameters estimated are:	a	K_a , K_e , $t_{1/2}$
		b	K_a , T_{max} , CL
		c	C_{max} , CL , K_e
		d	K_e , $t_{1/2}$, AUC
18	The validation of process during regular	a	Concurrent validation

	production is called as		
		b	Prospective validation
		c	Retrospective validation
		d	Revalidation
19	The validation of process based on historical data is called as	a	Prospective validation
		b	Retrospective validation
		c	Concurrent validation
		d	Revalidation
20 step should be performed before placing order for an equipment	a	Installation qualification
		b	Performance qualification
		c	Operational qualification
		d	Design qualification

Q I. Attempt any one question

1. Discuss pilot plant scale up for tablets by wet granulation method. 12M
2. What are pyrogens. Discuss in detail pyrogen test in parenterals. 12M

Q II. Attempt any four questions

1. Explain leaker test in parenterals and metal particle test for collapsible tubes in ophthalmic ointments 12M
2. Discuss method of residuals and state its limitations. 12M
3. Explain types of contact lenses and write a note on contact lens solutions. 12M
4. Classify different methods of microencapsulation and mention the role and applications of microencapsulation in pharmaceutical industry. 12M
5. Give advantages of sustained release systems. Explain dissolution and diffusion controlled systems 12M

12/05/22

Question Paper set -2**End Semester Examination 2021-22
Final year B. Pharm Sem VIII (CBCS)****CLINICAL PHARMACY****Subject Code: BPH_E_807_T****Total Marks:80****Q 1. Choose the correct answer.****20 Marks**Q.
No.

- 1 Three 'C' of good clinical Pharmacy practice include
- A Communication, Consulting, Counselling
 - B Commanding, Caring, Cooperating
 - C Comparing, Correlating, Compounding
 - D Campaigning, Classifying, Coordinating
- 2 In India patient-based barrier for patient counselling is
- A Heavy prescription filling load on Pharmacist
 - B Counselling is not a mandatory legal requirement
 - C Unawareness that Pharmacist can provide drug information
 - D Lack of Privacy in Pharmacy
- 3 Which administration instruction should the pharmacist give to the patient while dispensing Metered inhalation aerosols?
- A May cause temporary discomfort
 - B Shake the inhaler vigorously before actuation
 - C Use a standard measuring device for uniform dosage
 - D Importance of keeping it sterile
- 4 Before the final closure of patient counselling
- A Summarise the main points in a logical order
 - B Summarise only side effects of drugs
 - C summarise medical Jargons
 - D summarise the pathogenesis of the disease
- 5 Bizarre type of ADRs is _____
- A Rebound effect on discontinuation
 - B Secondary pharmacological activity
 - C Excessive pharmacological activity
 - D Idiosyncrasy

- 6 Which of the following drug may cause vestibular ototoxicity?
- A Thyroxine
 - B Streptomycin
 - C Carbidopa
 - D Levodopa
- 7 The interaction between Calcium and Tetracyclines is which type of drug interaction?
- A Absorption
 - B Distribution
 - C Metabolism
 - D Excretion
- 8 Which of the following is the mechanism of excretion type of drug interaction?
- A Competition for active secretion
 - B Induction of CYP450
 - C Alteration of GIT pH
 - D Adsorption
- 9 Identify the drug which produces the Risk of kernicterus by displacement of bilirubin in the neonates
- A Phenytoin
 - B Methotrexate
 - C Sulphonamides
 - D Erythromycin
- 10 An increase in CNS sensitivity is observed more prominently in which of the important type of special populations?
- A Geriatric patients
 - B Paediatric patients
 - C Adult men
 - D Adult women
- 11 Which one of the following drug has a higher risk of causing confusion in the geriatric patients
- A Laxatives
 - B Antibiotics
 - C CNS Stimulant
 - D Hypnotics

18 Which is a pharmacoepidemiologic method is a group or cluster of case reports that may be generated by a single clinician, a group of the clinician, a hospital, and a pharmaceutical company?

- A Cohort studies
- B Meta-analysis
- C Case series study
- D Cross-sectional studies

19 In health economic evaluations, QALY stands for _____

- A Quality affected life year
- B Quality adjusted life year
- C Quantity adjusted life year
- D Quantity affected life year

20 Which of the following statements represents the best definition of Pharmacoeconomics?

- A Process of identifying, measuring, and comparing the costs, risks, and benefits of programs, services, or therapies and determining which alternative produces the best health outcomes for the resources invested.
- B Putting principles, methods, and theories into practice to quantify the value of pharmacy products and services used in the real world.
- C Studies that attempt to identify, measure, and evaluate the results of health care services in general.
- D Description and analysis of the costs of drug therapy to health care systems and to society.

Q.2 Answer ANY ONE of the following

12 Marks

- i Classify drug interactions. Discuss factors responsible for the occurrence of drug interactions. Write a note on drug-alcohol interaction.
- ii Give a definition of Informed consent. Discuss the Principles of GCP used in clinical trials.

Q.3 Answer ANY FOUR of the following

48 Marks

- i Write a note on methods to detect patient compliance to therapy. Justify which method is the most accurate method.
- ii Why adverse drug reactions are more common in geriatric patients. Add a note on pharmacodynamic factors affecting drug treatment in geriatric patients.
- iii Discuss various clinical practice opportunities for community pharmacists.
- iv Write a short note on drugs causing the following adverse drug reaction manifestations: a. Hepatotoxicity b. Nephrotoxicity.
- v Define Pharmacovigilance. Write a note on bioavailability and bioequivalence studies.

-----X-----X-----

- 12 The most accurate method for Therapeutic drug monitoring involves
- A Measurement of drug efficacy
 - B Measurement of medication concentrations in blood
 - C Measurement of drug metabolism
 - D Measurement of renal secretion of drug
- 13 _____ is a trial that consists of the administration of a drug or treatment to a target group of patients with both patient and staff being aware of which treatment is given.
- A Double-blind trial
 - B Single-blind trial
 - C Open trial
 - D Half-blind trial
- 14 How many patients are involved in Phase II clinical trial
- A 15 -45
 - B 2000-3000
 - C 1000-2000
 - D 100-400
- 15 In clinical trial, if volunteer wishes to discontinue the participation in trial then _____
- A Punish the volunteer
 - B Threaten the volunteer
 - C Impose a penalty
 - D Allow the volunteer to leave the trial
- 16 _____ is an international ethical and scientific quality standard for designing, conducting, recording, and reporting trials that involve the participation of human subject.
- A Good Manufacturing Practice
 - B Good Clinical Practice
 - C Good Laboratory practice
 - D Good Regulatory Practice
- 17 The main aspects studied in Analytic epidemiology is _____.
- A Place of disease
 - B Person factor
 - C Time of spread of disease
 - D Observational data

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- Sem. VIII

17/5/22

Subject: BPH E- 808 T-Pharmacovigilance**Year and Sem: Fourth Year B. Pharm – Sem VIII-CBCS****Duration: 3 Hours****Total marks: 80****N.B.: 1. All questions are compulsory****2. Figures to right indicate full marks**

Q. 1	Choose appropriate option for following multiple choice-based questions.	20
1	What is Pharmacovigilance?	
a	Science of Assessment of Adverse Effects of Drugs	
b	Study of Genomics of Biosimilar Products	
C	Activities related to Mechanism of Drug Action	
d	Study of Molecular Pharmacology	
2.	Who is responsible for Pharmacovigilance Programme of India?	
a	Pharmacy Council of India	
b	Indian Pharmacopoeia Commission	
C	Indian Council of Medical Research	
d	Central Drug Research Institute	
3	Naranjo's Scale method is used for:	
a	Spontaneous Reporting of Drug Safety	
b	Safety Monitoring of Clinical Trials	
C	Data Collection of Adverse Drug Reactions	
d	Causality Assessment of Adverse Drug Events	
4	Type B Adverse Drug Reactions Are:	
a	Related to Pharmacology of Drugs	
b	Predictable	
C	Dose Dependent	
d	Idiosyncratic	

5	The Serious Adverse Event:	
a	Results in Persistent Disability	
b	Have Mild Symptoms	
C	Can be managed by Out Patient Department	
d	Can be reported till next Seven Days	
6	Which of the following is the Method for Reporting of Adverse Drug Reactions?	
a	Translational Research	
b	Case Control Studies	
C	Micro dosing	
d	BA-BE Studies	
7	The ability of a Drug to cause Malformation in the foetus is called as:	
a	Genotoxicity	
b	Mutagenicity	
C	Teratogenicity	
d	Myelosuppression	
8.	Aspirin can cause _____ in Children Patients	
a	Addison's Disease	
b	Cartilage Damage	
C	Gray Baby Syndrome	
d	Reye's Syndrome	
9.	One of the Following is Active surveillance Pharmacovigilance method	
a	Sentinel sites	
b	Spontaneous reports	
C	Cohort Studies	
d	Case Control Method	

10.	Which of the Following documents is related to Pharmacovigilance?	
a	Clinical Study Report	
b	Periodic Safety Update Report	
C	Drug Dossier	
d	Case Record Form	
11	Which one of the following is an Activity associated with Pharmacovigilance?	
a	Translational Research	
b	Pre-clinical Drug Development	
C	Vaccine Safety Surveillance	
d	Phase I Clinical Study	
12	One of the Following is a type of Drug Utilization Study:	
a	BA-BE Study	
b	Phase I Clinical Development	
C	Translational Research	
d	Cross Sectional Study	
13.	Case Control Study is a type of:	
a	Observational Study	
b	Cost Analysis	
C	Pre-clinical Drug Development	
d	In-vitro Bioassay	
14.	Which one of the following is an example of Primary Drug Information Resource?	
a	Review Article	
b	Original Research Publication	
C	Electronic Indexing Systems	
d	Compendium	

15.	The Adverse Drug Reaction: Hypoglycaemia produced by Oral Anti-diabetic Agents is:	
a	Type B ADR	
b	Type D ADR	
C	Type A ADR	
d	Type C ADR	
16.	ICH Guideline entitled Pharmacovigilance Planning is _____	
a	E 2-C	
b	E 19	
C	E 6 -R 1	
d	E 2 E	
17.	WHO Uppsala Monitoring Centre holds and maintains one of the following Individual Case Safety Reports Database	
a	Vigibase TM	
b	Argus Database	
C	Materiovigilance Data	
d	Toxnet	
18.	Schedule Y is a Part of one of the following Act	
a	Indian Patent Law	
b	Drugs & Cosmetic Act	
C	Drug Price Control Order	
d	The Pharmacy Act	
19.	CIOMS was jointly established in 1949 by	
a	CDSCO & UMC	
b	USFDA & ICH	
C	WHO & UNESCO	
d	World Medical Association & EMEA	

20.	Which one of the following is Drug Regulatory Authority in India?	
a	Pharmacy Council of India	
b	Indian Council of Medical Research	
C	Central Drug Research Institute	
d	Central Drugs Standard Control Organization	
Q. 2 A	Answer Any One question.	12
a	Classify Adverse Drug Reactions with suitable examples. Discuss any two Methods for Causality Assessment.	
b	Elaborate on various types of Drug Utilization Studies. Add a note on Generation of Medication Safety Data during Clinical Phase.	
Q. 2 B	Answer Any Four questions.	48
a	Write Notes on: 1. WHO International Drug Monitoring Programme 2. Pharmacovigilance Programme of India	
b	1. Discuss various methods of Reporting of Adverse Drug Reactions. 2. Differentiate between Type A and Type B Adverse Drug Reactions.	
c	Explain Drug Safety Evaluation in: 1. Paediatric Population: 2 Geriatric Population.	
d	1. Elaborate on Active Surveillance Methods of Pharmacovigilance 2. Give a brief account on: Communication in Drug Safety Crisis Management	

e	Write Notes on: 1. Periodic Safety Update Report 2. Council for International Organizations of Medical Sciences	
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***** All the Best *****

