

## **MCOs For Pharmacology**

**Note** Only one option is to be encircled

- 1-The main route of administration of a drug to produce a local effect is:
  - A. Topical
  - B. Oral
  - C. Parenteral
- 2-The main routes of administration of a drug to provide systemic effects are;
  - A. Topical
  - B. Oral
  - C. Parenteral
- 3-Pharmacodynamic is the study of;
  - A. Preparation of drug
  - B. Biochemical and physiological effects of drug
  - C. Toxic effect of drugs
- 4- Drug can easily diffuse the biomembrane when they are;
  - A. In ionized form
  - B. In Unionized form
  - C. In solution form
- 5- Basic drug are easily absorbed from the site when the pH is;
  - A. Basic
  - B. Acidic
  - C. Neutral
- 6- If the pH of the stomach is made alkaline the acidic drugs are;
  - A. Ionized and less absorbed
  - B. Unionized readily absorbed
  - C. Highly ionized and rapidly absorbed
- 7- Bioavailability means the;
  - A. Rate of absorption of drugs
  - B. Rate and extent of absorption of drugs
  - C. Rate of excretion of the drugs
- 8- The acidic drugs are rapidly excreted in ;
  - A. Acidic urine
  - B. Basic urine
  - C. Urine of dog
- 9- Basic drugs are slowly excreted in;
  - A. Basic urine
  - B. Acidic urine
  - C. Urine of cow
- 10- If the urine of dog is made alkaline the acidic drugs are;
  - A. Rapidly excreted
  - B. Slowly excreted
  - C. Not excreted at all
- 11- For promoting the excretion of basic drugs, the urine pH may be made;
  - A. Neutral
  - B. Acidic
  - C. Basic
- 12- Basic drugs are easily excreted in the urine of;
  - A. Preruminants
  - B. Adult ruminants
  - C. Preruminants and ruminants
- 13- Renal clearance of creatinine is an index of;
  - A. B.M.R.
  - B. E.S.R.
  - C. G. F.R.
- 14- PKa of the drugs is that value of pH when;
  - A. Drug is 75% ionized
  - B. Drug is 65% ionized
  - C. Drug is 50% ionized

- 15- Agonist has got;
- A. Affinity for the receptor
  - B. Efficacy
  - C. Affinity as well as efficacy
- 16- If one drug antagonizes the action of other drug by interacting with different receptor, the antagonism may be called as;
- A. Chemical antagonism
  - B. Physiological antagonism
  - C. Pharmacological antagonism
- 17- Antagonism may be called as competitive if;
- A. Both drugs have different receptors
  - B. Both drugs has affinity for the same receptors
  - C. Both drugs interact chemically
- 18- Total higher concentration of the drugs are found on the side of the biomembrane where the;
- A. Extent of ionization is more
  - B. Extent of ionization is less
  - C. Extent of ionization is 50%
- 19- Tick mark the true statement;
- A. Phase II products of metabolism are in variably inactive
  - B. Phase II product may be active
  - C. Phase II product may be more active
- 20- Digoxin is obtained from;
- A. Plant source
  - B. Mineral source
  - C. Plant and synthetics
- 21- Shorter half life of drug indicates;
- A. Slow elimination
  - B. Rapid elimination
  - C. Slow metabolism
- 22- Long half life of drugs indicates;
- A. Rapid elimination
  - B. Slow elimination
  - C. Rapid metabolism
- 23- Acetylation is;
- A. Phase I reaction
  - B. Phase III reaction
  - C. Phase II reaction
- 24- Microsomal enzymes catalyzing enzymes are associated with;
- A. Nephron of kidney
  - B. Smooth surface endoplasmic reticulum of hepatocyte
  - C. Mitochondria of hepatocyte
- 25- Volume of distribution of drug means;
- A. The volume of drug in which drug is distributed
  - B. The volume of body fluid in which drug is distributed
  - C. The volume of intracellular fluid in which drug is distributed
- 26- Pharmacokinetics is the study of;
- A. What is drug doing to the body
  - B. What is body doing with the drug
  - C. What is drug doing with other drugs
- 27- Elimination of drug means;
- A. Excretion of drug
  - B. Metabolism of drugs
  - C. Metabolism and excretion of drugs
- 28- Glucuronic acid conjugation is also known as;
- A. Sulphate conjugation
  - B. Glucuronidation
  - C. Acetylation
- 29- Protein bound drugs are;
- A. Pharmacologically inactive
  - B. Pharmacologically more active
  - C. Pharmacologically less active

- 30- Protein drug complex;
- A. Acts as circulatory reservoir
  - B. Decrease the potency
  - C. Produce action for shorter time
- 31- Qualitatively unusual response of a drug is called;
- A. Teratogenic effect
  - B. Drug allergy
  - C. Idiosyncrasy
- 32- Teratogenic effect of drug mean;
- A. Toxic effect on kidney
  - B. Mal formation of foetus
  - C. Inflammation of liver
- 33- Therapeutic index is equal to;
- A. ED50/LD50
  - B. LD50/ED50
  - C. LD50 X ED50
- 34- Higher value of therapeutic index indicates;
- A. Margin of safety is broader
  - B. Margin of safety is narrow
  - C. Margin of safety is doubtful
- 35- Lesser the value of therapeutic index;
- A. Higher will be margin of safety
  - B. Lesser will be margin of safety
  - C. No effect on margin of safety
- 36- Aphrodisiacs are those drugs which;
- A. Act as purgatives
  - B. Increase sexual desire
  - C. Improve respiration
- 37- Ecbolics are used;
- A. To increase peristalsis movement
  - B. To decrease peristalsis movement
  - C. To increase uterine contraction
- 38- Antitussives are used to;
- A. Depress respiration
  - B. Suppress coughing
  - C. Dull the pain
- 39- The drugs are used for increasing vascularity of specific area are known as;
- A. Emollient
  - B. Demulcent
  - C. Counter irritant
- 40- Opium is obtained from;
- A. Acacia
  - B. Popy plant
  - C. Atropa belladonna
- 41- Mydriatics are used to;
- A. Relax skeletal muscles
  - B. Contract smooth muscles
  - C. Dilate pupil
- 42- Mood elevator drugs are known as;
- A. Analgesics
  - B. Soporifics
  - C. Tranquilizers
- 43- One molar solution of drugs contains;
- A. One mole/100ml
  - B. One mole/Lit.
  - C. One mole/ 500ml
- 44- 1% solution of a drug contains;
- A. 10 mg/ml
  - B. 10 µg/ml
  - C. 100 mg/ml

- 45- The solution of a drug labeled as  $10^{-3}$  is;  
A. 1 % solution  
B. 0.1 % solution  
C. 0.01 % solution
- 46- One ounce of drug is approximately equal to;  
A. 30 G  
B. 40 g  
C. 15 G
- 47- Caster-oil is;  
A. Bulk purgative  
B. Lubricant purgative  
C. Stimulant purgative
- 48- Expectorants are used;  
A. To increase the fluidity of mucus  
B. To decrease the mucus  
C. To remove the mucus
- 49- Kaoline is traditional;  
A. Purgative  
B. Toxin absorbing agent  
C. Counter irritant
- 50- MIC means;  
A. Minimum inhibitory concentration  
B. Minimum therapeutic dose  
C. Maximum therapeutic dose
- 51- Histamine is synthesized from;  
A. Nor-epinephrine  
B. Histidine  
C. Nor-adrenaline
- 52- Prostaglandin is;  
A. Neurotransmitter  
B. Autacoids  
C. Endocrine hormone
- 53- Arichidonic acid is precursor of;  
A. Histamine  
B. Epinephrine  
C. Prostaglandins
- 54- Aspirin acts as analgesics and antipyretic by inhibiting;  
A. Monoamine oxidase enzyme  
B. Cyclooxygenase enzyme  
C. Carbonic anhydrase enzyme
- 55- Quantal dose response relationship refers to;  
A. All or non response  
B. Increase the intensity of action  
C. Decrease the intensity of action
- 56- Potency of a drug means;  
A. Action of drug by a dose  
B. Activity of drug per unit mass  
C. Activity of a drug molecule
- 57- Efficacy refers to;  
A. Potency of a drug  
B. Intrinsic activity of a drug  
C. Safety of a drug
- 58- For computing kinetic parameters the concentration versus time data is plotted on;  
A. Ordinary graph paper  
B. Plane paper  
C. Semi log graph paper
- 59- The discipline of pharmacology dealing with mode of action of drug is known as;  
A. Pharmacotherapy  
B. Pharmacy  
C. Pharmacodynamics

- 60- Pharmacy deals with;
- A. Mechanism of action of drug
  - B. Preparation of drug
  - C. Identification of drug
- 61- Subscription carries;
- A. Instruction for pharmacist
  - B. Instruction for the user
  - C. Instruction for the prescriber
- 62- Soporifics are;
- A. Pain killer
  - B. Sleep inducing agents
  - C. Antipyretics
- 63- Intrathecal administration of drug means;
- A. Epidural administration
  - B. Administration into C.S.F.
  - C. Intraocular
- 64- In epidural administration drug is administered;
- A. into C.S.F.
  - B. Above the durameter
  - C. Below the durameter
- 65- Derivatives of sulfanilamides are called;
- A. Barbiturates
  - B. Sulfonic acid
  - C. Sulfonamide
- 66- Metabolite of drug may become;
- A. More lipophilic
  - B. More polar than parent drug
  - C. Non polar than parent drug
- 67- Biotransformation of drug facilitates excretion of drug;
- A. By changing it to more active
  - B. By converting non polar drug to polar
  - C. By converting polar drug to non polar
- 68- Polar substances are excreted;
- A. Easily by kidney
  - B. Slowly by kidney
  - C. Normally by kidney
- 69- 1<sup>st</sup> pass effect;
- A. Increase the bioavailability of the drugs
  - B. Decrease the bioavailability of the drugs
  - C. Increase the excretion of drugs
- 70- Drug administered I/V may excrete in faeces due to;
- A. Absorption of drug
  - B. Metabolism of drug
  - C. Due to entero-hepatic circulation
- 71- Biliary excretion drug refers to excretion;
- A. In urine
  - B. In milk
  - C. In faeces
- 72- Tick the true statement;
- A. All the antibacterials are antibiotics
  - B. All the antibiotics are antibacterial
  - C. All the antibacterial are obtained from living organism
- 73- All the antibiotics are;
- A. Bactericidal only
  - B. Bacteriostatic only
  - C. Bacteriostatic and bactericidal
- 74- Drugs give their action;
- A. Due to their specific receptor only
  - B. Due to non receptor mediated mechanism only
  - C. Due 1 and 2

- 75- In anaphylactic shock due to drug;  
A. Blood pressure is increased to high limit  
B. Blood pressure dropped to critical level  
C. Nothing happen to blood pressure
- 76- Posology deals with;  
A. Weighing and measuring of drug  
B. Dose and dosage  
C. Metabolism of drugs
- 77- Ice burge theory explains the mode of action of;  
A. Local anesthetics  
B. All general anesthetics  
C. Volatile general anesthetics
- 78- Penicillin gives their bactericidal action due to;  
A. Inhibition of protein synthesis  
B. Inhibition of nucleic acid synthesis  
C. Inhibition of cell wall synthesis
- 79- Sulfonamide give their bacteriostatic action due to;  
A. Protein synthesis inhibition  
B. Competing antimetabolite  
C. Cell wall synthesis inhibition
- 80- Tachyphylaxis develops;  
A. Over days  
B. Over weeks  
C. Within minutes
- 81- Tolerance to drug may develop due to;  
A. Increase rate of metabolism of drug  
B. Decrease rate of metabolism of drug  
C. Decrease in the excretion of drug
- 82- Tachyphylaxis may develop due to;  
A. Increase rate of metabolism of drug  
B. Exhaustion of mediators  
C. Decrease rate of metabolism of drug
- 83- Acetylcholine is a chemical mediator at;  
A. Sympathetic nervous system  
B. Parasympathetic nervous system  
C. None of the above
- 84- Prontosil is reduced to \_\_\_\_\_ in the body;  
A. Aryl amine  
B. Acetate  
C. Sulfanilamide
- 85- Acetate and choline are metabolite of;  
A. Nor epinephrine  
B. Neostigmine  
C. Acetyl choline
- 86- Choral hydrate is converted into \_\_\_\_\_ by the liver which is an active metabolite;  
A. Butanol  
B. Trichloroethanole  
C. Trichloroacetic acid
- 87- Glucoronide conjugation is missing in;  
A. Cat  
B. Dog  
C. Pig
- 88- Sulfate conjugation is of low level in;  
A. Cat  
B. Pig  
C. Dog
- 89- Sulfonamide are metabolized in the body by the reaction;  
A. Oxidation  
B. Reduction  
C. Acetylation

- 90- Drug allergy refers to those situations in which unusual response is due to;
- A. Over dose
  - B. Wrong rout of administration
  - C. Antigen-antibody reaction
- 91- Histamine is stored in the following cell in the body;
- A. Epithelial cells
  - B. Eosinophils
  - C. Mast cells and basophis
- 92-Idiosyncrasy is attributable to;
- A. Immunological basis
  - B. Genetic abnormality
  - C. Over dose of a drug
- 93- Biotransformation facilitates the excretion of drugs by changing them into;
- A. More ionized and less lipid soluble
  - B. Less ionized and more lipid soluble
  - C. More ionized and more lipid soluble
- 94- Basic nitrogenous substances available in plants are exploited for their pharmacological actions are known as;
- A. Tannins
  - B. Glucoside
  - C. Alkaloids
- 95- Styptics are used to prevent;
- A. Minor hemorrhages
  - B. Clotting of blood
  - C. Perfuse hemorrhages
- 96- Oxidative reactions are called;
- A. Synthetic reaction
  - B. Non synthetic reaction
  - C. Conjugation reaction
- 97- When a drug potentiates or complements the action of other drug the phenomenon is called;
- A. Antagonism
  - B. Drug interaction
  - C. Synergism
- 98- The substances added to a dosage form in addition to active ingredients are called;
- A. Inert
  - B. Excipient
  - C. Recipient
- 99- Hard solid preparation applied to skin under a cloth are leather covering are known as;
- A. Emulsions
  - B. Lotions
  - C. Plasters
- 100- The drug preparations which are used by licking are;
- A. Aerosole
  - B. Dragee
  - C. Linctures
- 101- Ad lib means;
- A. Upto
  - B. As desired
  - C. Minimum
  - D. Less than desired
- 102- The mechanism of transport of drug which work like active transport but the drug does not more against concentration gradient;
- A. Pinicytosis
  - B. Passive diffusion
  - C. Facilitated diffusion
- 103- Hepatic and renal diseases;
- A. Decrease the half life
  - B. Increase the half life
  - C. Do not affect the half life

- 104- If the gut motility is increased then;  
A. Drug absorption is decreased  
B. Drug absorption increased  
C. Drug absorption is not affected
- 105- The rate of drug absorption is greatest in;  
A. The small intestine  
B. The large intestine  
C. The stomach
- 106- Drug distribution may depend on tissue perfusion;  
A. Highly vascular organs a drug slowly  
B. Highly vascular organ rapidly acquire a drug  
C. Levels of drug in bone may rise quickly due to its high vascularity
- 107- Most drugs and metabolites are excreted by;  
A. The kidneys  
B. The bile  
C. The lungs
- 108- Pharmacodynamics considers;  
A. The way in which the drug affects the body  
B. The effect of drug in the body and mode of action  
C. Drug metabolism
- 109- A drug allergy occurs;  
A. When too much drug has accumulated in the body  
B. When body sees the drug as an antigen and an immune response is established against the drug  
C. An unwanted but predictable response to a drug
- 110- The drug receptor interaction is usually;  
A. Irreversible  
B. Reversible  
C. Always irreversible
- 111- Cholinestrase enzyme is inhibited by;  
A. Atropine  
B. Organo phosphorus pesticide  
C. Pilocarpine
- 112- The osmotic diuretic produces diuresis;  
A. By increasing osmolarity of tubule urine  
B. By decreasing osmolarity of tubule urine  
C. Increasing reabsorption of water
- 113- The magnesium sulfate acts as a purgative because;  
A. Magnesium and sulfate ions are rapidly absorbed  
B. Magnesium and sulfate ions are poorly absorbed  
C. Magnesium ion stimulate protect the mucosa
- 114- MAO inhibitors prevent;  
A. The excretion of epinephrine  
B. The metabolism of epinephrine  
C. The distribution of epinephrine
- 115- Acetazolamide produces diuresis;  
A. By inhibiting carbonic anhydrase  
B. By inhibiting cholinestrase  
C. M.A.O.
- 116- Blood brain barrier can be crossed easily by;  
A. Unionized and lipophilic drug  
B. Ionized and hydrophilic drug  
C. Highly ionized drug
- 117- Renal function can be estimated by determining;  
A. Renal clearance of potassium  
B. Renal clearance of Na.  
C. Renal clearance of cretinine
- 118- Zero order elimination is;  
A. Dose independent  
B. Dose dependent



- C. Both A and B
- 119- 1<sup>st</sup> order elimination is;  
A. Dose independent  
B. Dose dependent  
C. Both A and B
- 120- Drugs mainly bind to protein in the body;  
A. Albumin  
B. Globulin  
C. Hemoglobin
- 121- H<sub>1</sub>-receptor of histamines are mainly associated with;  
A. Blood vascular system  
B. Blood vascular and respiratory system  
C. Stomach
- 122- Pharmacognosy deals with;  
A. Preparation of drug  
B. Properties and identification of drugs  
C. Doses of drugs
- 123- Microsomal enzyme induction leads to;  
A. Prolong the half life of drug  
B. Shorten the half life of drug  
C. No effect on the half life of a drug
- 124- Microsomal enzyme inhibitors;  
A. Prolong the half life of a drug  
B. Shorten the half life of a drug  
C. None of A & B
- 125- Renal clearance of a drug refers;  
A. The volume of blood cleared of drug per unit time  
B. The volume of urine coming from kidney per unit time  
C. The volume of drug cleared from the blood
- 126-  $t_{1/2}$  is computed by the formula;  
A. Dose /AUC  
B.  $0.693 / \beta$   
C. Dose /B
- 127- Higher value of  $t_{1/2 \text{ abs}}$  refers;  
A. Slow absorption  
B. Rapid absorption  
C. Very rapid absorption
- 128- Lower value of  $t_{1/2 \text{ abs}}$  refers;  
A. Slow absorption  
B. Rapid absorption  
C. None of A & B
- 129- Proteing bind of drug obeys;  
A. Dalton's law  
B. Law of mass action  
C. Henery's law
- 130- Albumin molecule has got;  
A. Only negative charge  
B. Only positive charge  
C. Both negative and positive charge
- 131- Net charge on the molecule is;  
A. Positive  
B. Negative  
C. Neutral
- 132- Strychnine competes with \_\_\_\_\_ receptor to give its toxicity;  
A. Ach. receptor  
B. Adrenergic receptor  
C. Glycine receptor
- 133- Parasympathamimetic agents may be called as;  
A. Adrenergic agents  
B. Oxidizing agents

- C. Cholinergic agents
- 134- Sympathomimetic agents;
  - A. Cholinergic agents
  - B. Adrenergic agents
  - C. Reducing agents
- 135- Atropine blocks the;
  - A. Alpha receptors
  - B. Nicotinic receptors
  - C. Muscarinic receptors
- 136- Muscarinic receptors can be blocked by;
  - A. Pilocarpine
  - B. Adrenaline
  - C. Atropine
- 137- Alpha adrenergic receptors mediate;
  - A. Excitatory response
  - B. Inhibitory response
  - C. None of A & B
- 138- Beta adrenergic receptors mediate;
  - A. Inhibitory response
  - B. Excitatory response
  - C. None of A & B
- 139- Adrenaline causes;
  - A. Positive inotropic effect on heart
  - B. Positive chronotropic effect on heart
  - C. Both B & C
- 140- Acetylcholine causes;
  - A. Positive inotropic effect on heart
  - B. Negative inotropic effect on heart
  - C. Both negative inotropic and chrono inotropic
- 141- Acetylcholine is act as chemical mediator at;
  - A. Post ganglionic sympathetic fibers to smooth muscles, cardiac muscles and exocrine glans
  - B. Post ganglionic parasympathetic fibers to smooth muscles, cardiac muscles and endocrine glands
  - C. Both A & B
- 142- Sweat glands receive;
  - A. Parasympathetic innervation
  - B. Sympathetic innervation
  - C. Sympathetic innervation but the fibers are cholinergic
- 143- Adrenaline gland is well known to receive;
  - A. Adrenergic innervation but release acetylcholine
  - B. Cholinergic innervation but release epinephrine
  - C. Both A & B
- 144- Ganglionic receptors can be blocked by;
  - A. Atropine
  - B. Hexamethonium
  - C. d-tubacurarine
- 145- Nicotinic receptors in skeletal muscles can be blocked by;
  - A. Atropine
  - B. Hexamethonium
  - C. d-tubacurarine
- 146- Contraction of skeletal muscle with acetylcholine is a;
  - A. Nicotinic action
  - B. Muscarinic action
  - C. Adrenergic action
- 147- Stimulation of parasympathetic ganglia by acetylcholine is a;
  - A. Muscarinic action
  - B. Nicotinic action
  - C. Adrenergic action
- 148-  $\beta_1$ -receptors are located in ;
  - A. Heart
  - B. Lung

- C. Blood vessel
- 149-  $\beta_2$  receptors mediate;
- A. Inhibitory response
  - B. Stimulatory response
  - C. Inhibitory and excitatory
- 150- Intra-arterial injection of acetylcholine into blood vessels of skeletal muscle leads to;
- A. Relaxation of muscles
  - B. Twitching of muscles
  - C. Twitching and fasciculation of muscles
- 151- Drug absorption is decreased if the;
- A. Gut motility is decreased
  - B. Gut motility is increased
  - C. Both A & B
- 152- In the intestine, the rate of drug absorption is;
- A. The greatest
  - B. The least
  - C. Similar to stomach
- 153- Parenteral administration of drug give;
- A. Systemic effect
  - B. Local effect
  - C. Topical
- 154- A drug that binds to cell receptor and cause a response is called as;
- A. Agonist
  - B. Antagonist
  - C. Receptor blocker
- 155- A drug that binds to cell receptor and have to intrinsic activity is called;
- A. Antagonist
  - B. Agonist
  - C. Receptor blocker
- 156- Conjugation reaction of biotransformation of drugs are called;
- A. Non synthetic reaction
  - B. Synthetic reaction
  - C. None A & B
- 157- Drug like epinephrine and nor epinephrine are metabolized by;
- A. Methylation
  - B. Acetylation
  - C. Glucoronidation
- 158- Drug action id terminated by;
- A. Metabolic inactivation
  - B. Metabolic activation
  - C. Metabolic inhibition
- 159- Hyper susceptibility refers to;
- A. Some subjects show much lesser response
  - B. Some subjects show much greater response
  - C. Some subject do not show the response at all
- 160- Non-depolarizing neuro muscular agents act;
- A. By promoting the post syneptic membrane depolarizing by Ach.
  - B. By preventing the post syneptic depolarizing by Ach.
  - C. By competing the acetylcholine for its muscarinic receptors
- 161- Barbiturates are derivatives of;
- A. Barbituric acid
  - B. Prontosil
  - C. Sulfanilamide
- 162- Renal toxicity of sulfa drug is due to;
- A. Ionization of sulfa in the urine
  - B. Precipitation of crystals in the collecting tubules
  - C. Due to osmolarity in the tubule
- 163- Carbachole as a purgative contraindicated in;
- A. Pregnant animal
  - B. Male horse

- C. Adult buffalo
- 164- Morphine leads to excitement;  
A. dog  
B. In pig  
C. In Cat
- 165- The new antiseptics are usually compared with;  
A. Salicylic acid  
B. Phenol  
C. Xylol
- 166- Mucolytics are used;  
A. To destroy secretion  
B. To loosen viscid secretion  
C. To harden the secretion
- 167- Astringents;  
A. Precipitate salts  
B. Precipitate amino acid  
C. Precipitate amino acids
- 168- Toxins from fungi are called;  
A. Venum  
B. Poison  
C. Mycotoxins
- 169- Following combination of antibiotics is considered rationale;  
A. Bactericidal+Bacteriostatic  
B. Bactericidal+Bacteriocidal  
C. Bacteriostatic+Bacteriocidal
- 170- Clavulanic acid is added to amoxicillin:  
A. To destroy the fungi  
B. To destroy the penicillinase  
C. To synthesis the penicillin
- 171- Trimethoprim potentiate the mode of action of sulfonamide;  
A. Inhibiting the reductase enzyme  
B. Inhibiting the oxidase enzyme  
C. Inhibiting the hydrolase enzyme
- 172- Important glycoside obtained from plant are;  
A. Renal glycoside  
B. Liver glycoside  
C. Cardiac glycoside
- 173- The effect of sulfa decreases as the number of bacteria;  
A. Decreases  
B. Increases  
C. None of A & B
- 174- The mechanism of resistance development in bacteria by bacteriophage is called;  
A. Mutation  
B. Transformation  
C. Transduction
- 175- Incorporation of free DNA from the environment into bacteria is called;  
A. Transduction  
B. Transformation  
C. Mutation
- 176-  $\beta$ -lactam ring is available in the structure of;  
A. Penicillin only  
B. Cephalosporine only  
C. Pencillines and cephalosporins
- 177- Last stage of general anesthetic is called;  
A. Medullary stimulation  
B. Medullary paralysis  
C. Hind quarter paralysis
- 178- Leptazole is;  
A. Anti diuretic  
B. Analeptics

- C. Diuretic
- 179- For antagonist efficacy is;
- A. Maximum
  - B. Moderate
  - C. Zero
- 180- Full agonist can produce;
- A. High efficacy
  - B. Low efficacy
  - C. No efficacy
- 181- Partial agonist produce;
- A. Submaximal effect
  - B. Maximal effect
  - C. No effect
- 182- Type 2 receptors affect;
- A. Enzymes
  - B. Enzyme and channels
  - C. Gene transcription
- 183- Muscarinic receptors are;
- A. Type 1 receptor
  - B. Type 2 receptor
  - C. Type 3 receptor
- 184- Type 4 receptors are located on;
- A. Membrane
  - B. Nucleus
  - C. Mitochondria
- 185- G protein is membrane protein comprising;
- A. 2 subunits
  - B. 4 subunits
  - C. 3 subunits
- 186- In adenylate cyclase/camp system, the CAPM acts as;
- A. 1<sup>st</sup> messenger
  - B. 2<sup>nd</sup> messenger
  - C. 3<sup>rd</sup> messenger
- 187- CAMP is hydrolysed with the cell by;
- A. Phosphodiesterase
  - B. Cholinesterase
  - C. MAO
- 188- G protein are;
- A. 3 types
  - B. 4 types
  - C. Several types
- 189- G protein coupled receptors are also termed as;
- A. Hypotropic
  - B. Hyper tropic
  - C. Metabotropic
- 190- Phospholipase A2 catalyses the reaction for the formation;
- A. Nor epinephrine
  - B. Ach.
  - C. Arachidonic acids and eicosanoids
- 191- Binding of drugs to receptors obeys the law of;
- A. Langmuir
  - B. Mass action
  - C. Henry
- 192- High the affinity of the drug for the receptor;
- A. The higher the concentration range over which it will approach the saturation
  - B. The lower the concentration range over which it will approach the saturation
  - C. None of A & B
- 193- Reversible competitive antagonism is;
- A. Less common and unimportant
  - B. The commonest and most important

- C. None of A & B
- 194- If nor adrenaline antagonize the action of histamine, The antagonism is known as;  
A. Competitive  
B. Non competitive  
C. Physiological antagonism
- 195- Antihistamine antagonizes the action of histamine;  
A. Competitively  
B. Non-competitively  
C. Physiologically
- 196- Which one is true;  
A. No drugs are completely specific in their action  
B. Many drugs are completely specific in their action  
C. Some drugs are completely specific in their action
- 197- Local anesthetic acts by:  
A. Blocking action on the voltage gated sodium channel  
B. Opening action of sodium channel  
C. None of A & B
- 198- Neostigmine inhibits the acetylcholinesterase enzyme;  
A. Reversibly  
B. Irreversibly  
C. None of A & B
- 199- Aspirin acts as;  
A. Phospholipase A2 enzyme  
B. Cyclooxygenase enzyme  
C. Cholinesterase enzyme
- 200- Steroids inhibit;  
A. Cyclooxygenase enzyme  
B. Phospholipase A2 enzyme  
C. Cholinesterase enzyme
- 201- Which are of the following diuretics act on the renal tubule;  
A. Mannitol  
B. Urea  
C. Aldosterone inhibitors
- 202- Type I receptors give action;  
A. In seconds  
B. In milli seconds  
C. In minutes
- 203- Type 4 receptors give action;  
A. In minutes  
B. In seconds  
C. In hours
- 204- Ionotropic receptors are involved mainly in;  
A. Fast synaptic transmission  
B. Slow synaptic transmission  
C. None of A & B
- 205- Lipid to water partition coefficient is equal to;  
A. Solubility in lipid Phase/ solubility in water phase  
B. Solubility in water phase/ Solubility in lipid phase  
C. None of A & B
- 206- Percent absolute bioavailability (F) of a product is equal;  
A.  $AUC_{IM} / AUC_{IV}$   
B.  $AUC_{IV} / AUC_{IM}$   
C.  $AUC_{IM} / AUC_{IV} \times 100$
- 207- Following method is commonly used for determination of protein binding of drugs in vitro;  
A. Titration  
B. Ultrafiltration  
C. Ultracentrifugation
- 208- The phase I metabolic reactions of drugs are carried out by enzymes that are located predominately in;  
A. Rumen  
B. Kidney

- C. Hepatocyte
- 209- The microsomal oxidizing enzyme have a specific requirement of;
- A. Oxidizing NADP and molecular O<sub>2</sub>
  - B. Reduced NADPH and molecular O<sub>2</sub>
  - C. Both A & B
- 210- Drug induced changes in metabolic may be;
- A. Increase rate of metabolism
  - B. Decrease rate of metabolism
  - C. Both A & B
- 211- Uremia leads to;
- A. Decrease the proteining binding of drug
  - B. Increase the proteining binding of the drug
  - C. Both A & B
- 212- Traditionally pharmacokinetic of drug is determined after;
- A. I/M administration
  - B. Oral administration
  - C. I/V administration
- 213- The half life for elimination of drug is called as;
- A. t<sub>1/2</sub> elimination
  - B. Biological half life
  - C. Both A & B
- 214- Reserpine is obtained from
- A. Rawwolfia
  - B. Opium
  - C. Acacia
- 215- Refrigeration general anesthesia can be produced;
- A. By injecting volatile substance
  - B. By spraying highly volatile agent
  - C. Both A & B
- 216- Tail flick method is used to measure the potency of;
- A. Antipyretics
  - B. Diuretics
  - C. Analgesics
- 217- Adrenaline is added to local anesthetic to;
- A. To decrease the duration of action of local anesthetic
  - B. To increase the duration of local anesthetic
  - C. To reduce the toxicity and to increase the duration of action of local anesthetic
- 218- Which one of the following are addictive analgesics;
- A. Codein
  - B. Paracetamole
  - C. Brufen
- 219- Carbacole may be called as;
- A. Parasympathomimetic pugnitive
  - B. Neuromuscular pugnitive
  - C. Both A & B
- 220- Activated charcole is used as;
- A. Toxin adsorbent
  - B. Stimulant
  - C. Depressant
- 221- Antiemetics are commonly used to prevent vomiting;
- A. In buffalo and cow
  - B. In equines
  - C. In felines and canines
- 222- Apomorphine is a;
- A. Locally acting emetics
  - B. Centrally acting emetics
  - C. Both A and B
- 223- Some cholinergic can be used in;
- A. Ruminal stasis
  - B. Ruminal atony
  - C. Both A & B

- 224- Frothy bloats may result commonly from;
- A. High intake of saponine
  - B. High intake of saponine and similar component
  - C. Chocking of esophagus
- 225- NH<sub>4</sub>Cl may be used as;
- A. Urinary alkalizer
  - B. Urinary acidifier
  - C. Both A & B
- 226- Kenamycine belongs to;
- A. Tetracyclie
  - B. Cephalosporine
  - C. Aminoglycosides
- 227- Ofloxacin belongs to;
- A. Penicillins
  - B. Quinolones
  - C. Sulfonamides
- 228- Tetracyclines affect the growth of bacteria;
- A. By inhibiting the cell wall synthesis
  - B. By inhibiting the protein synthesis
  - C. Both A & B
- 229- Nitrofurazone is derivative of;
- A. Sulfonamide
  - B. Nitrophenol
  - C. Nitrofurane
- 230- Rifamycine acts by;
- A. Inhibiting DNA gyrase
  - B. Inhibiting RNA polymerase
  - C. Inhibiting penicillinase
- 231- Norfloxacin and ciprofloxacin are also called as;
- A. Quinolones
  - B. Flouroquinolones
  - C. Both A & B
- 232- Quinolones are;
- A. Bactericidal
  - B. Bacteriostatic
  - C. None of A & B
- 233- Chloramphenicol belongs to;
- A. Tetracyclines
  - B. Sulfonamides
  - C. None of A & B
- 234- The lowest blood levels for detrimental effect on bacteria are required of;
- A. Cephalosporines
  - B. Macrolides
  - C. Flouroquinolones
- 235- Which one of the following antibacterial group better bioavailability after oral medication;
- A. Penicillins
  - B. Aminoglycosides
  - C. Flouroquinolones
- 236- Prostaglandins are;
- A. Basic lipids
  - B. Acidic lipids
  - C. Neutral lipids
- 237- Prostaglandins are also known as;
- A. Ecosanoids
  - B. Derivatives of ponstanoic acids
  - C. Both A & B
- 238- Kinins have got;
- A. Vasodilator polypeptids
  - B. Vasoconstricto polypeptids
  - C. Both A & B



- 239- Diuretics results from:  
A. Decreasing the glomerular filtration rate  
B. Increasing the glomerular filtration rate  
C. Both A & B
- 240- Some diuretics lead to diuresis by;  
A. Increasing the tubular absorption of water  
B. Decreasing the tubular absorption of water  
C. None of A & B
- 241- One of the following is the important principle for producing diuresis;  
A. Interfering with the ion transfer in renal tubules  
B. Dilution of blood  
C. None of A & B
- 242- Microorganism may develop resistance to the chemotherapeutic due to following reason;  
A. Elaboration of enzymes which destroy drug  
B. Elaboration of enzymes which activate drug  
C. Both A & B
- 243- Combination of sulfa drugs with trimethoprim is;  
A. Bacteriostatics  
B. Bacteriocidal  
C. Both A & B
- 244- Streptomycine is considered as;  
A. Narrow spectrum.  
B. Broad spectrum  
C. Both A & B
- 245- Atropin and oxines are used as specific antidote in;  
A. Copper poisoning  
B. Organophosphorus poisoning  
C. Nitrate poisoning
- 246- Non proprietary name of the drugs are know as;  
A. Generic name  
B. Non official name  
C. Trade name
- 247- Aminoglycosides causes;  
A. Hepatic toxicity  
B. Ototoxicity & renal toxicity  
C. Myoesthesia gravis
- 248- Thalidomide tragedy was due to its;  
A. Renal toxicity  
B. Hepatic toxicity  
C. Teratogenic effect
- 249- Pencilline V is;  
A. Acid resistance penicillin  
B. Natural penicillin  
C. Pencillinase resistance penicillins
- 250- Cloxacilline is a;  
A. Acid resistance penicillin  
B. Natural penicillin  
C. Pencillinase resistance penicillin
- 251- Ampicillines and cloxacilline are;  
A. Narrow spectrum penicillin  
B. Broad spectrum penicillin  
C. Acid resistance penicillin
- 252- Cephalosporins of \_\_\_\_\_ possess considerable lactamase stability;  
A. 1<sup>st</sup> generation  
B. 2<sup>nd</sup> generation  
C. 3<sup>rd</sup> generation
- 253- Chloramphenicol acts by blocking protein synthesis at the ribosomes;  
A. By binding to 50s subunits  
B. By binding at 30s subunit  
C. Binding at 70s subunit

- 254- The compound 48/80 is very potent to liberate;
- A. Body kinins
  - B. Norepinephrine
  - C. Histamine
- 255- Microbiological assay is used;
- A. To determine cholinergic drugs
  - B. Antibacterial agents
  - C. To determine nicotine
- 256- Triple response is very common for;
- A. Nor epinephrine
  - B. Acetylcholine
  - C. Histamine
- 257- Pilocarpine and muscarine give their action by ;
- A. Stimulation of depolarization of post synaptic membrane
  - B. Inhibition of mediator binding
  - C. Inhibition of mediator synthesis
- 258- Botulism toxin give its action by;
- A. Inhibition of mediator binding
  - B. Stimulation of depolarization of post synaptic membrane
  - C. Inhibition of mediator release
- 259- Methyl dopa causes;
- A. Inhibition of mediator release
  - B. Inhibition of mediator synthesis
  - C. Inhibition of mediator binding
- 260- Pupil can be dilated by;
- A. Cholinergic drug
  - B. Adrenergic drug
  - C. Anti adrenergic drug
- 261- Anti cholinergic and adrenergic drugs are;
- A. Mydriatics.
  - B. Meiotics
  - C. Both A & B
- 262- Glaucoma is treated with;
- A. Atropine
  - B. Pilocarpine
  - C. Both A & B
- 263- Epinephrine affects;
- A. Only beta receptors
  - B. Both alpha and beta receptors
  - C. More active on beta than beta receptors
- 264- Nor epinephrine is;
- A. More active on beta than alpha receptors.
  - B. More active on alpha than beta receptors
  - C. Equally active on alpha and beta receptors
- 265- Cardiovascular effects of nor epinephrine and epinephrine may be quite different when;
- A. Their smaller doses are administered
  - B. Their larger doses are administered
  - C. When the equal doses are given
- 266- Precursor for the synthesis of nor epinephrine is;
- A. Histidine
  - B. Tyrosine
  - C. Tryptamine
- 267- Uptake of nor epinephrine is inhibited by;
- A. Cocain
  - B. Morphine
  - C. Reserpine
- 268- Cholinergic blocking agents may be used as;
- A. Antiemetics
  - B. Antispasmodics
  - C. Antiseptica

- 269- For haemostatic action one can use;
- A. Carbachole
  - B. Pilocarpine
  - C. Adrenaline
- 270- Acetylcholine increases the blood pressure after atropine due to;
- A. Muscarinic action
  - B. Nicotinic action
  - C. Both A & B
- 271- Isoprenaline is a potent stimulator of;
- A. Beta receptors
  - B. Alpha receptors
  - C. Both A & B
- 272- Phenylepinephrine acts exclusively on;
- A. Beta receptors
  - B. Alpha receptors
  - C. Nicotinic receptors
- 273- Ergot alkaloids are;
- A. Powerful diuretic
  - B. Weak diuretic
  - C. Powerful vasoconstrictors
- 274- Cardiovascular effects of isoprenaline can be prevented by;
- A. Atropine
  - B. Beta blockers
  - C. Alpha blockers
- 275- Beta blockers can be used to prevent the action of;
- A. Carbachole
  - B. Pilocarpine
  - C. Isoprenaline
- 276- Non depolarizing drugs can lead to ;
- A. Flaccid type of muscle paralysis
  - B. Spastic of muscle paralysis
  - C. Both A & B
- 277- Chloroform is more potent than ether because;
- A. Its P.C. ratio is higher
  - B. Its P.C. ratio is lower
  - C. Its P.C. ratio is equal to ether
- 278- Nystagmus is observed in horses in;
- A. Stage I of anesthesia
  - B. Stage II of anesthesia
  - C. Stage III of anesthesia
- 279- One of the following is called laughing gas;
- A. Helium
  - B. Cyclopropain
  - C. Nitrous oxide
- 280- For I/V general anesthesia \_\_\_\_\_ barbiturates are preferred;
- A. Long acting barbiturates
  - B. Short acting barbiturates
  - C. Ultra short acting barbiturates
- 281- Following are both muscarinic and nicotinic receptor stimulant;
- A. Carbachole
  - B. Ach.
  - C. Methacholin
- 282- Which are of the following drugs most closely resemble to atropine in pharmacological action;
- A. Physostigmine
  - B. Carbachole
  - C. Scopolamine
- 283- Typical symptoms of cholinesterase inhibitor toxicity includes;
- A. Salivation, diarrhoea, miosis
  - B. Ataxia, Anorexia
  - C. Sweating, trembling

- 284- Atropine over dosage may cause;  
A. Contraction of GIT muscles  
B. Decrease in gastric secretion  
C. Papillary constriction
- 285- Nicotinic receptors include;  
A. Parasympathetic ganglia  
B. Sympathetic ganglia  
C. Both A & B
- 286- Drugs bound to plasma proteins;  
A. Can leave vascular space  
B. Is eliminated early  
C. Is inactive pharmacologically
- 287- 1<sup>st</sup> pass effect occurs in the following routs of administration;  
A. Oral  
B. Sublingual  
C. Subcutaneous
- 288- Strychnine leads to;  
A. Tonic convulsions  
B. Colonic convulsions  
C. Both A & B
- 289- Nikhethamide and leptazol may cause convulsion when given;  
A. In depressed dog  
B. Unconscious dog  
C. In normal dog
- 290- Theophyline leads to diureis;  
A. By decreasing the reabsorption of water  
B. By stimulating the renal tubule  
C. By increasing the G.F.R.
- 291- Methemoglobin is reduced to hemoglobin by;  
A. Methylene blue  
B. Methyl alcohol  
C. Methylene red
- 292- For detoxifying cyanide one may use;  
A. Sodium sufate  
B. Sodium Chloride  
C. Sodium thiosulfate
- 293- Dimercaprol is specific antidote for;  
A. Carbon mono oxide poisoning  
B. Mercury poisoning  
C. Nitric poisoning
- 294- Kidney and liver are susceptible to xenobiotics because they have;  
A. Low blood flow  
B. High blood flow  
C. Smaller size
- 295- In counter irritation, vesication occurs;  
A. When the irritation moderate  
B. When irritation severe  
C. When irritation zero
- 296- Ruebafaciene  
A. Strong irritant  
B. Mild irritant  
C. Both A & B
- 297- Benzoin, Euclyptus oil and T.T. oil can be used as expectorant in the form of;  
A. Oral medication  
B. Parenteral medication  
C. Inhalation
- 298- Antitussive drugs depress;  
A. Respiratory centre  
B. Vomiting centre  
C. Cough centre

- 299- Saline expectorant can give;
- A. Orally
  - B. I/V
  - C. I/M
- 300- Pancreatic dornase;
- A. Depolymerize RNA
  - B. Depolymerize DNA
  - C. Both A & B
- 301- 298- Kmnon is a;
- A. Strong reducing agent
  - B. Strong oxidizing agent
  - C. Strong hydrolyzing agent
- 302- Disinfectants are used to eradicate microorganism on;
- A. On living object mainly
  - B. One non living objects mainly
  - C. Both A & B
- 303- Povidone is;
- A. Less irritant than iodine
  - B. More irritant than iodine
  - C. Equally irritant
- 304- Carminatives are used to;
- A. Check the gases
  - B. Expel the gases
  - C. Form the gases
- 305- Ruminal flora;
- A. Convert the urea into CO<sub>2</sub> and SO<sub>2</sub>
  - B. Convert the urea into CO<sub>2</sub> and NH<sub>3</sub>
  - C. Convert the urea into melanic acid
- 306- Condensation of melanic acid and urea is done to obtain;
- A. Uric acid
  - B. Babbituric acid
  - C. Oxalic acid
- 307- Babbituric acid is;
- A. Very good CNS depressant
  - B. Very poor CNS depressant
  - C. Non CNS depressant
- 308- Alkyle or aryle radicals are to be substituted at the following site to convert a barbituric acid to hypnotic;
- A. At carbon 2
  - B. At carbon 5
  - C. At carbon 4
- 309- Ultra short acting barbiturates have sulfur atom in the molecule at;
- A. C5 position
  - B. C2 position
  - C. C3 position
- 310- Barbiturates are;
- A. Sparingly soluble in water
  - B. Highly soluble in water
  - C. Insoluble in water
- 311- Solution of sodium salt of barbiturate are;
- A. Highly acidic
  - B. Highly alkaline
  - C. Neutral
- 312- Drug interaction of phenylebutazone and warfin is due to;
- A. Divert neutralization
  - B. Protein binding of drugs
  - C. Inhibition of enzyme
- 313- Spironolactane acts by;
- A. Inhibiting the carbonic anhydrase enzyme
  - B. Inhibiting MAO enzyme
  - C. By inhibiting the aldosteron

- 314- All the following characteristics are associated with the process of facilitated diffusion of drugs EXCEPT;
- A. The transport mechanism becomes saturated at high drug concentration
  - B. The process is selective for certain ionic or structural configurations of the drug
  - C. If two compounds are transported by the same mechanism, one will competitively inhibit the transport of the other
  - D. The drug crosses the membrane against a concentration gradient and the process requires cellular energy
  - E. The transport process can be inhibited noncompetitively by substances that interfere with cellular metabolism
- 315- Which route of administration is most likely to subject a drug to a first-pass effect?
- A. intravenous
  - B. inhalation
  - C. oral
  - D. sublingual
  - E. intramuscular
- 316- Drugs may be released slowly from various drug reservoirs over long periods of time. The body reservoir that holds the largest amount of the barbiturate thiopental (Pentothal) is
- A. fat
  - B. lung
  - C. liver
  - D. muscle
  - E. serum albumin
- 317- The route of excretion for drugs or their metabolic derivatives that is quantitatively the LEAST significant is which of the following?
- A. Biliary tract
  - B. Kidneys
  - C. Lungs
  - D. Feces
  - E. Milk
- 318- If a drug is repeatedly administered at dosing intervals equal to its elimination half-life, the number of doses required for the plasma concentration of the drug to reach the steady state is
- A. 2 to 3
  - B. 4 to 5
  - C. 6 to 7
  - D. 8 to 9
  - E. 10 or more
- 319- When two pharmacologically active agents interact, the response elicited by the combination of drugs may be equal to, greater than, or less than the sum of, greater than, or less than the sum of the effects of the individual compounds. A synergistic effect is one in which
- A. One drug alters the pharmacokinetics of the second drug so that less of the second drug so that less of the second compound reaches the target tissue
  - B. The combined effect of the two drugs is greater than the sum of the effect of each of each compound given alone
  - C. An increased effect of one drug occurs in the presence of a compound that does not cause that effect
  - D. The combined effect of the two drugs is equal to the sum of the effect of each compound given alone
  - E. Two drugs produce opposite effects on the same physiologic function
- 320- The pharmacokinetic value that most reliably reflects the amount of drug reaching the target tissue after oral administration is the
- A. peak blood concentration
  - B. time to peak blood concentration
  - C. product of the volume of distribution and the first-order rate constant

- D. volume of distribution
  - E. area under the blood concentration-time curve
- 321- All the following are phase I biotransformation reaction EXCEPT
- A. sulfoxide formation
  - B. Nitro reduction
  - C. ester hydrolysis
  - D. sulfate conjugation
  - E. deamination
- 322- Drug products have many types of names. Of the following types of names that are applied to drugs, the one that is the official name and refers only to that drug and not to a particular product is the
- A. generic name
  - B. trade name
  - C. brand name
  - D. chemical name
  - E. proprietary name
- 323- Therapy of urea intoxication includes;
- A. Acetic acid administered
  - B. T.T. oil administered
  - C. Carbachol administration
- Q- For each type of drug interaction below, select the pair of substances that illustrates it with a reduction in drug effectiveness.
- 324- Therapeutic interaction
- A. Tetracycline and milk
  - B. Amobarbital (Amytal) and secobarbital (Seconal)
  - C. Isoproterenol (Isuprel) and propranolol (Inderal)
  - D. Soap and benzalkonium chloride (Ionil)
  - E. Sulfamethoxazole and trimethoprim
- 325- Physical interaction
- A. Tetracycline and milk
  - B. Amobarbital (Amytal) and secobarbital (Seconal)
  - C. Isoproterenol (Isuprel) and propranolol (Inderal)
  - D. Soap and benzalkonium chloride (Ionil)
  - E. Sulfamethoxazole and trimethoprim
- 326- Chemical interaction
- A. Tetracycline and milk
  - B. Amobarbital (Amytal) and secobarbital (Seconal)
  - C. Isoproterenol (Isuprel) and propranolol (Inderal)
  - D. Soap and benzalkonium chloride (Ionil)
  - E. Sulfamethoxazole and trimethoprim
- 327- Which of the following is classified as belonging to the tyrosine kinase family of receptors;
- A. GABA<sub>A</sub> receptors
  - B. Beta-adrenergic receptor
  - C. Insulin receptors
  - D. Nicotinic-II receptor
  - E. Hydrocortisone receptor
- Q- For each description of a drug response below, choose the term with which it is most likely to be associated.
- 328- Immunologically mediated reaction to drug observed soon after administration
- A. Super sensitivity
  - B. Tachyphylaxis
  - C. Tolerance
  - D. Hyposensitivity
  - E. Anaphylaxis
- 329- A rapid reduction in the effect of the given dose of a drug after only one or two doses
- A. Super sensitivity
  - B. Tachyphylaxis
  - C. Tolerance
  - D. Hyposensitivity

- E. Anaphylaxis
- 330- Hyperactivity to a drug seen as a result of denervation
- A. Super sensitivity
  - B. Tachyphylaxis
  - C. Tolerance
  - D. Hyposensitivity
  - E. Anaphylaxis
- 331- All the following compounds are prodrugs that are biotransformed to a pharmacologically active product EXCEPT:
- A. Minoxidil (Loniten)
  - B. Enalapril maleate (Vasotec)
  - C. Diazepam (Valium)
  - D. Sulfasalazine (Azulfidine)
  - E. Sulindac (Clinoril)
- Q- For each description below, select the transmembranal transport mechanism it best defines.
- 332- Lipid-soluble drugs cross the membrane at a rate proportional to the concentration gradient across the membrane and the lipid: water partition coefficient of the drug
- A. Filtration
  - B. Simple diffusion
  - C. Facilitated diffusion
  - D. Active transport
  - E. Endocytosis
- 333- Bulk flow of water through membrane pores, resulting from osmotic differences across the membrane, transports drug molecules that fit through the membrane pores
- A. Filtration
  - B. Simple diffusion
  - C. Facilitated diffusion
  - D. Active transport
  - E. Endocytosis
- 334- Cell membranes engulf droplets of solutions that are released inside the cell.
- A. Filtration
  - B. Simple diffusion
  - C. Facilitated diffusion
  - D. Active transport
  - E. Endocytosis
- 335- In the treatment of infections caused by *Pseudomonas aeruginosa*, the antimicrobial agent that has proved to be effective is;
- A. Penicillin G
  - B. Piperacillin
  - C. Nafcillin
  - D. Erythromycin
  - E. Tetracycline
- Q- Lipid-soluble xenobiotics are commonly biotransformed by oxidation in the drug-metabolizing microsomal system (DMMS). For each description below, choose the component of the microsomal mixed-function oxidase system with which it is most closely associated.
- 336- A group of iron-containing isoenzymes that activate molecular oxygen to a form capable of interacting with organic substrates
- A. NADPH
  - B. Cytochrome a
  - C. ATP
  - D. NADPH-cytochrome P-450 reductase
  - E. Monoamine oxidase
  - F. Cyclooxygenase
  - G. Cytochrome P-450
- 337- The component that provides reducing equivalents for the enzyme system.
- A. NADPH
  - B. Cytochrome a
  - C. ATP
  - D. NADPH-cytochrome P-450 reductase
  - E. Monoamine oxidase



- F. Cyclooxygenase
  - G. Cytochrome P-450
- 338- A flavoprotein that accepts reducing equivalents and transfers them to the catalytic enzyme.
- A. NADPH
  - B. Cytochrome a
  - C. ATP
  - D. NADPH-cytochrome P-450 reductase
  - E. Monoamine oxidase
  - F. Cyclooxygenase
  - G. Cytochrome P-450
- 339- Aluminum and calcium salts inhibit the intestinal absorption of which of the following agents?
- A. Isoniazid
  - B. Chloramphenicol
  - C. Phenoxymethyl penicillin
  - D. Erythromycin
  - E. Tetracycline
- 340- The drug most effective against malarial parasites in the liver but not effective against parasites within erythrocytes is
- A. Primaquine
  - B. Pyrimethamine
  - C. Quinacrine
  - D. Chloroquine
  - E. Chloraguanide
- 341- Norfloxacin acid, a quinolone derivative, is
- A. Effective in the treatment of urinary tract infections
  - B. Effective in preventing cell-wall synthesis
  - C. Ineffective against *Pseudomonas aeruginosa*
  - D. Only administered parenterally
  - E. A nonhalogenated derivative
- 342- Sulfonamides specifically inhibit which of the following processes?
- A. Conversion of tetrahydrofolic acid to dihydrofolic acid
  - B. Conversion of folic acid to folinic acid
  - C. Synthesis of DNA
  - D. Synthesis of folic acid
  - E. Reduction of ribonucleotides
- 343- The elimination half-life of which of the following tetracyclines remains unchanged when the drug is administered to an anuric patient?
- A. Methacycline
  - B. Oxytetracycline
  - C. Doxycycline
  - D. Tetracycline
  - E. None of the above
- 344- In the treatment of gonococcal infection resistant to penicillins in adults, the drug of choice is
- A. Aqueous crystalline penicillin G
  - B. Benzathine penicillin G
  - C. Penicillin VK
  - D. Erythromycin
  - E. Ceftriaxone
- 345- In patients with hepatic coma, decreases in the production and absorption of ammonia from the gastrointestinal tract will be beneficial. The antibiotic of choice in this situation would be
- A. Neomycin
  - B. Tetracycline
  - C. Penicillin G
  - D. Chloramphenicol

- E. Cephalothin
- 346- All the following statements regarding the extended-spectrum penicillins are true EXCEPT
- A. Mezlocillin and piperacillin are drugs in this category
  - B. They are effective against gram-negative bacilli
  - C. They are susceptible to staphylococcal penicillinase
  - D. They are the drug of choice for "strep" throat
  - E. They produce cross-sensitization with the natural penicillins
- 347- Ethambutol is administered concurrently with other antitubercular drugs in the treatment of tuberculosis in order to
- A. Reduce the pain of injection
  - B. Facilitate penetration of the blood-brain barrier
  - C. Retard the development of organism resistance
  - D. Delay excretion of other antitubercular drugs by the kidney
  - E. Retard absorption after intramuscular injection
- 348- The aminoglycoside most likely to remain a useful therapeutic agent in the event of resistance to gentamicin is
- A. Streptomycin
  - B. Amikacin
  - C. Neomycin
  - D. Tobramycin
  - E. Kanamycin
- 349- The drug used in all types of tuberculosis is
- A. Ethambutol
  - B. Cycloserine
  - C. Streptomycin
  - D. Isoniazid
  - E. P-aminosalicylic acid
- 350- Candidiasis of the vagina, gastrointestinal tract, and oral cavity is treated primarily by
- A. Nystatin
  - B. Miconazole
  - C. Rifampin
  - D. Griseofulvin
  - E. Iodide
- 351- Isoniazid, one of the most active drugs for the treatment of tuberculosis,
- A. Cannot be used with rifampin or ethambutol
  - B. Works primarily by preventing protein synthesis
  - C. Possesses toxicities that can be prevented by pyridoxine
  - D. Is removed from the body unchanged
  - E. Is rarely met with resistance to its action
- 352- All the following antibiotics inhibit bacterial cell wall synthesis EXCEPT
- A. Bacitracin
  - B. Cycloserine
  - C. Cephalothin
  - D. Vancomycin
  - E. Polymyxins
- 353- The mechanism of action by which niclosamide is effective against adult intestinal cestodes is
- A. Interference with cell-wall synthesis
  - B. Interference with cell division
  - C. Inhibition of mitochondrial oxidative phosphorylation
  - D. Interference with protein synthesis
  - E. Depletion of membrane lipoproteins
- 354- All the following penicillins are resistant to penicillinase EXCEPT
- A. Oxacillin
  - B. Cloxacillin
  - C. Ticarcillin
  - D. Nafcillin
  - E. Dicloxacillin
- 355- Which of the following statements concerning griseofulvin is true?

- A. It inhibits the growth of dermatophytes
  - B. It inhibits synthesis of the cell wall
  - C. It inhibits synthesis of the cell membrane
  - D. It is used primarily as a short-term drug
  - E. It is administered primarily by the parenteral route
- 356- All the following are associated with the use of penicillin EXCEPT
- A. Hypersensitization
  - B. Interstitial nephritis
  - C. Impaired platelet function
  - D. Seizures
  - E. Disulfiram-like reaction
- 357- Which of the following is a correct statement concerning the pharmacology of spectinomycin?
- A. It is classified with bacterial 50S subunits
  - B. It is classified as an aminoglycoside
  - C. It is active against *Neisseria gonorrhoeae*
  - D. It possesses ototoxicity
  - E. It possesses nephrotoxicity
- 358- All the following statements are true concerning cephalosporins in comparison with penicillins EXCEPT
- A. Their structures are closely related
  - B. Their mechanisms of action are analogous
  - C. Cephalosporins have an unusually broader antimicrobial spectrum
  - D. Their hypersensitivity reactions are distinguished by distinct signs and symptoms
  - E. Cephalosporins can cause bleeding problems related to hypoprothrombinemia
- 359- Penicillin has little or no antibacterial action against
- A. *Treponema pallidum*
  - B. Gonococci
  - C. Meningococci
  - D. Resting bacterial cells
  - E. Actively growing bacterial cells
- 360- Which of the following cephalosporins would have increased activity against anaerobic bacteria such as *Bacteroides fragilis*?
- A. Cefaclor
  - B. Cephalothin
  - C. Cephalexin
  - D. Cefamandole
  - E. Cefoxitin
- 361- Which one of the following antimicrobial agents is primarily administered topically?
- A. Polymyxin B
  - B. Penicillin G
  - C. Dicloxacillin
  - D. Carbenicillin
  - E. Streptomycin
- 362- Streptomycin is an effective aminoglycoside that
- A. Is administered orally
  - B. Is not significantly metabolized
  - C. Does not accumulate in patients with renal impairment
  - D. Is used widely against gram-positive enteric bacteria
  - E. Is ineffective against tuberculosis
- 363- Metronidazole is effective in the treatment of all the following EXCEPT
- A. Trichomoniasis in females
  - B. Asymptomatic trichomoniasis in males
  - C. Giardiasis
  - D. Infection with *Bacteroides fragilis*
  - E. Streptococcal infection
- 364- Which one of the following penicillins is resistant to penicillinase?

- A. Ampicillin
  - B. Oxacillin
  - C. Carbenicillin
  - D. Ticarcillin
  - E. Mezlocillin
- 365- One of the mechanisms associated with bacteria's resistance to penicillin is
- A. Ability of bacteria produce an acid media
  - B. Bacterial production of lysozymes
  - C. Alteration of penicillin-binding proteins (PBPs)
  - D. Increased metabolism of the penicillin
  - E. Increased renal excretion of penicillins
- 366- Ketoconazole is a broadly useful antifungal compound that
- A. Is usually administered parenterally
  - B. Possesses androgenic activity
  - C. Is excellent for infections of the central nervous system
  - D. Is effective in chronic suppressive therapy for mucocutaneous candidiasis
  - E. Can cause steroid abnormalities in patients
- 367- Thiabendazole (Mintezol), a benzimidazole derivative, is an anthelmintic drug used primarily to treat infections caused by
- A. Ascaris
  - B. Necator americanus (hook-worm)
  - C. Strongyloides
  - D. Enterobius vermicularis
  - E. Taenia saginata (flatworm)
- 368- Sulfonamides may cause renal damage that has been shown to be the result of precipitation of crystals in the collecting tubules of the kidney. Predisposing factors to such crystal formation include
- A. Low urinary concentration of the drug
  - B. High urinary solubility of the drug
  - C. A urine pH of 5.0
  - D. Simultaneous administration of several sulfonamides
  - E. Administration of the drug parenterally
- 369- The use of chloramphenicol may result in
- A. Bone marrow stimulation
  - B. Photoxicity
  - C. Aplastic anemia
  - D. Staining of teeth
  - E. Alopecia
- 370- A third-generation cephalosporin is
- A. Cephalexin
  - B. Cefoperazone
  - C. Cefoxitin
  - D. Cephalothin
  - E. Cefamandole
- 371- One of the reasons aminoglycosides are frequently combined with other antibiotics to treat certain infections is to
- A. Prevent drug interactions
  - B. Prevent the emergence of resistant bacteria
  - C. Increase renal excretion
  - D. Increase oral absorption
  - E. Decrease systemic toxicities
- 372- Neuromuscular blockade produced by tubocurarine is potentiated by
- A. Neomycin
  - B. Bacitracin
  - C. Cephalothin
  - D. Penicillin
  - E. Chloramphenicol
- 373- Chloramphenicol, a completely synthetic antibiotic, is the drug of choice in

- A. Symptomatic Salmonella infections
  - B. Brucellosis
  - C. Urinary tract infection by Escherichia coli
  - D. Cholera
  - E. Streptococcal pharyngitis
- 374- A true statement concerning cephalosporin antibiotics is which of the following?
- A. Cephalosporins are only bacteriostatic against multiplying bacteria
  - B. Cephalosporins and penicillins have dissimilar mechanisms of activity
  - C. Cross-hypersensitivity exists between cephalosporins and penicillins
  - D. Cephalosporins are resistant to inactivation by  $\beta$ -lactamase
  - E. Cephalosporins are usually administered orally
- 375- A correct statement concerning the reactions caused by aminoglycosides is that these agents
- A. Produce ototoxicity
  - B. Are potent neuromuscular blockers
  - C. Have little or no effect on kidneys
  - D. Produce a high incidence of hypersensitivity reactions similar to those of penicillins
  - E. Produce a high incidence of exfoliated dermatitis
- 376- The gray baby syndrome, which is caused by chloramphenicol in the newborn, is
- A. Not a serious problem
  - B. Related to an immature hepatic conjugating mechanism
  - C. Unrelated to renal function
  - D. Characterized by life-threatening hyperthermia
  - E. Associated with hypertension
- 377- To inhibit the antibacterial activity of sulfonamides, one should administer
- A. Acetylsalicylate
  - B. Folic acid
  - C. Pantothenic acid
  - D. Vitamin B12
  - E. Methotrexate
- 378- The activity of dihydrofolate reductase is inhibited by
- A. Succinylsulfathiazole (Sulfsuxidine)
  - B. Trimethoprim
  - C. Sulfamethoxazole (Gantanol)
  - D. Tetracycline
  - E. Griseofulvin
- 379- The use of morphine is contraindicated in
- A. Myocardial infarction
  - B. Cor pulmonale
  - C. Dysentery
  - D. Migraine headache
  - E. Acute pulmonary edema
- 380- Which of the following local anesthetics is useful for topical (surface) administration only?
- A. Procaine
  - B. Bupivacaine
  - C. Etidocaine
  - D. Benzocaine
  - E. Lidocaine
- 381- The agent most effective in acute treatment of migraine headache is
- A. Propranolol
  - B. Methysergide
  - C. Clonidine
  - D. Ergotamine tartrate
  - E. Amitriptylline

- 382- Which of the following is an antidepressant agent that selectively inhibits serotonin (5-HT) uptake with minimal effect on norepinephrine uptake?
- A. Protriptyline
  - B. Maprotiline
  - C. Fluoxetine
  - D. Desipramine
  - E. Amoxapine
- 383- All the following statements about chloral hydrate are true EXCEPT that it
- A. irritates the gastric mucosa
  - B. produces physical dependence
  - C. produces hypnosis rapidly
  - D. effectively produces analgesia
  - E. accelerates the biotransformation of some drugs by the hepatic microsomal metabolizing system
- 384- A high degree of tolerance develops to all the following effects of hydromorphone EXCEPT
- A. Euphoria
  - B. Analgesia
  - C. Nausea and vomiting
  - D. Respiratory depression
  - E. Constipation
- 385- Which of the following inhalation anesthetics is most likely to produce diffusion hypoxia?
- A. Isoflurane
  - B. Enflurane
  - C. Methoxyflurane
  - D. Halothane
  - E. Nitrous oxide
- 386- The preferred treatment of status epilepticus is intravenous administration of
- A. Chlorpromazine
  - B. Diazepam
  - C. Succinylcholine
  - D. Tranylcypromine
  - E. Ethosuximide
- 387- All the following statements are true about amphetamine EXCEPT that it
- A. Releases catecholamines from central and peripheral adrenergic neurons
  - B. May cause tachycardia, cardiac arrhythmias, and anginal pain
  - C. Is used in the treatment of narcolepsy
  - D. Is rapidly biotransformed by catechol-O-methyltransferase (COMT)
  - E. Can lead to toxic psychosis, hyperthermia, and hypertension
- 388- All the following statements are true about thiopental EXCEPT that it
- A. Is ultra-short-acting by virtue of redistribution
  - B. Sensitizes the myocardium to endogenous catecholamines
  - C. May cause laryngospasm and bronchospasm
  - D. Is biotransformed to pentobarbital
  - E. Produces little postanesthetic excitement or vomiting
- 389- All of the following statements are true about ethanol EXCEPT
- A. It is a hepatotoxic agent
  - B. It elevates body temperature by peripheral vasoconstriction
  - C. It suppresses the release of antidiuretic hormone
  - D. It can lead to gastritis and pancreatitis
  - E. Acute overdose can cause acidosis, hypoglycemia, and elevated intracranial pressure
- 390- All the following statements about lidocaine (Xylocaine) are true EXCEPT
- A. It is biotransformed by amidase
  - B. Vasodilation increase duration of action
  - C. It has rapid onset of action
  - D. Topical application can produce surface anesthesia
  - E. It can be used to induce epidural anesthesia

- 391- Which of the following statements is true concerning abuse of opioid analgesics?
- A. No cross tolerance develops among opioid analgesics
  - B. Tolerance develops equally to all effects of opioids
  - C. Opioids reduce pain, aggression, and sexual drives
  - D. The symptoms of acute methadone withdrawal are qualitatively different from those of acute heroin withdrawal
  - E. None of the above
- 392- A drug that specifically enhances metabolically the activity of brain dopamine is
- A. Benztopine
  - B. Selegiline
  - C. Trihexyphenidyl
  - D. Bromocriptine
  - E. Chlorpromazine
- 393- The pharmacologic properties of acetylsalicylic acid include
- A. A rapid and effective reduction in elevated temperature
  - B. Promotion of platelet aggregation
  - C. Alleviation of pain by stimulation of prostaglandin synthesis
  - D. Potency equal to that of acetaminophen as an anti-inflammatory agent
  - E. Less gastric irritation than other salicylates
- 394- A drug of choice for the therapy of absence seizures is
- A. Phenobarbital
  - B. Phenytoin
  - C. Carbamazepine
  - D. Ethosuximide
  - E. Trimethadione
- 395- All the following agents enhance the activity of  $\gamma$ -aminobutyric acid (GABA) EXCEPT
- A. Chlordiazepoxide
  - B. Phenobarbital
  - C. Halazepam
  - D. Valproic acid
  - E. Chlorpromazine
- 396- All the following drugs produce an abstinence syndrome characterized as being excitatory EXCEPT
- A. Morphine
  - B. Ethanol
  - C. Phenobarbital
  - D. Cocaine
  - E. Glutethimide
- 397- Drugs that produce their pharmacologic effects by inhibition of prostaglandin synthesis include all the following EXCEPT
- A. Indomethacin
  - B. Ibuprofen
  - C. Acetaminophen
  - D. Piroxicam
  - E. Naproxen
- 398- All the following are a consequence of ethanol abuse EXCEPT
- A. Development of metabolic tolerance
  - B. Reduced effect of barbiturates in an intoxicated alcoholic person
  - C. Possible development of disorientation, tremors, hallucinations, and convulsions when consumption of ethanol is abruptly ended
  - D. Hepatitis
  - E. Pancreatitis
- 399- All the following statements regarding barbiturates are true EXCEPT
- A. Pentobarbital is a biotransformation product of thiopental
  - B. Phenobarbital can decrease the enzymatic activity of  $\delta$ -amino-levulinic acid
  - C. Mephobarbital can be used in the treatment of tonic-clonic seizures
  - D. The duration of effect for methohexital is determined by redistribution
  - E. Alkalinization of the urine readily the excretion of secobarbital

- 400- All the following statements are true of halothane (Fluothane) EXCEPT that it
- A. Is more potent as an anesthetic than nitrous oxide
  - B. Increases cardiac output
  - C. Causes respiratory depression with increase anesthetic levels
  - D. May produce hepatotoxicity
  - E. Is a halogenated alkane
- 401- True statements about mechanisms of drugs used in the treatment of Parkinsonism include all the following EXCEPT
- A. Benztropine blocks muscarinic receptors
  - B. Amantadine stimulates release of dopamine from storage sites
  - C. Bromocriptine stimulates dopaminergic receptors
  - D. Levodopa enhances the synthesis of dopamine
  - E. Selegiline is an inhibitor of monoamine oxidase A
- 402- True statements about codeine include all the following EXCEPT that it
- A. Produces naloxone-reversible respiratory depression
  - B. May cause hypotension as a result of histamine release
  - C. Has antitussive properties
  - D. Is exempt from the narcotics control laws
  - E. Is partially biotransformed to morphine
- 403- The alpha-adrenergic receptor antagonist that produces an irreversible, nonequilibrium receptor blockade is
- A. Phentolamine (Regitine)
  - B. Phenoxybenzamine (Dibenzyline)
  - C. Prazosin (Minipress)
  - D. Terazosin (Hytrin)
  - E. Ergotamine (Ergomar)
- 404- All the following are possible effects of low doses of nicotine (from smoking tobacco products) EXCEPT
- A. Increased tone and motor activity of the intestine
  - B. Stimulation of respiratory rate and depth
  - C. Stimulation of catecholamine release from the adrenal medulla
  - D. Bradycardia
  - E. Nausea and vomiting
- 405- The nonselective beta-adrenergic blocking agent that is also a competitive antagonist at alpha-adrenoceptors is
- A. Timolol (Blocadren)
  - B. Nadolol (Corgard)
  - C. Pindolol (Visken)
  - D. Acevutolol (Sectral)
  - E. Labetalol (Normodyne)
- 406- All the following are effects of serotonin (5-hydroxytryptamine) EXCEPT
- A. Relaxation of gastrointestinal smooth muscle
  - B. Vasoconstriction of arterioles of the pulmonary and renal beds
  - C. Bronchoconstriction
  - D. Stimulation of pain and itching
  - E. Vasodilation of arterioles in the heart and skeletal muscle
- 407- All the following structures respond to beta-adrenergic receptor stimulation EXCEPT
- A. The ciliary muscle of the iris
  - B. The radial muscle of the iris
  - C. Bronchial muscle
  - D. The atrioventricular node
  - E. The sinoatrial node
- 408- All the following drugs act within sympathetic neurons to depress neurotransmitter release and are used to treat hypertension EXCEPT
- A. Guanadrel (Hylorel)
  - B. Metyrosine (Demser)
  - C. Selegiline (Eldepryl)
  - D. Reserpine (Serpasil)
  - E. Guanethidine (Ismelin)



- 409- In certain patients, the duration of apnea produced after administration of succinylcholine is hours rather than a few minutes. These patients probably have a deficiency of
- A. Liver transglycosylase
  - B. Liver hydroxymethylase
  - C. Plasma cholinesterase
  - D. Plasma glycine transamidinase
  - E. Red blood cell glucose-6-phosphate dehydrogenase
- 410- Atropine and scopolamine will block all the effects of acetylcholine listed below EXCEPT
- A. Bradycardia
  - B. Salivary secretion
  - C. Bronchoconstriction
  - D. Skeletal muscle contraction
  - E. Miosis
- 411- Propranolol (Inderal) is indicated for use in patients with all the following conditions EXCEPT
- A. Hypertention
  - B. Angina pectoris
  - C. Glaucoma
  - D. Migraine headaches
  - E. Supraventricular and ventricular arrhythmias
- 412- Hypotension bradycardia, respiratory depression, and muscle weakness, all unresponsive to atropine and neostigmine, would most likely be due to
- A. Diazoxide
  - B. Isoflurophate
  - C. Tubocurarine
  - D. Nicotine
  - E. Pilocarpine
- 413- The skeletal muscle relaxant that acts directly on the contractile mechanism of the muscle fibers is
- A. Gallamine (Flaxedil)
  - B. Baclofen (Lioresal)
  - C. Pancuronium (Pavulon)
  - D. Cyclobenzaprine (Flexeril)
  - E. Dantrolene (Dantrium)
- 414- The cholinomimetic drug that is useful for treating postoperative abdominal distention and gastric atony is
- A. Acetylcholine (Michol)
  - B. Methacholine (Provocholine)
  - C. Carbachol (Isopto Carbachol)
  - D. Bethanechol (Urecholine)
  - E. Pilocarpine (Pilocar)
- 415- Neostigmine (Prostigmin) will effectively antagonize skeletal muscle relaxation produced by
- A. Metocurine (Metubine)
  - B. Succinylcholine (Anectine)
  - C. Diazepam (Valium)
  - D. Baclofen (Lioresal)
  - E. Nicotine (Nicorette)
- 416- All the following drugs can produce bronchodilation and are indicated for the therapy of bronchial asthma EXCEPT
- A. Theophylline
  - B. Isoproterenol
  - C. Tetrahydrozoline
  - D. Albuterol
  - E. Aminophylline

- 417- The mechanism of action of the long-lasting organic phosphate anticholinesterases is
- A. Splitting of polypeptide bonds in cholinesterases
  - B. Phosphorylation of the anionic site of cholinesterases
  - C. Phosphorylation of the esteratic site of cholinesterases
  - D. Acetylation of the anionic site of cholinesterases
  - E. Acetylation of the esteratic site of cholinesterases
- 418- Which of the following antimuscarinic drugs is used by inhalation in the treatment of bronchial asthma?
- A. Anisotropine methylbromide (Valpin)
  - B. Cyclopentolate hydrochloride (Cyclogyl)
  - C. Ipratropium bromide (Atrovent)
  - D. Methscopolamine bromide (Pamine)
  - E. Trihexyphenidyl hydrochloride (Artane)
- 419- All the following statements are accurate characterizations of ephedrine EXCEPT that it
- A. Is used as a decongestant
  - B. Can cause insomnia, restlessness, agitation, and tremors
  - C. Can increase systemic blood pressure
  - D. Is rapidly biotransformed by both catechol-O-methyltransferase (COMT) and monamine oxidase (MAO)
  - E. Will relax the smooth muscles of the bronchial tree
- 420- The cholinesterase inhibitor that is used in the diagnosis of myasthenia gravis is
- A. Edrophonium chloride (Tendilon)
  - B. Ambenonium chloride (Mytelase)
  - C. Malathion
  - D. Physostigmine salicylate (Antilirium)
  - E. Pyridostigmine bromide (Mestinon)
- 421- All the following drugs block beta-adrenergic receptors in the heart EXCEPT
- A. Propranolol (Inderal)
  - B. Metoprolol (Lopressor)
  - C. Haloperidol (Haldol)
  - D. Atenolol (Tenormin)
  - E. Esmolol (brevibloc)
- 422- The skeletal muscles that are most sensitive to the action of tubocurarine are the
- A. Muscles of the trunk
  - B. Muscles of the arms and legs
  - C. Respiratory muscles
  - D. Muscles of the head, neck, and face
  - E. Abdominal muscles
- 423- Which of the following is used in the treatment of acute migraine headaches because of its vasoconstrictor properties?
- A. Ergotamine
  - B. Propranolol
  - C. Methsergide
  - D. Pseudoephedrine
  - E. Aspirin
- 424- All the following are effects elicited by activation of the parasympathetic nervous system EXCEPT
- A. Decreased heart rate
  - B. Increased tone of longitudinal smooth muscles of the intestine
  - C. Contraction of the skeletal muscles
  - D. Contraction of the detrusor of the urinary bladder
  - E. Secretion of fluid from the lacrimal glands
- 425- The drug of choice for the treatment of anaphylactic shock is
- A. Epinephrine
  - B. Norepinephrine
  - C. Isoproterenol
  - D. Diphenhydramine
  - E. Atropine

- 426- All the following compounds are believed to function as co transmitters or neuromodulators that exist with acetylcholine or nor epinephrine in neurons of the autonomic nervous system EXCEPT
- A. Vasoactive intestinal peptide (VIP)
  - B. Adenosine triphosphate (ATP)
  - C. Neuropeptide Y (NPY)
  - D. Substance P
  - E. Serotonin (5-HT)
- 427- Canrenone, which elicits a diuretic response, is a major biotransformation product of which of the following agents?
- A. Indapamide (Lozol)
  - B. Chlorthalidone (Hygroton)
  - C. Spironolactone (Aldactone)
  - D. Amiloride (Midamor)
  - E. Triamterene (Dyrenium)
- 428- Mannitol may be useful in all the following procedures EXCEPT
- A. Treatment of elevated intracranial pressure
  - B. Treatment of elevated intraocular pressure
  - C. Treatment of pulmonary edema with congestive heart failure
  - D. Diagnostic evaluation of acute oliguria
  - E. Prophylaxis of acute renal failure
- 429- True statements about triamterene (Dyrenium) include all the following EXCEPT
- A. It has a shorter duration of action than spironolactone
  - B. It is a weak diuretic
  - C. It is used with hydrochlorothiazide in treating hypertension
  - D. It is biotransformed by hydroxylation and conjugation
  - E. It can produce hyperglycemia
- 430- Adverse interactions may occur between thiazides and all the following drug groups EXCEPT
- A. Adrenal corticosteroids
  - B. Anticoagulants (oral)
  - C. Aminoglycosides
  - D. Beta-adrenergic blockers
  - E. Antidopaminergic skeletal muscle relaxants
- 431- Hyperkalemia is a contraindication to the use of which of the following drugs?
- A. Acetazolamide (Diamox)
  - B. Chlorothiazide (Diuril)
  - C. Ethacrynic acid (Edecrin)
  - D. Chlorthalidone (Hygroton)
  - E. Spironolactone (Aldactone)
- 432- A reduction in insulin release from the pancreas may be caused by which of the following diuretics?
- A. Triamterene (Dyrenium)
  - B. Chlorothiazide (Diuril)
  - C. Spironolactone (Aldactone)
  - D. Acetazolamide (Diamox)
  - E. Amiloride (Midamor)
- 433- Acute uric acid nephropathy, which is characterized by the acute overproduction of uric acid and by extreme hyperuricemia, can be prevented with
- A. Antidiuretic hormone (vasopressin, ADH)
  - B. Cyclophosphamide (Cytosan)
  - C. Allopurinol (Zyloprim)
  - D. Amiloride (Midamor)
  - E. Sodium chloride
- 434- Idiopathic calcium urolithiasis can be treated by the administration of
- A. Ethacrynic acid (Edecrin)
  - B. Triamterene (Dyrenium)
  - C. Furosemide (Lasix)
  - D. Hydrochlorothiazide (Hydrodiuril)
  - E. Bumetanide (bumex)

- 435- The release of antidiuretic hormone (ADH) is suppressed by which of the following drugs to promote a diuresis?
- A. Guanethidine (Ismelin)
  - B. Acetazolamide (Diamox)
  - C. Chlorothiazide (Diuril)
  - D. Ethanol
  - E. Indomethacin (Indocin)
- 436- Adverse reactions reported with administration of chlorthalidone (Hygroton) include all the following EXCEPT
- A. hyperlipidemia
  - B. hyponatremia
  - C. hypokalemia
  - D. hyperuricemia
  - E. hyperglycemia
- 437- Properties of mannitol include all the following EXCEPT
- A. Retention of water in the tubular fluid
  - B. The ability to be metabolically altered to an active form
  - C. The capacity to be freely filtered
  - D. Effectiveness as nonelectrolytic, osmotically active particles
  - E. The ability to resist complete reabsorption by the renal tubule
- 438- Conservation of potassium ions in the body occurs with which of the following diuretics?
- A. Furosemide (Lasix)
  - B. Hydrochlorothiazide (Hydrodiuril)
  - C. Amiloride (Midamor)
  - D. Metolazone (Zaroxolyn)
  - E. Bumetanide (Bumex)
- 439- Adverse reactions associated with furosemide (Lasix) include all the following EXCEPT
- A. Hyperglycemia
  - B. Tinnitus
  - C. Fluid and electrolyte imbalance
  - D. Hypertension
  - E. Metabolic acidosis
- 440- The distal tubule of the nephron is the principal site of action for which one of the following?
- A. Bumetanide (Bumex)
  - B. Hydrochlorothiazide (hydrodiuril)
  - C. Ethacrynic acid (Edecrin)
  - D. Triamterene (Dyrenium)
  - E. Amiloride (Midamor)
- 441- Chlorothiazide increases the urinary excretion of all the following ions EXCEPT
- A. Potassium
  - B. Chloride
  - C. Calcium
  - D. Sodium
  - E. Magnesium
- 442- The increased urinary excretion of sodium, potassium, magnesium, and calcium occurs with the administration of
- A. Spironolactone (Aldactone)
  - B. Chlorothiazide (Diuril)
  - C. Ethacrynic acid (Edecrin)
  - D. Acetazolamide (Diamox)
  - E. Amiloride (Midamor)
- 443- Adverse reactions associated with both acetazolamide (Diamox) and antibacterial sulfonamides include all the following EXCEPT
- A. Formation of urinary calculi
  - B. Fever
  - C. Metabolic acidosis
  - D. Crystalluria
  - E. Exfoliative dermatitis

- 444- An enhancement of the parathyroid hormone-mediated reabsorption of calcium in the distal tubule is caused by which of the following diuretics?
- A. Acetazolamide (Diamox)
  - B. Furosemide (Lasix)
  - C. Triamterene (Dyrenium)
  - D. Bumetanide (Bumex)
  - E. Hydrochlorothiazide
- 445- All the following statements regarding drug interactions are true EXCEPT
- A. Aspirin may increase the hypoprothrombinemic effect of dicumarol
  - B. Combining amphetamine and levothyroxine may cause cardiac tachyarrhythmias
  - C. Amitriptyline may increase the sedative effect of ethanol
  - D. Cholestyramine enhances the hepatotoxicity of acetaminophen
  - E. Benztropine would increase the risk of urinary retention, paralytic ileus, and blurred vision associated with thioridazine
- 446- Convulsions caused by drug poisoning are most commonly associated with
- A. Phenobarbital
  - B. Diazepam
  - C. Strychnine
  - D. Chlorpromazine
  - E. Phenytoin
- 447- Alkalinization of the urine with sodium bicarbonate is useful in the treatment of poisoning with
- A. Aspirin (acetylsalicylic acid)
  - B. Amphetamine
  - C. Morphine
  - D. Phencyclidine
  - E. Cocaine
- 448- All the following statements are true about arsenic poisoning EXCEPT
- A. Acute poisoning cause severe diarrhea and difficulty swallowing
  - B. Signs of chronic poisoning include peripheral neuritis, hypotension, and anemia
  - C. Death following acute intoxication may be due to hypovolemic shock
  - D. Dimercaprol is the primary agent used in the treatment of chronic arsenic poisoning
  - E. Gingivitis, stomatitis, and salivation can occur
- 449- Which of the following is an agent useful in the treatment of severe poisoning by organophosphorus insecticides, such as parathion?
- A. Ethylenediaminetetraacetic acid (EDTA)
  - B. Pralidoxime (2-PAM)
  - C. N-Acetylcysteine
  - D. Carbachol
  - E. Diethyldithiocarbamic acid
- 450- All the following are true of cyanide poisoning EXCEPT
- A. It causes convulsions and coma
  - B. It produces bright red venous blood
  - C. It produces ECG abnormalities and bradycardia
  - D. It is treated with sodium thiocyanate
  - E. It is treated with sodium nitrite
- 451- Activated charcoal may be used to treat poisoning by all the following drugs EXCEPT
- A. Phenobarbital
  - B. Carbamazepine (Tegretol)
  - C. Proxiphyne (Darvon)
  - D. Methanol
  - E. Aspirin
- 452- All the following statements are true for methanol intoxication EXCEPT

- A. Blurred vision and hyperemia of the optic disc may develop
  - B. It may produce bradycardia, coma, and seizures
  - C. Treatment includes administration of ethanol
  - D. Ascorbic acid corrects the metabolic alkalosis
  - E. Treatment may include hemodialysis
- 453- N-Acetylbenzoquinoneimine is the hepatotoxic metabolite of which drug?
- A. Sulindac (Clinoril)
  - B. Acetaminophen
  - C. Isoniazid
  - D. Indomethacin (Indocin)
  - E. Procainamide
- 454- All the following drugs may produce a syndrome of flushing, headache, nausea, vomiting, sweating, hypotension, and confusion after ethanol consumption EXCEPT
- A. Amitriptyline (Elavil)
  - B. Cefoperazone (Cefobid)
  - C. Acetohexamide (Dymelor)
  - D. Moxalactam (Moxane)
  - E. Disulfiram (Antabuse)
- 455- All the following statements are true for carbon monoxide EXCEPT
- A. Poisoning is effectively treated with 100% oxygen
  - B. It binds to hemoglobin, reducing the oxygen-carrying capacity of blood
  - C. Carboxyhemoglobin levels below 15 percent rarely produce symptoms
  - D. Symptoms of poisoning include headache, convulsions, and respiratory and cardiovascular depression
  - E. It inhibits ferricytochrome oxidase
- 456- Rapid intravenous administration of this drug causes hypocalcemic tetany.
- A. Dimercaprol
  - B. Edetate disodium
  - C. Deferoxamine
  - D. Penicillamine
  - E. N-Acetylcysteine
- 457- Acute intermittent porphyria is a contraindication to the use of
- A. Enflurane (Ethrane)
  - B. Nitrous oxide
  - C. Ketamine (Ketalar)
  - D. Diazepam (Valium)
  - E. Thiopental sodium
- 458- All the following drugs can cause hepatic toxicity EXCEPT
- A. Valproic acid (Depakene)
  - B. Halothane (Fluothane)
  - C. Thiopental sodium
  - D. Enflurane (Ethrane)
  - E. Ethanol
- 459- Following are long acting barbiturates except one;
- A. Barbitol sodium
  - B. Phenobarbitol sodium
  - C. Thiopental sodium
- 460- Following are adrenergic drug except one;
- A. Ephedrine
  - B. Amphetamine
  - C. Scopolamine
- 461- Following adrenergic drugs act on alpha receptors except one;
- A. Phenylephrine
  - B. Epinephrine
  - C. Isoprenaline
- 462- All the following reactions are phase I except:
- A. Deamination
  - B. Acetylation
  - C. O-dealkylation

- 463- As a rule acetylcholine act as mediator at all cholinergic nerves with one exception
- A. Cardiac muscles
  - B. Smooth muscles
  - C. Exocrine glands
  - D. Sweat glands
- 464- Nor epinephrine is a mediator at all adrenergic nerves with one exception;
- A. Adrenal medulla
  - B. Cardiac muscles
  - C. Exocrine glands
  - D. Smooth muscles
- 465- Neuromuscular purgative can be used in the following condition except one;
- A. Atony of rumen
  - B. Parturition
  - C. Pregnant animal
- 466- All the following antibiotics are bactericidal except one;
- A. Quinolones
  - B. Cephalosporines
  - C. Tetracycline
- 467- One of the following drugs belongs to anesthetics;
- A. Nitrofurantoin
  - B. Bacitracin
  - C. Kamillidone
- 468- Clavulanic acid is combined with one of the following antibiotics;
- A. Norfloxacin
  - B. Ofloxacin
  - C. Amoxicillin
- 469- One of the following antibiotics inhibit the cell wall synthesis;
- A. Tylosin
  - B. Vancomycin
  - C. Kanamycin
- 470- Parasympathetic neurons may be called as;
- A. Lumbosacral
  - B. Craniosacral
  - C. C.N.S.
- 471- One of the following diuretics belong to osmotic diuretics;
- A. Acetazolamide
  - B. Spirinolactone
  - C. Mannitol
- 472- One of the following diuretic belong loop diuretics;
- A. Thiazide
  - B. Lasix
  - C. Caffeine
- 473- One of the following drugs is commonly used in doping in race horses;
- A. Nuxvomica
  - B. Amphetamine
  - C. Diphenhydramine
- 474- One of the following antibiotics inhibit RNA polymerase;
- A. Ciprofloxacin
  - B. Kanamycin
  - C. Rifampicin
- 475- Which one of the following inhibit the protein synthesis;
- A. Penicillins
  - B. Quinolones
  - C. Chloramphenicol
- 476- One of the following antibiotics is obtained from bacteria;
- A. Tylosin
  - B. Neomycin
  - C. Bacitracin
- 477- MAO is used to catalyse the metabolic reaction for degradation of;
- A. Histamine
  - B. Ach.
  - C. Catecholamines

- 478- N4 acetylated metabolite of sulfa drugs are very common in the following species except one;
- A. Bovine
  - B. Caprine
  - C. Dog
- 479- Sulfa drugs have got selectivity for those cells which;
- A. Can use preformed folic acid
  - B. Synthesize their own folic acid
  - C. Both A & B
- 480- One of the following statement is true;
- A. Some drugs have got side effect
  - B. All drugs have got side effect
  - C. Synthetic drugs have got side effect
- 481- One of the following statement is true;
- A. All the drugs under go biotransformation
  - B. Some drugs may undergo biotransformation
  - C. Acid drug do not under biotransformation
- 482- One of the following statement is false;
- A. Sulfonamide are obtained from living organism
  - B. Quinolones are synthetic
  - C. Tetracyclines have bacteriostatic action
- 483- One of the following statement is true;
- A. Polar structures are easily excreted in urine
  - B. Non polar substances are not easily excreted in urine
  - C. Basic drugs are easily excreted in bovine urine
- 484- Which one of the following antibiotics lead to aplastic anemia as a side effect;
- A. Tetracyclines
  - B. Clindamycine
  - C. Chloramphenicol
- 485- One of the following antibiotics leads to deafness as a side effect;
- A. Ciprofloxacin
  - B. Terramycine
  - C. Streptomycine
- 486- Stimulation of sympathetic division of autonomic nervous system produce;
- A. More generalized but intensive effect
  - B. Localized and discrete
  - C. A & B
- 487- Clostrum is absorbed by;
- A. Active transport
  - B. Passive transport
  - C. Pinocytosis
- 488- Handerson hasselbalch equation gives relation of;
- A. pH and PKa
  - B. pH and PKa ionized
  - C. pH and PKa ionized and unionized acids and bases
- 489- Which of the following is the base for ointment;
- A. Sodium chloride
  - B. Cyanide
  - C. Lanoline
- 490- What is the commonly used ointment?
- A. Mineral oils
  - B. Vegetable oils
  - C. Hydrocarbon of petroleum industry
- 491- Renal clearance of creatinine considered an index G.F.R because;
- A. Creatinine is exclusively reabsorbed
  - B. Creatinine is only filtered through glomerulus
  - C. Creatinine is actively secreted into the renal tubule
- 492- The ratio of renal clearance of creatinine to renal clearance of drug is important to known;
- A. About the liver function
  - B. About the mechanism involved in renal handling of drugs



- C. About the functional status of kidney
- 493- Renal impairment lead to;
- A. Decrease a half life of a drug
  - B. Prolong the half life of a drug
  - C. Promote the excretion rate of drug
- 494- Least square regression analysis is performed to;
- A. Determine slop only
  - B. Determine slop and intercept
  - C. Determine SEM
- 495- The hydbride parameters of kinetics are;
- A. A, B, alpha and beta
  - B. K12, K21
  - C. t1/2beta
- 496- Residual method is used to;
- A. Differentiate alpha and beta phases
  - B. To calculate Vd
  - C. To calculate Kel
- 497- The units for Vd are;
- A. L/kg
  - B. mg/Lit.
  - C. Hr<sup>-1</sup>
- 498- One of the following statements is true;
- A. Biotransformation result in inactivation of drug
  - B. Biotransformation may lead to activation of drugs
  - C. Biotransformation only modify the drug
- 499- One of the following statements is true;
- A. Orally administered drugs are maximally subjected to 1<sup>st</sup> pass effect
  - B. Sublingual administration of drugs under goes 1<sup>st</sup> pass effect
  - C. I/V administered drugs under goes 1<sup>st</sup> pass effect maximally
- 500- One of the following statements is true;
- A. All drugs have got specific receptors
  - B. Some drugs have got specific receptors
  - C. No drugs have got Specific receptors

### **KEY OF PHARMACOLOGY**

Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer
1	A	42	C	83	B	124	A	165	B
2	C	43	B	84	C	125	A	166	B
3	B	44	A	85	C	126	B	167	C
4	B	45	B	86	B	127	A	168	C

5	A	46	A	87	A	128	B	169	B
6	A	47	C	88	B	129	B	170	B
7	B	48	A	89	C	130	C	171	A
8	B	49	B	90	C	131	B	172	C
9	A	50	A	91	C	132	C	173	B
10	A	51	B	92	B	133	C	174	C
11	B	52	B	93	A	134	B	175	C
12	A	53	C	94	C	135	C	176	C
13	C	54	B	95	A	136	C	177	B
14	C	55	A	96	B	137	A	178	B
15	C	56	B	97	C	138	A	179	C
16	B	57	B	98	B	139	C	180	A
17	B	58	C	99	C	140	C	181	A
18	A	59	C	100	C	141	B	182	B
19	A	60	B	101	B	142	C	183	B
20	C	61	A	102	C	143	B	184	B
21	B	62	B	103	B	144	B	185	C
22	B	63	B	104	A	145	C	186	B
23	C	64	B	105	A	146	A	187	A
24	B	65	C	106	B	147	B	188	C
25	B	66	B	107	A	148	A	189	C
26	B	67	B	108	B	149	C	190	C
27	C	68	A	109	B	150	C	191	B
28	B	69	B	110	B	151	B	192	B
29	B	70	C	111	B	152	A	193	B
30	A	71	C	112	A	153	A	194	C
31	C	72	B	113	B	154	A	195	C
32	B	73	C	114	B	155	A	196	A
33	B	74	C	115	A	156	B	197	A
34	A	75	B	116	A	157	A	198	A
35	B	76	B	117	C	158	A	199	B
36	B	77	C	118	B	159	B	200	B
37	C	78	C	119	A	160	B	201	C
38	B	79	B	120	A	161	A	202	C
39	C	80	C	121	B	162	B	203	C
40	B	81	A	122	B	163	A	204	A
41	C	82	B	123	B	164	C	205	A
Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer
206	C	250	C	294	B	338	D	382	C
207	B	251	B	295	B	339	E	383	D
208	C	252	C	296	B	340	A	384	E
209	B	253	A	297	C	341	A	385	E
210	C	254	C	298	C	342	D	386	B
211	A	255	B	299	A	343	C	387	D
212	C	256	C	300	A	344	E	388	B
213	C	257	A	301	B	345	A	389	B
214	A	258	C	302	B	346	D	390	B
215	B	259	B	303	A	347	C	391	C
216	C	260	B	304	B	348	B	392	B
217	C	261	A	305	B	349	D	393	A
218	A	262	B	306	B	350	A	394	D
219	C	263	B	307	C	351	C	395	E
220	A	264	B	308	B	352	E	396	D
221	C	265	A	309	B	353	C	397	C
222	B	266	B	310	A	354	C	398	B
223	C	267	A	311	B	355	A	399	B
224	B	268	B	312	B	356	E	400	B
225	B	269	C	313	C	357	C	401	E
226	C	270	B	314	D	358	D	402	D
227	B	271	A	315	C	359	D	403	B



463	D								
464	A								
465	C								
466	C								
467	C								
468	C								