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صيدلة فيزيائية - ()- المستوى الأول -قسم علوم صيدلانية - الكل - كلية الصيدلة - الفترة الاولي- درجة الامتحان (75)

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1) 1- All of the following is true for Newtonian except
   1) - a. Called simple flow
   2) - b. Curve starts from the origin
   3) + c. Increasing of temperature, increasing of the viscosity
   4) - d. All of the above
2) 2- Span 20 is nonionic surface active agents while Brije is
   1) - A) Anionic surface active agents
   2) + B) Nonionic surface active agents
   3) - C) Amphoteric surface active agents
   4) - D) Cationic surface active agents
3) 3- What is the correct definition of solubility?
   1) - A) The ability of solid particles to disperse throughout a liquid continuous phase
   2) - B) The rate at which a solute dissolve into a solvent
   3) + C) The ability of a solute to dissolve into a solvent
   4) - D) The ability of immiscible liquid droplets to disperse within a second liquid phase
4) 4 - Cosolvent used to increase the solubility by
   1) - A) Decreasing the interfacial tension between the solute and solvent
   2) - B) Change the properties of the first solvent
   3) - C) Alter the dielectric constant of the medium
   4) + D) All of the above
5) 5- Indicate which statement is TRUE.
   1) - A) Pseudoplastic flow is shear-thickening type and dilatant is shear- thinning type.
   2) - B) Deflocculated suspension is example of plastic flow
   3) - C) Printing inks is example of dilatants flow
   4) + D) Non of above
6) 6- plastic deformation is ….
   1) + A) Irreversible and permanent
   2) - B) Spontaneous and irreversible
   3) - C) Spontaneous and reversible
   4) - D) Non of above
7) 7- According to particle dimensions, flocculated suspension particles are
   1) - A) 0.5 – 10 microns
   2) - B) 50 – 100 microns
   3) - C) 150- 1000 microns
   4) + D) Non of above
8) 8- An example of a anionics surfactant would be
   1) - A) Ammonium laurate
   2) - B) Cetylpyridinium chloride
   3) - C) Sorbitan monopalmitate
   4) + D) Sodium Lauryl sulfate
9) 9 - Indicate which statement is TRUE
   1) - A) Solubilizing agents and wetting agents are used in high concentration.
   2) - B) wetting agents have HLB range between 3-7
   3) - C) W/ O Emulsifying agents have HLB range between 8-15
   4) + D) Non of above

10) 10- According to solubility of a solute in a solvent, slightly soluble substance is expressed
1) - A) 10 to 1 parts
2) + B) 100 to 1000 parts
3) - C) 1000 to 10000 parts
4) - D) Non of the above

11) 11 - Solubility of gases in liquids increased by
1) - A) Increase of pressure
2) - B) Decrease of temperature
3) - C) addition of non-electrolytes
4) + D) All of above

12) 12 - In an Ideal solution
1) - A) Heat of solution has (+) value
2) - B) The solubility is affected by the nature of the solvent
3) - C) Heat of solution ≠ heat of fusion
4) + D) None of the above

13) 13- Triethanolamine is
1) - A) Cationics surface active agents
2) - B) Non-ionics surface active agents
3) + C) Anionics surface active agents
4) - D) Amphoterics surface active agents

14) 14-Tween is generally used as solubilizing agents while Span is used as
1) - A) Antifoaming agents
2) + B) emulsifying agents
3) - C) Solubilizing agents
4) - D) All of the above

15) 15- Indicate which of the following statements are true, Except
1) - A) Sod. Lauryl sulfate is water soluble
2) + B) Sod. Lauryl sulfate is stable in acidic media
3) - C) Sod. Lauryl sulfate is good wetting agents
4) - D) B &C

16) 16- Indicate which of the following statements is False,
1) + A) salicylic acid is semipolar compound
2) - B) phenol is semipolar compound
3) - C) Benzoic acid is semipolar compound
4) - D) All of the above

17) 17- The solubility of electrolytes in water primarily depends on the ..... of the dissolved molecules into ions.
1) - A) pH
2) - B) solubility
3) + C) dissociation
4) - D) None of the above

18) 18- What is the relationship between viscosity and flow rate?
1) - A) There is no relationship between viscosity and flow rate
2) - B) The lower viscosity, the slower the flow rate
3) - C) The greater viscosity. the faster the flow rate
4) + D) Non of the above

19) 19- Which of the following terms refers to a solution that contains the maximum quantity of solute given temperature?
1) - A) Aqueous sol.

2) - B) Saturated sol.
3) - C) Non aqueous sol.
4) + D) None of the above

20) 20- An example of amphoterics surfactant would be
1) - A) Ammonium laurate
2) + B) Lecithin
3) - C) Sorbitan monopalmitate
4) - D) Sodium Lauryl sulfate

21) 21- Elastic deformation is ….
1) - A) Reversible and permanent
2) - B) Spontaneous and irreversible
3) + C) Spontaneous and reversible
4) - D) Non of the above

22) 22- Molality is defined as ….
1) - A) The number of gram molecular weight of solvent in 100g of solvent
2) - B) The number of gram molecular weight of solvent in 100g of solute
3) + C) The number of gram molecular weight of solute in kg of solvent
4) - D) Non of the above

23) 23- According to solvent-solute interaction, the solubility or miscibility is generally enhanced when:
1) - A) Attraction between unlike molecules are more than the cohesive forces
2) - B) Adhesive forces are more than the cohesive forces
3) - C) Attraction between solute-solvent molecules are more than the Attraction between solute-solute or solvent-solvent molecules
4) + D) All of the above

24) 24- Stoke,s equation is expressed as
1) - A) V=2r2(d1-d2)g/9η
2) + B) V= 2r2(d1-d2)g//18η
3) - C) V=2r (d1-d2)g/9η
4) - D) V= 2r (d1-d2)g//18η

25) 25) All the following are correct about sodium lauryl sulfate except:
1) - A) Unstable in acidic medium
2) - B) Good wetting Agents
3) - C) Water soluble
4) + D) Non of the above

26) 26-for the very fine powder we shake the sieve at least.....
1) - A) 20 min
2) + B) 30 min
3) - C) 40 min
4) - D) 15 min

27) 27- In general, the solubility of a solute in a solvent may be predicated by:
1) - A) Solute_Solute Interactions
2) - B) Solvent_Solvent Interactions
3) - C) Solute_Solvent Interactions
4) + D) All of the above

28) 28- Each of the following is true from the factors affecting solubility of solids in liquids except:
1) - A) Common ion affect
2) + B) Effect of wetting agents
3) - C) The PH
4) - D) Effect of solubilizing agents

29) 29- Effect of temperature on viscosity in "Dilatant":
1) - A) Decreasing of temperature,increasing the viscosity.
2) - B) Decreasing of temperature,decreasing of the viscosity.
3) - C) Increasing of temperature,decreasing of the viscosity.
4) + D) Increasing of temperature,increasing of the viscosity.

30) 30 - Cosolvent used to increase the solubility by
1) - (A) decreasing the interfacial tension between the solute and solvent
2) - (B) change the properties of the first solvent
3) - (C) alter the dielectric constant of the medium
4) + (D) all of the above

31) 31- Surface active agents activity depend on
1) - (A) polar group
2) - (B) non polar group
3) - (C) non of above
4) + (D) all of above

32) 32- solubility of solid in liquid (weak acid drug or its salt) is increased by
1) - (A) increase in particle size
2) - (B) decrease in pH
3) + (C) increase in temperature
4) - (D) all of the above

33) 33- Lecithin is
1) - A) Cationics surface active agents
2) - B) Non-ionics surface active agents
3) + C) Amphoterics surface active agents
4) - D) Anionics surface active agents

34) 34- Drug having solubility less than 0.1mg/ml comes under which category:
1) - A) very soluble
2) - B) slightly soluble
3) + C) partically insoluble
4) - D) freely soluble

35) 35- It is the attraction between unlike molecules (solute solvent) molecules: -
1) + A. Adhesive force
2) - B. Cohesive force
3) - C. Both of the above
4) - D. Each of the above

36) 36- Above 208 C and below 60 C, nicotine and water are miscible in all proportions and between these two temperature they are: -
1) - A. Completely miscible
2) + B. Partially miscible
3) - C. Chemical reaction
4) - D. None of the above

37) 37- petroleum and bentonite are considered of examples of Non_newtonian
1) + A. Plastic
2) - B. Pseudoplastic
3) - C. Dilatant
4) - D. None of the above

38) 38- Effect of temperature on viscosity in "Newtonian
1) + A. Decreasing of temperature, increasing the viscosity
2) - B. Increasing of temperature, increasing of the viscosity

3) - C. Decreasing of temperature, decreasing of the viscosity
4) - D. Increasing of temperature, decreasing of the viscosity

39) 39- Fluidity is:
1) - A. reciprocal of density
2) - B. reciprocal of surface tension
3) - C. reciprocal of volume
4) + D. reciprocal of viscosity

40) 40- Deflocculated suspension with high concentration of the dispersed solids exhibits the flow of type:
1) + A. dilatant
2) - B. newtonian
3) - C. plastic
4) - D. pseudoplastic

41) The drug can be used after the expiration date for
1) - 48 hours
2) - A week
3) - three months
4) + All of the answers are incorrect

42) Polymorphs of the same drug have different:
1) - X-ray diffraction patterns
2) - Melting point
3) - Solubilities
4) + All of the answers are correct

43) The change of matter from solid phase to liquid phase is called ...
1) + Melting
2) - Evaporation
3) - Condensation
4) - Deposition

44) The change of matter from liquid phase to solid phase is called ...
1) - Solidification
2) - Lyophilization
3) - Freeze drying
4) + All of the above

45) When it occurs, particles arrange themselves in more than one way or pattern:
1) - Crystalline solids
2) - Viscosity
3) + Polymorphism
4) - Surface tension

46) Crystals that contain solvent of crystallization are called:
1) - Crystal solvates
2) - Anhydrates
3) - Crystal hydrates
4) + Crystal solvates and Crystal hydrates

47) What is the importance of physical pharmacy:
1) - Drug solubility- Drug stability
2) - Drug absorption -Drug action
3) + All of the above
4) - None of the above

48) …… is the sum of kinetic and potential energy in the particles that make up an object
1) - Kinetic energy

2) + Thermal energy
3) - Removed energy
4) - All of the above

49) It is the time when the drug concentration is remaining 90%
1) - Drug stability
2) - Drug solubility
3) + Expiration date
4) - Shelf life

50) Drug stability is remaining the active ingredient constant through the:
1) - Half life
2) + Shelf life
3) - Expiration date
4) - Half life and Shelf life

51) It is the period between production date and expiry date
1) - Drug stability
2) - Drug solubility
3) - Expiration date
4) + Shelf life

52) When ……occurs, the molecules arrange themselves in two or more different ways in the crystal:
1) + Polymorphism
2) - Amorphous
3) - Liquids-gas
4) - All of the answers are correct

53) Problem 1: A solution of the drug contained 60 units per ml was analyzed after a period of 4 weeks. It was analyzed after a period of 8 weeks and was found to contain 58 units per ml. assuming that the decomposition is (first order kinetics). Determine the rate decomposition constant (K) for the solution of drug?
1) - K= 85.0 week-1
2) + K= 0.0085 week-1
3) - K= 0.85 week-1
4) - K= 8.5 week-1

54) Problem 1 : A solution of the drug contained 60 units per ml was analyzed after a period of 4 weeks. It was analyzed after a period of 8 weeks and was found to contain 58 units per ml. assuming that the decomposition is (first order kinetics). Determine the rate decomposition constant (K) for the solution of drug?
1) + C0 = 62.1 units per ml
2) - C0 = 60.00 units per ml
3) - C0 = 59.00 units per ml
4) - C0 = 79.00 units per ml

55) Problem 1 : A solution of the drug contained 60 units per ml was analyzed after a period of 4 weeks. It was analyzed after a period of 8 weeks and was found to contain 58 units per ml. assuming that the decomposition is (first order kinetics). Determine the rate decomposition constant (K) for the solution of drug?
1) - t50%= 815 week-1
2) - t50%= 518 week-1
3) - t50%= 8.15 week-1
4) + t50%= 81.5 week-1

56) Problem 1 : A solution of the drug contained 60 units per ml was analyzed after a period of 4 weeks. It was analyzed after a period of 8 weeks and was found to contain 58 units per ml. assuming that the decomposition is (first order kinetics). Determine the rate decomposition constant (K) for the solution of drug?
1) + t90%= 12.35 week-1
2) - t90%= 1235 week-1

3) - t90%= 1.235 week-1
4) - t90%= 123.5 week-1

57) Problem 2: A solution of the drug contained 140 units per ml was analyzed after a period of 2 months. It was analyzed after a period of 6 months and was found to contain 120 units per ml. assuming that the decomposition is (zero order kinetics). Determine the rate decomposition constant (K) for the solution of drug?
1) - K= 0.5 units per ml /month
2) + K= 5 units per ml /month
3) - K= 20 units per ml /month
4) - K= 1 units per ml /month

58) Problem 2 : A solution of the drug contained 140 units per ml was analyzed after a period of 2 months. It was analyzed after a period of 6 months and was found to contain 120 units per ml. assuming that the decomposition is (zero order kinetics). Determine the rate decomposition constant (K) for the solution of drug?
1) - C0 =15.0 units per ml
2) + C0 =150 units per ml
3) - C0 =510 units per ml
4) - C0 =1500 units per ml

59) Problem 2: A solution of the drug contained 140 units per ml was analyzed after a period of 2 months. It was analyzed after a period of 6 months and was found to contain 120 units per ml. assuming that the decomposition is (zero order kinetics). Determine the rate decomposition constant (K) for the solution of drug?
1) - t50%= 115 M
2) - t50%= 51 M
3) - t50%= 1.5 M
4) + t50%= 15 M

60) Problem 2 : A solution of the drug contained 140 units per ml was analyzed after a period of 2 months. It was analyzed after a period of 6 months and was found to contain 120 units per ml. assuming that the decomposition is (zero order kinetics). Determine the rate decomposition constant (K) for the solution of drug?
1) + t90%= 3 M
2) - t90%= 30 M
3) - t90%= 0.3 M
4) - t90%= 15.3 M

61) Factors affecting on drug stability:
1) - Temperature - oxygen - humidity
2) - Light - excipients - solvent - package
3) - Polymorphsim - pH - microbial contamination
4) + All of the answers are correct

62) The order of matter state from the strongest attractive forces to the weakest is……
1) - Solids, gases then liquids
2) + Solids, liquids then gases
3) - Gases, solids then liquids
4) - Gases, liquids then solids

63) The polymorphism use in the manufacture of drug should be
1) - Soluble - Unstable
2) + Soluble-Stable
3) - Insoluble -Stable
4) - None of the above

64) UV. test is used to measure…..... of the drug
1) + Wavelength
2) - Functional groups
3) - Melting point
4) - All of the answers are correct

65) IR. test is used to measure ….....of the drug
1) - Wavelength
2) + Functional groups
3) - Melting point
4) - All of the answers are correct

66) DSC test is used to measure…..... of the drug
1) - Wavelength
2) - Functional groups
3) + Melting point
4) - All of the answers are correct

67) When the drug loses 10% of its original concentration, the drug is considered
1) + Expired
2) - Good for use
3) - Effective
4) - All of the above

68) Particles arranged in a regular repeating pattern is called……
1) - Amorphous solids
2) + Crystalline solids
3) - All of the above
4) - None of the above

69) Simple and fast tests must be performed before manufacturing the drug
1) + Preformulation study
2) - Formulation study
3) - Evaluation study
4) - None of the above

70) Which of the following states true about polymorphic forms of tetracycline
1) + Being amorphous or crystalline
2) - The crystalline form is poorly absorbed and has activity
3) - The amorphous form is readily absorbed and therapeutically nonactive
4) - All of the answers are incorrect

71) Which of the following is true about viscosity
1) - It depends on the shape and size of particles and the attraction between them
2) - The stronger the attractive forces the more viscous the liquid gets
3) - It is resistance of a fluid to flow
4) + All of the above

72) When it occurs, particles arrange themselves in more than one way or pattern
1) - Crystalline solids
2) - Viscosity
3) + Polymorphism
4) - Surface tension

73) Does not depend on concentrations: .....
1) + Zero order
2) - First order
3) - Second order

4) - None of the above

74) The change of matter from gas phase to liquid phase is called……..

1) - Melting
2) - Lyophilization
3) + Condensation
4) - Sublimation

75) The complete soluble and less stable drug dosage form is…..

1) + Solutions
2) - Emulsions
3) - Suspensions
4) - Tablets