

**TY BSC- SEM -5 INORGANIC CHEMISTRY**

**MOCK TEST -30 MARKS**

Q.1. In  $C_{2v}$  point group symmetry elements or operations present.

- a)  $E, C_2^1, \sigma_v, \sigma_v'$
- b)  $E, C_3^2, C_2^1, \sigma_h, 3 \sigma_v, S_3, S_3^5$
- c)  $E, C_3^1, C_2^1, \sigma_h, 3 \sigma_v, S_3, S_3^5$
- d)  $E, C_3^2, C_2^1, \sigma_h, 2 \sigma_v, S_3, S_3^5$

Q.2. Trans dichloroethylene is an example to explain.....

- a)  $C_\infty$  point group
- b)  $D_\infty h$
- c)  $C_{2h}$
- d)  $C_\infty v$

Q.3. Improper rotation axis is represented .....

- a) Rotation followed by reflection in a plane perpendicular to the principal axis.
- b) axis through which all symmetry operations can be carried out.
- c) incomplete operation
- d) Horizontal axis

Q.4. In polyatomic species, the group orbitals are called

- a) Molecular orbitals
- b) SALCs
- c) TASOs
- d) Atomic orbitals

Q.5. NaCl is .... type structure.

- a) tetragonal
- b) monoclinic
- c) cubic
- d) orthorhombic

Q.6.  $CuSO_4 \cdot 5H_2O$  have ... point

- a) 2
- b) 3

c)4

d)1

Q.7.The fraction of space occupied by atoms in a unit cell called

a)packing efficiency

b)thermal packing

c)Volume

d)lattice

Q.8.SQUID stand for

a)Semiconducting Quantum Interference Devices

b)Superconducting Quantum Interference Devices

c) Semiconducting Quantum Internet Devices

d) Superconducting Quantum Interference Defect

Q9. The electronic configuration of lanthanum (atomic number = 57) is

a.  $[\text{Xe}] 4f^7 5d^1 6s^2$ .

b.  $[\text{Rn}] 4f^0 5d^1 6s^2$ .

c.  $[\text{Xe}] 4f^0 5d^1 6s^2$ .

d.  $[\text{Ar}] 4f^0 5d^0 6s^2$ .

Q10. Which elements among lanthanons is not considered as 4f block element.

a. Ce.

b. Eu.

c. La.

d. Tm

Q.11. The elements of lanthanide series have general electronic configuration

a.  $4f^{n+1} 5d^0 6s^2$ .

b.  $4f^{n+2} 5d^1 6s^2$ .

c.  $4f^n 5d^0 6s^2$ .

d.  $4f^{n+1} 5d^2 6s^2$

Q12. Among interhalogens +7 oxidation state is exhibited by

a. iodine.

b. chlorine.

c. bromine.

d. fluorine.

Q.13. Interhalogens are represented by formula

- a.  $XY_n$
- b.  $XY_{n-1}$
- c.  $XY$
- d.  $XY_{n-2}$

Q.14.  $CO^+$  is more stable than CO because

- a) CO is nonpolar.
- b) bond order of  $CO^+$  is 2.5.
- c) loss of electron is from nonbonding level of Carbonmonoxide.
- d) electronegativity of carbon is more than oxygen.

Q.15. Liquid ammonia is

- a. protonic Solvent.
- b. acidic Solvent.
- c. non-Ionising Solvent.
- d. not a water like solvent.

Q.16 Bond order of nitric oxide is

- a) 3
- b) 2.5
- c) 2
- d) 1

Q.17 On bending linear molecule

- a) no change in the molecular orbitals
- b) only molecular orbitals energy changes
- c) only bond angle changes
- d) both bond angle & molecular orbital energy changes.

Q.18. APF of SCC is

- a) 82%
- b) 52%
- c) 59%
- d) 152%

Q.19 The least basic hydroxide among lanthanide series elements is

- a.  $\text{Lu}(\text{OH})_3$ .
- b.  $\text{Ce}(\text{OH})_3$ .
- c.  $\text{La}(\text{OH})_3$ .
- d.  $\text{Yb}(\text{OH})_3$ .

Q.20. The catalyst used in the manufacture of sulphuric acid is

- a. platinised asbestos.
- b. platinum rhodium.
- c. Zigler-Natta.
- d. Rollen's Catalyst.

**ANSWER KEY -MOCK EXAM-TY BSc-SEM 5 ATKT**

Q.1	A
Q2	C
Q3	A
Q4	C
Q5	C
Q6	D
Q7	A
Q8	B
Q9	C
Q10	C
Q11	A
Q12	A
Q13	A
Q14	C
Q15	A
Q16	B
Q17	D
Q18	B
Q19	A
Q20	A