

CHEMISTRY

41. (2)

As_2S_3 colloid can be represented as $As_2S_3 S^{2-}$ so it is negatively charged.

42. (3)

Alums due to the charged nature of colloidal particle and hence co-agonal impurities in muddy water as per shulze rule.

43. (2)

As in adsorption

$$\Delta S = -ve$$

$$\Delta G = -ve$$

$$\Delta H = -ve$$

44. (1)

AgI adsorbs Ag^+ ion from excess $AgNO_3$ and forms AgI/Ag^+ positive charge colloidal particle.

45. (1)

Clouds are colloidal solution due to presence of liquid in gas.

46. (4)

Total body diagonal = 4

Two atoms in each body diagonal

So total number of atoms = $4 \times 2 = 8$ and 8 atoms on each corner.

So its contribution will be $= \frac{1}{8} \times 8 = 1$

So total number of atoms = $8 + 1 = 9$

47. (3)

→ Cu → ccp so 4 atoms

→ Ag is at edge centre

each edge has its contribution $\frac{1}{4}$ so, total

number of silver.

$$= \frac{1}{4} \times 12 = 3$$

→ Au is present at the body so its contribution will be 1.

so, formula will be $Cu_4 Ag_3 Au$.

48. (3)

There are 7 atoms at the corner.

so contribution by 7 atoms form corner will be

$$\frac{7}{8} \text{ thus } A = \frac{7}{8}$$

B will be at face so total contribution by it will be 3.

$$A_{\frac{7}{8}} = B_3 = A_7 B_{24}$$

49. (4)

Rubber, Plastics and glass, all are amorphous solids so

50. (1)

In B.C.C

$$4r = a\sqrt{3}$$

$$2r = 1.73.$$

$$2 \times 1.73 = a\sqrt{3}$$

$$Q = 200 \times 10^{-12} \text{ m} = 200 \text{ pm}$$