Dr. B. C. Roy College of Pharmacy and Allied Health Sciences

GPAT Cell, BCRCP

Mock Test-2

Total Time: 1 hour

1. Which of the following statements is not true?
   a. Lipid insoluble drugs have low Vd
   b. Drugs strongly bound to plasma proteins have low Vd
   c. Digoxin, Propranolol and Morphine have high Vd
   d. Drugs with high Vd can be easily removed by hemodialysis
2. All the following statements are true, except:
   a. Achlorhydria decreases aspirin absorption byfavoring its ionization
   b. In liver disease, plasma protein binding will bereduced
   c. In kidney disease, excretion of Streptomycin and Digoxin will decrease
   d. In liver cirrhosis, prodrugs will be activated faster
3. All of the drugs are strongly bound to albumin,except:
   a. Barbiturates
   b. Tetracycline
   c. Warfarin
   d. Lidocaine
4. Which of the following drugs ionize more atacidic pH:
   a. Sodium phenobarbitone
   b. Sod. Sulfadiazine
   c. Pot. Penicillin V
   d. Chloroquine
5. Cimetidine potentiates the action of Warfarin, Propranolol and Phenytoin because:
   a. It causes deficiency of Glucose-6-Phosphatedehydrogenase
   b. It blocks histaminic H2 receptors
   c. Itis an inhibitor of microsomal P-450 isoenzymes
   d. All of these
6. Which of the following statements is false?
   a. Basic drugs attain higher concentration intracellularly
   b. Acidic drugs ionize more in alkaline urine
   c. Ion trapping may contribute to mucosal damage by aspirin
   d. Basic drugs ionize more in alkaline urine
7. Which of the following drugs first undergoes Phase-II and then Phase-I reaction:
   a. Warfarin
   b. Isoniazid
   c. Chlorpromazine
   d. Allopurinol

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8. The metabolism kinetics changes from first orderto zero order with increase in dose for one of the the following drugs:
   a. Phenytoin
   b. Tolbutamide
   c. Theophylline
   d. All of these 4
9. Which of the following statements is not true about Glucuronide conjugation:
   a. it is carried out by UDP-glucuronysltransferase enzyme
   b. compounds with hydroxyl or carboxylic groups areeasily conjugated with glucuronic acid
   c. drug glucuronides excreted in bile can behydrolysed by bacteria in g.i.t.
   d. glucuronidation decreases the hydrophilicity of the drug
10. Which of the following is not a prodrug:
   a. Malathion
   b. Prontosil
   c. Cyclophosphamide
   d. Heroin
11. Which is the most prominent CYP isoform present inhumans:
   a. CYP3A4
   b. CYP3A6
   c. CYP P3A5
   d. CYP P3A7
12. Which of the following drugs undergoentehohepatic circulation:
   a. Morphine
   b. Phenolphthalein
   c. Estradiol
   d. All of these
13. Incase of Zero order (linear kinetics), which of the following statements istrue:
   a. Rate of elimination is directly proportional to drug concentration, Cl remains constant.
   b. Rate of elimination remains constant irrespective of drug concentration, Cl decreasewith increase in concentration.
   c. Both of these
   d. None of these
14. Whichof the following drugs is excreted unchanged exclusively in bile:
   a. Vecuronium
   b. Morphine
   c. Ethacrynic acid
   d. All of these
15. What type of conjugation reaction do Morphine, Acetaminophen, Diazepam and Chloramphenicol undergo?
   a. Glucuronide conjugation
   b. Glutathione conjugation
   c. Acetylation

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d. Sulfate conjugation

16. Bilirubin is displaced from plasma protein binding by which of the following drugs:
    a. Sulfonamides
    b. Vitamin K
    c. Salicylates
    d. All of these
17. Entry of glucose into muscle and fat cells byGLUT-4 transporter is an example of:
    a. Facilitated diffusion
    b. Active transport
    c. Simple
    d. diffusion
    e. Both (a) and (c)
18. Polycyclic aromatic hydrocarbons (found as airpollutants) enhance metabolism of:
    a. Amitryptylline
    b. Warfarin
    c. Cimetidine
    d. Both (a) and (b)
19. For which of the drugs, concentration is muchgreater than Km:
    a. Aspirin
    b. Ethanol
    c. Phenytoin
    d. All of the above
20. In phase-I reaction, Proguanil (anti-malarial)undergoes:
    a. Oxidation
    b. Reduction
    c. Hydrolysis
    d. Cyclisation
21. Which statement is false?
    a. The density of gas is constant as long as its temperature remains constant.
    b. Gases can be expanded without limit.
    c. Gases diffuse into each other and mix almost immediately when put into the same container.
    d. Pressure must be exerted on a sample of a gas in order to confine it.
22. Which of the following statements is not consistent with the kinetic molecular theory of gases?
    a. Individual gas molecules are relatively far apart.
    b. The actual volume of gas molecules themselves is very small compared to the volume occupied by the gas at ordinary temperatures and pressures.
    c. The average kinetic energy of different gases are different at the same temperature.
    d. There is no net gain or loss of the total kinetic energy in collision between gas molecule.
23. A real gas most closely approaches the behavior of an ideal gas under conditions of
    a. High pressure and low temperature
    b. Low pressure and high temperature

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c. Low pressure and temperature
d. High pressure and temperature

24. For a gas which pair of variables is inversely proportional to each other(if all other conditions remain constant)
    a. P,T
    b. P,V
    c. V,T
    d. n,V
25. Which of the following statements is false?
    a. The property of nitrogen gas will deviate more from ideality at -100 degree Celsius than at 100 degree Celsius.
    b. Van der Waal equation corrects for the non ideality of the real gases
    c. Molecules of methane at high pressure and low temperature have no attraction forces between each other.
    d. Molecules of ideal gases are assumed to have no significant volume.
26. The abbreviation- m.d, stands for
    a. Every morning
    b. Before meal
    c. After meal
    d. As directed
27. Which of the followings is used to calculate dose for a child according to body weight.
    a. Young's formula
    b. Dilling's formula
    c. Clark's formula
    d. All of these

28. Match the following to make meaningful statements:

1. Hypnotics	(A) Glucose-6-P deficiency maycause hemolysis
2.Methotrexate	(B) Main route ofbiotransformation is acetylation
3.Corticosteroids	(C) Taken in nighttime in quiet surrounding
4.Primaquine	(D) Dose iscalculated in mg/sqmt of body weight
5. Isoniazid	(E) Taken as single morning dose causes less adrenal suppression

a. 1(C) 2(D) 3(E) 4(A) 5 (B)
b. 1(B) 2(E) 3(C) 4(A) 5(D)
c. 1(B) 2(E) 3(A) 4(D) 5 (C)
d. 1(C) 2(D) 3(C) 4(A) 5(E)

29. Match the following drugs with their active form:

1.Dipivefrine	(A) Ampicillin
2.Bacampicillin	(B) Fluorouridinemonophosphate

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3.Sulfasalazine (C) Epinephrine

4.Sulindac (D) 5-aminosalicylic acid

5.Fluorouracil (E) Sulfidemetabolite

a. 1(A) 2(B) 3(E) 4(C) 5 (D)

b. 1(C) 2(A) 3(D) 4(E) 5(B)

c. 1(D) 2(A) 3(C) 4(E) 5 (B)

d. 1(E) 2(D) 3(C) 4(A) 5(E)

30. Match the following competitive inhibitor pairs ofdrug-enzyme:

1. Physostigmine (A) folatesynthetase

2. Sulfonamide (B)dopa decarboxylase

3. Allopurinol (C) cholinesterase

4. Carbidopa (D) xanthine oxidase

a. 1(A) 2(B) 3(C) 4(D)

b. 1(C) 2(B) 3(D) 4(A)

c. 1(C)2(A) 3(D) 4(B)

d. 1(C) 2(D) 3(A) 4(B)

31. Match the drugs with the tissues in which they are concentrated:

1. Digoxin A. Bone and teeth

2. Iodine B. Iris

3. Chloroquine C. Retina

4. Atropine D. Heart

5. Tetracycline E. Thyroid

a. 1(D)2(E) 3(C) 4(B) 5 (A)

b. 1(E) 2(B) 3(A) 4(C) 5(D)

c. 1(D) 2(A) 3(B) 4(C) 5 (E)

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d. 1(E) 2(D) 3(C) 4(B) 5(A)

32. Match the following non- competitive inhibitor pairsof drug-enzyme:

1. Acetazolamide	A. Phosphodiesterase
2. Indomethacin	B. Aldehyde dehydrogenase
3. Disulfirum	C. Na+-K+-ATPase
4. Digoxin	D. Cyclooxygeanase
5. Theophylline	E. Carbonic anhydrase

a. 1(A) 2(B) 3(C) 4(D) 5 (E)

b. 1(E)2(D) 3(B) 4(C) 5(A)

c. 1(D) 2(A) 3(B) 4(C) 5 (E)

d. 1(D) 2(B) 3(C) 4(D) 5(E)

33. What concentration of procaine hydrochloride will yield a solution iso osmotic with blood plasma? Freezing point of one percent procaine hydrochloride is -0.122 degree celsius.

a. 0.9% w/v b. 4.26% w/v c. 9 % w/v d. 0.425 % w/v

34. An alcoholic solution contains 57.1 % v/v alcohol, which is said to be

a. 25 proof b. 50 proof c. 57.1 proof d. 100 proof

35. All acids ontreatment with a strong basic solvent tend to become indistinguishable instrength. This effect is called as:

a. Spin effect

b. Chelating effect

c. Levelling effect

d. Shielding effect

36. Aprotic solvents possess

a. Basic properties

b. Acidic properties

c. Both acidic and basic properties

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d. Neutral Character

37. The most commonly usedindicator, phenolphthelein is a

a. mono basic acid

b. monoprotic acid

c. diprotic acid

d. triprotic acid

38. An example of a universal indicator is

a. anthocyanin b. diosgenin c. methyl orange d. phenol red

39. Which interaction between adrug and receptor would favor a permanent damage of killing living cells?

a. Charge transfer complex

b. Induced dipole

c. London dispersion attraction

d. Covalent bonding

40. Identify the odd statement about bioisosteres.

a. Groups possess identical outer shell electronic configuration

b. Have near equal molecular shapes and volume

c. Exert similar stereo chemical features

d. Have similar physical properties

41. A classical example of bioisosteric modification is the development of localanesthetics, procaine and procainamide. Identify the class of bioisosterism to which it belongs.

a. monovalent classical bioisosteric replacement

b. divalent classical bioisosteric replacement

c. trivalent classical bioisosteric replacement

d. tetravalent classical bioisosteric replacement

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42. Which one of the following receptors have zinc finger domain in it?

a. Intracellular receptor

b. G-protein coupled receptor

c. Ligand gated ion channel receptor

d. Kinase linked receptor

43. Kinase linked receptor is anexample of

a. 1- TM receptor

b. 3-TM receptor

c. 4-TM receptor

d. 7-TM receptor

44. How many ml of 50% w/v dextrose solution and how many ml of 5% dextrose solution are required to prepare 4500 ml of 10 % w/v solution?

a. 500 ml of 50% and 4000 ml of 5% solution

b. 1000 ml of 50% and 3500 ml of 5% solution

c. 4000 ml of 50% and 500 ml of 5% solution

d. 1500 ml of 50% and 3000 ml of 5% solution

45. Boric acid is a weak acid which can't be titrated with standard sodium hydroxide solution using phenolphthalein indicator. The titration is possible on addition of glycerol due to which of the following reasons?

a. Boric acid becomes boronic acid

b. Boric acid gives monoprotic tetravalent boron ester with glycerol

c. Boric acid gives a tribasic acid on reaction with glycerol

d. None of the above

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