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1) Discoloration of unwanted colors from crystals of a compound is removed by
a) silica gel b) Alumina c) NaCl d) Animal charcoal

2) The solvent selected for crystallization must be:
a) cheap b) Easily removable c) Safe to use d) All

3) Naphthalene, Iodine and Ammonium chloride all are examples of_____materials
a) hygroscopic b) Inorganic c) combustible d) sublimable

4) It is very convenient to use because no preparation is needed for its use:
a) Gooch crucible b) sintered glass crucible c) Both d) None

5) The one which is not a drying (dehydrating) agent among the following is:
a) silica gel b) $CaCl_2$ c) phosphorous d) NaCl

6) Which organic compound can be purified by sublimation:
a) Ammonium chloride b) Iodine c) Naphthalene d) All

7) Separating funnel is used during the process of:
a) sublimation b) filtration c) solvent extraction d) All

8) Chromatography in which stationary phase is a solid is classified as:
a) partition chromatography b) adsorption chromatography c) Ion exchange chromatography d) Affinity chromatography

9) The component of a mixture having larger value of K remains mostly in the:
a) stationary phase b) mobile phase c) both d) None

10) Mixture of two solid components can be separated, only if one of components shows direct conversion to vapors on heating by,
a) Filtration b) Sublimation c) Solvent extraction d) Crystallization

11) Which of the following cannot be separated by sublimation?
a) Naphthalene and Sand b) Iodine and Sand c) NaCl and I_2 d) Naphthalene and Iodine

12) Which of the following mixtures can be separated by sublimation?
a) Sand and Water b) Sand and I_2 c) I_2 and KI Solution d) NaCl and H_2O

13) For the separation of a thermally unstable or volatile components from aqueous medium a technique applied is
a) Filtration b) Sublimation c) Solvent extraction d) Chromatography

14) Which of the following is equilibrium process?
a) Crystallization b) Sublimation c) Solvent extraction d) Chromatography

15) Iodine is soluble in
_____(a) Water (b) CCl_4 (c) water having KI (d) both b and c

16) The most common solvent used for solvent extraction in lab is
_____(a) Ethanol (b) Water (c) Ether (d) All above

17) The color of iodine in carbon tetra chloride is
(a) brown (b) purple (c) orange (d) no color

18) Chromatography is used to separate components in a mixture & these components are adsorbed via:
a) Mobile phase b) Stationary phase c) 'a' & 'b' d) None

19) Solvent extraction is an equilibrium process & it is controlled by:
a) Law of mass action b) Amount of solvent used c) Amount of solute used d) Distribution law

20) Which one of the solution is not feasible with filter paper to filter it
(a) H_2SO_4 (b) HCl (c) $KMnO_4$ (d) All

21) Which one mat is used in Gooch crucible if filter solution reacts with paper?
(a) Silica (b) Asbestos (c) Electrolyte (d) all

22) Quantitative analysis have ---------- steps.
(a) 1 (b) 2 (c) 3 (d) 4

23) Decolonization is done by using.
(a) animal charcoal (b) graphite (c) P_2O_5 (d) Silica gel

24) In adsorption chromatography stationary phase is
(a) gas (b) liquid (c) solid (d) none

25) In paper chromatography stationary phase is.
(a) solid (b) liquid (c) gas (d) none

26) Rapid cooling yield ---------- sized crystals.
(a) medium (b) large (c) small (d) premature

27) When an organic compound formed in water, is volatile or thermally unstable it is separated by.
(a) crystallization (b) Sublimate (c) Solvent extraction (d) Chromatography

28) A complete characterization of a compound must include :
a) qualitative analysis b) quantitative analysis c) Both d) None

29) The technique which is used to separate insoluble particles from liquids
a) sublimation b)solvent extraction c) crystallization d) filtration

30) In sublimation, we collect pure solid from:
a) Outer side of funnel as it is inverted b) Inner side of funnel as it is not inverted
c) A receiving beaker attached to funnel d) None

31) In sublimation, substance which we purify, first heated over a:
a) Water bath b) Sand bath c) Direct heated d) Heated via boiler plates

32) Detection or identification of an element present in a compound is the part of:
a) Quantitative analysis b) Data analysis c) Sample analysis d) Qualitative analysis

33) Measurements & calculations of results come:

a) 1st step of quantitative analysis b) 3rd step of qualitative analysis
c) 2nd step of qualitative analysis d) 3rd step of quantitative analysis

34) Science of chemical characterization is termed as:
a) Industrial chemistry b) Analytical chemistry c) Thermo-chemistry d) Bio-chemistry

35) Which is suitable for a good solvent?
a) Should dissolve impurities b) Should react chemically with solute c) Should be inexpensive d) None

36) Which is 1st step for crystallization process?
a) Preparation of saturated solution b) Filtration of saturated solution
c) 1st step is to choose a suitable solvent d) Cooling the saturated solution

37) Which drying agent is suitable to use in desiccator?
a) Ammonium chloride b) Iodine c) Naphthalene d) None

38) Which of the following mixtures can be separated by solvent extraction?
a) Sand and Water b) Sand and I_2 c) I_2 and KI Solution d) NaCl and H_2O

39) The mixture of Ions or inks can be separated by
a) Filtration b) Sublimation c) Solvent extraction d) Chromatography

40) The SI units for Rf value are
a) cm b) cm^3 c) cm^2 d) None

41) The pattern formed on the paper in chromatography is called.
(a) R_f value (b) Chromatophore (c) Chromatograms (d) None

42) Chromatography in which stationary phase is liquid is called _____chromatography.
(a) Paper (b) Partition (c) Column (d) None

43) Ninhydrin and rubinic acid are used as
a) locating agent b) stationary phase c) spraying agent (d) drying agents

44) Which technique is very useful in organic synthesis for separation, isolation and purification of the products?
(a) Chromatography (b) Solvent Extraction (c) Filtration (d) Both a and b

45) Vapors are condensed back into solid in:
a) Solvent extraction b) Filtration c) Crystallization d) Sublimation

46) Following technique is applied to separate organic compounds from water:
a) Chromatography b) Solvent extraction c) Solvent extraction d) Crystallization

47) Following is useful for the filtration of ppt. which is needed to be ignited at high temperature?
a) Fluted filter paper b) Sintered glass crucible c) Gooch crucible d) Common filter paper

48) Solvent is said to be inflammable if it:
a) Doesn't catch fire b) Catches fire c) Behaves smoothly on heating d) Remains stable on heating

49) Substances which undergo process of sublimation have:
a) High melting points b) Low melting points c) Thermally stable d) Low molecular weight

50) Which technique is an application of distribution phenomenon?
a) Solvent extraction b) Sublimation c) Crystallization d) Filtration

51) We may determine the purity of a substance via:
a) Filtration technique b) Chromatography c) Crystallization d) Sublimation

52) Word chromatography originates from a Greek word.....
a) Chromatos b) Kromatos c) Khromatos d) Karomathoes

53) Animal charcoal is used to.....
a) Dry crystal b) remove color form crystal c) evaporate mother liquor d) all

54) Saturated solution should be filter when it is .....
a) Hot b) cool c) moderate d) all

55) Stationary phase may be .....
a) Liquid b) solid c) gas d) liquid and solid

56) ..... cooling produce big crystal
a) Slow b) moderate c) fast d) all

57) which one is best for filtration
a) Filter paper b) gooch crucible c) sintered crucible d) all

58) Iodine can be purified by process of
(A) Evaporation (B) Saponification (C) Sublimation (D) Crystallization

59) Crystallization is a method for separation which is used when compound are
(A) Non-volatile or thermally unstable (B) Volatile or thermally stable
(C) Non-volatile or thermally stable (D) Volatile or thermally unstable

60) A component having large value of K (distribution coefficient) mostly remains in
(A) Stationary phase (B) Mobile phase (C) Chromatographic tank (D) Filtration

61) The ratio of the solute in organic phase to that in aqueous phase is called
(A) Rate constant (B) Equilibrium constant (C) Distribution coefficient (D) Arrhenius constant

62) The comparative rates at which the solutes move in paper chromatography, depend on:
(A) The size of paper (B) R_f values of solutes
(C) Temperature of the experiment (D) Size of the chromatographic tank used

63) Solvent extraction is an equilibrium process and it is controlled by.
(A) Law of mass action (B) The amount of solvent used (C) Distribution law (D) The amount of solute

64) In CCl_4 solvent, I_2 shows
(A) blue colour (B) brown colour (C) pink colour (D) purple colour

65) The drying agent not used in vacuum desiccator is
(A) $CaCl_2$ (B) Silica gel (C) P_2O_5 (D) Cl_2O_7

66) Substance that does not show the process of sublimation is:
(A) $K_2Cr_2O_7$ (B) Iodine (C) Naphthalene (D) NH_4Cl

67) Direct conversion of the solid into vapors is called:
(A) Crystallization (B) Sublimation (C) Distribution (D) Vaporization

68) Chromatography is the process which involves the distribution of a solute between.
(A) Two mobile phases (B) A stationary phase and a mobile phase
(C) Two stationary and two mobile phases (D) Two stationary phases

69) A filtration process could be very time consuming if it were not aided by a gentle suction which is developed:
(A) If the paper covers the funnel upto its circumference. (B) If the paper has got small sized pores in it.
(C) If the stem of the funnel is large so that it dips into the filtrate. (D) If the paper fits tightly

70) Filtration by ordinary filter paper is very:
(A) Fast (B) Time consuming (C) Different (D) Accurate

71) In paper chromatography, the point to which the solvent rises to maximum extent is called
(A) Eluent (B) Chromatogram (C) Solvent front (D) Base line

72) Which one of the following substances is used as decolorizing agent?
(A) animal charcoal (B) conc. H_2SO_4 (C) $CaCl_2$ (D) silica gel

73) The iodine present in water can be separated by which one of the following techniques
(A) Sublimation (B) Chromatography (C) Filtration (D) Solvent extraction

74) When hot saturated solution is cooled very rapidly we get
(A) small size crystals (B) Large size crystals (C) Premature crystallization of substance (D) No crystallization

75) Iodine dissolves in water in the presence of KI due to formation of which one of the following species
(A) I_2 (B) I^- (C) I_3^{-1} (D) I_4

76) A component having small value of K (distribution coefficient) mostly remains inefficient in
(A) Chromatographic tank (B) Mobile phase (C) Stationary phase (D) Paper

77) Which of the following is purified by sublimation
(A) Naphthalene (B) Benzoic acid (C) Ammonium chloride (D) All of these

78) During the process of crystallization, the hot saturated solution
(A) Is cooled very slowly to get large sized crystals. (B) Is cooled at a moderate rate to get medium sized crystals.
(C) Is evaporated to get the crystals of product. (D) Is mixed with an immiscible liquid to get pure crystals of product.

79) The rate of filtration can be increased by using:
(A) Fluted filter paper (B) Desiccators (C) Suction flask (D) Chromatographic tank

80) Which separation technique is best for purifying a liquid that contains some un-dissolved solids?
a) Sublimation b) Chromatography c) Filtration d) Crystallization

81) The filtration of mixtures containing oxidizing agents can be easily done by using
a) A filter paper b) A sintered glass crucible c) A simple Gooch crucible d) All of these

82) How would you separate NaCl from sand?
a) Formation of solution, filtration followed by evaporation b) Solvent extraction
c) Formation of solution, filtration followed by crystallization c) Filtration followed by sublimation

83) Which of the following is not a feature of crystallizing solvents?
a) It should chemically inert b) It should be easily removable c) It should be expensive d) It should be safe to use

84) How could a mixture of two liquid compounds, one red and the other blue be separated?
a) By sublimation b) By chromatography c) By crystallization d) None of these

85) A hot saturated solution of white crystalline compounds was allowed to cool slowly, what would you observe?
a) Nothing happens b) Large white crystals are formed c) White fine crystals are formed d) None of these

86) Which of the followings cannot be used as drying agent in desiccators?
a) NaCl b) $CaCl_2$ c) P_2O_5 d) Silica gel

87) The best method for separating ammonium chloride from calcium chloride is
a) Chromatography b) Sublimation c) Solvent extraction d) None of these

88) Solvent extraction cannot be used for the separation of a mixture of
a) NaCl and CuSO4 b) Petrol and n-butanol c) Benzene and glucose d) None of these

89) In ether extraction, ether layer is
a) At the top b) In between two layers of water c) At the bottom d) None of these

90) The stationary phase of chromatography is
a) A solid always b) A solid or liquid c) A liquid only d) A solid or liquid or a gas

91) Which of the followings is not true for the mobile phase in chromatography?
a) It can never be solid b) It can be gas c) It can never be liquid or a gas d) None of these

92) Paper chromatography is a type of
a) Partition chromatography b) Adsorption chromatography c) Thin layer chromatography d) None of these

93) What would be the best for separating benzoic acid containing a small impurity of iodine?
a) Sublimation b) Solvent Extraction c) Chromatography d) Crystallization

94) All of the following mixtures can be separated into their components by sublimation except
a) Benzoic acid + Phenol b) Iodine + NaCl c) Benzoic acid + Iodine d) $NH_4Cl + CaCl_2$

95) Solvent extraction can be used for the separation of the component of mixture of
a) Two ionic solidsb) One polar and one non polar solid c) Two compounds of same polarity d) None of these

96) Two components of a mixture of compounds, having more affinity for mobile phase would have Rf values
a) 0.5 b) less than 1 c) more than 1 d) none of these

97) All of the following are wrong except;
a) Only solids can be purified by solvent extraction
b) Chromatography can only be used for the separation of components of colored mixtures
c) Crystallization can be used to purify iodine
d) Vacuum desiccation is preferred for drying hygroscopic compounds

98) Which of the followings cannot be used for the separation of two isomorphic crystalline compounds?
a) Solvent extraction b) Chromatography c) Crystallization in a single solvent d) None of these

99) Which of following solvents will form lower layer in a separatory funnel when used in connection with water?
a) Methanol b) Ethanol c) Diethyl ether d) Chloroform

100) When I_2 present in the aqueous layer in the form of I_3^{1-} goes to CCl_4 layer, then the change in color is from
a) Purple to brown b) Green to brown c) Purple to green d) Brown to purple

101) Rate of filtration in using fluted paper is greater as compared to simply folded filter paper due
a) It has greater surface of the paper b) It is more absorbent c) It has greater size of pores d) All of these

102) Gooch crucible is used when
a) Quick filtration is to be done b) The residue has to be ignited at high temperature
c) A suction pump is to be employed d) All of the above are true

103) Chromatography cannot be used for the separation of
a) Two liquid compounds b) Two aqueous substances c) More than three covalent compounds d) All of these

104) A solvent used for crystallization should dissolve;
a) Maximum solute at room temperature b) Maximum solute at its boiling point
c) Minimum solute at room temperature d) None

105) if none of the solvent is found suitable for crystallization;
a) A mixture of two miscible solvents is used b) A mixture of two immiscible solvents is used
c) A mixture of organic and inorganic solvents is used d) None of the above

106) In solvent extraction a solute distributes itself between two immiscible solvents in a constant ratio of concentrations
a) Depending upon the amount of solvent added b) Depending upon the amount of solute added
c) Independent of the amount of solvent added d) Independent of the amount of solute added

107) During the process of filtration, the hot saturated solution is _____ to get crystals
a) Cooled very slowly b) Evaporated c) Cooled at moderate rate d) Mixed with immiscible liquid

108) Sublimation is used when the product to be separated is
a) Volatile and thermally stable b) Non-volatile and thermally stable
c) Non-volatile and thermally unstable d) Volatile and thermally unstable

109) Aspirin is insoluble in water; it will be separated from it by;
a) Sublimation b) Chromatography c) Solvent Extraction d) Filtration

110) A crude product is crystallized to;
a) Characterize it b) Determine no. of elements c) Purify it d) None

111) Which one is soluble in CCl_4?
(a) I- (b) I_2 (c) I - (d) All

112) Proteins and amino acids can be separated by.
(a) Sublimation (b) filtration (c) chromatography (d) All

113) Detection of functional group is called
(a) qualitative analysis (b) quantitative analysis (c) both (d) none of these

114) Gooch crucible is used to filter the solution of
(a) KOH (b) H_2SO_4 (c) $KMnO_4$ (d) both b and c

115) $CaCl_2$ and P_2O_5 are used as
(a) Washing agents (b) drying agents (c) dehydrating agents (d) none of these

116) Solvent extraction is used when product is
(a) volatile (b) thermally unstable (c) thermally stable (d) both a and b

117) Paper chromatography can be
(a) ascending (b) descending (c) radial/ circular (d) all of these

118) The Greek word KHROMATOS means
(a) Color (b) color writing (c) visible (d) none of these

119) The solvent should be moved upto the ---------- length of paper
(a) 1/2nd (b) 1/3rd (c) 3/4th (d) none of these

120) We can separate insoluble $BaSO_4$ from water through
(a) Filtration (b) chromatography (c) solvent extraction (d) sublimation

121) The filter media to be used ,depends upon
(a) Nature of precipitate (b) nature of solvent (c) size of particles (d) all of these

122) Gooch crucible is made of
(a) clay (b) asbestos (c) porcelain (d) iron

123) Which one is not the property of solvent used for crystallization
(a) Inexpensive (b) safe to use (c) easily removable (d) it dissolves impurities

124) The best method of drying the crystals is
(a) Pressing b/w filter paper (b) drying in furnace (c) drying in vacuum desiccator (d) none of these

125) Rectified spirit is
(a) 95% alcohol (b) 90% alcohol (c) 85% alcohol (d) none of these

126) Absolute alcohol is
(a) 95% alcohol (b) 100% alcohol (c) 85% alcohol (d) none of these