

Version No.			

ROLL NUMBER						



0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

Answer Sheet No. \_\_\_\_\_

Sign. of Candidate \_\_\_\_\_

Sign. of Invigilator \_\_\_\_\_

**CHEMISTRY SSC-I**  
**SECTION – A (Marks 12)**  
**Time allowed: 20 Minutes**

Section – A is compulsory. All parts of this section are to be answered on this page and handed over to the Centre Superintendent. Deleting/overwriting is not allowed. **Do not use lead pencil.**

**Q.1 Fill the relevant bubble for each part. Each part carries one mark.**

- (1) Which one of the following charged ions will be formed by an element of group IIA having electronic configuration  $1s^2 2s^2 2p^6 3s^2$ ?
- |             |             |
|-------------|-------------|
| A. $A^{+3}$ | B. $A^{+2}$ |
| C. $A^{+1}$ | D. $A^{-2}$ |
- (2) Which one of the following pairs of subshell has the lowest energy as compared to other pairs of subshells?
- |           |           |
|-----------|-----------|
| A. 1s, 2s | B. 2s, 2p |
| C. 3s, 3p | D. 3s, 4s |
- (3) Which one of the following Isotopes is used in nuclear reactors?
- |          |          |
|----------|----------|
| A. U-234 | B. U-238 |
| C. U-235 | D. U-233 |
- (4) How many molecules of oxygen gas contains one mole of oxygen gas?
- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| A. $8 \times 6.022 \times 10^{23}$  | B. $6.022 \times 10^{23}$           |
| C. $32 \times 6.022 \times 10^{23}$ | D. $16 \times 6.022 \times 10^{23}$ |
- (5) The variable that is kept constant in Charles' Law is:
- |                |                         |
|----------------|-------------------------|
| A. Temperature | B. Volume               |
| C. Pressure    | D. Volume & Temperature |
- (6) The most dilute solution amongst the following is:
- |          |            |
|----------|------------|
| A. 1M    | B. 0.5 M   |
| C. 0.02M | D. 0.0005M |

- (7) Pressure Cooker works on the principle of relationship of boiling point with:  
A. External Pressure                      B. Evaporation  
C. Boyle's law                                D. Volume
- (8) 17g of  $\text{NH}_3$  is dissolved in  $1 \text{ dm}^3$  of solution, its molarity will be:  
A. 1    B. 2  
C. 3    D. 4
- (9) In  $\text{H}_2\text{S}$ , the oxidation state of Sulphur is:  
A. +1    B. +2  
C. -1    D. -2
- (10) The compound having Hydrogen bonding among its molecule is:  
A.  $\text{C}_6\text{H}_6$                                       B.  $\text{MgO}$   
C.  $\text{CH}_4$                                         D.  $\text{H}_2\text{O}$
- (11) Metallic Character increases down the group, which one of the following is the most metallic:  
A. Rb    B. Cs  
C. Na    D. K
- (12) The most electronegative element in the group VIIA is:  
A. F    B. Cl  
C. Br    D. I
-



Federal Board SSC-I Examination  
Chemistry Model Question Paper  
(Curriculum 2006)

Time allowed: 2.40 hours

Total Marks: 53

Note: Answer all parts from Section 'B' and all questions from Section 'C' on the **E-sheet**.  
Write your answers on the allotted/given spaces.

**SECTION – B (Marks 33)**

**Q.2** Attempt all parts from the following. All parts carry equal marks. (11 × 3 = 33)

i. Calculate the number of molecules in 4.5 moles of Carbon dioxide. (1+2)

**OR**

Calculate the mass of one Hydrogen atom in gram. (1+2)

ii. Draw Bohr's Atomic Model for Potassium  ${}_{19}\text{K}^{39}$  indicating the location of electrons, protons and neutrons. (1+1+1)

iii. State Charles's Law. Derive its mathematical expression. (1+2)

iv. Define ionic bond. Give one example of two elements forming an ionic bond between them. (1+2)

v. Write two similarities and two differences between isotopes. (1.5+1.5)

vi. Elements are unstable in free state except noble gases. Explain how elements attain stability? (1+2)

**OR**

Why is an atom always electrically neutral? Give reason (1+2)

vii. Write electronic configuration of Aluminum  ${}_{13}\text{Al}^{27}$ . Identify its group and period. (1+1+1)

**OR**

How does the change in temperature affect the Vapour Pressure of a liquid? Show with the help of graph. (1+2)

viii. How will you prepare 250 cm<sup>3</sup> of 0.025M Na<sub>2</sub>SO<sub>4</sub> solution from a stock solution of 2M Na<sub>2</sub>SO<sub>4</sub>? (1+2)

ix. Identify the oxidizing and reducing agents in the following reaction with indicating oxidation number: (1.5+1.5)



**OR**

Define corrosion. How is corrosion prevented by cathodic protection? (1+2)

x. Enlist the name of three noble metals? (1+1+1)

**OR**

Why is the boiling point of water at the top of Mount Everest 70°C. Give a reason? (1+2)

xi. Discuss why sugar is soluble in water but petrol is not? (1.5+1.5)

## SECTION – C (Marks 20)

**Note:** Attempt all questions. Marks of each question are given within brackets.

**Q.3** What are the type of bonds responsible for the formation of F<sub>2</sub>, O<sub>2</sub> and N<sub>2</sub>?  
Explain the formation of bond with the help of structures. (2+2+2)

**OR**

Describe Rutherford's Experiment with diagram and its conclusions. (3+3)

**Q.4** Describe three importance of intermolecular forces in our life. (2+2+2)

**OR**

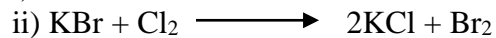
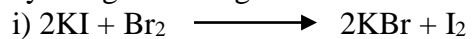
Describe the trend of Ionization Energy in the Period and group. Explain with reasons. (3+3)

**Q.5** Explain the working and construction of Daniel Cell with the help of a labelled diagram. (2+2)

**OR**

Identify the relationship between electronic configuration and the position of an element in the periodic table.  ${}_{35}\text{Br}^{70}$  and  ${}_{8}\text{O}^{16}$  (2+2)

**Q.6** By using following reactions. Discuss the reactivity (2+2)



\* \* \* \* \*

SUPPLEMENTARY TABLE

<b>Atomic No</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>Symbol</b>	H	He	Li	Be	B	C	N	O	F	Ne	Na	Mg	Al	Si
<b>Mass no</b>	1	4	7	9	11	12	14	16	19	20	23	24	27	28
<b>Atomic No</b>	15	2	16	17	18	19	20	31	32	33	34	35	36	37
<b>Symbol</b>	P	He	S	Cl	Ar	K	Ca	Ga	Ge	As	Se	Br	Kr	Rb
<b>Mass no</b>	31	4	32	35	40	39	40	70	73	74	79	80	84	85
<b>Atomic No</b>	38	49	50	51	52	53	54	55	56	81	82	83	84	85
<b>Symbol</b>	Sr	In	Sn	Sb	Te	I	Xe	Cs	Ba	Tl	Pb	Bi	Po	At
<b>Mass no</b>	88	115	119	122	128	127	131	133	137	204	207	208	209	210