الإجابة النموذجية لامتحان كيمياء و تكنولوجيا البويات

416 ك
(نصف ورقة امتحانية)

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كلية : العلوم

1) ……are macromolecular products with a molecular mass between 500 and 30000.
A- **Binders**. B. Plasticizers. C. Wetting agents. D. Pigments.

2) The basic constituent of paint is a …….
A. Pigments. B. Plasticizers. C. Additives. **D. Binders**.

3) ……is natural polyunsaturated oils used in paints.
A. Drying oils. B. Nondrying oils. C. Triglycerides. D. Polyesters.

4) …… paints consist of natural drying oils.
A. Alkyd resins. **B. Oil.** C. Ployesters. D. Resins.

5) The autoxidative polymerization of polyunsaturated oils in the presence of catalytic driers and ……
A. styrene. B. oil. **C. oxygen.** D. water.

6) The term "industrial resins" refers to any …… polymer resin made for commercial use.
A. synthetic. B. ester. C. oxygen. D. normal.

7) Cellulose acetate esters have ……. solubility and compatibility with other resins.
A. limited. B. medium. C. highest. D. normal.

8) Chlorinated rubber and related chlorinated polymers are forming coating films by ……. drying.
A. physical. B. medium. C. chemical. D. normal.

9) Increasing molecular mass of vinyl resins is accompanied by ……. mechanical properties.
A. improved. B. decreased. C.no change. D. reduced.

10) Vinyl resins of high molecular mass can therefore only be used in the form of dispersions or …… for paint applications.
A. powders. B. solvents. C. no change. D. reduced.

11) Polyacrylates do not absorb above……and are therefore not degraded by UV radiation.
A. 100 nm. **B. 300 nm.** C. 400 nm. D. 7000 nm.

12) Polyacrylates are only slightly attacked by……..
A. water. B**. chemicals.** C. atmospheric. D. pollution.

13) Polyacrylates as binders consist of copolymers of …… and methacrylate esters.
A. acetate. **B. acrylate.** C. butyrate. D. formate.

14) The drying of Oil-Based Coatings may be accelerated by the addition of small quantities of…….
A. ions. **B. metals.** C. oxygen. D. resins.

15) The drying mechanism of Oil-Based Coatings is ……mechanism.
A. ionic. B. nonionic. **C. free radical.** D. homogenous.

16) Cellulose butyrate is ……. compatible and soluble than cellulose acetates.
A. less. B. not. **C. more.** D. almost.

17) Free ……. groups along the cellulose chain are necessary to provide solubility, flexibility, compatibility, and toughness.
A. carboxyl. B. amino. **C. hydroxyl.** D. methyl.

18) …… is an example for low molecular mass resins, which are chemically hardened after application.
A- Binder. B. Polyacrylate. **C. Alkyd resins**. D. Celluse resin.

19) Natural or synthetic rubber such as polyethylene, polypropylene or…….
A. polyisoprene. B. polyhydroxy. C. polyalcohol. D. cellulose.

20) Almost all……. coatings are based on emulsions of vinyl acetate copolymers, copolymers of vinyl chloride and vinyl acetate, and polyvinyl chloride.
A. vinyl. B. cellulose. C. polyalcohol. D. oil.

21) Alkyd resins are known as ……. polyesters.
A. oil-modified. B. oil. C. polyesters. D. rubber.

22) The most common polyols used in alkyd resins are: glycerol and……..
A. ethanol. B. butanol. C. ethylene glycol. **D. pentaerythritol**.

23) Styrene is used as additives to alkyd resins to ……. the drying time.
A. stabilized. B. raise. C. increasing. **D. reducing**.

24) The manufacture of the alkyds proceeds in ……. stages.

A. three. B. four. C.one. **D. two.**

25) ……. is the first step for the manufacture of alkyd resin.
A. Monoglycerolysis. B. Estrification. C. oxidation. D. reduction.

26) …… considers as the last step for the manufacture of alkyd resin.
A. Monoglycerolysis. **B. Esterification.** C. oxidation. D. reduction.

27) The reaction of alkyd resins was monitored by ……and viscosity measurements.
A. density. **B. acidity.** C. Iodine value. D. saponification.

28) Drying of alkyds depends up on high amount of ……. fatty acids in its structure.
A. saturated. **B. unsaturated.** C. long chain. D. short chain.

29) Medium oil linseed alkyds is used in automotive refinishing which have …… of fatty acids.
A. 35-45%. **B. 46-55%.** C. 56-70%. D. more than 70%.

30) Alkyd resins can be classified according to its drying into ……. types.
A. one. **B. two.** C. three. D. four.

31) Long oil length alkyds are always prepared from drying and semidrying oils, with ……. being the preferred polyol.
A. pentaerythritol. B. butanol. C. isoprpanol. D. ethanol.

32) Nondrying oil alkyds do not form films and, they are mainly used as ……. for other binders.
A. plasticizers. B. automotive coatings. C. powder coatings. D. light stabilizer.

33) The …… of the unsaturated fatty acids in alkyd resins permit copolymerization with vinyl compounds.
A.carboxylic group. B. hydroxyl group. **C. double bonds**. D. rubber.

34) The drying of alkyd resins takes place by …… of the fatty acid chain of an alkyd resin binder unit.
A. catalyzed. B. condensation. **C. autoxidation.** D. polymerization.

35) Neutralized of alkyd resins with amines are used to produce ……. alkyd resins.
A. drying. B. modified. **C. waterborne**. D. nondrying.

36) …… is an example for higher molecular mass resins, which are suitable for physical film formation.
A- Binder. **B. Polyacrylate.** C. Alkyd resins. D. Epoxy resins.

37) Health risks of alkyd resins depend on the nature of the ……. and their concentration in the paint.
A. oil. B. acids. **C. solvents.** D. esters.

38) Alkyd resins have been developed for producing high-solids paints to ……. solvent emission.
A. stabilize. B. raise. C. increase. **D. reduce**.

39) Problems of environmental pollution also followed from the introduction of …… in paint industry.
A. oil. B. acids. **C. organic solvents**. D. esters.

40) Oil-modified polyesters prepared by reacting together polyols, ……. and oil.
A. resins. B. amines. C. polyesters. **D. dibasic acids.**

41) The drying process of polyunsaturated oils is a complex one of polymerization, probably catalyzed by……
A. acids. B. alcohols. C. oxygen. **D. peroxides.**

42) The ……is the length of time that paint can be used after necessary preparations for application have been made.
A. falsh point. B. half time. C. indentation. **D. pot life.**

43) The …….. of a liquid is a measure of the flammability of its vapors on application of an external flame.
A. flash point. B. half time. C. indentation. D. pot life.

44) …….. is one of the important mechanical properties should be measured in paint industry.
A. Adhesion. B. Density. C. Viscosity. D. Gloss.

45) Nonvolatile matter left when the product is heated at an elevated temperature for a definite period under prescribed test conditions known as ……..
A. Solid content. B. resins. C. hard matter. D. solvents.

46) The hiding power is the ability of paint to ……..a surface over which it has been uniformly applied.
A. hide. B. adsorb. C. colour. D. tinting.

47) The Damping test can be used to measure the …….. of paint film.

A. Adhesion. **B. Hardness**. C. Viscosity. D. Gloss.

48) The degree to which the coating allows bending of a substrate without cracking or peeling is measured to determine …….

A. adhesion. B. hardness. C. viscosity. **D. flexibility**.