

# VISWABHARATI - GUDIVADA

## WORK SHEET-1

### Chapters: Acids, Bases and Salts

**Class: X**

**Time: 1 ½ Hr**

**Subject: Chemistry**

**Name** \_\_\_\_\_ **Class/Sec:** \_\_\_\_\_ **Roll No:** \_\_\_\_\_

1. What is the colour of methyl orange indicator in an acidic medium?
2. What is the colour of the phenolphthalein indicator in a basic solution?
3. A solution turns red litmus blue. What is its pH value?  
A) 1                      B) 4                      C) 5                      D) 10
4. What will be the products of the following reaction?  
$$\text{HCl} + \text{NaOH} \rightarrow ?$$
5. Name two indicators which are widely used in laboratories
6. What is brine solution?
7. What happens to the temperature of water when few drops of cone.  $\text{H}_2\text{SO}_4$  is added to it?
8. Does distilled water conduct electricity?
9. Chemical formula for bleaching powder is \_\_\_\_\_
10. Match the column

Column-A		Column-B		
1) Strong Acid	[     ]	a) $\text{NH}_4\text{OH}$		
2) Weak acid	[     ]	b) $\text{NaOH}$		
3) Strong base	[     ]	c) Distilled water ( $\text{H}_2\text{O}$ )		
4) Weak Base	[     ]	d) $\text{CH}_3\text{COOH}$		
5) Neutral solution	[     ]	e) $\text{HCl}$		
A) d, e, a, b, c	B) e, d, b, a, c	C) b, c, d, e, a	D) c, d, a, e, b	

11. \_\_\_\_\_ Medicine used to treat indigestion
12. True and False statement
  - a) Vinegar contains acetic acid
  - b)  $\text{NaCl}$  is a base
  - c) Baking soda is used for softening of hard water
  - d) Acids gives  $\text{H}^+$  ions in water
13. How plaster of paris is formed?
14. What is a universal indicator? What is its advantage
15. What is the organic Acid present in Tamarind?
16. When a solution of acid contains larger amount of acid, it is said to be
  - a) Dilute
  - b) Concentrated
  - c) mono basic
  - d) polybasic
17. Metals like sodium K, Ca, react with an acid to liberate
  - a)  $\text{CO}_2$
  - b)  $\text{NH}_3$
  - c)  $\text{O}_2$
  - d)  $\text{H}_2$
18. Calcium sulphate hemihydrates is popularly known as \_\_\_\_\_
19. Write sulphate hemihydrates is popularly known as \_\_\_\_\_
20. Write the chemical name and formula of washing soda?
21. What is chloro alkali process?

22. What is the common name of the compound  $\text{CaOCl}_2$ ?
23. Give any one example for olfactory indicators
24. Which compound is used in soda Acid fire exiting uisher?
25. Name the acid present in Honey bee sting?
26. What would happen if a small amount of copper oxide is taken in a beaker and dilute is added to it
27. How non-metal oxide react with base? Explain with example?
28. While diluting an acid, why is it recommended that the acid should be added to water and not water to the acid?
29. State reasons for the following?
  - a) Dry HCl gas does not turn blue litmus red, where as HCl does
  - b) Top water conduct electricity, where as distilled water does not
30. In a tabular form write the colours of the following indicators in presence of acid and base  
Litmus solution, Phenolphthalein solution, methyl orange solution
31. A farmer treats the soil with quick lime (or)  $\text{CaCO}_3$ . What is the nature of soil? Why does the farmer treat the soil with quick lime?
32. How do metal carbonates and metal hydrogen Carbonates react with acids?
33. On passing excess  $\text{CO}_2$  through lime water, it first turns milky and then becomes colourless. Name the substance
34. Why does the flow of acid rain water into a river make the survival of aquatic life in the river difficulty
35. Write any two uses of washing soda and Baking soda?
36. Why does tooth decay start when the pH of mouth is lower than 5.5?
37. Write chemical formula of bleaching powder. How is bleaching prepared. For what purpose is it used in paper factories?
38. Milk of Magnesium is an example of
  - a) Base
  - b) acid
  - c) salt
  - d) None of these
39. Which of the following acid is present in sour milk?
  - a) glycolic Acid
  - b) acetic acid
  - c) citrus Acid
  - d) lactic Acid
40. Write the name of products obtained when zinc metal pieces are dropped into sodium hydroxide bottle
41. Write the name and the chemical formula of organic acid present in vinegar?
42. What are alkalies? Give one example of alkalies?
43. What is water of crystallization? Give example
44. True/ False Questions
  - a) Plaster of paris of obtained by heating gypsum at 373k
  - b) Carbonic Acid is a weak Acid
45.  $\text{H}_2\text{SO}_4$  can be prepared by reaction of water with
  - a)  $\text{NO}_2$
  - b)  $\text{SO}_2$
  - c)  $\text{N}_2\text{O}$
  - d)  $\text{SO}_3$

### Classification of Elements – The Periodic table

1. How many number of elements present in the 2<sup>nd</sup> period of a periodic table?
2. Nitrogen ( $Z = 7$ ) is the element of group VA of the periodic table. Which of the following is the atomic number of the next element in the group?  
 A) 9                      B) 14                      C) 15                      D) 17
3. Which element family of barium belongs to?
4. Match the following
 

1) Alkali metal	[      ]	P) Calcium
2) Chalcogen	[      ]	Q) Potassium
3) Alkaline earth metal	[      ]	R) Sulphur
A) 1-Q, 2-R, 3-P    B) 1-Q, 2-P, 3-R    C) 1-P, 2-Q, 3-R    D) 1-P, 2-R, 3-Q		
5. On moving from top to bottom in a group the Ionization energy is?
6. Electronic configuration of an atom is 2, 8, 7 to which of the following elements would it be chemically similar  
 A) Nitrogen ( $z = 7$ )                      B) Fluorine ( $z = 9$ )  
 C) Phosphorous ( $z = 15$ )                      D) Argon ( $z = 18$ )
7. The number of elements in 3<sup>rd</sup> period of the periodic table
8. Which of the following is most active metal  
 A) Lithium              B) Sodium              C) Potassium              D) Rubidium
9. What is the most electro Negative element?
10. 5f elements are called \_\_\_\_\_
11. 4f elements are called \_\_\_\_\_
12. Which element family of potassium belongs to?
13. The properties of the elements on the modern periodic table depend on?
14. Ionisation potential is expressed in \_\_\_\_\_
15. Predict the reason for placing inert gases in the 18<sup>th</sup> group?  
 i) They have octet valency  
 ii) They have zero reactivity  
 iii) They are highly reacting  
 A) i and ii              B) ii and iii              C) i and ii              D) i, ii and iii
16. Match the following
 

A) eka boron	[      ]	x) scandium
B) eka Aluminium	[      ]	y) Galium
C) eka silicon	[      ]	z) Germanium
17. How many number of elements present in the first period of the periodic table?
18. Match the following
 

1) Dobernier	[      ]	P) Triad
2) Mendeleff	[      ]	Q) Atomic weight
3) H.J. mosley	[      ]	R) Atomic number
A) 1-Q, 2-R, 3-P    B) 1-Q, 2-P, 3-R    C) 1-P, 2-Q, 3-R    D) 1-P, 2-R, 3-Q		
19. What are the representative elements?
20. What are the transition elements?

21. What are the inner transition elements
22. On moving from left to right in a modern periodic table the atomic size vary is?
23. Assertion: In a group from top to bottom the atomic size is increasing  
Reason: In the group from top to bottom the atomic number increasing hence shell number also increases  
A) Assertion and Reason are correct  
B) Assertion, reason correct. The reason is the correct explanation of A  
C) Assertion is correct and the reason is correct  
D) Assertion is false and the reason is correct
24. X: In a periods table the valence electrons are equal to its group number  
Y: Modern periodic table is based on atomic weight  
A) Both X and Y are true                      B) X is true and Y is wrong  
C) Both X and Y are wrong                  D) X is wrong and Y is true
25. Which element is most electron affinity element?
26. What was the limitation of Dobereiner law of triads?
27. Classify the following elements into groups of triads  
Cl, Ca, Ba, Sr, K, Li, Br, I, Na
28. State mendeleev's law?
29. Mendeleev classified the elements on the basis of two factors. What were these two factors?
30. What is meant by "groups" of periodic table?
31. Name two elements whose valencies are equal to their group number
32. What is meant by periodicity of properties?
33. Which one has the bigger size?  
Na(11) or Cl(17), Cl (17) or F (9)
34. What would be the nature of oxides formed by the element on the left hand side of the periodic table? Give one example?
35. How many shells are present in the elements of 3<sup>rd</sup> period? Give reason also?
36. An element 'X' has atomic number 20. To which group and period it belong?
37. Find atomic number of the element whose electronic configuration is 2, 8, 5?
38. Out of Li and K, which will have stronger metallic character and why?
39. Write the number of horizontal rows in the modern periodic table. What are these rows called?
40. Give the names of metalloids in the periodic table
41. What were the limitations of Newland's law of octaves?
42. List three anomalies of mendeleev's periodic table which were renamed by modern periodic law
43. Which one between Na atom and Na<sup>+</sup> ion would have more size? Why?
44. What are Lanthanides?
45. Which Group elements are called chalcogens?