

100 questions: Choose the Single most appropriate answer.

1. Which one of the following is the most effective treatment for status epilepticus?
- A. Topiramate
 - B. Clonazepam followed by propranolol
 - C. Sodium valproate followed by lamotrigine
 - D. Gabapentin
 - ☒ E. Lorazepam followed by fosphenytoin
2. A 42 year old man at a major urban hospital is given a prophylactic intravenous dose of antibiotic before surgery to insert a prosthetic heart valve. As the antibiotic is being infused, the patient becomes flushed over most of his body, his head and neck becoming bright red. Which of the following antibiotics is most likely responsible?
- ~~X~~ ☒ A
- A. Vancomycin
 - B. Gentamicin
 - C. Penicillin G
 - D. Tetracycline
 - E. Cefalozin
3. A 44-year-old airplane pilot in the US Airways complained of seasonal allergies. Which one of the following drug should you suggest?
- A. Flutamide
 - B. Chlorpheniramine
 - C. Promethazine
 - ☒ D. Diphenhydramine
 - E. Loratadine
4. Which of the following agents is a DNA alkylating drug?
- A. Imatinib
 - B. Cetuximab
 - ☒ C. Cyclophosphamide
 - D. Aminoglutethimide
 - E. Gefitinib
5. Which of the following tumors can be induced during cancer chemotherapy as common chemotherapy-induced secondary tumor?
- A. Prostate cancer
 - B. Breast cancer
 - C. Brain tumor
 - ☒ D. Acute myelogenous leukemia
 - E. Skin cancer

6. Which one of the following drugs is most likely to prevent NSAID-induced ulcers by stimulating secretion of mucus by the gastric mucosa?
- ☒ A. Esomeprazole
 - ☐ B. Misoprostol
 - ☐ C. Bismuth subsalicylate
 - ☐ D. Ranitidine
 - ☐ E. Sodium bicarbonate
7. Repeated use of methylene-dioxy-methamphetamine (MDMA) can cause neurotoxicity and depletion of which neurotransmitter?
- ☐ A. Acetylcholine
 - ☐ B. Dopamine
 - ☐ C. GABA
 - ☒ D. Glutamate
 - ☐ E. Serotonin
8. Which drug has an active metabolite that can produce CNS excitation?
- ☐ A. Codeine
 - ☐ B. Hydrocodone
 - ☒ C. Meperidine
 - ☐ D. Morphine
 - ☐ E. Buprenorphine
9. Opioid analgesics can have adverse interactions with all of the following classes of drugs EXCEPT:
- ☒ A. COX2 inhibitors
 - ☐ B. MAO inhibitors
 - ☐ C. Local anesthetics
 - ☐ D. Benzodiazepines
 - ☐ E. Oral anticoagulants
10. Deficiency of which of the following vitamins may result in a degenerative neuropathy characterized by general neuritis, paralysis, and atrophy of the muscle:
- ☒ A. Vitamin B₁ (thiamine)
 - ☐ B. Vitamin B₂ (riboflavin)
 - ☐ C. Vitamin B₃ (nicotinic acid)
 - ☐ D. Vitamin B₆ (pyridoxine)
 - ☐ E. Vitamin B₁₂

11. Formation of prothrombin and factors VII, IX and X requires the cofactor:

- A. Vitamin C
- B. Vitamin A
- C. Vitamin E
- ☒ D. Vitamin K
- E. Vitamin D

12. Which of the following is a toxic side effect associated with the use of cisplatin during cancer chemotherapy?

- X B
- A. Endometriosis
 - B. Renal toxicity
 - C. Hepatotoxicity
 - D. Impotence
 - ☒ E. Hyperglycemia

13. Baclofen is an agonist on the:

- X ♥
- A. Glycine receptor
 - B. GABA_B receptor
 - C. Nicotinic receptor
 - D. Adenosine receptor
 - ☒ E. GABA_A receptor

14. Once released into the synaptic cleft, the action of norepinephrine is terminated largely by:

- OK
- A. Monoamine oxidase
 - B. Acetylcholinesterase
 - C. Choline acetyltransferase
 - D. Tyrosine hydroxylase
 - ☒ E. Neuronal uptake into the nerve terminal

15. In which of the following cases is a COMT inhibitor is added to the Parkinson's disease medical therapy?

- C
- A. At the very beginning of the treatment
 - B. If the surgery does not improve the symptoms
 - C. Only after the combination of Dopamine receptor agonists and L-dopa are no longer effective
 - ☒ D. If the L-dopa does not control the symptoms well
 - ☒ E. If the side effects with L-dopa are not well tolerated by the patients

16. Which of the following statements is true for the benzodiazepines?

- ☒ A. They can produce motor incoordination and ataxia
- ☐ B. They accelerate the metabolism of other drugs
- ☐ C. They have severe effects on respiration in therapeutic doses.
- ☒ D. They have higher dependence and abuse potential than barbiturates
- ☐ E. They are excreted unchanged by the kidney.

17. What the mechanism of action of Disulfiram (Antabuse)?

- ☐ A. Reduces alcohol absorption from the stomach
- ☐ B. Prevents alcohol from entering the central nervous system
- ☐ C. Increases the metabolism of alcohol
- ☒ D. Inhibits aldehyde dehydrogenase
- ☐ E. Increases the urinary excretion of alcohol

18. Mannitol is an osmotic diuretic, its best indication is?

- ☐ A. Acute pulmonary edema
- ☒ B. An increase in intracranial pressure (cerebral edema)
- ☐ C. Glaucoma
- ☐ D. Heart failure
- ☐ E. Renal failure

19. A patient has developed digoxin toxicity. The measured plasma concentration is 4 ng/ml. The half life of digoxin is 1.6 days. How long does it take to reach the safe target dose of 1 ng/ml?

- ☐ A. 1.6 days
- ☐ B. 2.4 days
- ☐ C. 3.2 days
- ☒ D. 4.8 days
- ☐ E. 6.4 days

$$\begin{aligned} 1.6 &= 4 \\ 3.2 &= 2 \\ 4.8 &= 1 \end{aligned}$$

20. Which of the following cancers may be treated with tamoxifen?

- ☐ A. Testicular tumors
- ☐ B. Hodgkin's disease
- ☐ C. Lymphoma
- ☒ D. Chronic myeloid Leukemia
- ☐ E. Breast cancer

21. The primary mechanism of action of digoxin in treatment of congestive heart failure involves:

- A. A shortening of the action potential duration
- B. An increase in ATP synthesis.
- C. A modification of actin
- ☒ D. An increase in systolic intracellular calcium levels
- E. An inhibition of sodium-calcium exchange

22. Which vitamin facilitates the absorption of calcium and phosphate from the intestine?

- A. Vitamin C
- B. Vitamin B6
- C. Vitamin E
- ☒ D. Vitamin D
- E. Vitamin B1

23. Which of the following statements best describes the mechanism of action of thyroid hormones?

- ☒ A. Binds to an ion channel receptor, to increase sodium influx
- ☒ B. Binds to an intracellular receptor, to increase protein synthesis
- C. Binds to a tyrosine kinase-linked receptor
- D. Binds to a G-protein-linked receptor, to increase cAMP
- E. Binds to a G-protein-linked receptor, to increase protein kinase C

24. Which of the following is the drug of choice for treating the acute attack of angina pectoris?

- ☒ A. Sublingual nitroglycerin
- B. Propranolol
- C. Verapamil
- ☒ D. Metoprolol
- E. Nifedipine

25. Which of the following drugs does not produce a significant decrease in peripheral resistance?

- A. Chronic administration of diuretics
- B. Hydralazine
- C. β -blockers
- ☒ D. ACE inhibitors
- E. Clonidine

26. A 23-year-old pregnant woman is found to be anemic. Laboratory analysis shows that she has typical microcytic anemia of pregnancy. Which of the following agents would be used to relieve the anemia?

- A. Cobalamin
- B. Folic acid
- C. Erythropoietin
- ☒ D. Ferrous sulfate
- E. Intrinsic factor

27. A 45-year-old man with a neuroendocrine tumor suffers from secretory diarrhea. Which of the following agents would be most useful in treating the diarrhea?

- A. Bismuth subcarbonate
- B. Cholestyramine
- C. Kaopectate
- ☒ D. Octreotide
- E. Ciprofloxacin

28. Night blindness is a result of deficiency in:

- A. Vitamin C
- ☒ B. Vitamin A
- C. Vitamin D
- D. Vitamin E
- E. Vitamin K

29. A patient with a duodenal ulcer is treated successfully with cimetidine. Which one of the following best describes the mechanism of action of cimetidine?

- A. Blocks ATPase
- B. Increases intracellular cAMP levels
- C. Blocks muscarinic receptors on parietal cells
- D. Enhances the action of acetylcholine on parietal cells
- ☒ E. Blocks H-2 receptors on parietal cells

30. A 60-year-old man is hospitalized following a stroke. He is recovering well but is constipated. Which of the following agents would be most likely prescribed to relieve the constipation?

- A. Codeine
- B. Docusate
- C. Methylnaltrexone
- ☒ D. Polyethylene glycol
- E. Sodium Phosphate

31. Which of the following is a prodrug, used for its anti-inflammatory properties rather than its antibacterial activity?

- A. Ciprofloxacin
- B. Polymyxin
- ☒ C. Sulfasalazine
- D. Trimethoprim
- E. Vancomycin

32. A patient has been treated with high doses of levothyroxine for the past 6 months. Which of the following adverse reactions is most likely to occur?

- A. Bradycardia
- B. Hypotension
- ☒ C. Hyperglycemia
- D. Hypothermia
- E. Hypercholesterolemia

33. A patient is being treated with terbinafine for onychomycosis. The physician performs blood work during therapy. The physician is most concerned about

- A. Metabolic acidosis
- B. Renal impairment
- C. Peripheral neuropathy
- D. Bone marrow suppression
- ☒ E. Hepatotoxicity

Questions 34. and 35. A dental patient is being treated for the bone infection, purulent osteitis, with an appropriate antibiotic. After a week of therapy the patient complains of severe and bloody diarrhea.

34. Which of the following antibiotics was most likely responsible?

- ☒ A. Clindamycin
- B. Erythromycin
- C. Sulfamethoxazole
- D. Tetracycline
- E. Vancomycin

35. The dentist prescribes another drug to treat the diarrhea. Which of the following drugs was most likely to be prescribed?

- A. Clindamycin
- B. Erythromycin
- C. Sulfamethoxazole
- D. Tetracycline
- ☒ E. Vancomycin

B
X
36. All of the following are involved in formation of cysteinyl leukotrienes EXCEPT:

- ☒ A. Arachidonic acid
- ☒ B. Cyclooxygenase
- ☒ C. Glutathione-S-transferase
- ☒ D. Lipoxygenase
- ☒ E. Phospholipase A2

37. Which of the following classes of antibiotic may require a supplement of Vitamin K to avoid blood clotting problems caused by the antibiotic?

- ☒ A. Aminoglycosides
- ☒ B. Cephalosporins
- ☒ C. Fluoroquinolones
- ☒ D. Penicillins
- ☒ E. Tetracyclines

38. All of the following statements about penicillins are true EXCEPT:

- OK
X
- ☒ A. Penicillins are useful in treatment of Legionnaire's disease
 - ☒ B. Autolytic enzymes may be involved in the antibiotic effect of penicillins
 - ☒ C. Benzathine penicillin G is a repository form of penicillin
 - ☒ D. Penicillins are excreted unchanged in the urine
 - ☒ E. Penicillin allergy is the main adverse effect of penicillins

39. Sulbactam is given in combination with ampicillin in order to

- OK
X
- ☒ A. Reduce the risk of allergic reactions
 - ☒ B. Prolong ampicillin's half-life
 - ☒ C. Reduce the severity of diarrhea
 - ☒ D. Inhibit beta-lactamases
 - ☒ E. Inhibit transpeptidases

40. Which of the following antibiotics is mainly excreted in the feces, and not eliminated in the urine?

- OK
X
- ☒ A. Ampicillin
 - ☒ B. Ciprofloxacin
 - ☒ C. Doxycycline
 - ☒ D. Penicillin G
 - ☒ E. Tetracycline

41. Preparative cancer chemotherapy is used as:

- A. An adjunct treatment following surgery or radiation
- B. A primary treatment when surgery or radiation is contraindicated
- ☒ C. An initial therapy to reduce tumor size to permit surgery or radiation
- D. A mechanism to decrease the duration of therapy
- E. A means to avoid the use of surgery or radiation

42. A patient is under treatment for colon cancer. No acute toxicity is observed. Cell analysis indicates reduced levels of deoxythymidine monophosphate. The drug the patient is being treated with is:

- A. Vincristine
- B. Cytosine
- C. 6-mercaptopurine
- ☒ D. 5-Fluorouracil
- E. Cytarabine

43. Which of the following statements is true for 6-thioguanine:

- ☒ A. It is metabolized to an active form
- B. It competes for the estrogen receptor
- C. It induces acute toxicity
- D. It inhibits tubulin polymerization
- E. It is a cell cycle nonspecific drug

44. Metabolism of which of the following drugs is slowed down in patients with reduced hepatic blood flow?

- A. Tetracaine
- B. Procaine
- ☒ C. Lidocaine
- D. Cocaine
- E. Benzocaine

45. The difference between a disinfectant and an antiseptic is that:

- ☒ A. One works on inanimate surfaces and the other on animate surfaces
- B. Disinfectants kill only growing bacteria
- C. Antiseptics don't depend on the type of tissue exposure
- D. Antiseptics are only bacteriostatic
- E. Disinfectants are only fungicidal

46. Alcohol is an effective disinfectant and antiseptic because it destroys:

- A. Viruses
- B. Fungi
- ☒ C. Bacteria
- D. Spores
- E. All of the above

47. Hexachlorophene and chlorhexidine are widely used as:

- A. Bleaching agents
- B. Generators of reactive oxygen species
- ☒ C. Treatments for gonococcal organisms
- D. Surgical scrubs
- E. Inhibitors of tissue peroxidases

48. Toxic effects of long-term administration of prednisolone are most likely to include

- A. A "lupus-like" syndrome
- B. Hepatotoxicity
- ☒ C. Osteoporosis
- D. Renal impairment
- E. Weight loss

☒ 49. Sir Joseph Lister introduced which of the following compounds as a surgical disinfectant in the mid-1800's?

- A. Peroxides
- ☒ B. Phenols
- C. Alcohols
- D. Halogens
- E. Quaternary ammonium compounds

50. Use of pilocarpine is most likely to produce

- ☒ A. Urinary retention
- ☒ B. Bronchodilation
- ☒ C. Reduced intraocular pressure
- ☒ D. Tachycardia
- ☒ E. Dry mouth *muscarinic*

51. Which of the following best describes the mechanism of action of acyclovir?

- A. Is a viral protease inhibitor
- B. Inhibits viral uncoating
- C. Is a neuraminidase inhibitor
- D. Inhibits reverse transcriptase
- ☒ E. Inhibits viral DNA polymerase

52. Neosporin is effective as an antiplaque/antigingivitis agent because it contains:

- ☒ A. Antibiotics
- B. Silver
- C. Sodium hypochlorite
- ☒ D. Sodium monofluorophosphate
- E. Chondroitin sulfate

53. Which of the following best describes the mechanism of action of itraconazole?

- A. Binds to ergosterol in fungal cells to disrupt cell membranes
- B. Inhibits thymidylate synthetase
- C. Inhibits spindle formation in fungal cell mitosis
- D. Inhibits squalene epoxidase
- ☒ E. Inhibits ergosterol synthesis

54. The anticaries agent of choice is:

- A. Phenol
- B. Hydrogen peroxide
- ☒ C. Fluoride
- D. Mercury
- E. Vancomycin

55. Oral administration of which of the following drugs is most useful for the treatment of oropharyngeal candidiasis in an immunocompromised patient?

- A. Caspofungin
- B. Terbinafine
- C. Natamycin
- ☒ D. Fluconazole
- E. Griseofulvin

Effects of estrogens in hormone replacement therapy are most likely to include

- A. Reduction in breast cancer
- B. Reduction in body temperature
- C. Reduction in HDLs
- ☒ D. Increased risk of osteoporosis
- E. Increased risk of thromboembolic disorders

57. A hospitalized patient develops an infection caused by methicillin-resistant staphylococcus aureus. The infection is also resistant to vancomycin. Which of the following antibiotics is most likely to be suitable agent for treating the infection?

- A. Azithromycin
- B. Erythromycin
- C. Isoniazid
- ☒ D. Linezolid
- E. Streptomycin

58. Which of the following statements best describes the rationale for the use of probenecid in combination with penicillin G?

- A. Expand the spectrum of activity
- B. Slow down excretion of penicillin G
- C. Slow down absorption of penicillin G
- ☒ D. Decrease acid stability
- E. Prevent emergence of penicillin resistant staphylococci

59. Use of which of the following drugs is most associated with nephrotoxicity and an acute hypersensitivity reaction?

- ☒ A. Amphotericin B
- B. Flucytosine
- C. Voriconazole
- D. Tolnaftate
- E. Griseofulvin

60. Ganciclovir, useful in the treatment of cytomegaloviral infections, is most likely to produce which of the following adverse reactions?

- ☒ A. Hepatotoxicity
- ☒ B. Anemia
- C. Hypertensive crises
- D. Psychotic reactions
- E. Bradycardia

61. Which of the following drugs is a reverse transcriptase inhibitor, useful in the treatment of HIV, and also in the treatment of hepatitis B?
- A. Amantadine
 - B. Indinavir
 - C. Valacyclovir
 - D. Ganciclovir
 - ☒ E. Lamivudine
62. A 30-year-old woman presents to her physician with insomnia and cardiac palpitations. Following blood work, the physician starts the patient on methimazole. What disease does the patient most likely have?
- A. Type 2 diabetes mellitus
 - B. Hypertension
 - ☒ C. Hyperthyroidism
 - D. Addison's disease
 - E. Osteoporosis
63. Which of the following best describes the adverse reaction profile of propylthiouracil?
- A. Hypertension and tachycardia
 - B. Hyperglycemia and ketoacidosis
 - ☒ C. Hepatotoxicity
 - D. Maculopapular rash and gastrointestinal upset
 - E. Weight loss and insomnia
64. A 50-year old woman is given a prescription for ibandronate. What disease has the physician diagnosed?
- ☒ A. Osteoporosis
 - B. Hypertension
 - C. Diabetes Mellitus
 - D. Hypothyroidism
 - E. Glaucoma
65. Which of the following drugs is most useful in combination with Interferon for the treatment of chronic hepatitis C?
- A. Amantadine
 - B. Zanamivir
 - C. Lamivudine
 - D. Nelfinavir
 - ☒ E. Ribavirin

66. Which of the following statements best describes the mechanism of action of parathyroid hormone?
- A. Binds to an intracellular receptor to enhance protein synthesis
 - B. Binds to a tyrosine kinase-linked receptor
 - C. Binds to the chloride ionophore
 - ☒ D. Binds to a G-protein-linked receptor to increase cAMP
 - E. Binds to a G-protein-linked receptor to increase intracellular calcium
67. Which of the following drugs directly binds to hydroxyapatite crystals to reduce resorption of calcium from bone, and reduce bone turnover?
- A. Levothyroxine
 - B. Calcitriol
 - ☒ C. Alendronate
 - D. Estradiol
 - E. Propylthiouracil
68. Which of the following statements best describes the mechanism of action of insulin?
- A. Binds to an ion channel receptor to increase chloride influx
 - B. Binds to a G-protein-linked receptor to increase cAMP
 - ☒ C. Binds to a tyrosine kinase-linked receptor
 - D. Binds to a nuclear receptor to increase protein synthesis
 - E. Binds to a G-protein-linked receptor to decrease cAMP
69. Which of the following is a polymer fractionated from heparin that inhibits coagulation by binding to anti-thrombin III?
- A) Protamine
 - ☒ B) Enoxaparin
 - C) Lepirudin
 - D) Argatroban
 - E) Amicar
70. A 48-year-old woman with type 2 diabetes mellitus has been stabilized on a sulfonylurea for the past 10 years. When she has a sudden elevation in her blood sugar, her physician adds a second drug, which stimulates the GLP-1 receptor to enhance insulin secretion. Which drug was added to her treatment?
- ☒ A. Exenatide
 - B. Glyburide
 - C. Metformin
 - D. Acarbose
 - E. Rosiglitazone

71. Which of the following drugs blocks estrogen receptors in the breast, and is therefore useful in the treatment of breast cancer?

- A. Ethinyl estradiol
- B. Mestranol
- C. Levothyroxine
- D. Nandrolone
- ☒ E. Tamoxifen

72. Hydrogen peroxide is an effective antiplaque/antigingivitis agent because it:

- ☒ A. Produces reactive oxygen species
- B. Degrades sodium hypochlorite
- C. Contains hydrophobic and hydrophilic regions
- D. Accelerates chlorine or iodine release
- E. Prevents repeated denture stomatitis

73. Which of the following drugs is useful in the treatment of prostate cancer because it blocks androgen receptors?

- A. Levonorgestrel
- B. Mestranol
- C. Oxybutynin
- ☒ D. Flutamide
- E. Leuprolide

74. Which of the following statements best describes the mechanism of action of sildenafil in the treatment of erectile dysfunction?

- A. Stimulation of a tyrosine kinase-linked receptor
- B. Increased chloride influx
- ☒ C. Inhibition of phosphodiesterase
- D. Increased protein synthesis
- E. Blockade of calcium channels

75. Pharmacological effects of exogenous glucocorticoids are most likely to include

- ☒ A. Increased muscle mass
- B. Hyperglycemia
- C. Improved wound healing
- D. Increased excretion of sodium and water
- E. Bradycardia

76. Which of the following drugs is most useful in the prophylaxis and treatment of rickets and osteomalacia?

- ☒ A. Teriparatide
- ☐ B. Calcitriol
- ☐ C. Calcitonin
- ☐ D. Parathyroid hormone
- ☐ E. Prednisone

77. Which of the following best describes the mechanism of action of hydrocortisone?

- ☒ A. Enhances gene expression and protein synthesis
- ☐ B. Induces adenylyl cyclase
- ☐ C. Inhibits adenylyl cyclase
- ☐ D. Stimulates a tyrosine-kinase-linked receptor
- ☐ E. Opens chloride channels

78. Which of the following drugs is most effective in replacing mineralocorticoid activity in a patient with severe chronic adrenal insufficiency?

- ☐ A. Metyrapone
- ☒ B. Fludrocortisone
- ☐ C. Dexamethasone
- ☐ D. Dehydroepiandrosterone
- ☐ E. Triamcinolone

79. A 65-year-old man enters the hospital having taken an acute overdose of aspirin for his arthritis. Which of the following treatments will enhance excretion of the drug?

- ok
- ☐ A. N-Acetylcysteine
 - ☐ B. Ammonium chloride
 - ☒ C. Sodium bicarbonate
 - ☐ D. Naloxone
 - ☐ E. Flumazenil

80. Which of the following best describes the mechanism by which simvastatin lowers LDL levels?

- ☒ A. Increases the number of LDL receptors on liver cells.
- ☐ B. Binds bile acids in the gastrointestinal tract preventing reabsorption.
- ☐ C. Inhibits lipolysis in adipose tissue
- ☐ D. Stimulates lipoprotein lipase activity
- ☐ E. Inhibits lipoprotein lipase activity

81. Which of the following statements best applies to lidocaine

- A. It prolongs the QT interval
- B. It increases cardiac contractility
- C. It is efficacious against supraventricular arrhythmias.
- ☒ D. It reduces abnormal automaticity
- E. It broadens the QRS complex

82. Infliximab (Remicade) is used for the treatment of severe rheumatoid arthritis. The desirable and undesirable properties of this drug include:

- ☒ A. It is a highly selective COX-2 inhibitor.
- B. It is a potent inhibitor of interleukin 2 production.
- ☒ C. It is a humanized monoclonal anti-TNF antibody.
- D. It is frequently associated with myocardial infarction.
- E. All of the above

83. A 34 yr old female at 24 weeks gestation with a history of peptic ulcer disease came home from work with a fever of 101 degrees. Which of the following is most appropriate for the relief of fever in this patient?

- A. Acetylsalicylic acid
- B. Ibuprofen
- C. Codeine
- ☒ D. Acetaminophen
- E. Morphine

84. Which of the following statements correctly describes the characteristics of Cyclosporine A?

- ☒ A. Nephrotoxicity is among the most common adverse reactions.
- ☒ B. It is a specific inhibitor of T cell responses to IL-2.
- C. It is rarely associated with increased incidence of viral and bacterial upper respiratory infections.
- D. It is occasionally employed as an immunostimulant for the treatment of certain cancers.
- E. Peripheral Neuropathy..

85. All of the following adverse reactions are commonly observed with corticosteroid therapy EXCEPT:

- A. Cushingoid reactions.
- ☒ B. Decreased appetite and weight loss.
- C. Hypertension.
- D. Glucose intolerance.
- E. Cataracts.

86. The mechanism of action of Tacrolimus (FK506) an effective immunosuppressive drug is based on its ability to:

- A. Inhibits TNF receptor function.
- ☒ B. Inhibit cyclophilin function suppressing IL-2 levels.
- C. Bind and inhibit TNF-alpha.
- D. Promotes IL-2 receptor activation.
- E. Act as an antagonist for the IL-2 receptor.

87. Paclitaxel is an effective cancer chemotherapeutic agent because it:

- A. Binds to the estrogen receptor
- B. Blocks cells in G2
- C. Is an S phase inhibitor
- ☒ D. Blocks cells in mitosis
- E. Competes for the progesterone receptor

88. Which of the following statements describes the potential adverse reactions of the immunosuppressive drug azathioprine?

- ☒ A. Can induce bone marrow depression (leukopenia).
- B. Causes a temporary hypergammaglobulinemia.
- C. Is activated by xanthine oxidase which prevents its use in patients with hemolytic anemia.
- D. It can cause severe respiratory depression.
- E. Peripheral Neuropathy.

89. Which of the following is an inhibitor of the fibrinogen receptor on platelets?

- A) Clopidogrel
- B) Protamine
- ☒ C) Abciximab
- D) Aspirin
- E) Alteplase

90. A 12-year-old boy with Type-1 diabetes mellitus, enters the emergency room in ketoacidosis, coma and a blood sugar of over 600 mg/dL. Which of the following drugs is most useful by the intravenous route for acute treatment of his symptoms?

- ☒ A. Regular insulin
- B. Glipizide
- C. Acarbose
- D. Repaglinide
- E. NPH insulin

91. Which of the following intravenous drugs used in general anesthesia 1) has relatively low redistribution to fat cells 2) decreases cerebral blood flow

- A) Propofol
- B) Thiopental
- C) Midazolam
- D) Etomidate
- E) Ketamine

92. Which of the following directly regulates the activity of adenylyl cyclase?

- A) Diacylglycerol
- B) Cyclic GMP
- C) G-alpha-s
- D) Inositol trisphosphate
- E) Steroid receptors

93. When determining the proper dosage for children, what is the most appropriate factor to consider.

- A) Young's Rule
- B) Fried's Rule
- C) Clark's Rule
- D) The Child's weight (kg)/70kg weight times the adult dose.
- E) Appropriate recommended dose for each individual drug as directed on the drug insert.

94. Which of the following statements is true for the actions of prazosin. *or blood*

- A. Raises systemic blood pressure
- B. Produces only a modest reflex bradycardia
- C. Acts as a sympathomimetic
- D. Blocks the pressor response to norepinephrine
- E. Selective for beta-2 adrenergic receptors

95. A young woman is brought to the emergency room having taken 50 maximum strength acetaminophen tablets 4 hours earlier. She has no immediate symptoms. This drug overdose is best managed by continued administration of

- A. N-Acetylcysteine
- B. Sodium bicarbonate
- C. Methylene blue
- D. Vitamin C
- E. Castor oil

96. Which of the following drugs is a potent bronchodilator?
- A. Doxazosin
 - B. Nadolol
 - C. Phenoxybenzamine
 - ☒ D. Albuterol
 - E. Atropine
97. Buspirone is an anti-anxiety agent that acts as:
- A. An agonist at GABA receptors
 - B. A pro-drug for nordiazepine
 - C. A selective serotonin reuptake inhibitor
 - ☒ D. An agonist at dopamine D-2 receptors in the striatum
 - E. A partial agonist at serotonergic-1A receptors
98. Among the listed antipsychotic medications, which one can best ameliorate negative symptoms of schizophrenia?
- A. Haloperidol
 - ☒ B. Risperidone
 - C. Chlorpromazine
 - D. Thioridazine
 - E. Fluphenazine
99. Which one of the following agents is an endogenous ligand for cannabinoid receptors?
- ☒ A. Anandamide
 - B. Dronabinol
 - C. Met-enkephalin
 - D. Beta-endorphin
 - E. Dynorphin
100. Sucralfate alleviates the symptoms of peptic ulcer disease by which one of the following mechanisms?
- A. Preventing the secretion of gastric acid
 - B. Neutralizing gastric acid
 - ☒ C. Forming a viscous gel that coats and protects gastric epithelial cells
 - D. Enhancing the production of H. pylori-directed antibodies
 - E. Preventing the secretion of gastrin