

# Dr.K.K.R GOWTHAM E.M HIGH SCHOOL :: GUDIVADA

Class : X – All Section

PRACTICE TEST- 2

Time : 2.45 Min

Sub : Chemistry

Marks : 50 M

Instructions:

1. There are four sections and 33 questions in the paper.
2. Answers should be written in a given answer booklet.
3. There is internal choice in Section-IV.
4. Write all the questions visible & legibly.
5. 15 minutes are given for reading the question paper and 2.30 hours given for answering questions.

## Section - I

**I. Answer the following questions**

**12×½ =6 M**

1. Write the 'Octet rule'. How does Mg get stability while reacting with chlorine as per this rule ?
2. Name the scientist who proposed VSEPR ?
3. What is anode mud ?
4. Which is used as the reducing agent in thermite process
5. "I am produced by the action of chlorine on dry slaked lime and used as a reagent in the preparation of chloroform . " who am I ?
6. Match the following :  
a) Alkanes                      i)  $C_nH_{2n}$   
b) Alkenes                      ii)  $C_nH_{2n+2}$   
c) Alkynes                      iii)  $C_nH_{2n-2}$   
A) a -ii , b-i , c-iii              B) a -i , b- ii , c- iii              C) a-iii , b-i, c-ii
7. Which of the following is more stable ?  
a)  $1s^2 2s^2 2p^4$               b)  $1s^2 2s^2 2p^3$               c)  $1s^2 2s^2$
8. What is general electronic configuration of alkali metal family ?
9. An element has an atomic number 12. How many electrons will be present in K,L and M shells of its atom?
10. Explain the principle which describes the arrangement of electrons in degenerate orbitals.
11. How does a strong acid differ from a concentrated acid
12. I am an acid -base indicator. I give different smells in acidic and basic solutions" who am I

## Section - II

**II. Answer the following questions**

**8×1 =8 M**

13. Why do valency electrons involve in bond formation, than electrons of inner shells ?
14. Match the following :  
a)  $H\hat{N}H$  in  $NH_3$                       i)  $107^0 18'$   
b)  $H\hat{O}H$  in  $H_2O$                       ii)  $120^0$   
c)  $F\hat{B}F$  in  $BF_3$                       iii)  $104^0 31'$   
A) a- i , b- ii , c- iii                      B) a- iii , b- i , c- ii  
C) a- i , b- iii , c- ii                      D) a- ii , b- i , c- iii
15. In which method a low melting metal can be made to flow on a slopy surface to separate it from high melting impurities ?  
a) Liqutation              b) Distillation              c) polling              d) Froth floatation
16. Matching.  
Group -A                      Group- B  
i) Metallic oxides              p) Neutral  
ii) Non - metallic oxides              Q) Basic in nature  
R) Acidic in nature

17. Thanish added acetic acid along with concentrated sulphuric acid to ethanol what would be his observation during the experiment ?
18. 

Mendeleeff's Periodic law	→	Atomic weight	→	Modern periodic law	→	?
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- What is at ?
19. Write the short hand notation of electronic configuration?
20. What is baking powder ? How does it make the cake soft and spongy ?

### Section - III

#### III. Answer the following questions

**8×2 =16 M**

21. "Nitrogen and Hydrogen react to form a molecule of Ammonia (NH<sub>3</sub>). Carbon and Hydrogen react to form a molecule of Methane (CH<sub>4</sub>)".  
For each reaction :
- a) What is the valency of each of the atom involved in the reaction ?
- b) Draw the dot structure of the products that are formed
22. Match the following :
- |  |                      |
|--|----------------------|
| a) Never found in nature in free state | 1) Hg, Ag, Pt, Au    |
| b) Found in earth crust                | 2) Zn, Fe, pb, Cu    |
| c) Found in nature in free state       | 3) K, Na, Ca, Mg, Al |
| A) a-3 ,b-2 , c-1                      | B) a-1, b-2, c-3     |
|  | C) a-2, b-3, c-1     |
23. Write the types of Allotropes of carbon. Give any three examples of each.
24. What is ionization energy ? Explain the factors that affect ionization energy
25. Your friend is unable to understand  $n_l^x$ . What questions will you ask to make him to understand  $n_l^x$  method ?
26. Write the daily life use the given substances
- |                     |                |                 |                     |
|---------------------|----------------|-----------------|---------------------|
| a) Bleaching powder | b) Baking soda | c) washing soda | d) plaster of paris |
|---------------------|----------------|-----------------|---------------------|
27. How do you appreciate the role of esters in daily life ?
28. Which electronic shell is at a higher energy level K or L ? Give reason.

### Section - IV

#### IV. Answer the following questions

**5×4=20 M**

29. Rainbow is an example for continuous spectrum – explain.

**(OR)**

In the table given below, names of some elements of families are given. Based on this, fill the information in the empty boxes.

S.No.	Name of the Element family	Elements		Valency shell configuration	Valency electrons	Valency
		From	To			
1	Alkali metal family	Li	Fr			
2	Alkaline earth metal family	Be	Ra			

3	Carbon family	C	Fl			
4	Halogen family	F	At			

30. Define the modern periodic law. Discuss the construction of the long form of the periodic table.

(OR)

Explain the formation of the following molecules using valence bond theory.

(a) N<sub>2</sub> molecule (b) O<sub>2</sub> molecule

31. Write a note on dressing of ore in metallurgy.

(OR)

An organic compound with molecular formula C<sub>2</sub>H<sub>4</sub>O<sub>2</sub> produces brisk effervescence on addition of sodium carbonate/bicarbonate. Answer the following:

- Identify the organic compound
- Write the chemical equation for the above reaction
- Name the gas evolved
- How will you test the gas evolved?
- List two important uses of the above compound.

32. Why do we call alkanes as paraffins? Explain the substitution reactions of alkanes.

(OR)

Write an activity to show the reaction of bases with metals.

33. Draw the diagram of s, p and d orbitals.

(OR)

Draw the diagram of a) Diamond (b) Graphite (c) C<sub>60</sub> molecule

**\*\* All the best \*\***