

**DEPARTMENT OF GENERAL EDUCATION**

**DIET ERNAKULAM**

**VAIBHAVAM 2021**

**SSLC – ACADEMIC SUPPORT**

T 8

CHEMISTRY

(Chapter - 1,2)

Time : 45 min

TEST - 1

Score :20 marks

**Instruction** : - Total score in the question paper is 30. Answer of best written questions/ sub questions, for 20 score are evaluated

1. The maximum number of electrons that can be accommodated in p subshell is ? [1]
2. Find the Molecular mass of CO<sub>2</sub>? [ C =12, O = 16] [1]
3. The subshell electronic configuration of an element is given.  
 $1s^2 2s^2 2p^6 3s^2$   
Find its atomic number [1]
4. 1 mole nitrogen (N<sub>2</sub>) = number of molecules [1]
5. 320g of SO<sub>2</sub> is given. Find the number of moles.(molecular mass of SO<sub>2</sub> = 64) [1]
6. Which one of the following sub shell is not possible?  
(3d, 2s, 3f, 4p) [1]
7. Write the subshell electronic configuration of <sub>24</sub>Cr . [1]
8. If an inflated balloon is kept in sunlight, it will burst.  
a) Name the gas law applied here [1]  
b) State the law [1]
9. Find out the characteristics of d- block elements from the following.  
a) Atomic radius high  
b) Form coloured compounds  
c) Show variable oxidation states  
d) Found in solid liquid and gaseous states [2]
10. Atomic number of Mn is 25. Write the subshell electronic configuration of Mn<sup>3+</sup> [2]

11. The size of the air bubble rising from the bottom of an aquarium increases.
- Give reason
  - Name the gas law applied here
  - Write the mathematical equation of this law. [3]
12. Write the subshell electronic configuration of  ${}_{19}\text{K}$  and find in the following. [3]
- block
  - period
  - group
13. 360 g of glucose is given ( $\text{C}_6\text{H}_{12}\text{O}_6$ )  
(C -12, H - 1, O - 16)
- Find the number of moles
  - Find the number of molecules [3]
14. The subshell electronic configuration of some elements are given. Symbols are not real.
- |   |   |        |        |        |        |        |        |        |
|---|---|--------|--------|--------|--------|--------|--------|--------|
| A | - | $1s^2$ | $2s^2$ | $2p^6$ | $3s^1$ |        |        |        |
| B | - | $1s^2$ | $2s^2$ | $2p^4$ |        |        |        |        |
| C | - | $1s^2$ | $2s^2$ | $2p^6$ | $3s^2$ | $3p^6$ |        |        |
| D | - | $1s^2$ | $2s^2$ | $2p^6$ | $3s^2$ | $3p^6$ | $3d^6$ | $4s^2$ |
- Atomic number of element A is -----
  - Which is the inert gas among these ?
  - Which of one elements forms coloured compounds?
  - Find out the 16<sup>th</sup> group element [4]
15. Find A,B, C, D (Atomic mass of N-14)

No. of GMM = A

No. of moles = D

56 g  $\text{N}_2$

No. of GAM = B

No. of atoms = C

[4]