

**BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI**

**Pharmacology-II (PHA F341)**

**Comprehensive Examination (OPEN BOOK)**

**Date: 07/12/2016**

**Duration: 100 Minutes**

**Weightage: 25%**

**Answer Sheet**

**Name:**

**ID:**

---

Question Number	Answer	Question Number	Answer	Question Number	Answer
1		18		35	
2		19		36	
3		20		37	
4		21		38	
5		22		39	
6		23		40	
7		24		41	
8		25		42	
9		26		43	
10		27		44	
11		28		45	
12		29		46	
13		30		47	
14		31		48	
15		32		49	
16		33		50	
17		34			

-----  
Each correct answer carries 1M and wrong carries -0.5M

1. Unfractionated heparin preparations inhibits the actions of thrombin on fibrinogen by accelerating the interaction between thrombin and
  - a) Hageman's factor
  - b) Antithrombin III
  - c) Factor VIII
  - d) Platelet factor IV
2. A chronic asthmatic patient aged 37 years was trained how to use inhaler. He knew that different types of inhalers containing different drugs are available. This patient asked his doctor which inhaler is suitable for acute bronchial asthma. Doctor answered that contains
  - a) Salmeterol
  - b) Fluticasone
  - c) Cromolyn sodium
  - d) Salbutamol
3. An educated diabetes mellitus patient was pleading for an oral anti-diabetic drug free from hypoglycemic effect with an endocrinologist. This diabetes specialist advised
  - a) Metformin
  - b) Glibenclamide
  - c) Tolazamide
  - d) Chlorpropamide
4. For a black male aged 62 years with moderate hypertension, the physician has combined a diuretic+vasodilator with this rationale:
  - a) Depicts therapeutic antagonism
  - b) Avoids salt and water retention
  - c) Increase the mortality rate
  - d) Reduce heart rate and cardiac contraction
5. What will happen to the serum drug concentration of Phenytoin if its administered with Cimetidine:
  - a) Increase
  - b) Decrease
  - c) Unchanged
6. The rationale for administration of antacid in combination is to have sustainable buffering action. At the same time combination of antacid nullifies each other's side effects on the alimentary canal. Antacid that causes constipation is
  - a) Calcium carbonate
  - b) Magnesium trisilicate
  - c) Aluminium hydroxide
  - d) Sodium bicarbonate
7. Castor oil is broken down in the small intestine to\_\_\_\_\_, which is very irritating to the gut, and promptly increases peristalsis.
  - a) Acetic Acid
  - b) Lactic Acid
  - c) Ascorbic Acid
  - d) Ricinoleic acid
8. An emergency call came to a doctor from an ICU staff nurse stating that the patient is bleeding and blood pressure is decreasing gradually. Doctor checked the list of drugs given to the patient. He noted that heparin was administered at the higher dose level. Immediately doctor directed the nurse to administer
  - a) Vit K1
  - b) Protamine sulphate
  - c) Procainamide
  - d) Probenecid
9. Insulin is the only hypoglycemic hormone secreted in the human body. It controls glucose homeostasis by different mechanisms. Insulin promote cellular glucose uptake in skeletal muscles by activating--
  - a) Glucose transporter 1
  - b) Glucose transporter 2
  - c) Glucose transporter 3
  - d) Glucose transporter 4
10. Physician was caught in dilemma about which combination of antihypertensive drugs acting by diverse

mechanisms is more appropriate for prostatic hypertrophic hypertensive diabetic patient:

- a) Metoprolol + Verapamil
- b) Tamsulosin + Amlodipine
- c) Labetolol + Nifedipine
- d) Ramipril + Telmisartan

11. A man aged 58 years with history of heart failure was brought to the emergency ward with breathlessness, edema, of the dorsum foot. Patients BP read as 185/102mmhg. Chest auscultation revealed rhonchi. Doctor in charge has decided to administer a diuretic intravenously to relieve acute pulmonary edema. The drug selected is:

- a) Spironolactone
- b) Furosemide
- c) Mannitol
- d) Xipamide

12. Insulin is the only hypoglycemic hormone secreted in the human body. It controls glucose homeostasis by different mechanisms. Insulin promote cellular glucose uptake in skeletal muscles by activating--

- a) Glucose transporter 1
- b) Glucose transporter 2
- c) Glucose transporter 3
- d) Glucose transporter 4

13. A pregnant woman aged 28 years visited her gynecologist. On evaluation it is noted that patient BP is high with proteinuria and edema. Doctor selected this antihypertensive drug which is devoid of teratogenicity:

- a) Alpha methyl dopa
- b) Irbesartan
- c) Levodopa
- d) Telmisartan

14. Which drug will potentiate the anticoagulant action of Warfarin:

- a) Rifampin
- b) Barbiturates
- c) Glutethimide
- d) Chloramphenicol

15. A rheumatoid arthritis patient who is on prolonged methotrexate treatment developed megaloblastic anemia. Physician thought of a rapidly acting drug to

correct the hematological picture and called for the administration of

- a) Hydroxyl cobalamine
- b) Folic acid
- c) Copper
- d) Ascorbic acid

16. To rectify the oxygen imbalance in angina pectoris patient, physician employ drugs which reduce oxygen demand of the heart as well as promote oxygen supply to myocardium. Coronary vasodilators used to increase the oxygen supply to myocardium are listed below. The non coronary vasodilator drug combined with these is:

- a) Propranolol
- b) Nitroglycerin
- c) Dipyridamole
- d) Isosorbide dinitrate

17. A senior cardiologist informed his assistant to administer heparin for patient suffering from deep vein thrombosis. Junior doctor gave heparin by selecting the route-

- a) Oral
- b) Intravenous
- c) Intramuscular
- d) Rectal

18. Cytotoxic anti-cancer drug therapy generally causes moderate to intense emesis. Oncologist to combat this often uses combination of anti-emetics. Aprepitant is an add on drug in this regimen which acts by

- a) Neurokinin 1 receptor antagonism
- b) Blocking corticosteroid receptor
- c) Inhibiting directly the vomiting centre
- d) blocking peripheral stretch receptors of lungs

19. Confirmatory scientific evidences are there to say that the unique feature of insulin receptor is linked with the enzyme:

- a) Tyrosine Kinase
- b) Plasma Kinase
- c) Hexokinase
- d) Glycogen Synthetase

20. Doctors prefer docusate sodium for hospitalized patient to prevent constipation and straining. Docusate permits penetration of water and lipids into the fecal matter. Hence known as

- a) Stimulant laxative
- b) Bulk purgative
- c) Hydrogogue purgative
- d) Fecal softener

21. A doctor inadvertently started concurrent therapy of Furosemide with Aminoglycoside antibiotic gentamicin for an infected hypertensive patient. This has caused:

- a) Aggravation of Ototoxicity
- b) Increased Nephrotoxicity
- c) Precipitation of gastrointestinal toxicity
- d) Myelosuppression

22. Doctors advise thorough rinsing at least thrice after steroid inhalation to avoid immune suppression. Thus it will prevent

- a) Candidiasis
- b) Glossitis
- c) Stomatitis
- d) Steroid dependence

23. Most commonly used stimulant oral purgative also available as suppositories preferentially used for elderly patient as night purgative

- a) Dioctyl sodium
- b) Magnesium sulphate
- c) Liquid paraffin
- d) Bisacodyl

24. A physician was hesitant to prescribe hydrochlorothiazide for mild hypertensive, dyslipidemic, diabetic, and gouty arthritis patient because thiazide diuretic produces:

- a) Hyperuricemia + Hyperglycemia
- b) Hypoglycemia + Hypreruricemia
- c) Hyperkalemia + Hypoglycemia
- d) HYperglycemia + Hypercholesteremia

25. Anti-platelet drugs have been useful to patients who have suffered from stroke and myocardial infarction. Physicians use aspirin and Clopidogrel to prevent

- a) Thrombolysis
- b) New thrombus formation
- c) Fibrinolysis
- d) Bleeding

26. Nowadays physicians advise coronary thrombosis patient even after revascularization measures like angioplasty to take statin to ensure:

- a) Enhanced Production of NO
- b) Athersclerotic Plaque Stability
- c) Anti smooth muscle proliferation
- d) Enhanced Apoptosis

27. A 60 year old patient was suffering heart failure and on Digitalis treatment. Simultaneously, doctor also prescribed Loop Diuretics along with Digitalis. What will be the effect of loop diuretics on Digitalis Cardiotoxicity:

- a) Increase
- b) Decrease
- c) Unchanged

28. A female patient of enalapril therapy given for hypertension reported to her physician and strongly objected that prescribed drug is causing a dry cough and that is interfering with normal life. Physician convinced her by explaining that it may abate itself and is due to:

- a) Enhanced bradykinin levels
- b) Increased prostacyclin levels
- c) Increased levels of Ang I in plasma
- d) Direct stimulation of cough centre

29. A physician is aware of factors that precipitate Digoxin toxicity has advised the patient not to take excess of

- a) Selenium
- b) Calcium
- c) Potassium
- d) Magnesium

30. Cardiologist expects that thrombolytic drug administration produces hemorrhage. To reverse this adverse reaction the drug that is usually employed

- a) Valproic acid
- b) Ethacrynic acid
- c) Hyaluronic acid
- d) Aminocaproic acid

31. An angina pectoris patient had asked his physician to give a long acting organic nitrate so that he can take the tablet once a day conveniently. Doctor has readily agreed and prescribed:

- a) Isosorbide-5-mononitrate
- b) Sodium Nitrate
- c) Isosorbide dinitarte
- d) Nitroglycerin

32. A physician directed his hypertriglyceridemic pateint to start taking fenofibrate without delay. He told the patient that this drug predominately controls triglycerides levels by activating receptor:

- a) PPAR  $\alpha$
- b) PPAR  $\beta/\delta$
- c) PPAR  $\delta$
- d) LDL

33. Among recently introduced leukotriene antagonists, lipoxygenase inhibitor that arrests the synthesis of leukotrienes used in asthma is

- a) Zileuton
- b) Pranlukast
- c) Montelukast
- d) Xylocaine

34. Cardiologist after thorough evaluation of diabetic and angina pectoris patient with hypertension preferred to administer a calcium channel blocker which has potent vascular and cardiac action:

- a) Diltiazem
- b) Nifedipine
- c) Nimodipine
- d) Verapamil

35. A physician used clopidogrel for a myocardial infarction patient thinking that it will inhibit platelet aggregation by blocking the role of

- a) Adenosine
- b) Plasmin
- c) Thombin
- d) Von Willebrand factor

36. Insulin Sensitizer Rosiglitazone reduces insulin resistance by the activation of this receptor

- a) EGFR
- b) VEGF
- c) PPAR
- d) PARP

37. Proton pump Inhibitors reacts with which a residue of the H<sup>+</sup>/K<sup>+</sup>-ATPase, forming a stable covalent bond.

- a) cysteine
- b) Arginine
- c) Serine
- d) Proline

38. A geriatric patient aged 74 years is suffering from chemotherapy induced vomiting. The preferred antiemetic by the physician for this patient is

- a) Meclizine
- b) Domperidone
- c) Metoclopramide
- d) Ondansetron

39. Patient suffering from uncomplicated simple non-specific diarrhoea is readily treated with an anti-motility drug that also produces smooth muscle relaxation. Most commonly used drug given in terms of milligram dose

- a) Atropine
- b) lactulose
- c) cellulose
- d) Loperamide

40. This gastroprotective prostaglandin analogue has been advised by a physician to an acute erosive gastritis patient who is habituated to consume heavy doses of aspirin

- a) Alprostadiol
- b) Gemfrost
- c) Misoprostol
- d) Carboprost

41. Fibrates increases the level of HDL cholesterol by increasing the expression of

- a) apo AI and apo AII
- b) apo AIII and apo AIV
- c) apo AV and apo AVI

42. Inhaled steroids adverse reactions are often seen with more frequent use. Steroid inhalation commonly produces

- a) Diabetes mellitus
- b) Hoarseness of voice
- c) Cushing's syndrome
- d) Bone resorption

43. Doctors do not recommend co-administration of aspirin and warfarin for coronary thrombosis patient.

The interaction between these drugs involves both dynamic and kinetic mechanisms resulting into bleeding. The bleeding can be promptly controlled by

- a) Withdrawing both the drugs immediately
- b) Decreasing the dose of warfarin
- c) Low dose aspirin therapy
- d) Replacing clotting factors and vitamin K

44. Type 2 diabetic patients are generally maintained by insulin secretagogue oral hypoglycemic drugs like glimepiride. This second generation Sulfonylurea oral anti diabetic acts by:

- a) Reducing Insulin Resistance
- b) Proliferation of beta cells islet
- c) ATP sensitive K<sup>+</sup> channel blockade
- d) Increasing intestinal absorption of glucose

45. A hypertensive patient who is on ramipril therapy has been advised to add spironolactone to ensure optimal control of blood pressure. As a result, the patient developed electrolyte imbalance presenting:

- a) Hyponatremia
- b) Hypercalcemia
- c) Hypokalemia
- d) Hyperkalemia

46. When doctors decide to anti-coagulate the patient, it is common to use heparin at first and later switch to warfarin. This is because warfarin action is manifested with latency period of up to 72 hours. The reason for warfarin latency period is plasma rich with

- a) Vit K1
- b) Antithrombin III
- c) Ionic calcium
- d) Clotting factors

47. Chronic bronchial asthma patients are managed by doctors with the inhalation of steroids + $\beta$  2 receptor agonist bronchodilators. The rationale of this combination is

- a) Anti-inflammatory+ immune suppression+ bronchodilator action
- b) Synergistic bronchodilation
- c) Induce refractoriness to bronchodilator response
- d) Aggravates systemic toxicity

48. A doctor while giving explanation to his patient about the pharmacodynamics of insulin enlisted these actions. Doctor informed the patient insulin action on liver results in:

- a) Enhanced hepatic glycogenesis
- b) Increased hepatic glucose output
- c) Increased lipogenesis
- d) Enhanced hepatocyte Proliferation

49. It is common to use combination of statin and ezetimibe for hypercholesterolemia. Physicians are happy with ezetimibe as a least toxic lipid lowering agent for which the mechanism of action is:

- a) Inhibits intestinal absorption of dietary and biliary cholesterol
- b) Compensatory hepatic cholesterol synthesis is increased
- c) Reduce TGs levels
- d) Elevates HDL by 39%

50. Which drug will attenuate the anticoagulant action of Warfarin:

- a) Chloramphenicol
- b) Barbiturates
- c) Metronidazole
- d) Phenybutazone