VISWABHARATI - GUDIVADA

WORK SHEET-3

Chapters: METALLURGY

Class: X **Time: 1 ½ Hr**

Subject: Chemistry

Name_____ Class/Sec: _____ Roll No: _____

1. What are the properties of metals
2. Write the importance of metals in our daily liter
3. Define metallurgy?
4. The percentage of metals among the available elements
5. Soluble salts present in the sea water?
6. What are called ores
7. What are called minerals?
8. Which is the most abundant element in the earth crust
9. Which is the most abundant nonmetal in the earth crust
10. Which is the most abundant metal in the earth crust
11. The percentage of Al in Bauxite is?
12. All ores axe minerals but all minerals need of be ores can U justify the above statement
13. Complete table

Ore	Zinc blend		Pyrolusite		Carnalite
Formula		$MgSO_4.7H_2O$		PbS	

14. Write at least two of each kind of ore?

S.No	Carbonate	Oxide	Sulpide	Chloride
1)				
2)				

15. Why 16^{th} group is called chalcogen feasily
16. Write a short note on activity series?
17. Which metals forms peroxides along with oxide
18. Which metals only form surface layer of oxide
19. Which metals do not form oxides when they react with oxygen?
20. Which metals can displace H_2 when they react with cold water
21. Which metals do not displace H_2 when they react with dilute strong acids
22. Define enrichment of ore? Write the different methods
23. What is called Gangue
24. The various physical methods adopted in dressing of the ore depends upon?
25. Which method is mainly useful for enrichment of sulphide ore
26. Why do we add pine oil to the mixture in the froath flotation process
27. Which method do you suggest enrich iron ore?
28. What are the different stages for the extraction of metal from the ore
29. Which method do you suggest for extraction of Highly reactive metal and why?
30. Which method do you suggest for extraction of moderation and low reaction metals
31. In the electrolysis of their fused compound method which one is act as cathode and anode respectively?
32. Write the electrode reaction of extractives of Na from NaCl
33. What is the use of adding impurities to the ore in the electrolysis process
34. What are the difference between roasting and calcinations?
35. Write a short note on self reduction of sulphide ore
36. What is the unite process write its application as in osides life?
37. What is caped refining of the metals
38. Write some refining methods
39. Match the following

1) Distillation	[ ]	P) Purification of low melting metals
2) Liquation	[ ]	Q) Blister copper is purified
3) Poling	[ ]	R) Anode mud is formed
4) Electrolytic refining	[ ]	S) Purification of low boiling metals

40. The properties of oxidative detoriration of metal is called

41.

Complete the table	Formula	Colour
Rusting of iron		
Tarnishing of silver		
Colour contains an coper		

42. What are essential for corrossion?
43. Why do we take anhydrous calcium chloride in a test tube in the activity of corrosion?
44. The chemistry of corrosion? Is which phenemenan ?
45. How do we present of corrosion?
46.

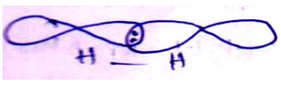
Alley	Mixture of metals	Use
1) Bronze		
2) Brass		
3) Stainless stet		

47. What is the purpose of smelting which furnace is used for smelting
48. Write the reactions inside the blast furnace?
49. Define the following
    1) Flux 2) Slag 3) Furnace 4) Smelting
50. What are the impotant parts of a furnace?
51. In which furnace fire box and hearth are combined
52. In which furnale fire box and hearth are separated
53. In which furnale there is no olsrect constant bet week the heart and fire box
54. Why PVC pipes are used for water supply?
55. **Choose the correct statement**
    1) Platinum occurs in the free state
    2) Platinum is least reactive metal
56. Which of the following is a carbonate are
    a) Galena b) Epsom salt c) Magnasite d) lime stone
57. The reducing agent in the termite process

Chemical Bonding (1/2 Mark Questions)

1. Which of the following is not ionic compound [ ]
   A) NaCl B) $BeCl_2$ C) $AlCl_3$ D) $MgCl_2$
2. The valence bond theory has been proposed by [ ]
   A) Linus pauling B) Nyholm C) Hund D) Sidgwick
3. Which of the following element is electronegative [ ]
   A) Sodium B) Oxygen C) Magnesium D) Calcium
4. The VSEPRT was failed in explaining the [ ]
   A) overlapping B) Bond angles C) strength of bonds D) shapes of molecules
5. Which of the following does not obey the octet rule [ ]
   A) O_2 B) F_2 C) BCl_3 D) N_2
6. The number of σ and π bonds present in ethyne is [ ]
   A) 2, 3 B) 5, 1 C) 1, 5 D) 3, 2
7. Write the number of σ and π bonds presented in a triple boind?
8. Write any two examples for electron difficult molecules?
9. The order of the overlapping of atomic orbitals is _____ [ ]
   A) S – S > P – P > S – P B) P – P > S – P > S – S
   C) S – S > S – P > P – P D) S – P > S – S > P – P
10. Which of the following is correct order of repulsive interactions? [ ]
    A) L.P – L.P > L.P – B.P > B.P – B.P D) L.P – B.P > L.P – L.P > B.P – B.P
    C) B.P – B.P > L.P – B.P > L.P – L.P D) Any of three depends on type of molecule
11. Increasing order of size of various hybrid orbitals is [ ]
    A) $sp > sp^2 > sp^3$ B) $sp^3 > sp^2 > sp$ C) $sp^2 > sp > sp^3$ D) $sp > sp^3 > sp^2$
12. Write the bond angles in $BeCl_2$. BF_3, H_2O molecules?
13. Among following which one is formed due to transfer of electrons and sharing of electrons.
    NH_3, NaCl, $CaCl_2$, H_2O, $BeCl_1$, $MgCl_2$
14. Who proposed covalent bond?
15. Who proposed Ionic bond?
16. Who proposed hybridization?
17. Define coordination number?
18. Which compound generally contains one metallic atom and one nonmetallic atom minimum?

19. 1 nano metre = _____ metres
20. An element ‘A’ forms a chloride ACl_2. The number of electrons in the valence shell of ‘A’ is ___
21. x is the atom which can form both ionic and covalent bonds. The x may be ____
    A) Na B) Mg C) Ca D) Cl
22. The charge on cation ‘M’ is +2 and Anoin ‘A’ is –3 the compound has the formula _____
23. The electronegativity of element ‘A’ and ‘B’ is and 1 and 3 respectively which type of bond can form between A and B?
24. Boiling points of x, y, z are 1413^0C, -84.9^0c and-88.63^0C respectively. Which of the following is an ionic compound?
25. Hydrochloric acid contains which type of bond?
26. Which of the following diagram is correct?

    a)  b)  c)  d) 

27. Which can posses ‘Ne’ configuration?
    a) Cl^- b) Mg^{+2} c) O^{-2} d) All the above
28. Which one has lowest bond angle?
    a) NH_3 b) BeF_2 c) H_2O d) CH_4
29. Draw Lewis dot Notation for F_2 molecule?
30. Number of lone pairs present on Beryllium in $BeCl_2$ molecule?

1 Mark Questions

1. Fill the following table

Molecule	**No. of σ bonds**	**No. of π bonds**
N_2		
O_2		

2. Define octet rule?
3. Define hybridization
4. Write any two drawbacks of VSEPRT?
5. Fill the following table

Properties	**Cation**	**Anion**
Atomic size Ionisation potential Electron affinity Electronegativity		

6. Match the following
   a) NH_3 [ ] i) Trigonal plannar
   b) H_2O [ ] ii) Linear
   c) $BeCl_2$ [ ] iii) Bent shape
   d) BF_3 [ ] iv) Trigonal pyramidal
7. Fill the table

Molecules	**No. of lonepairs**	**No. of bond pairs**
NH_3 H_2O CH_4 $BeCl_2$		

8. Match the following
   a) Sodium ion [ ] 4Cl
   b) Calcium ion [ ] $1Cl^-$
   c) Aluminium ion [ ] $2Cl^-$
   d) Carbon element [ ] $3Cl^-$
9. Write any two differences between covalent compounds and Ionic compounds?
10. Write any two differences between σ bond and π bond?
11. Explain formation NaCl?
12. Write the differences between covalency and valency electrons?
13. Define bond length and bond energy?
14. NaCl dissolves in water but not in benzene. Explain?
15. What is chemical bond?

16. Match the following

a) s – s overlapping [ ] i) F_2, Cl_2, Br_2, I_2

b) p – p overlapping [ ] ii) HF, HCl, HBr

c) s – p overlapping [ ] iii) H_2

17. Answer the following questions based given table

Elements	**W**	**X**	**Y**	**Z**
Electronic configuration	2, 8, 1	2, 8, 7	2, 5	1

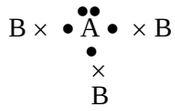
i) What type of bond is formed between

a) W and X b) Y and Z

ii) What is the formula of the compound formed between

a) X and Z b) W and X

18. Identify the following compound



19. Give any two examples of the compounds which can dissolve in polar solvents?

20. Explain why covalent compounds have low boiling and melting points than ionic compounds?