Question Bank

For Backlog

Chemical Process and Synthesis

Class:- B.E.Chemical (sem VII)

1. Which source of Carbon Dioxide contains a maximum percentage of CO_2
   a. Flue gas
   b. Byproduct of Fermenter
   c. Natural wells
   d. Lime kiln
2. Which solvent is preferred in the Manufacturing of Acetylene by partial combustion process
   a. Ethanol amine solution
   b. Quenched water
   c. Liquid Ammonia
   d. DF solution
3. When a cold and compressed gas is allowed to do some external work it falls in Temperature. This principle is involved in
   a. Linde's process
   b. Dry process
   c. Claude's Process
   d. Montecatini Process
4. Physico-Chemico principle are to be determined from the
   a. Mass law of action
   b. Law of Energy conservation
   c. Le- Chatelliers principle
   d. Both a&c
5. Which catalyst and operating conditions are used in the Haber Process of Ammonia
   a. Fe , 450^oC & 200-900 atm
   b. Mo , 450^oC & 200-900 atm
   c. Fe & Mo, 450^oC & 200-900 atm
   d. Both a & c
6. Sequence of reaction in the Ostwald's process for the Nitric Acid
   a. Oxidation Nitrogen dioxide to Nitric oxide, Oxidation Nitric oxide to Nitrogen dioxide, absorption of Nitrogen dioxide
   b. Oxidation Ammonia to Nitric oxide, Oxidation Nitric oxide to Nitrogen dioxide, absorption of Nitrogen dioxide in water
   c. Oxidation Ammonia to Nitrogen dioxide , Oxidation Nitrogen dioxide to Nitric oxide, absorption of Nitrogen dioxide
   d. None of the above
7. Why the temperature400 ^oC is to be maintained in the reactor of salt and sulfuric acid method of Hydrochloric acid.
   a. To Liquefy NaCl
   b. To Liquefy H_2SO_4

c. To Liquefy $Na_2 SO_4$
d. To Liquefy $NaHSO_4$

8. Alum is a
   a. Double sulfate of Aluminum or Chromium
   b. Not double sulfate of Aluminum or Chromium
   c. TSP
   d. None of the above
9. Why the Barium sulfide is added in the manufacturing of Aluminum sulfate
   a. To reduce the Mg to Magnesium sulfate to precipitate Iron
   b. To reduce the Ca to Calcium sulfate to precipitate Iron
   c. To reduce the Ferric sulfate to ferrous state to precipitate Iron
   d. All of the above.
10. What is the formula of Urea
    a. NH_4COONH_2
    b. $NH_2CONHCONH_2.H_2O$
    c. $NH_2CO\ NH_2$
    d. None of the above
11. What is function of Carbamate condenser in Urea manufacture process
    a. Act as a gas liquid separator
    b. Separates the ammonium carbamate solution
    c. Separates the ammonium carbamate solution ,Urea , CO_2 and Ammonia
    d. Both a&c
12. Function of N-P-K
    a. Growth of leaves- Growth of seed formation-overall growth
    b. Growth of leaves- Growth of Fruit formation-Kill the diseases
    c. Growth of leaves- Growth of seed & fruit formation-overall growth
    d. All of the above
13. The following reagent is used in the concentration of Nitric acid
    a.H_2SO_4
    b.HNO_3
    c.$MgNO_3$
    d.$BaSO_4$

14. Alum is also known as

    a. Paper makers salt

    b. Dry agent

    c. Aluminum sulfate

    d. None of the above

15. Yield is defined as

    a. Reactants converted in desired products

    b. Desired product to the amount of reactants fed

c. Product to the amount of reactants fed

d. All of the above

1 6 : Prilling tower is found in the flowsheet for the manufacture of

a. ammonia

b. urea

c. superphosphate

d. triple superphosphate

17 : P_2O_5 content in triple superphosphate is about _____ percent.

a. 42-50

b. 15-20

c. 85-90

d. 70-75

18 : Vapor phase reaction of ammonia & nitric acid to produce ammonium nitrate is termed as the _____ process.

a. Haber's

b. Stengel

c. Le-chatlier's

d. Du-pont's

19. Acetelyne is stored in gas cylinder in.....

a. In gaseous form

b. In liquid form

c. In solid form

d. Under high pressure

20. Inert gases should be present for what?

a. Prevents heat

b. Prevents explosion

c. High energy

d. All of the mentioned

21.Process in which sodium carbonate is manufactured is called

a. calcinations

b. metallurgy

c. Solvay process

d. carbonation

22. The last step of the Solvay process is

a. preparation of ammonical brine

b. carbonation

c. preparation of carbon dioxide and slaked lime

d. recovery of ammonia

23. Fermentation occurs in the

a. presence of oxygen

b. absence of oxygen

c. presence of nitrogen

d. presence of carbon

24. Anaerobic respiration by yeast produces

a. CO2

b. Wine and Beer

c. Alcohol

d. All of the above

25. Which Catalyst is used in the oxidation of SO_2 to SO_3 in the Contact Process

a. V_2O_5

b. Pt-Rd

c. Silver

d. All of the above

26. Chemical Formula for Oleum is

a. $H_2S_2O_7$

b. . $H_4S_2O_7$

c. H_2SO_4

d. None of these

27. Affination in the refining of sugar means

a. Removal of molasses from the surface of sugar crystal

b. Treating juice with $H_3P\,O_4$

c. Treating juice with $H_2S\,O_4$

d. Decolourization

28. Formula for starch is

a. $(C_6\,H_{10}\,O_5)_n$

b. $C_{12}\,H_{22}\,O_{11}$

c. $C_6\,H_6\,O_{11}$

d. All above

29. Producer gas is

a. $CO + H_2$

b. $CO + N_2$

c. $CO + NH_3$

d.None of These

30. Maximum alumina content in high alumina refractory can be as high as _____ percent.

a. 30

b. 50

c. 70

d. 90

31. High porosity refractory bricks have

a. poor resistance to the peneration of molten slag, metal & flue gases.

b. poor heat conductivity & low strength.

c. better thermal spalling resistance.

d. all

32. Spalling of Refractory means

a. Thermal Conductivity

b. Resistance to Electricity

c. Strength

d. None of the above.

33. Which of the following is not a raw material used for the manufacture of ordinary glass?

a. Iron oxide

b. Soda ash

c. Limestone

d. Silica

34.The principle constituents of a fuel are.....

a.Carbon and hydrogen

b.Oxygen and hydrogen

c.Sulpher and oxygen

d.Sulpher and hydrogen

35. What is the temperature is to be maintained in the Carbonation tower of Solvay's Process

a. $350^{O}C$

b. 300^{O}

c. $1300^{O}C$

d. $1350^{O}C$

36. Which step is not involved in the manufacturing of glass

a. Melting

b. Canning

c. Shaping or Forming

d. Annealing

37. Glass can be colored by adding

a. Metallic oxides

b. Paints

c. synthetic color

d. Organic colour

38. Glass is a

a. Crystalline material

b. Non-Crystalline material

c. Non-Transparent material

d. none of these

39. Fermentation is a

a. Chemical transformation of organic substance into simpler compound by the action of enzymes.

b. Chemical transformation of Inorganic substance into simpler compound by the action of enzymes.

c. Chemical transformation of raw material into products.

d. All of the above.

40.Absolute Alcohol is

a. 95% Alcohol

b. 100% Alcohol

c. Dilute Alcohol

d. None of these

41. Potassium nitrate is used in

a. Medicine

b. Fertilizer

c. Salt

d. Glass

42. Sodium hydroxide is used

a. as an antacid
b. in manufacture of soap
c. as a cleansing agent
d. in alkaline batteries

43. Chemical formula of washing soda is

a. $Na_2C0_3 . 7H_2O$
b. $Na_2C0_3 . 5H_2O$
c. $Na_2C0_3 . 2H_2O$
d. $Na_2C0_3 . 10H_2O$

44. Ammonium phosphate is a _____ fertiliser.

a. Nitrogenous

b. Phosphatic

c. Complex

d. Mixed

45. Dehydration of ammonium carbamate (to produce urea) is a/an _____ reaction.

a. reversible

b.catalytic

c.exothermic

d. endothermic

46.Superphosphate is manufactured by reacting phosphate rock with

a. acetic acid

b. sulphuric acid

c. aluminium chloride

d. none of these

47. Maturation of the beers is carried out at

a. 14°C

b. 10°C

c. 6°C

d. 2°C

48. What is the chemical name of baking powder?

a. Sodium carbonate

b. Sodium bicarbonate

c. Potassium carbonate

d. Calcium carbonate

49. Cider vinegar is produced from

a. fruit juices

b. malted grain

c. ethanol

d. ale

50. The main use of HCl is in the

a. drilling of petroleum wells and pickling of steel sheets.

b. manufacture of cationic detergent.

c. treatment of spent fuel of nuclear reactor.

d none of these.

51. The function of flash drum in Urea process

a. To separate the solid and Liquid

b. To separate the liquid and gas

c. for the decomposition of ammonium carbamate

d. all

52. What is the purpose of Bichromate scrubber in the purification of CO_2 from fermentation process?

a. To neutralize the acid .

b. To remove the traces of oil.

c. To deodorization and drying.

d. To oxidizes aldehydes and Alcohol.

53. What is the purpose of quenching tower in the manufacturing of Acetylene from partial combustion of HC?

a. For cooling

b. To remove water soluble impurities.

c. To avoid undue pyrolysis of acetylene.

d. All .

54. In the wet process of Phosphoric acid, reactor temperature is maintained at

a. $30^{O}c$- $40^{O}c$

b. $40^{O}c$- $50^{O}c$

c.$75^{O}c$- $80^{O}c$

d. $35^{O}c$- $55^{O}c$

55. In the production of NaOH and Cl_2 by Mercury cell

a. Mercury acts as an sodium amalgum

b. Mercury acts as an anode

c. Mercury acts as an Intermediate electrode by induction

d. none of these.

56. Refining of gas is

a. Removal of floating matter from the molten glass

b. Removal of gas, small or big bubbles from the molten glass

c. Removing strain

d. purifying glass.

57. Mono-ammonium phosphate and Di-ammonium phosphate are the

a. Single nutrient fertilizer

b. Mixed fertilizer

c. 16:20:0 fertilizer

d. none of the above.

58. The major component in LPG is

a. Methane

b. butane

c. ethane

d. propane

59. The catalyst used in the manufacture of Hydrogen from natural gas is

a. Silver

b. Nickel with alumina or magnesia as promoter

c. Iron

d. Pt-Rd

60. H_3PO_4 acid may be added in the sugar cane juice to remove

a. Water soluble impurities

b. coagulate the impurities

c. To remove small amount of Phosphate.

d. none of these
