

Model Question of SSC Examination 2016

Sub: Chemistry (Creative)

Time: 2 Hours 10 minutes

Total Marks-40

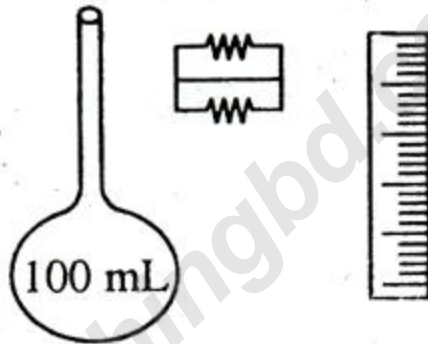
(Answer any four of the following Questions)

1. ► Teacher said a student to draw an atomic model. Student drew few circles in a big circle from the same centre. When teacher said to come and show. Student show his model like.

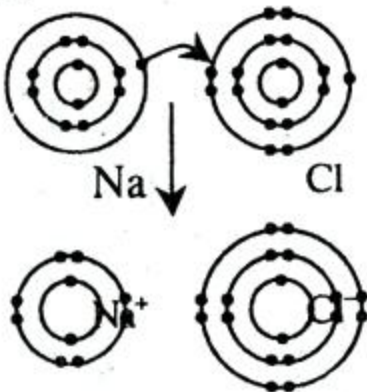


Bohr's Atomic model

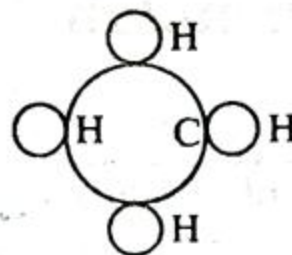
- What is relative atomic mass? 1
 - What do you mean by kinetic properties of particles? 2
 - Discuss the atomic model that is indicated by stem. 3
 - According to the model drawn, give logical explanation of arrangement of electrons and stability of atom. 4
2. ► Substance 'A' molecular mass is 106. Composed of 3-elements of atomic masses 23, 12 & 16 also its percentages are 43.4%, 11.3% and 45.3% respectively. 1.06g of substance A is dissolved in 100 ml water.



- What is percentage of yield? 1
 - Write down the differences between empirical formula and molecular formula. 2
 - Determine the molecular formula of compound "A" from the values of stem. 3
 - Determine the concentration of solution 'A' and explain why it is called ideal solution? 4
3. ► Look at the compounds and answer the relevant questions.



Ionic Bond

Electron from hydrogen
Electron from carbon

- What is valency? 1
- What do you mean by reactivity series? 2
- Discuss the differences between the two compounds in the stem. 3

d. Explain the formation of compounds in the stem and analyze its solubility process. 4

4. ► A scientist took two test tubes labeled- M and N that are full of NaOH, for an experiment. He added two kinds of salt FeSO_4 in M and AgNO_3 in N. After a few seconds he found green precipitate in test tube labeled -M. But in test tube N, there is no change in color. When he added ammonia and aldehyde in N, Scientist got surprised.

a. What is reversible reaction? 1

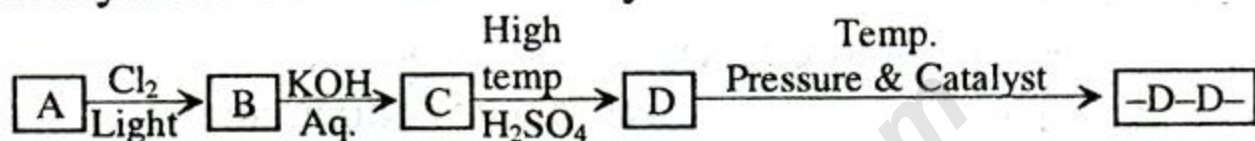
b. Why heat change is occurred in chemical reaction? 2

c. In test tube labeled- M, the reaction is non-redox, analyze with reaction. 3

d. What happened in test tube labeled-N? Explain with reaction. 4

5. ► Look at the steps and answer the relevant questions.

A is hydrocarbon of C & H only and molecular mass is 30,



a. What is vinegar? 1

b. What do you mean by Aromatic compound? 2

c. Explain two differences between the compounds A and D with reactions. 3

d. Analyze three properties of each compounds A and D with reactions. 4

6. ► Look at the picture And answer the relevant questions.

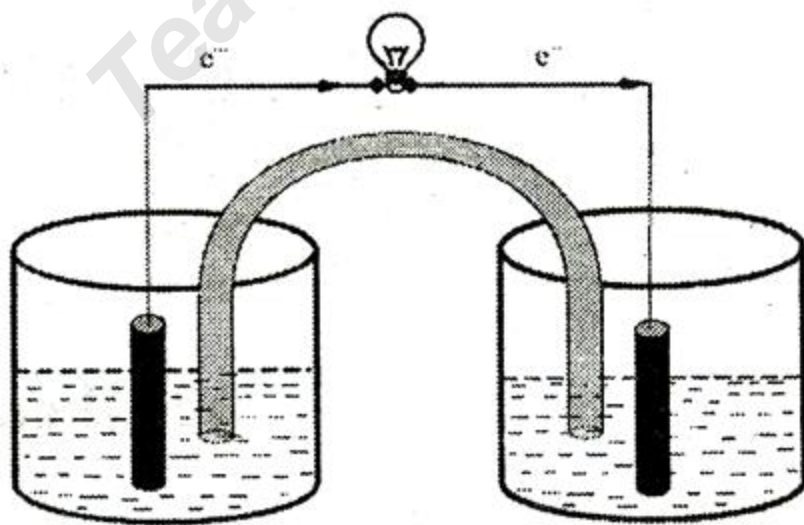


Fig: Galvanic cell

a. What is nuclear reaction? 1

b. Draw the energy diagrams of reactions on the basis of heat change. 2

c. The cell reaction is spontaneous, discuss with the help of stem cell reactions and salt bridge. 3

d. If the figure is replaced by a dry cell, the mechanism of the stem cell is not concurrent- Explain. 4

Model Question of SSC Examination 2016
Sub: Chemistry (MCQ)

Time: 35 minutes

Total Marks- 35

[Darken the circle (O) of the correct option from the following alternatives]

- Which one is an aromatic compound?
 (a) Ethylene (b) Naphthalene
 (c) Butane (d) Cyclopropane
- Metals are shown in a series according to activeness—
 i. Ca, Al are highly active
 ii. Zn, Pb are medium active
 iii. Ag, Cu are highly active
 Which one of the following is correct?
 (a) i & ii (b) i & iii
 (c) ii & iii (d) i, ii & iii

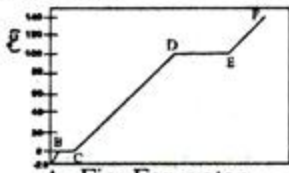


Fig: For water

- In the figure C-D indicates
 (a) Ice (b) Liquid
 (c) Liquid and vapor
 (d) Water vapor
- Standard temperature and pressure (STP) means—
 (a) 0°C and 1 atm
 (b) 25°C and 1 atm
 (c) -273K and 1 atm
 (d) 298 K and 25 atm

- $\text{CO} + 3\text{H}_2 \longrightarrow \text{CH}_4 + \text{H}_2\text{O}$
 Which one of the following are the required optimum temp. & catalyst for the above reaction?

- (a) 150°C, Ni (b) 180°C, Ni
 (c) 250°C, Ni (d) 750°C, Ni

- Percentage of metals in stain less steel—
 i. Fe 74% ii. Cr 18%
 iii. Nickel 8%

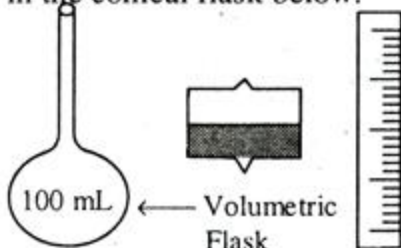
Which one of the following is correct?

- (a) i & ii (b) i & iii
 (c) ii & iii (d) i, ii & iii

- Does which element obey duet rule?

- (a) He (b) N
 (c) Ar (d) Kr

Jamal prepare 250 ml 0.1 M Na_2CO_3 solution in the conical flask below.



fig

Answer questions 8-9 on the basis of the stem.

- What is the percentage of carbon?

- (a) 10.59% (b) 11.32%
 (c) 12.56% (d) 15.57%

- How much Jamal was taken?
 (a) 1.325 g (b) 2.65 g
 (c) 5.30 g (d) 10.6 g
- Which one of the following sign is used for the identification of radioactive ray?
 (a) Cross (b) Cross on Skeleton
 (c) Trefoil (d) Scattered ray
- Which one of the following atoms exist same number of group and period?
 (a) Ti (b) Cr
 (c) Al (d) P
- What will happen in the NH_3 production?
 $\text{N}_2 + 3\text{H}_2 \rightleftharpoons 2\text{NH}_3$; $\Delta H = -92 \text{ kJ}$, if the temperature of the reaction is increased:
 (a) Amount of NH_3 will decrease
 (b) Amount of NH_3 will remain same
 (c) Amount of NH_3 will remain increase
 (d) the reaction will be stopped
- What is the main basis of modern periodic table?
 (a) Atomic mass
 (b) Electronic configuration
 (c) Molecular mass (d) Neutron number
- In which compound roasting is applied?
 (a) PbO (b) ZnS
 (c) ZnO (d) ZnSO_4
- The following chemical test is carried out in the laboratory for the detection of—

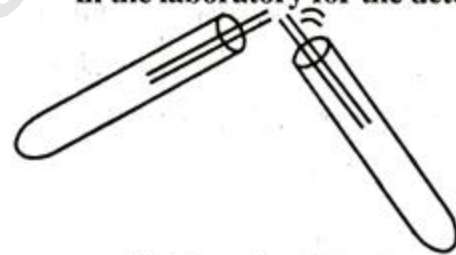
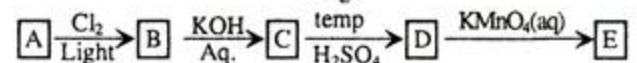


Fig : Reaction of metals carbonate with acid

- (a) CO - Gas (b) CO_2 - Gas
 (c) NO_2 - Gas (d) O_2

Answer questions 16-17 on the basis of the stem below. (where A is alkane of M.mass 30)



- Which one of the following is the functional group of compound C?

- (a) -OH (b) -CHO
 (c) -CN (d) -COOH

- Which one of the following compound is E in the stem?

- (a) $\text{CH}_3 - \text{CH}_2 - \text{OH}$ (b) $\text{CH}_3 - \text{O} - \text{CH}_3$
 (c) $\text{CH}_2(\text{OH}) - \text{CH}_2(\text{OH})$
 (d) $\text{CHO} - \text{CHO}$

- Which one is the next term of "Planning of project" As investigation method?

- (a) Analysis of data (b) Effect of result
 (c) Data collection (d) Hypothesis

19. N, P, As; In the elements—
 i. 5 electrons at the outermost shell
 ii. Radius increases from N to As
 iii. As is harmful for health

Which one is correct?

- (a) i and ii (b) ii and iii
 (c) i and iii (d) i, ii and iii

Na	Mg	Al	Si	'Y'	S	Cl
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20. In the period 'Y' indicates
- (a) O (b) Br
 (c) P (d) Ar
21. Which one is the vinegar?
- (a) 6-10% aqueous solution of ethanoic acid
 (b) 18-20% aqueous solution of acetic acid
 (c) 6-10% aqueous solution of methanoic acid
 (d) 1-5% aqueous solution of propanoic acid

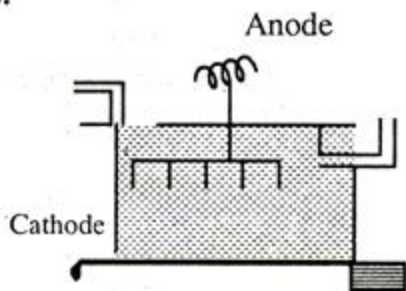


fig : Mercury cathode cell

What is the main product of anode in the above stem fig?

- (a) NaOH (b) Cl₂
 (c) Na₂CO₃ (d) Na

23. Which one of the following is main ingredient of toilet cleaner?

- (a) LiOH (b) KOH
 (c) CsOH (d) NaOH

24. 'Z' is the common compound formed by the decomposition of any carbonate salt by heat. 'Z' indicates—

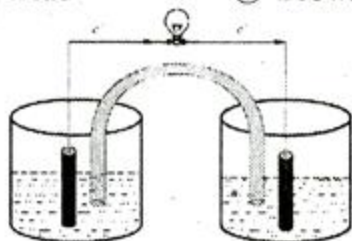
- (a) CaO (b) CO₂
 (c) H₂O (d) b and c

25. What is the shape of water molecule?

- (a) V-shape (b) Trigonal
 (c) Pyramidal (d) Tetrahedral

26. $\text{FeSO}_4 + 2 \text{NaOH} = \text{X} + \text{Na}_2\text{SO}_4$; What is the colour of compound 'X'?

- (a) Violet (b) Green
 (c) Blue (d) Brown



27. What type of reaction is occurred in the anode of above cell?

- (a) Oxidation (b) Neutralization
 (c) reduction (d) Redox

28. i. Rutherford model is compare to solar model
 ii. According to Bhers, Electrons are moving around the nucleus in definite circular path
 iii. Maxwell shows electrons goes towards centre

Which one is true?

- (a) i & ii (b) ii & iii
 (c) i & iii (d) i, ii & iii

29. Which one accelerates the enzymatic activities in digestion?

- (a) HNO₃ (b) H₂CO₃
 (c) HCHO (d) CH₃CHO

30. Which one of the following is used to increase the cleaning capacity of detergent?

- (a) Carbonate (b) Sulphate
 (c) Phosphate (d) Nitrate

31. One student of chemistry tades a glass of water. He mixes one drop of ink with water after a few minutes one can see that the ink will mix properly with H₂O. what is the name of this phenomena?

- (a) Effusion (b) solution
 (c) diffusion (d) chemical reaction

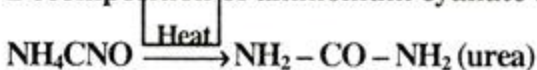
32. pH of a basic solution is 12, to decrease the pH value we have to add—

- i. sodium hydroxide solution
 ii. Concentrated hydrochloric acid
 iii. Solid magnesium carbonate

Which one of the following is correct?

- (a) i (b) ii
 (c) iii (d) i, ii and iii

33. Decomposition of ammonium cyanate :



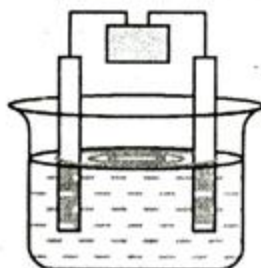
The above process is known as—

- (a) Isomerisation (b) Hydration
 (c) Neutralization (d) Substitution

34. Diffusion and effusion are influenced by—

- (a) Mass and Osmosis
 (b) Temperature and attraction
 (c) Mass and density
 (d) Pressure and Volume

35. Electrolysis of NaCl :



Which one of the following is produce in anode of the above cell?

- (a) Cl₂ (b) NaOH
 (c) H₂(g) (d) Na metal

1	a	2	a	3	b	4	a	5	c	6	d	7	a	8	b	9	b	10	c	11	c	12	a	13	b	14	b	15	b	16	a	17	c	18	b	19	d	20	c
21	a	22	a	23	d	24	b	25	a	26	b	27	a	28	d	29	b	30	c	31	c	32	b	33	a	34	c	35	a										