Topic / Page No.

(11) CLASS TEST ✓ (13)

DEPARTMENT OF PHARMACOLOGY

MBBS 3rd YEAR

(General Pharmacology)

MCQ's

Time Allowed: 20min **Max Marks: 20**

1. **The process by which amount of drug in the body is reduced after administration before entering the systemic circulation is called:**
   a) Excretion
   b) First pass effect
   c) First order elimination
   d) Metabolism

2. **Which one of following types of reaction takes place in phase 2 metabolism of a drug?**
   a) Conjugation
   b) Hydrolysis
   c) Reduction
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3. **Which one of the following process is best suited for permeation of very large protein molecules into cells?**
   a) Aqueous Diffusion
   b) Special Carrier Transport
   c) Endocytosis
   d) Lipid Diffusion

4. **A process by which a weak acid becomes less water soluble and more lipid soluble at low pH is:**
   a)Distribution
   b) Permeation
   c) Elimination
   d) Protonation

5. **The set of properties that characterize the effects of a drug on a body is called:**
   a)Distribution
   b) Permeation
   c) Pharmacodynamics
   d) Pharmacokinetics

6. **The kinetics that are characteristics of the elimination of ethanol and high doses of phenytoin and aspirin are called:**
   a)Distribution
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   c) First - order elimination
   d) Zero – order elimination

7. **Drugs administrated through which routes show 100% bioavailability?**
   a) Oral
   b) Intravenous
   c) Subcutaneous
   d) Topical

8. **A drug which is lipid soluble and unionized has:**
   a) High Volume of Distribution
   b) Low Volume of Distribution
   c) No Absorption
   d) Both A & C

9 A 36-year-old male of Lebanese ancestry is being treated for Plasmodium vivax malaria. He experiences severe fatigue, back pain, and darkened urine. Which one of the following antimalarial drugs is most likely to have caused his symptoms?

A. Pyrimethamine. B. Artemisinin. C. Chloroquine.
D. Quinine. E. Primaquine.

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A. Triiodothyronine. B. Surgical removal of the thyroid gland.
C. Iodide. D. Propylthiouracil.
E. Methimazole.

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A. ACTH B. Growth hormone
C. GnRH D. Thyroxine
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A. Increase the excretion of calcium. B. Inhibit absorption of calcium.
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17. A 22-year-old man, who frequently backpacks, complains of diarrhea and fatigue. Examination of stool specimens shows binucleate organisms with four flagellae. Which one of the following drugs would be effective in treating this patient's infestation?

9. **A constant fraction of the drug is metabolized per unit time in:**
   a) Zero order kinetics
   b) First order kinetics
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10. **The effect of plasma protein binding on the duration of drug action is that it is:**
   a) Prolonged
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11. **Acidic drugs can bind with:**
   a) Glycoprotien
   b) Albumin (binds normally)
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14. **Process by which drug is excreted in bile and then reabsorbed from gut is called:**
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   c) Enterohepatic circulation
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15. **Redistribution results in:**
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16. **Intrarticular injection is given in joints for:**
   a) Rheumatoid Arthritis
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17. **Enteral route include:**
   a) Oral
   b) Sublingual
   c) Both A & B
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18. **Drugs excreted by lungs include:**
   a) Alcohol
   b) Acetaminophen
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19. **The ability of a drug to cause fetal abnormalities is known as:**
   a) Teratogenicity
   b) Carcinogenicity
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   d) Allergic Reaction

20. **Examples of drugs given as S/C injection are:**
   a) Insulin
   b) Adrenaline
   c) Omeprazole
   d) Histamine

Department of Pharmacology

MCQ's(Pharmacodynamics)

1. Which of the following correctly defines a receptor?
   a. A carrier that transports drug
   b. A macromolecule of a cell to which a drug binds and thereby producing its effects
   c. An enzyme involved in drug metabolism
   d. A plasma protein to which drug binds
2. All of the following terms are correctly defined EXCEPT:
   a. Affinity: The ability of a drug to bind to a receptor
   b. EC50: Concentration of a drug that produces half of Emax (maximum efficacy)
   c. Efficacy: Maximum efficacy produced by a drug
   d. Kd: The concentration of free drug at which all of the receptors are occupied.
3. A 24 years old patient is to be treated for toothache with an analgesic. Drug X and Y are 2 analgesics with the same mechanism of action. Drug X in a dose of 5 mg produces the same magnitude of response as 500 mg of drug Y. This most likely means:
   a. Drug X has less potency than drug Y
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4. Which of the following variables are expressed by X axis and Y axis respectively of a graded dose response curve?
   a. Affinity and Potency
   b. Efficacy and affinity
   c. Potency and efficacy
   d. Potency and affinity
5. A partial agonist may act as an antagonist in the presence of a full agonist because it has:
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7. Variation in the sensitivity of a population of individuals to increasing doses of a drug is best determined by which of the following?
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GENERAL PHARMACOLOGY TEST

MCQ s

Encircle the best choice.

Time allowed: 20 minutes Maximum Marks: 20

1. Drugs administered through which route show 100% bioavailability?

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2. An example of G-protein coupled receptors is:

a) Insulin receptor b) nicotinic receptor c) muscarinic receptor

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6. An antagonist is the drug that has:

a) affinity b) intrinsic activity c) both a and b d) none

7. Prolonged deprivation of an agonist on the receptors results in increased sensitivity, this is:

a) down regulation b) up regulation c) both d) none

8. The amount of a drug required to produce a response is called:

a) maximal efficacy b) potency c) therapeutic index d) ligand

9. A genetically determined unexpected abnormal reaction to a drug is known as:

a) toxic effect b) dependence c) idiosyncrasy d) tolerance

10. The ability of a drug to cause fetal abnormalities is known as:

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   d) Histamine

15. A patient is administered a drug that binds to and activates cytokine receptors. The drug would most likely be:
    a. A corticosteroid
    b. Acetylcholine
    c. Adrenaline
    d. Growth hormone
16. All of the following are 2nd messengers EXCEPT:
    a. IP3
    b. cAMP
    c. Adenylyl cyclase
    d. DAG
17. Which of the following ligands is correctly coupled with its receptor signaling mechanism?
    a. Adrenaline: Ion channel linked receptors
    b. GABA: Tyrosine kinase receptors
    c. Insulin: Intracellular receptors
    d. Vitamin D: Intracellular receptors
18. The phenomenon of decrease in intensity of response to a given dose of a drug after repeated administration so that greater amount of drug is required to produce the same previous effect is called:
    a. Allergy
    b. Dependence
    c. Tolerance
    d. Idiosyncracy
19. Chronic use of an antagonist over a long period of time may cause an increase in the number of receptors. This is called:
    a. Desensitisation
    b. Down regulation
    c. Tolerance
    d. Up regulation
20. What is the situation when failure to continue administering the drug result in serious psychological and somatic distrubances called?
    a. Abstinence/ withdrawl syndrome
    b. Idiosyncracy
    c. Tachyphylaxis
    d. Allergy

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CLASS TEST

DEPARTMENT OF PHARMACOLOGY

MBBS 3rd YEAR

(General Pharmacology)

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c. Quantal dose response curve
d. Graded dose response curve

8. Which of the following is a measure of drugs potency?
   a. EC50
   b. EMax
   c. Kd
   d. Bmax
9. Which of the following defines the concentration or dose between the minimum effective concentration or dose and minimum toxic concentration or dose?
   a. Efficacy
   b. Intrinsic activity
   c. Therapeutic index
   d. Therapeutic window
10. The dose which produces toxic effect in 50 % of the population is:
   a. ED50
   b. TD50
   c. TD99
   d. ED1
11. A patient is administered insulin to a patient to oppose the hyperglycemic effects of Glucocorticoid therapy. This is an example of:
   a. Chemical Antagonism
   b. Competitive Antagonism
   c. Physical Antagonism
   d. Physiological Antagonism
12. All of the following statements are true regarding Competitive reversible pharmacological antagonist, EXCEPT:
   a. It causes a parallel shift of the dose response curve of an agonist to the right
   b. It decreases the potency of an agonist
   c. It increases the efficacy of an agonist
   d. Its effect can be overcome by increasing the agonist concentration.
13. A patient is administered drug A that produces no effect on its own and causes a right and downward shift on the dose response curve of another drug B and decreasing its maximum efficacy. Drug A is most likely an:
   a. Competitive reversible antagonist
   b. Irreversible antagonist
   c. Partial Agonist
   d. Physiological Antagonist
14. Deferroxamine is a drug given in iron overdose. It acts by combining with iron in plasma to form an inactive complex. Which of the following terms best defines this type of antagonism?
   a. Chemical Antagonism (To Drug(Agonist), Not Receptor)
   b. Competitive Antagonism
   c. Physical Antagonism
   d. Physiological Antagonism

12. Microsomal drug reactions occur in:

a) nucleus b) endoplasmic reticulum c) mitochondria d) plasma

13. The effect of enzyme induction on a drug is:

a) increased plasma level b) decreased plasma level c) none

14. Time taken for the plasma concentration of a drug to be reduced to half of its initial value is known as:

a) bioavailability b) plasma half life c) maintenance dose d) loading dose

15. The maintenance dose depends upon:

a) volume of distribution b) clearance c) both d) none

16. The receptors associated with Steroids are:

a) ion channels b) G-protein coupled c) intracellular d) none

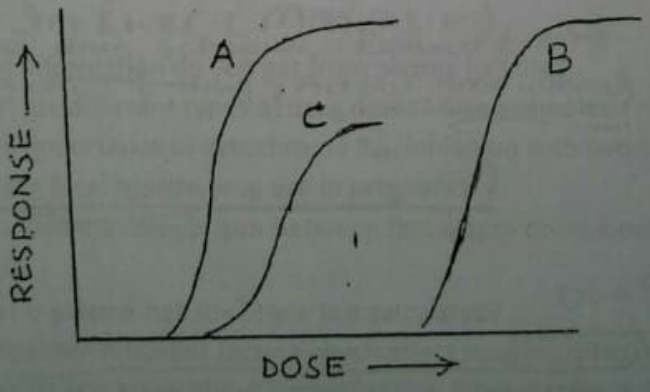
17. The ratio of median toxic dose to median effective dose is:

a) antagonism b) therapeutic index c) Allergy d) dependence

18. The requirement of higher dose of a drug to produce the same response is:

a) cumulation b) tolerance c) withdrawal d) none

IN THE DOSE RESPONSE CURVE SHOWN:



19. a) Drug A has more efficacy b) Drug B has more efficacy

c) A & B have same efficacy d) none

20. a) Drug C is the most potent b) Drug A is more potent that drug B

c) Drug A and C have same potency d) Drug A is the most potent

MULTIPLE CHOICE QUESTIONS Class test

FIRST TERM TEST OF PHARMACOLOGY

Time allowed:60 mins **Max Marks:45**

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6.Enteral route of drug administration includes all of the following except:

a)Oral b)Intravenous c)Sublingual d)both A & C

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a)No Absorption b) Low volume of distribution

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a) Down regulation b)Up regulation c) Tolerance d)Tachyphylaxis

9. Safety of a drug is better explained by:

a) Potency b)Ligand c)therapeutic index d) Efficacy

10.An example of drugs acting through intracellular receptors is:

a)Gonadal steroids b) Insulin c) Cytokines d)Epinephrine

11.Histamine cause Bronchoconstriction (mediated at Histamine receptors) in patient with asthma. When Epinephrine is given to the patient during asthma attack, Bronchodilation usually results. Which of the following expression best describes the action of Epinephrine in this situation?

a) Chemical antagonist. b) Noncompetitive antagonist.

c)Physiological antagonist d)Pharmacological antagonist.

12. A genetically determined unexpected abnormal reaction to a drug is known as:

a)Toxic effect b)Dependance c)Idiosyncrasy d) Tolerance

DEPARTMENT OF PHARMACOLOGY
Max Marks:20 **(MCQ's)** **3rd year MBBS**
Time Allowed: 20 mins

1) Which of the following is not a hypothalamic hormone?
a)Growth hormone b)Somatostatin c)TRH d)CRF

2)Menotropins is a preparation of:
(a) FSH + LH obtained from urine of menstruating women
(b) LH obtained from urine of pregnant women
(c) FSH + LH obtained from urine of post menopausal women
(d)Gondaotrophin releasing hormone

3)Following are the effects of iodide salts Except:
(a) Decreased size of the thyroid gland (b) Decreased vascularity of the thyroid gland
(c) Decreased hormone release (d)Decreased peripheral conversion of T4 to T3.

4) Which of the following drugs acts by increasing insulin secretion?
a)biguanides b)sulfonylureas c)Acarbose d)thizolidenidions

5)Which of the following insulin preparation is used in diabetic ketoacidosis:
(a) Regular insulin (b) Lente insulin (c) NPH insulin d) Glargine insulin

6)A 50 years old lady having breast cancer with estrogen &Progresteron receptors may receive:
a) Ethinyl estradiole b)Flutamide. c)Leuprolide. d)Tamoxifen.

7)Which of the following is usually the most appropriate drug for post coital contraceptive use?
a) Sildenafil b)Mifepristone. c)Raloxifene. d)Ritodrine.

8)Oral contraceptives bear an increased risk of :
a) Thromboembolism b) Weight loss c) Ovarian cancer d) Dysmenorrhea

9). A 70-year-old woman is being treated with raloxifene for osteoporosis. There is an increased risk of her developing:
a)Breast Cancer b) Uterine cancer c) Deep Vein thrombosis d) raised LDL

10.A long acting β 2 adrenergic agonist used in asthma is:
a)Salbutamol. b)Salmeterol. c)Terbutaline. d)Propranolol

11. A child with asthma is being treated effectively with inhaled preparation of Beclomethsone .Which of the following adverse effects is of particular concern?
a)Hypoglycemia b)Hypotension c) Growth suppression d) osteoarthritis

12.To produce anti-inflammatory and metabolic effect, Glucocorticoids inhibit:
a)Cyclooxygenase. b) Lipooxygenase. c)Phospholipase A2. d)Xanthine oxidase.

13.Which of the following drug is a potent inhibitor of corticosteroid synthesis and is used in severe Cushing's disease?
a) Dexamethasone. b)Hydrocortisone. c)Ketaconazole. d) Prednisone.

14.Glucocorticoids have not been proved to be effective in the treatment of:
(a) Addison's disease (b) Bronchial Asthma (c) Anaphylaxis (d) Osteoporosis

15. Insulin acts by binding to:
(a) Ion channel regulating receptor (b) Tyrosine kinase receptor
(c) G-protein coupled receptor d) Intracellular receptor

16. Which of the following compounds is incorrectly matched with its mechanism of action?
(a) Flutamide: Competitively blocks the binding of androgens to their receptor
(b) Finasteride: Inhibits 5α-reductase
(c) Acarbose: Inhibits α-glucosidase
(d) Pioglitazone: Competitively blocks the binding of estrogens to their receptor

17)Which drug enhances the action of GABA in nematodes causing muscle paralysis?
a) albendazole. B)ivermectin. C)pyrantel pamoate. D)thiabendazole

18)Select the chemotherapeutic agent that causes cardiac toxicity.
a) cyclophosphamide. B)tamoxifen. C)methotrexate. D)doxorubicin

19)Which of the following drug is most likely responsible for hemorrhagic cystitis?
A)doxorubicin B)cyclophosphamide. C)fluorocil d)Tamoxifen

20)Which of the following is a drug that is used in combination therapy for testicular carcinoma and is als associated with nephrotoxicity?
A) Bleomycin. B)Vinblastine. C)cisplatin. D)Leuprolide

(c) metabolic alkalosis d)Increased blood lipid levels

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14)Which statement about Thyroxine (T4) is correct?

a)more active than T3 (b) less active than T3 c)Half life is less than T3 d) released from pan

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19)Which of the following is usually the most appropriate drug for post coital contraceptive use?

a) Sildenafil (b) Mifepristone. c)Raloxifene. d)Ritodrine.

20)Men who use large doses of anabolic steroids, are at increased risk of the following:

a)Anemia. b)Testicular enlargement. (c) gynecomastia d)osteoporosis

21)Oral contraceptives bear an increased risk of :

(a) Thromboembolism b) Weight loss c) Ovarian cancer d) Dysmenorrhea

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Steroids And Anti-Cancer Pharmacology
Endo

1 Which of the following best describes the effect of propylthiouracil on thyroid hormone production?
A. It blocks the release of thyrotropin-releasing hormone.
B. It inhibits uptake of iodide by thyroid cells.
C. It prevents the release of thyroid hormone from thyroglobulin.
D. It blocks iodination and coupling of tyrosines in thyroglobulin to form thyroid hormones.
E. It blocks the release of hormones from the thyroid gland.

2 A 64-year-old woman with a history of Type 2 diabetes is diagnosed with heart failure. Which of the following drugs would be a poor choice in controlling her diabetes?

A. Sitagliptin. B. Exenatide. C. Glyburide. D. Glipizide.

E. Pioglitazone.

3 Which of the following statements is true for therapy with insulin glargine?

A. It is primarily used to control prandial hyperglycemia.
B. It should not be combined with any other insulin.
C. It is now used preferentially in Type 1 diabetics who are pregnant.
D. Pharmacokinetically, there is no peak activity, and the activity lasts about 24 hours.
E. It is effective by inhalation.

4 A child with asthma is being treated effectively with an inhaled preparation of beclomethasone dipropionate. Which of the following adverse effects is of particular concern?
A. Hypoglycemia B. Hirsutism. C. Growth suppression.
D. Cushing's syndrome. E. Cataract formation.

5 Which of the following drugs specifically inhibits calcineurin in the activated T lymphocytes?
A. Daclizumab. B. Cyclosporine C. Prednisone. D. Sirolimus.
E. Mycophenolate mofetil.

6 A patient is being treated with allopurinol to control hyperuricemia resulting from chemotherapy. Which of the following would have to have its dose reduced to prevent toxicity?

A. 5-FU. B. 6-MP. C. 6-TG. D. Fludarabine. E. Cytarabine.

7 Mucositis develops in a patient undergoing cancer chemotherapy with methotrexate. Administration of which one of the following agents would help?

A. Leucovorin. B. Filgrastim. C. Prednisone. D. Vitamin B_{12}.

8 Which of the following drugs is recommended for the treatment of severe, multidrug-resistant Plasmodium falciparum malaria?
A. Artemisinin. B. Chloroquine. C. Quinine. D. Sodium stibogluconate.
E. Primaquine.

DEPARTMENT OF PHARMACOLOGY

Marks:25

MCQ's

Time allowed:25 mins

A 38-year-old male has recently started monotherapy for mild hypertension. At his most recent of visit, he complains of tiredness and not being able to complete three sets of tennis. Which one of following drugs is he most likely to be taking for hypertension?

a) Atenolol. b) Ephedrine. c) Phentolamine. d) Prazosin

2) Which drug is most likely to slow recovery from hypoglycemia in a diabetic patient who has taken excessive dose of insulin?

(a) doxazosin (b) propranolol (c) phenoxybenzamine (d) atenolol

3) Propranolol is useful in all of the following except:

(a) Angina (b) Familial tremor (c) Hypertension (e) Partial atrioventricular block

4) A 57 years old man is being treated for an atrial arrhythmia. He complains of headache, dizziness a tinnitus. Which of the following antarrhythmic drugs is the most likely cause?

a) Amiodarone b) Procainamide c) Propranolol d) Quinidine

5) Digitalis has a profound effect on myocyte interacellular concentrations of Na^+, K^+ and Ca^{2+}. Th effects are caused by digitalis inhibiting:

a) Ca^{2+} ATPase of the sarcoplasmic reticulum b) Na^+/K^+ ATPase of myocyte membrane

c) Cardiac β1 receptor d) Juxtaglomerular renin release

6) A 58 year old man is admitted to the hospital with acute heart failure and pulmonary edema. Which the following drugs would be most useful in treating him.

a) Digoxin b) Dobutamine c) Furosemide d) Minoxidil

7) Which of the following adverse effect is likely to be experienced by a man taking sublingu nitroglycerine for atherosclerotic angina?

a) Hypertension (b) Throbbing Headache c) Bradycardia d) Sexual dysfunction

8) Which of the following side effects caused by nitroglycerine can be counteracted by combinin blockers in case of angina?

a) Dizziness b) Methemoglobinemia c) Throbbing headache d) Reflex tachycardia

9) Which of the following antihypertensive drugs can cause persistent cough upon administration.

a) Losartan b) Enalapril c) Propranolol d) Prazosin

10) Select an antihypertensive drug which precipitates hypertensive crisis upon abrupt cessation therapy:

a) Clonidine b) Diltiazem c) Enalapril d) Losartan

11) The most suitable drug for the treatment of paroxysmal supraventricular tachycardia is:

a) Adenosine b) Lidocaine c) Quindine d) Sotalol

12) Which of the following effect is not associated with use of hydrochlorothiazide?

a) increased blood glucose level (b) Increased urinary excretion of Ca^{++}