

Five-Choice Completion

Direction: Select the Single best answer (2% per question)

1. Which of the following drugs has the lowest addiction liability?
  - A. Amphetamine
  - B. Codeine
  - C. Cocaine
  - D. Nicotine
  - E. Atropine
  
2. Bile acid-binding resins are anion-exchange resins that bind bile acids in the intestinal lumen and exclude them. The liver then increases bile acid synthesis to replace the lost acids. Since cholesterol is the precursor for bile acids, the net result is increased utilization of cholesterol and, usually, a lowering of the plasma concentration. Which of the following anti-hyperlipidemic drugs is a bile acid-binding resin?
  - A. Nicotinic acid
  - B. Probucol
  - C. Gemfibrozil
  - D. Clofibrate
  - E. Cholestyramine
  
3. Which metal is recognized in connection with Minamata's disease which is an neurologic and psychiatric disease discovered in the village of Minamata in Japan.
  - A. Organic mercury
  - B. Cadmium
  - C. Lead
  - D. Arsenic
  - E. None of the above
  
4. Common effects of muscarinic stimulant drugs include all of the following EXCEPT
  - A. Tachycardia
  - B. Increased peristalsis
  - C. Mydriasis
  - D. Stimulation of sweat glands
  - E. Increased secretion by salivary glands
  
5. Aminophylline, dobutamine, and digoxin: each can
  - A. Increase cAMP
  - B. Increase cardiac contractile force
  - C. Decrease conduction velocity in the atrioventricular node.
  - D. Increase peripheral vascular resistance
  - E. Decrease venous return
  
6. All of the following statements about cyclosporine are accurate EXCEPT
  - A. It is an effective immunosuppressant in organ and bone marrow transplantations.
  - B. It inhibits proliferation and early differentiation of lymphoid T cells.
  - C. It causes marked bone marrow toxicity.
  - D. It is a lipophilic peptide antibiotic.
  - E. Its nephrotoxicity may be reduced by mannitol diuresis.
  
7. Contraindications to the use of propranolol include
  - A. Angina pectoris
  - B. Migrane
  - C. Tachycardia
  - D. Asthma
  - E. Hypertension

8. The primary site of action of tyramine is
- A. Preganglionic sympathetic nerve terminals.
  - B. Ganglionic receptors.
  - C. Postganglionic sympathetic nerve terminals.
  - D. Vascular smooth muscle cell receptors.
  - E. Gut and liver catechol-O-methyltransferase
9. A drug that reduces clotting of blood is
- A. Prostaglandin E<sub>2</sub>
  - B. Prostaglandin F<sub>2α</sub>
  - C. Prostacyclin
  - D. Thromboxane A<sub>2</sub>
  - E. Leukotriene B<sub>4</sub>
10. Most drug receptors are
- A. Small molecules with a molecular weight of between 100 and 1000.
  - B. Lipids arranged in a bilayer configuration
  - C. Proteins located on cell membranes or in the cytosol
  - D. Deoxyribonucleic acids
  - E. Ribonucleic acids
11. A component of the "MOPP" regimen effective in Hodgkin's disease, the drug causes arrest of cancer cells in the M phase of the cell cycle.
- A. Procarbazine
  - B. Mechlorethamine
  - C. Cytarabine
  - D. Vincristine
  - E. Cyclophosphamide
12. Which of the following statements about the pharmacological effects of thyrotropin (TSH) is FALSE?
- A. It increases the binding receptors of T<sub>3</sub> and T<sub>4</sub>.
  - B. It increases the uptake of iodide by thyroid.
  - C. It increases the biosynthesis of thyroglobulin.
  - D. It increases the release of T<sub>3</sub> and T<sub>4</sub>.
  - E. None of the above.
13. Growth hormone has the following properties EXCEPT
- A. It promotes growth and also induces the secondary sex characteristics.
  - B. It increases nitrogen retention.
  - C. It is diabetogenic.
  - D. It needs somatomedin as cofactor.
  - E. Its release is inhibited by somatostatin.
14. Which of the following drugs may be used in the treatment of hypertension, EXCEPT
- A. Furosemide
  - B. Captopril
  - C. Clonidine
  - D. Nifedipine
  - E. Dopamine
15. A drug that is converted into the active form in the brain.
- A. Prazosin
  - B. Guanethidine
  - C. Reserpine
  - D. Methyldopa
  - E. Captopril

16. A drug that predictably prolongs the PR interval and increases cardiac contractility.
- A. Quinidine
  - B. Digoxin
  - C. Verapamil
  - D. Lidocaine
  - E. Propranolol
17. A partial estrogenic agonist used in the treatment of infertility
- A. Ethinyl estradiol
  - B. Chlorotrianisene
  - C. Norethindrone
  - D. Fludrocortisone
  - E. Clomiphene
18. A potentially nephrotoxic agent capable of displacing lead from the body.
- A. Dimercaprol (BAL)
  - B. Penicillamine
  - C. Edetate calcium disodium
  - D. Deferoxamine
  - E. Levamisole
19. A drug that decreases gastric acid secretion
- A. Diphenhydramine
  - B. Ergotamine tartrate
  - C. Terfenadine
  - D. Cimetidine
  - E. Aspirin
20. A drug that is an antimetabolite and inhibits DNA polymerase (reverse transcriptase) of the retrovirus HIV.
- A. Methisazone
  - B. Gamma globulin
  - C. Interferon
  - D. Azidothymidine
  - E. Rifampin
21. A competitive inhibitor of aldosterone.
- A. Propylthiouracil
  - B. Fludrocortisone
  - C. Spironolactone
  - D. Methylprednisolone
  - E. Corticotropin
22. All of the following are recognized effects of oral contraceptives EXCEPT
- A. Increased risk of myocardial infarction.
  - B. Nausea.
  - C. Edema.
  - D. Increased risk of endometrial cancer.
  - E. Decreased risk of ovarian cancer.
23. Which of the following adverse effects is particularly characteristic of ampicillin therapy?
- A. Constipation.
  - B. Hyponatremia.
  - C. Maculopapular rash.
  - D. Hemolytic anemia.
  - E. Nephritis.
24. A drug active against methicillin-resistant staphylococcal strains is
- A. Gentamicin.
  - B. Cephalothin.
  - C. Erythromycin.

- D. Vancomycin.  
E. Tetracycline.
25. An inhibitor of DNA-dependent RNA polymerase, useful in tuberculosis, is
- A. Isoniazid.  
B. Streptomycin.  
C. Rifampin.  
D. Ethambutol.  
E. Ethionamide.
26. A drug that is phosphorylated rapidly by herpes-specific thymidine kinase, eventually forming a compound that inhibits viral DNA polymerase, is
- A. Amantadine.  
B. Interferon.  
C. Fluorophenylalanine.  
D. Acyclovir.  
E. Methisazone.
27. With continued use of a drug, tolerance develops to all of the following effects of morphine EXCEPT
- A. Analgesia.  
B. Sedation.  
C. Nausea.  
D. Euphoria.  
E. Miosis.
28. Increased levels of which of the following may be associated with a decreased risk of atherosclerosis?
- A. Very low density lipoproteins (VLDL).  
B. Low-density lipoproteins (LDL).  
C. Intermediate-density lipoproteins (IDL).  
D. High-density lipoproteins (HDL).  
E. Cholesterol.
29. Important effects of aspirin include all of the following EXCEPT
- A. Reduction of fever.  
B. Reduction of prostaglandin synthesis in inflamed tissues.  
C. Respiratory stimulation when taken in toxic dosage.  
D. Reduction of bleeding tendency.  
E. Tinnitus and vertigo.
30. All of the following are hormones EXCEPT
- A. Bromocriptine.  
B. Somatotropin.  
C. Thyrotropin.  
D. Vasopressin.  
E. Somatomedin.
31. Toxic effects of the corticosteroids include all of the following EXCEPT
- A. Hypoglycemia.  
B. Osteoporosis.  
C. Growth inhibition.  
D. Salt retention.  
E. Psychosis.
32. Each of the following is recognized as a central neurotransmitter EXCEPT
- A. Serotonin (5-hydroxytryptamine, 5-HT).  
B. Norepinephrine.  
C. Dopamine.  
D. cAMP.  
E. Acetylcholine.

33. Which of the following is NOT caused by treatment with moderate to large doses of a benzodiazepine?
- A. Decreased performance on tests of psychomotor function.
  - B. Development of tolerance with continued use.
  - C. Increase in the activity of liver drug-metabolizing enzymes.
  - D. Occurrence of seizures with abrupt discontinuance after chronic use.
  - E. Marked depression of the CNS if taken concomitantly with ethanol.
34. The primary mechanism of action of local anesthetics is
- A. Blockade of receptor-operated calcium channels.
  - B. Blockade of electrically gated sodium channels.
  - C. Enhancement of inhibitory neurotransmitter action.
  - D. Blockade of excitatory neurotransmitter action.
  - E. Blockade of potassium channels.
35. Which of the following is most often associated with histamine release in some patients?
- A. Tubocurarine.
  - B. Pancuronium.
  - C. Atracurium.
  - D. Succinylcholine.
  - E. Vecuronium.
36. The pharmacological basis of hypotensive effect of saralasin is
- A. to antagonize the biological effects of angiotensin.
  - B. to inhibit renin release.
  - C. to inhibit angiotensin converting enzyme activity.
  - D. to stimulate the breakdown of angiotensin.
  - E. to inhibit the plasma formation of angiotensinogen.
37. Captopril and enalapril do all of the following EXCEPT
- A. Increase renin concentration in the blood.
  - B. Inhibit an enzyme.
  - C. Competitively inhibit angiotensin at its receptor.
  - D. Decrease angiotensin II concentration in the blood.
  - E. Increase sodium and decrease potassium in the urine.
38. Important effects of digitalis on the heart include
- A. Increased force of contraction.
  - B. Decreased atrioventricular conduction velocity.
  - C. Increased ectopic automaticity.
  - D. Decreased ejection time.
  - E. All of the above.
39. Diphenhydramine
- A. Produces sedation.
  - B. Prevents motion sickness.
  - C. Produces local anesthesia.
  - D. Blocks H<sub>1</sub> histamine-receptors.
  - E. All of the above.
40. A polypeptide that causes increased capillary permeability and edema is
- A. Captopril.
  - B. Angiotensin I.
  - C. Bradykinin.
  - D. Saralasin.
  - E. Angiotensin II

41. Which of the following drugs inhibits cyclooxygenase (PGH synthase)?
- A. Hydrocortisone
  - B. Epineprine
  - C. Histamine
  - D. Nitroprusside
  - E. Indomethacin
42. Alpha<sub>1</sub> receptors are associated with
- A. Cardioacceleration.
  - B. Vasodepression (vasodilatation).
  - C. Pupillary dilatation.
  - D. Bronchodilatation.
  - E. All of the above.
43. Dilation of vessels in muscle, constriction of cutaneous vessels, and positive inotropic and chronotropic effects on the heart are all actions of
- A. Metaproterenol.
  - B. Norepinephrine.
  - C. Acetylcholine.
  - D. Epinephrine.
  - E. Isoproterenol.
44. Which of the following act(s) primarily on a receptor located on the membrane of the autonomic effector cell?
- A. Cocaine.
  - B. Tyramine.
  - C. Clonidine.
  - D. Epinephrine.
  - E. All of the above.
45. Phentolamine and tolazoline
- A. Are beta-blockers.
  - B. Induce vasospasm in large doses.
  - C. Cause tachycardia.
  - D. Cause hypertension.
  - E. Block both alpha- and beta-receptors.
46. Propranolol is useful in all of the following EXCEPT
- A. Hypertension.
  - B. Familial tremor.
  - C. Idiopathic hypertrophic subaortic cardiomyopathy.
  - D. Angina.
  - E. Partial atrioventricular heart block.
47. Drug(s) is/are useful in the treatment of Parkinson's disease.
- A. Amantadine
  - B. Levodopa
  - C. Benztropine
  - D. Bromocriptine
  - E. All of the above
48. All of the following are mechanisms of drug permeation EXCEPT
- A. Aqueous diffusion.
  - B. Aqueous hydrolysis.
  - C. Lipid diffusion.
  - D. Pinocytosis or endocytosis.
  - E. Special carrier transport.

49. Mr. Wang is admitted to hospital with pneumonia due to gram-negative bacteria. The  $V_d$  (volume of distribution) of tobramycin in Mr. Wang is 40 L. If you wish to give him a loading dose to achieve the therapeutic plasma concentration of 4 mg/L, how much should be given?
- A. 0.1 mg
  - B. 10 mg
  - C. 100 mg
  - D. 160 mg
  - E. None of the above.
50. Biotransformation (metabolism) usually results in a product that is
- A. More likely to distribute intracellularly.
  - B. Less lipid soluble than the original drug.
  - C. More likely to be reabsorbed by kidney tubules.
  - D. More lipid soluble than the original drug.
  - E. More likely to produce side effects.