

CITY SCHOOL OF EDUCATIONAL INSTITUTE PANDHURNA

OPEN BOOK EXAMINATION 2020-21

CLASS-12TH

SUBJECT :- CHEMISTRY

Time :- 3hr

Marks :- 70

Q .1 Choose the correct option :

1. Number of Na atom present in the unit cell of NaCl crystal is: **(5 MARK)**
(a) 1 (b) 2 (c) 3 (d) 4.
2. Cell constant is :
(a) A/l (b) l/A (c) lA (d) e l/a
3. Total..... types of crystal system are there.
(a) 6 (b) 7
(c) 4 (d) 3
4. Diamond is a.
(a) Hydrogen bond (b) Ionic solid
(c) Covalent solid (d) Metallic solid
5. the correct example of Frenkel defect is :
(a) NaCl (b) CsCl
(c) KCl (d) AgCl.

Q 2 Fill in the blanks: **(5 MARK)**

1. Ideal solution obeys law.....
2. Brass is.....
3. Normality is.....
4. Solid solution is
5. Reverse osmosis is.....

Q 3 Answer in one word/sentence: **(5 MARK)**

1. Write one example of body centered cubic cell.
2. From sea weeds can be obtained.
3. Give the name of laws which govern the electrolysis.
4. Write example of Redox reaction.
5. Write example of Kohlrausch law.

Q 4 Match the following : **(5 MARK)**

- | 'A' | 'B' |
|------------------------|---------------------------|
| 1. Ore of zinc | (a) $C_6H_5SO_2Cl$ |
| 2. Oil of mirbane | (b) Virility |
| 3. Heinsberg's reagent | (c) Nitro benzene |
| 4. Vitamin E | (d) $Fe_2O_3 \cdot 3H_2O$ |
| 5. Limonite | (e) Calamine. |

Q 5 :- why is solids Rigid? **(2 MARK)**

Or

Why is sky blue in colour?

Q 6 :- what is Doping? **(2 MARK)**

Or

What are molecular solids?

Q 7 :- what is unit cell? **(2 MARK)**

Or

What is effective atomic number ?

Q 8 :- Explain Frenkel defect? Or (2MARK)
What do you mean by metal excess defect?

Q 9. What is rate of reaction ? describe any two factors affecting rate of reaction. (4 MARK)

Or

What is defect in crystals ?explain with example.

Q 10. Explain electric characteristics in solid. (4 MARK)

Or

Explain briefly the packing in solid ?

Q 11. What is molarity and molality? (4 MARK)

Or

What is vapour pressure of solution?

Q.12. What do mean by Van't Hoff's Factor? (4 MARK)

Or

Explain the roult's Law?

Q 13.Explain Berkley Hartley process? (4 MARK)

Or

Explain electrochemical cell?

Q 14. What is Kohlrausch's law ? Explain any two applications of Kohlrausch's Law. (4 MARK)

Or

Explain corrosion on the basis of following points :

(i) Definition , (ii) Factors affecting (any two), (iii) prevention of corrosion (any two).

or

Q 15 What are standard oxidation and reduction potential? (4MARK)

Or

Write the name and structure of any five oxy acids of Sulphur.

Q 16. Explain the following : (4 MARK)

(i) Nernst equation. (ii) Corrosion.

Or

Write notes on :

(i) Fule cell (ii) Dry cell

Q 17. What is Raoult's Law ? Write any four differences between Ideal and non-ideal solutions.

Or

What is Osmotic pressure ? Draw a labelled diagram of Berkeley – Hartley method of determination of osmotic pressure. **(5 MARK)**

Q 18. What are transition elements ? Write any four characteristic properties of transition metals.

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Explain Faraday's laws of electrolysis in detail? **(5MARK)**