MBBS SECOND PROFESSIONAL

MODEL PAPER FOR ANNUAL 2009

Pharmacology and Therapeutics
(Multiple Choice Questions)

Total Marks: 65 **Time Allowed: 1 hour 05 Minutes**

Q.1 A 20 year old male suffered from moderate Aspirin toxicity; he may be managed by promoting its excretion when infused with:

a) Ascorbic acid.
b) Acid citrate.
c) Sodium bicarbonate.
d) Sodium chloride.
e) Quinidine sulphate.

Q.2 A 15 year old boy needs to be avoided from the central effects of the drugs; therefore he should be given some quaternary amine drug which has the structure like:

a) 

b) 

c) 

d) 

e) 

Q.3 A 25 year old female was given 200mg of a drug I/V in a single dose; during first 120 minutes its 100mg were eliminated. As this drug follows first-order elimination kinetics, after 6 hours the amount of the drug left behind in the blood will be:

a) None.
b) 5 mg.
c) 15 mg.
d) 25 mg
e) 35 mg.

Q.4 A 2 month child accidentally got a dose of chloramphenicol which may be harmful to him due to low enzymatic activity. It is metabolised through phase-I reaction like:

a) Acetylation.
b) Reduction.
c) Sulfation.
d) Methylation.
e) Glucoronidation.

Q.5 A single 10 mg dose of Enalapril was given to a hypertensive patient; after first half life of 3 hours its plasma concentration was 50 ng/ml. To reach almost 0.75 ng/ml it will take:

a) 9 hours.
b) 15 hours.
c) 21 hours.
d) 27 hours.
e) 30 hours.

Q.6 After synthesis in the cytoplasm, Acetylcholine is stored in the vesicles and in each vesicle the "quanta" of acetylcholine molecules usually contain:

a) 500 – 1000 molecules.
b) 1000 – 10,000 molecules.
c) 1000 – 20,000 molecules.
d) 1000 – 50,000 molecules.
e) 1000 – 100,000 molecules.

Q.7 Extensive research up till now on the adrenergic receptors has shown that the endothelium of the blood vessels contains:

a) α_1 - receptors.
b) α_2 - receptors.
c) β_1 – receptors.
d) β_2 – receptors.
e) No adenoceptors.

Q.8 A 30 year old asthmatic patient is having mild to moderate hypertension; he may be best managed by a good beta-blocker, like:

a) Atenolol.
b) Nadolol.
c) Pindolol.
d) Propranolol.
e) Timolol.

Q.9 A 60 year old male patient wit a history of postural hypotensive attacks is in need of an a_{1A} – specific blocker for his benign prostatic hyperplasma like:

a) Prazosin.
b) Terazosin.
c) Doxazosin.
d) Tamsulosin
e) Alfuzosin.

Q.10 An accidental overdosage of Chlordiazepoxide was observed in a 6 year old child; he may be best treated by giving him an antagonist like:

a) Flumazenil.
b) Naloxone.
c) Fomepizole.
d) Nalorphine.
e) Naltrexone.

Q.11 A 40 year old male was under alcoholism and apart from an increased risk of severe liver disease he may be at an increased risk for:

a) Angina.
b) Heart failure.
c) Pulmonary hypertension.
d) Renal impairment.
e) CNS-tumours.

Q.12 A 60 year old lady who was undergoing a cardiac surgery got an agent which provided full analgesia without any cardiac effect; but the patient was having full awareness during surgery with recall after it. Most probably she got:

a) Ketamine.
b) Enflurane.
c) Fentanyl.
d) Thiopental.
e) Midazolam.

Q.13 Lidocaine, an amide was injected in an infected tissue to get a local anaesthesia; its pKa is 7.9; 90% of the drug converted in an ionized state because the tissue pH was:

a) 6.9.
b) 5.9.
c) 4.9.
d) 3.9.
e) 2.9.

Q.14 A young girl of 15 years old experiences epileptic fits during her menstrual periods. She may however be managed with:

a) Ethosuximide.
b) Valproic acid.
c) Phenytoin.
d) Corticosteroids.
e) Acetazolamide.

Q.15 In the management of opioid withdrawal states the drugs usually used are those which have:

a) Short duration of action.
b) Long duration of action.
c) Pure antagonistic activity.
d) Euphoric effects also.
e) Mixed agonist-antagonistic activity.

Q.16 A 35 year old depressive patient who was taking a tricyclic Antidepressant also got clonidine to manage his hypertension. The possible drug interactions may show:

a) Re-appearance of depressive symptoms.
b) Increased respiratory depression.
c) Increased blood pressure.
d) Decreased blood pressure.
e) Increased anticholinergic activity.

Q.17 A 50 year old woman with a history of peptic ulcer disease is suffering from early stages of Rheumatoid Arthritis. She may be better managed with:

a) Penicillamine.
b) Methotrexate.
c) Omeprazole.
d) Celecoxib.
e) Indomethacin.

Q.18 Paracetamol is almost free of anti-inflammatory effect; its analgesic mechanism of action is:

a) Selective COX-2 inhibition.
b) Non-Selective COX 1 & 2 inhibition.
c) COX-3 inhibition in CNS.
d) Low CO_2 levels at Spinal Cord.
e) Decreased levels of Substance-P.

Q.19 In those patients with a history of GIT upset due to various NSAIDS, one of the followings may be better tolerated comparatively:

a) Aspirin.
b) Indomethacin.
c) Ibuprofen.
d) Diclofenace sodium.
e) Naproxen.

Q.20 A 35 year old patient suffering from Chronic Gout needs increased urinary excretion of uric acid; one of the followings will be effective even if he is having renal insufficiency:

a) Probenecid.
b) Sulfinpyrazone.
c) Allopurinol.
d) Colchicine.
e) Benzbromarone.

Q.21 Sulfasalazine is also a disease-modifying anti-rheumatic drug; it can show anti-rheumatic action due to its active metabolite:

a) Sulfapyridine.
b) 5 – aminosalicylic Acid.
c) Acetylsalicylic Acid.
d) Hydroxysalicylic Acid.
e) Sodium Salicylic Acid.

Q.22 A 30 year old pregnant lady was diagnosed to be suffering from haemolytic anaemia; no exact cause of it could be found except that of a history of drug intake to control her hypertension. The most likely drug she took may be:

a) Propranolol.
b) Captopril.
c) Clonidine.
d) Methyldopa.
e) Hydralazine.

Q.23 A 55 year old male has been taking orally Nitroglycerin for any acute attack of "Angina on Effort". But due to frequently occurring such attacks he must be given some useful alternative like:

a) Esmolol.
b) Amyl nitrite.
c) Diltiazem.
d) Isosorbide dinitrate sublingually.
e) Sublingual nitroglycerine.

Q.24 To treat a case of chronic congestive cardiac failure a drug is to be selected which can reduce the mortality also; but one of the followings can hardly reduce the mortality like:

a) Spironolactone.
b) Captopril.
c) Enalapril.
d) Carvedilol.
e) Digoxin.

Q.25 Lidocaine is an amide local anesthetic agent but also has useful anti-arrhythmic activity. Typically it:

a) Decreases resting potential.
b) Decreases abnormal automaticity.
c) Increases PR interval.
d) Increase contractility.
e) Increases duration of action potential.

Q.26 A 40 year old hypertensive patient while taking anti-hypertensive drugs suffered from a precipitous fall in blood pressure and fainting on initial administration. It is commonly seen with:
a) Nifedipine.
b) Prazosin.
c) Atenolol.
d) Hydrochlorthiazide.
e) Verapamil.

Q.27 The possible interactions of ACE inhibitors and Spironolactone include:
a) Increased attacks of dry cough.
b) Allergic reactions.
c) Hyperkalemia.
d) Hyponatremia.
e) Hypercalcemia.

Q.28 A 60 year old woman suffered from hyperchloremic metabolic acidosis due to which she is complaining of paraesthesias and occasional nausea; this is usually associated with:
a) Acetazolamide.
b) Hydrochlorthiazide.
c) Furosemide.
d) Amiloride.
e) Mannitol.

Q.29 A 40 year old patient was admitted in a hospital emergency due to postmyocardial infarction – 'Acute Pulmonary Edema'. He may be given:
a) Acetazolamide.
b) Hydrochlorthiazide.
c) Furosemide.
d) Triamterene.
e) Mannitol.

Q.30 A 50 year old lady when given Alteplase have shown improvement for ischemic stroke attack; however she must be put on one of the following drugs to prevent recurrence of such attacks:
a) Aspirin.
b) Warfarin.
c) Enoxaparin.
d) Urokinase.
e) Aminocaproic Acid.

Q.31 A 60 year old lady suffering from Deep Vein Thrombosis (DVT) in her left thigh was well maintained on Warfarin but now suddenly reported back for her severe nose-bleed. She must be immediately treated with:
a) Factor VIII.
b) Vitamin K_1.
c) Protamine.
d) Alteplase.
e) Aminocaproic Acid.

Q.32 A 50 year old male presents with striking hypertriglyceridemia; after about 6 months of drug treatment his "triglyceride and VLDL Cholesterol" levels dropped dramatically but his "HDL Cholesterol" levels had doubled. This phenomenon is commonly seen with:
a) Lovastatin.
b) Gemfibrozil.
c) Niacin.
d) Colestipol.
e) Ezetimibe.

Q.33 Although prescribed by a careless physician for ulcerative colitis but it is hardly useful; the drug is:

a) Prednisone.
b) Methotrexate.
c) Infliximab.
d) Azathioprine.
e) Loratadine.

Q.34 A 65 year old lady who is a known patient of Parkinsonism is also on anti-cancer therapy; but to avoid their nauseating effects she must be kept away from such a drug which may also cause extrapyramidal dysfunction e.g:

a) Dexamethasone.
b) Ondansetron.
c) Dronabinol.
d) Metoclopramide.
e) Prochlorperazine.

Q.35 In an old age debilitated patient who is having chronic constipation with severely reduced bowel tone may be benefited with:

a) Castor oil.
b) Glycerine.
c) Mineral oil.
d) Magnesium hydroxide.
e) Phenolphthalein.

Q.36 Diphenoxylate is an opioid derivative anti-diarrheal drug and it is usually combined with Atropine to:

a) Enhance its activity.
b) Reduce its CNS side effects.
c) Reduce the likelihood of abuse.
d) Make useful for children also.
e) Decrease the GIT secretions.

Q.37 A 40 year old known asthmatic patient reported to emergency for his severe exacerbations of asthma; he must get oxygen and frequent administration of corticosteroid with:

a) Epinephrine.
b) Salbutamol.
c) Ipratropium.
d) Cromolyn.
e) Zileuton.

Q.38 The life saving drug given parenterally in severe status asthmaticus will act by inhibiting Phospholipase A_2:

a) Epinephrine.
b) Aminophylline.
c) Salbutamol.
d) Prednisone.
e) Metaproterenol.

Q.39 A 55 year old patient suffering from persistent dry cough for the last 2 months due to unknown reasons wants to get a drug without having constipating effect like:

a) Codeine.
b) Dextromethorphan.
c) Pholcodein.
d) Hydrocodone.
e) Physostigmine.

Q.40 After taking Aspirin a 25 year old patient suffered from severe bronchospasm who may be now managed by giving:
a) Epinephrine.
b) Aminophyleine.
c) Loratedine.
d) Zafirlukast.
e) Omalizumab.

Q.41 Minimum Bacterial Concentration (MBC) is the lowest concentration of any antibiotic which kills the bacteria up to:
a) 90.0%.
b) 95.0%.
c) 98.0%.
d) 99.0%.
e) 99.9%.

Q.42 To get the synergistic effect, all the b-lactam antibiotics can be combined with:
a) Macrolides.
b) Chloramphenicol.
c) Aminoglycosides.
d) Quinolones.
e) Tetracyclines.

Q.43 A 30 year old female developed antibiotic-induced colitis due to C. difficile; she was given Metronidazole to treat it but it proved ineffective. Now she can respond to oral:
a) Amoxicillin.
b) Erythromycin.
c) Chloramphenicol.
d) Doxycycline.
e) Vancomycin.

Q.44 Erythromycin is an older macrolide antibiotic which is different from its newer family members like Azithromycin in that it has:
a) Longer half-life.
b) Lesser oral absorption.
c) No active metabolite.
d) Good urinary excretion.
e) Larger lactone ring.

Q.45 The Mechanism of Action of Clindamycin is the same as that of:
a) Penicillin.
b) Erythromycin.
c) Tetracyclines.
d) Ciprofloxacin.
e) Trimethoprim.

Q.46 In a 40 year old male the culture growth has shown the infection due to Streptococcus Pneumoniae which is sensitive to Quinolones; being a known patient of Severe Hepatitis, he must avoid to take:
a) Ciprofloxacin.
b) Norfloxacin.
c) Levofloxacin.
d) Trovafloxacin.
e) Gatifloxacin.

Q.47 A 16 year old girl has been recently diagnosed preliminary as a case of Pulmonary Tuberculosis after analysing her history, physical examination, routine blood test and X-ray chest. Now after sending her sputum to the laboratory for culture the most appropriate action will be:

a) Wait for the culture report.
b) Prescribe Isoniazide only.
c) Give a combination of Isoniazide and Rifampin.
d) Hospitalize her and give Isonazide, Rifampin and Ethambutol.
e) Hospitalize her and give Isoniazide, Pyrazinamide and Amikacin.

Q.48 A 20 year old patient is suffering from an acute attack of malaria, his blood film has shown P-vivax parasites; he got Chloroquine for this attack but to avoid future relapses of such attacks he must be given:

a) Mefloquine.
b) Quinine.
c) Primaquine.
d) Pyrimethamine - Sulfadoxine.
e) Proguanil.

Q.49 After getting a meal at a local restaurant a 25 year old patient suffered from a mild to moderate amebiasis; while later on he developed amebic liver abscess which should be treated by giving him:

a) Emetine plus Diloxanide Furoate.
b) Diloxanide Furoate plus Iodoquinol.
c) Chloroquine.
d) Metronidazole followed by Paromomycin.
e) Iodoquinol alone.

Q.50 Amphotericin B decreases the filtration rate and causes renal tubular acidosis which can be reduced by:

a) Reducing the dose.
b) Using corticosteroids.
c) Giving saline infusion.
d) Changing the route of administration.
e) Decreasing the rate of infusion.

Q.51 Most of the systemically used anti-fungals are selectively toxic to fungi because they inhibit:

a) Cell wall synthesis.
b) RNA synthesis.
c) Transpeptidase.
d) Ergosterol.
e) Topoisomerase II.

Q.52 A 35 year old woman suffering from Hepatitis-C viral infection has been treated with proper treatment; but she developed a 'flu-like' symptoms on injection which are typically seen with:

a) Adefovir.
b) Lamivudine.
c) Ribavirin.
d) Interferon-α.
e) Amantadine.

Q.53 A 30 year old woman underwent segmental mastectomy followed by chemotherapy with cyclophosphamide; this drug characteristically may cause:

a) GIT distress.
b) Myelosuppression.
c) Alopecia.
d) Hemorrhagic cystitis.
e) Cardiac dysfunction.

Q.54 Methotrexate is an antagonist of folic acid and is a cell cycle-specific drug which acts primarily in the:

a) G_0 – Phase.
b) G_1 – Phase.
c) G_2 – Phase.
d) S – Phase (DNA-Synthesis).
e) Mitotic Phase.

Q.55 A 25 year old man with Hodgkin's disease was successfully treated with ABVD regimen; but later on he developed some pulmonary toxicity. This is common with:

a) Adriamycin.
b) Bleomycin.
c) Vincristine.
d) Dacarbazine.
e) Prednisone.

Q.56 A 25 year old lady is suffering from severe Thyrotoxicosis; after chemotherapy she may be required to be prepared for surgical intervention by using a drug which has most rapid onset of action:

a) I^{131}.
b) Ipodate.
c) Prophylthrouracil.
d) Methimazole.
e) Thyroglobulin.

Q.57 A 40 year old male has developed signs and symptoms of Cushing's Syndrome which is due to an adrenal tumor. He may be given a drug which reduces the uncontrolled production of adrenal tumour:

a) Cortisol.
b) Betamethasone.
c) Ketoconazole.
d) Fludrocortisone.
e) Triamcinolone.

Q.58 28 year old male is using high doses of Oxandrolone for the last few months; he is at increased risk of:

a) Hirsutism.
b) Anemia.
c) Hyperprolactinemia.
d) Testicular Enlargement.
e) Cholestatic Jaundice.

Q.59 A 15 year old boy with Type-I Diabetes Mellitus has been admitted in emergency with Severe Hyperglycemia, Ketoacidosis and a blood pH of about 7.1; the most appropriate drug to control rapidly the severe Ketoacidosis is:

a) Glyburide.
b) Tolbutamide.
c) Crystalline Zinc Insulin.
d) Isophane Insulin.
e) Ultralente Insulin.

Q.60 A 45 year old patient of Type-II Diabetes is insisting to be managed with monotherapy without having a pronounced risk of hypoglycaemia. Therefore he may be given:

a) Glipizide.
b) Glyburide.
c) Repaglinide.
d) Pioglitazone.
e) Tolbutamide.

Q.61 An important adverse effect produced by Miglitol, an a-glucosidase inhibitor is:

a) Post Prandial Hyperglycemia.
b) Edema.
c) Mild Anemia.
d) Flatulence and Abdominal Pain.
e) Lactic acidosis.

Q.62 A 55 year old male patient of metastatic prostate cancer may be treated with some androgen receptor blockers like:

a) Flutamide.
b) Methyltestosterone.
c) Desogestrel.
d) Anastrozole.
e) Oxandrolone.

Q.63 An 18 year old girl is very anxious before undergoing a tooth extraction. She is being allowed to lay down on a couch for another half an hour to avoid one of the following possible effects of Promethazine:

a) Sedation.
b) Dryness of mouth.
c) Constipation.
d) Orthostatic hypotension.
e) Blurring of vision.

Q.64 Cimetidine may have toxicity like:

a) Blurring of Vision.
b) Diarrhea.
c) Sedation.
d) Orthostatic Hypotension.
e) Hepatic Enzymes Inhibition.

Q.65 Deferoxamine is a known chelator which has selectively high affinity for:

a) Aluminium.
b) Lead.
c) Iron.
d) Arsenic.
e) Mercury.