

The Bodwad Sarvajanik co operative Education Society Bodwad

Arts Commerce And Science College, Bodwad

Question Bank

Class- T.Y.B.Sc.

Sem – VI

Subject - CH602 Inorganic Chemistry.

1. The size of a nanomaterial is in between.....nm.

a. 2 to 100

b. 50 to 10

c. 1 to 100

d. 70 to 100

2 The size of a quantum dots is in between ..nm.

a. **2 to 7**

b. 1 to 100

c. 2 to 100

d. 3 to 50

3. All the bottom up technique starts with thematerial. 3

a. Gas

b. liquid

c. solid

d. both a and b

4. The top up technique starts with the ..material.

a. Gas

b. liquid

c. solid

d. both a and b

Chemical vapor deposition technique is involved in..

a. Bottom up approach

5 Chemical vapor deposition technique is involved in..

a. **Bottom up approach**

b. Top-down approach.

c. both a and b

d. none of the above. Top-down approach.

c. **both a and b**

d. none of the above

6 Mechanical alloying is a .. process.

a. **Non equilibrium**

b. equilibrium

c. both a and b

d. None of the above

7. Surfactants plays an important role in Of nanoparticles.

a. Conducting property

b. **shape and size**

c. shape and size

8. Many inorganic solids are intensely coloured and are used as --

inks, plastics, glasses, and glazes.

a. **Pigment**

b. Fiber

c. Fuel

d. Film

9. The blue colour of CoAl_2O_4 and $\text{CaCuSi}_2\text{O}_8$ stems from the presence of
in

the visible region of the electromagnetic spectrum.

a) s-s transition

- b) p-p transition
- c) **d-d transitions**
- d) None of these

10. Egyptian blue has formula ... 3.

- a) MgCuSi₂O₁₀
- b) **CaCuSi₂O₁₀**
- c) BaCuSi₂O₁₀
- d) SrCuSi₂O₁₀

11. is obtained by partial combustion or pyrolysis (heating in the absence of air) ***
of hydrocarbons.

- a) **Carbon black**
- b) Red oxide
- c) Prussian blue
- d) Indigo blue

12. Inorganic solids exhibit intense colour due to.

- a. s-s transition
- b) p-p
- c) p-d transition
- d) **d-d transition**

13. The yellow-orange colour of PbCrO₄ is due to a) **Charge transfer**

- b) p-d transition
- c) d-d transitions
- d) s-s transition

14. The formula of Prussian blue is

- a) K₄[Fe(CN)₆]
- b) **Fe^{II}Fe^{III}(CN)₆**
- c) K₃[Fe(CN)₆]

d) None of the above

15. is used as photosensitizers in Graetz-type solar cell.

a. (carboxyl)-terpyridine Ru complex

b) bis(carboxyl)-terpyridine Ru complex

c) **tris(carboxyl)-terpyridine Ru complex**

d) None of the above

16. TiO₂, free from impurities which is essential for a bright ... 9. .. pigment of controlled particle size.

a) Red

b) **White**

c) Orange

d) Yellow

17. . is used as white pigment

a) **TiO₂**,

b) TiCl₄

c) [Ti(H₂O)₆]³⁺

d) None of the above

19. ... exists in Rutile and Anatase forms.

a) SO₂;

b) SiO₂

c) TiCl₄

d) **TiO₂**

20. CuCr₂O₄ exhibit structure.

a) rutile

b) **spinel**

c) wurtzite

d) anatase

21. $\text{BiMn}_2\text{O}_{10}$ can absorb in the ... region wavelength.

- a) infrared
- b) ultraviolet
- c) **visible**
- d) radiowproper

14. Zinc phosphate has property

- a) Antiviral
- b) **Anticorrosive**
- c) Antimalarial
- d) None of the above

22. Exposure of solid Co to alkali metal vapour results in the formation of a series of compounds of formula.

- a) MxCaO
- b) MooCx
- c) MxCsO
- d) **MxCsO**

23. The structure of K_6C_{60} is a .

- a) **body-centered cubic**
- b) face-centered cubic
- c) both a and b
- d) None of the above

24.. The first one-dimensional metal Pt complex was made in.

- a) **1846**
- b) 1946
- c) 1886
- d) 1950

25. the first one-dimensional metal Pt complex.

- a) NASICON
- b) KSP
- c) **KCP**
- d) None of these

26. The ferromagnetic molecular inorganic compounds have chains of alternating $[M(n-Cp^{n-})]^{n+}$ cation and anion.

- a) TNCQ
- b) **TCNE**
- c) TTF
- d) TMTSF

27. recently developed fast- cationic conductors.

- a) TNCQ
- b) TCNE
- c) **NASICON**
- d) TMTSF

In AgHgI, below 50°C Ag⁺ and Hg⁺ ions are

- a) tetrahedrally

28. Ions are coordinated by I ions.

a. **tetrahedrally**

- b) trigonally
- c) tetragonally

- d) None of the above

29. Crystalline compounds possess properties that lie between those of solids and

- a) tetrahedrally
- b) Vapour
- c) **Liquid**

Multiple Choice Questions:

30. Dry process for manufacturing of cement is used only when

- a) **Raw materials are quite hard**
- b) Raw materials are quite soft
- c) Raw materials are chief
- d) None of these

31..... Decomposition of limestone/dolomite takes place at

- a) **900-1100 °C**
- b) 1400-1500 °C
- c) 500 700 C
- d) None of these

32. Role of gypsum is-----

- a) **it acts as retarder**
- b) It act as softener
- c) It act as hardener
- d) all of above

33. While manufacturing of cement main raw materials used are ----

- a) **Calcareous and argillaceous**
- b) Gypsum
- c) MgO
- d) Mn O

34. Clinker is ---

- a) **Hard granular, greenish black or grey coloured mass**
- b) CS
- c) C,S

35. Flash set of cement is ---

- a) **Initial set of the cement**
- b) Final set of cement

c) Hardening of cement

d) quick stiffening of cement

36. compound is responsible for setting by retardation of gypsum.

a) **CA**

b) CS, CS

c) Fe O

d) CS

37. has given name to Cement as Portland Cement.

a) Albert Aspidi

b) Morrison Aspidin

c) Peter Aspidin

d) **Joseph Aspidin**

38. General Cement having proportion of rawW materials is

$\text{CaO } 2.8 \text{ SiO} + 1.2 \text{ AlO}, + 0.65 \text{ Fe, O}_3$

a) **0.66 to 1.02**

b) 1.02 to 0.66

c) 1 to 2

d) 1.33 to 0.55

39. The calcareous materials which supply -

a) **CaO**

b) CO

c) CO

d) HCO

40. if present more than 3% which imparts brown color to the cement.

a) MgO

b) **MnO₃**

c) P:Os

d) CaO

41. In manufacture of cement, reactions are taking place in -

a) **kiln**

b) furnace

c) water

d) air

42. According to setting or hardening of cement is due to interlocking of the crystals formed during hydration.

a) **Lechatelier**

b) Michal

c) Le Cooper

d) Michaelis

43. It was made by calcination natural clay bearing limestones, which hydraulic to obtained cement.

a) **Natural**

b) Pozzolana

c) Portland

d) Lime

44. It was made from lime and pozzolana mixed with water to produce- cement.

a) Natural

b) **Pozzolana**

c) Portland

d) Lime

45. Pozzolana means a

a) Volcanic ash

b) fire clay rice husk ash

c) Significant quantities SiO₂ and Al₂O₃,

d) All of the above.

46. cement is white in colour and not containing tetra calcium alumino ferrite CAF and low amount of MgO.

a) **White**

b) Pozzolana

c) Portland

d) Lime 18.

47. cement is specially used for the decorative purposes. --.

a) **White**

b) Pozzolana

c) Portland

d) Lime

48. In quick setting cement --. --- IS mainly added to accelerate the setting time fast.

a. **Alluminium sulphate**

b. Calcium sulphate

c. Teracalcium alluminium ferrite

d. Alumina

49. The farmula of slacked lime is,.,.,.

a. **Calcium carbonate**

b. Calcium hydroxide

c. Calcium oxide

d. calcium sulphate

50. The element..... stimulates root formation and growth in plants. for proper growth of plant

a) Nitrogen

b) Potassium

c)**Phosphorus**

d) Iron

51. The pH of the soil should be between

- a) **7 to 8**
- b) 5 to 6
- c) 10 to 12
- d) 6 to 7

51. In 16-18-10 mixture there is total of...

3. % of active fertilizer.

- a) 24 %
- b) 32 %
- c) 51 %
- d) **44%**

51.fertilizer is used as softening agent.

- a) **Urea**
- b) Superphosphate
- c) Ammonium sulphate
- d) Sulphate of pottash

52. Elements consumed in large amounts by plants for their growth are called .

- a. natural nutrients
- b. Secondary nutrients
- c. **Primary nutrients**
- d. Micronutrients

53. Liquid NH₃ and CO₂ are added to autoclave under atmosphere Pressure and at 185 °C temperature to form a melt of urea.

- a) 200
- b) 250
- c) 150
- d) **180**

54. Superphosphate containing Of available P₂O₅.

- a) 20-22%
- b) 16-18 %
- c) 47-48%**
- d) 57-58 %

55. ... is part of chlorophyll and thus plays a role in photosynthesis.

- a) **Mg**
- b) Ca
- c) Mn
- d) Cu

56. The reaction of super phosphate take place in ...

- a. rotary furnace
- b) Rotary granulator
- c) c) rotary kiln**
- d) d) rotary cooler

57.. One of the potassium fertilizer, KCl is also called. .. of potash. .

- a) K₂O
- b) Muriate**
- c) Sulfate
- d) d) nitrate

58. Good fertilizers should be increase.....,..... Of soil

- a) pH
- b) Fertility**
- c) Water level
- d) Yield

59. Potassic fertilizers contains potassium in the form of ...

- a) KCl
- b) K₂SO
- c) KNO
- d) K₂O**

60. One of the potassium fertilizer, K_2SO_4 , is also called.... of potash.

- a) K_2O
- b) Muriate
- c) sulphate**
- d) nitrate

61. Elements consumed in minute quantity by plants for their growth are called....

- a) Natural Nutrients
- b) Secondary Nutrients
- c) primary nutrients
- d) Micronutrients**

62. Elements consumed in major quantity by plants for their growth are called ...

- a. Primary Nutrients
- b. Secondary Nutrients
- c. Tertiary Nutrients
- d. Macronutrient**

63. An alloy is..

- a) Pure metal
- b) Mixture of metal in any proportion
- c) of metal in fixed proportion**
- d) Mixture of two non metal

64. Which of the following is not an alloy? 2)

- a) Steel
- b) Copper**
- c) Brass
- d) Bronze

65. An alloy is a type of. 3)

- a) Horigenous
- b) Heterogeneous
- c) Intermetallic
- d) All of the above**

67. The first alloy made by humans was.

- a) Steel
- b) Brass
- c) Bronze**
- d) Mild steel

68. Ferrous alloys are.

- a) Metal**
- b) Non-metal
- c) Earthern
- d) None of the above

69. Nichrome is an alloy of

- a) Iron, cobalt, nickel
- b) Iron, carbon, cobalt
- c) Iron, nickel, chromium**
- d) Iron, zinc, nickel

70. Steel contains..... ..% chromium.

- a) 0 to 10
- b) 5 to 15
- c) 16 to 20**
- d) 20 to 30

71. Alnico is otherwise called as...

- a) Aluminum nickel- carbon steel
- b) Aluminum copper-cobalt steel
- c) Aluminum nickel-zinc steel

d) d) Aluminum nickel-cobalt steel

72. Steel contains .% of cobalt.

- a) **40 to 60**
- b) b) 15 to 20
- c) c) 0 to 200
- d) d) 30

73. Alnico is highly ...

- a) Paramagnetic
- b) **Magnetic**
- c) a & b
- d) None of above

74) The first step in producing steel is from

- a) Zinc oxides
- b) **Iron oxides**
- c) Mineral oxides
- d) None of above

75. In secondary steel making is a . process in which alloying metal are added And are removed.

- a) Refining, steel
- b) mixing, impurities
- c), **refining impurities**
- d) mixing, steel

76) In steel making the impurities are removed through

- a) Reduction
- b) **Oxidation**
- c) None of these
- d) Both a & b

77) Decarburization occur during the interaction between the atom.

- a) Cobalt
- b) **Carbon**
- c) Oxygen
- d) Both b & c

78. The melting point of non-ferrous alloys are .. than those of ferrous alloys.

- a) Zero
- b) Higher
- c) **Lower**
- d) Constant

79. In steel iron is material.

- a. none of these
- b.non ferromagnetic
- c. **Ferromagnetic**
- d. Magnetic