BRAHMANBARIA MEDICAL COLLEGE

Term-I Examination

Subject: Pharmacology and Therapeutics

Old Curriculum, SAQ Subject Code:17

Marks: 80 Time: 2 hours 30 minutes.

Instruction: Answer any Five [5] Questions from each Group

Use separate answer scripts for each group

Group-A (20)

1. Define drug according to World Health Organization. List six properties of drug. Discuss the factors that determine the routes of drug administration.(1+1+2)
2. Define absorption. Discuss three factors that influence the movement of drug across the biological membrane.Mention the clinical significance of half-life of drug? (1+2+1)
3. Write down the aims & objectives of biotransformation. Mention the chemical reactions of phase I and phase II biotransformation. Discuss the clinical significance of alteration of urinary pH.(1+2+1)
4. List the signal transduction mechanism of drug action. Discuss the signal transduction mechanism following stimulation of adrenergic receptors. (1+3)
5. A 10-year-old boy develops acute angioedema with stridor following an injection of intramuscular penicillin in the emergency department.
   - What type of Adverse Drug Reaction (ADR) is it? (0.5)
   - Outline the duty of a doctor after encountering such a case of ADR. (3)
   - Which type of antagonism is preferred for the treatment of this patient? (0.5)
6. Discuss the factors that determine individual variation in drug response. Discuss the clinical significance of plasma protein binding of a drug. (3+1)

Group-B (20)

1. Mention the natural catecholamine. Write down the steps of biosynthesis of them. Whichone of them is selective for anaphylactic shock and why?(0.5+2.5+1)
2. Classify drugs used in the management of Bronchial Asthma. Discuss the role of Montelukast and Steroids in chronic bronchial asthma. (2.5+1.5)
3. Mention the differentiating points between physostigmine and neostigmine. What is the role of Pilocarpine in Glaucoma.(2+2)
4. Mention the name of antispasmodics and mydriatics group of antimuscarinic drugs with their applications.Differentiate suxamethonium and Pancuronium on the basis of Mechanism of action. Write down the adverse effects of suxamethonium.(1.5+2+.5)
5. State the name of Cardio Selective Beta Adrenoceptor Blockers with advantages over non selective. Write down clinical applications and common side effects of Propranolol.(2+2)
6. List the α-blockers. Which α-blockers would you prefer in a normotensive patient with Benign Hyperplasia of Prostate and why? (1+3)

Group-C (20)

1. Categorize anti-hypertensive drugs according to their mechanism of action. What are the drugs used in Hypertensive Emergencies? (2.5+1.5)
2. Explain the following
a. Monitoring needed in the case of HMW Heparin therapy? (1.5)
b. Warfarin therapy is overlapped with Heparin therapy – Why? (2.5)
3.Compare β blocker, GTN and Diltiazem as Anti Anginal Agent. Explain how nitrate produce tolerance. (3+1)
4. Enlist the lipid lowering agents available in Bangladesh. How Atorvastatin lower blood lipid level? (1.5+2.5)
5.What do you mean by Total Dose Infusion? How can you calculate? How can youdetermine the duration of oral iron therapy? (1+1+2)
6. Explain the pharmacological basis of using
a. ACEi for Hypertensive Diabetic Nephropathy Patient. (1)
b. Aspirin for the Patient with Myocardial Infraction. (2)
c. Frusemide in CCF Patient. (1)

Group D (20)

1. Enlist the hypoglycemic anti diabetic agents. Write down the mechanism of action, indication and adverse effects of any one of the oral euglycemic agent.(1+3)

2. Classify Glucocorticoids according to their route of administration.Explain the permissive action of Glucocorticoids. What are the consequences of sudden withdrawal of steroid after prolong therapy.(1.5+1+1.5)
3.Compare between
   a. Domperidone & metoclopramide as prokinetic agent. (2)
   b. Oxytocin and ergometrine and prostaglandin as oxytocic. (2)
4. How will you approach to treat a case of PUD?Justify the combination of alluminium hydroxide with magnesium hydroxide in treating a case of PUD. (3+1)
5. A boy of 20 years got admitted in the hospital and diagnosed as a case of diabetes mellitus.
Which drug is suitable for him? Explain its mechanism of action and three adverse effects.
- Which drug is suitable for him? Explain its mechanism of action and three adverse effects. (4)

6.Discuss the treatment approach for a case of diarrhea.What are the role of ORS and zinc in diarrhea?(2+2)

Brahmanbaria Medical College
1st Term Examination-Old Curriculum
Subject: Department of Pharmacology and Therapeutics (MCQ)
Full Marks: 20 Time: 30 minutes
Encircle the 'T' for True or 'F' for False on the OMR sheet

1.	If a drug is highly bound to plasma proteins, it	
	a.	has a large volume of distribution
	b.	has a high renal clearance
	c.	is a likely candidate for drug interactions
	d.	is most likely carried by alpha-glycoprotein
	e.	is a quaternary ammonium salt

2.	Drugs having low therapeutic index	
	a.	Amlodipine
	b.	Paracetamol
	c.	Digoxin
	d.	Ranitidine
	e.	Barbiturate

3.	Factors regulating HCL secretion are-	
	a.	ACh
	b.	Adrenaline
	c.	Histamine
	d.	Somatostatin
	e.	Pepsin

4.	Glucocorticoids produce osteoporosis by-	
	a.	increasing the excretion of calcium
	b.	inhibiting absorption of calcium
	c.	stimulating the hypothalamic-pituitary-adrenal axis
	d.	decreasing production of prostaglandins
	e.	decreasing collagen synthesis

5.	Physiological antagonism is found in-	
	a.	Isoprenaline and Salbutamol
	b.	Isoprenaline and Adrenaline
		Adrenaline and Histamine

6.	**Following drugs are used to prevent Motion sickness**	
	a.	Hyoscine
	b.	Loperamide
	c.	Haloperidol
	d.	Ondansetron
		Promethazine

7.	**All of the following are used in OPC poisoning except**	
	a.	Pralidoxime
	b.	Atropine
	c.	Activated charcoal
	d.	Domperidone
	e.	Naltrexone

8.	**Indirect thrombin inhibitor:**	
	a.	Dicumarol
	b.	Deltaperin
	c.	Heparin
	d.	Warfarin
	e.	Enoxaparin

9.	**Beta blocker are contraindicated in**	
	a.	Bronchial asthma
	b.	Heart failure
	c.	Hypothyroidism
	d.	Migraine
	e.	Diabetic mellitus

10.	**Advantage of salmeterol over salbutamol are:**	
	a.	Shorter duration of action.
	b.	More potency
	c.	Longer duration of action

11.	Drugs causing hepatic enzyme induction are-	
	a.	Rifampicin
	b.	Carbamazepine
	c.	Ciprofloxacin
	d.	Phenobarbitone
	e.	Metronidazole

12.	Following drugs can be administered orally-	
	a.	Insulin
	b.	Antacid
	c.	Propranolol
	d.	Statin
	e.	LMW heparin

13.	Drugs that don't cause hypoglycemia-	
	a.	Glimepiride
	b.	Acarbose
	c.	Nateglinide
	d.	Liraglutide
	e.	Metformin

14.	Agents that could be used in opioid induced constipation-	
	a.	Senna
	b.	Lactulose
	c.	Opioid antagonist
	d.	Lubiprostone
	e.	Magnesium hydroxide

15.	Cabergoline is-	
	a.	a recombinant version of FSH
	b.	used for hyperthyroidism
	c.	dopamine agonist
	d.	an antidiuretic hormone
	e.	is used for hyperprolactinemia

16.	Anti-hypertensive drugs used in pregnancy-	
	a.	Captopril
	b.	α-methyldopa
	c.	Labetalol
	d.	Nifedipine
	e.	Losartan

17.	Most common adverse effect of ACEi	
	a.	Dry cough
	b.	Angioedema
	c.	Hyperkalaemia
	d.	Hypovolumia
	e.	1st Dose Hypotension

18.	Atropine causes-	
	a.	Cycloplegia
	b.	Bradycardia
	c.	Decreased IOP
	d.	Urinary incontinence
	e.	Tachycardia

19.	Adverse effects of thiazide diuretics-	
	a.	Hyperglycemia
	b.	Hyperkalemia
	c.	Ototoxicity
	d.	Nephrotoxicity
	e.	Hyperuricemia

20.	ß blockade by propranolol leads to	
	a.	Increase oxygen supply to the heart
	b.	Bronchoconstriction in asthmatic patient.
	c.	Decrease CO
	d.	Decrease PVR
	e.	Decrease oxygen demand to the heart

Brahmanbaria Medical College

Department of Pharmacology & Therapeutics

2nd Term Examination

Full Marks: 80 Time: 2hours and 30 minutes

Subject code: 17

All questions carry equal marks [5]

Answer any 8[eight] questions from each group

Use separate answer scripts for each group

Group A

1. Discuss molecular pharmacology of GABA-A receptor. Compare mechanism of action of BDZ and barbiturate as sedative hypnotic. (2+3)
2. Describe the neurological basis of origin of epilepsy. Discuss the role of GABA in the pathogenesis of epilepsy and their targets during therapy. (1.5+3.5)
3. Enlist common addiction producing drugs. Explain how morphine produces analgesia? Write down the drug treatment of morphine addiction. (1+2.5+1.5)

4. What are the dopaminergic tracts in CNS? List antipsychotic drugs according to their mechanism of action. Compare Typical and Atypical antipsychotic drugs. (1+2+2)

5. Name some clinically useful local anaesthetics. Write down different ways of application of local anesthetic agents. Discuss the danger of their use. (1+2.5+1.5)

6. What do you mean by dissociative type of anaesthesia? Compare in between Nitrous oxide and Halothane as general anaesthetic agent. (2+3)
7. List the clinically useful Non-Sedative Antihistamine. Enlist the therapeutic uses of H1-receptor blockers. Discuss the advantages of second generation over first generation H1 – receptor blockers. (1+1+3)

8. What do you mean by autacoids? Name some autacoids. Briefly discuss clinical uses of different prostaglandin. (1+1+3)

9. Write short notes on: (2.5+2.5)

   a. Essential drug
   b. Pre anaesthetic medication

Group B

1. Classify the antimicrobial agents according to their mechanism of action. Discuss the general principles in prescribing antimicrobials. (2+3)
2. Compare Erythromycin with Azithromycin. How does Penicillin produce anaphylaxis? How will you manage this anaphylaxis? (3+1+1)
3. Write down the name of Aminoglycosides. Illustrate the common criteria of Aminoglycosides. List the toxicities produced by these agents. (1+3+1)
4. Describe the characteristics of 3rd generation Cephalosporins. Give examples and adverse effects of 3rd generation Cephalosporins. Enlist the anti-pseudomonal antibiotics. (2+2+1)
5. Describe the short course anti-tubercular regimen. List two adverse effects of each drug used in this regimen. Why initially four drugs used for two months? (1.5+1.5+2)
6. List anti-malarial agents according to updated national guideline. Describe the chemoprophylaxis for Malaria. (3.5+1.5)
7. Justify the combination of the following drugs in the same formulation- i) Sulfamethoxazole & Trimethoprim & ii) Amoxicillin & Clavulanic acid (2.5+2.5)
8. Classify drugs used in the management of bronchial asthma. Discuss the role of Montelukast and steroids in chronic bronchial asthma. (1+4)
9. Write short notes on-
   a) Respiratory Fluroquinolone (2.5)
   b) P drug (2.5)

Brahmanbaria Medical College

2nd Term Examination

Subject: Department of Pharmacology and Therapeutics (MCQ)

Full Marks: 20 Time: 30 minutes

All questions carry equal marks

Use OMR(Optical Mark Recognition) sheet as answer script

Fill up the appropriate circle in OMR sheet for true or false answer

Q.1	**Regarding Metronidazole-**		**Q.6**	**Luminal amebicides include-**	
	a)	Used in extraluminal amebiasis		a)	Tinidazole
	b)	It kills trophozoites of *E histolytica*		b)	Metronidazole
	c)	Effectively eradicates intestinal and extraintestinal tissue infections		c)	Diloxanide furoate
	d)	Has extended spectrum coverage		d)	Paromomycin
	e)	Listed in Watch group of AWaRecategory		e)	Iodoquinol
Q.2	**Drug(s) used in acute asthma-**		**Q.7**	**Uncomplicated malaria with chloroquine-resistant P falciparum can be treated with-**	
	a)	Ipratropium		a)	Quinidine
	b)	Hydrocortisone		b)	Coartem
	c)	Montelukast		c)	Mefloquine
	d)	Salbutamol		d)	Malarone
	e)	Cromolyn Sodium		e)	Artesunate
Q.3	**Agents having time-dependent killing-**		**Q.8**	**All of the following drugs are β-Lactam antibiotics-**	
	a)	Macrolides		a)	Imipenem
	b)	Fluoroquinolones		b)	Cephradine
	c)	Cephalosporins		c)	Clavulanic acid
	d)	Aminoglycosides		d)	Cycloserine
	e)	Vancomycin		e)	Cephadroxil
Q.4	**Following agents can be used safely in patients with history of penicillin allergy-**		**Q.9**	**Following drugs show disulfiram like reaction with alcohol-**	
	a)	Aztreonam		a)	Ampicillin
	b)	Ceftriaxone		b)	Metronidazole
	c)	Cefaclor		c)	Griseofulvin
	d)	Macrolides		d)	Tetracycline
	e)	Cefepime		e)	Cefotetan
Q.5	**First-line anti-tubercular drugs include-**		**Q.10**	**Theophylline-**	
	a)	Levofloxacin		a)	Has a narrow therapeutic index
	b)	Isoniazide		b)	Stimulate phosphodiesterase enzyme
	c)	Pyrazinamide		c)	Used in bronchial asthma
	d)	Ethambutol		d)	Is a xanthine derivative
	e)	Streptomycin		e)	Reduces the effects of $_c$AMP

Q.11	**Drugs for partial seizure include-**		**Q.16**	**Following drugs produce extra pyramidal effect:**	
	a)	Carbamazepine		a)	Metoprolol
	b)	Phenytoin		b)	Metoclopramide
	c)	Valproic acid		c)	Haloperidol
	d)	Phenobarbitone		d)	Tramadol
	e)	Ethusuximide		e)	Prochlorperazine
Q.12	**Tricyclic antidepressant group of drugs-**		**Q.17**	**Which of the following is not an autacoid?**	
	a)	May produce tachycardia and palpitation		a)	Histamine
	b)	Inhibit the neuronal uptake of Noradrenaline		b)	Lipoprotein
	c)	Have a rapid onset of action		c)	Prostaglandin
	d)	May cause constipation and dry mouth		d)	Leukotriene
	e)	Do not produce postural hypotension		e)	Serotonin
Q.13	**Volatile liquids used as inhalation anesthetics are-**		**Q.18**	**Following agents have antihistamine with antiemetic property-**	
	a)	Enflurane		a)	Ondansetron
	b)	Nitrous oxide		b)	Meclizine
	c)	Ether		c)	Loratadine
	d)	Halothane		d)	Promethazine
	e)	Nitrous oxide		e)	Diphenhydramine
Q.14	**Ketamine:**		**Q.19**	**Following statements about benzodiazepines are-**	
	a)	Is a phencyclidine derivative		a)	It acts as GABA agonist
	b)	It acts by blocking NMDA receptors of glutamine		b)	Diazepam is a short acting benzodiazepine
	c)	It decreases blood pressure		c)	Nitrazepam is metabolized in the liver
	d)	It is intravenous anesthetic of choice in bronchial asthma		d)	Diazepam causes lesser respiratory depression than Midazolam
	e)	It depresses pharyngeal and laryngeal reflexes		e)	Diazepam has higher abuse potential than midazolam
Q.15	**Morphine:**		**Q.20**	**Central dopeminergic receptor blockade results in:**	
	a)	May cause miosis		a)	Mood elevation
	b)	Has specific receptors in the GIT		b)	Emotional quietening
	c)	Has anti-emetic effect		c)	Loss of unconditional reflex
	d)	May cause diarrhea		d)	Gynaecomastia
	e)	Addiction due to euphoria		c)	Extrapyramidal motor disturbamce