

Model Question of SSC Examination 2020 for All Board

Chemistry

Subject Code

1	3	7
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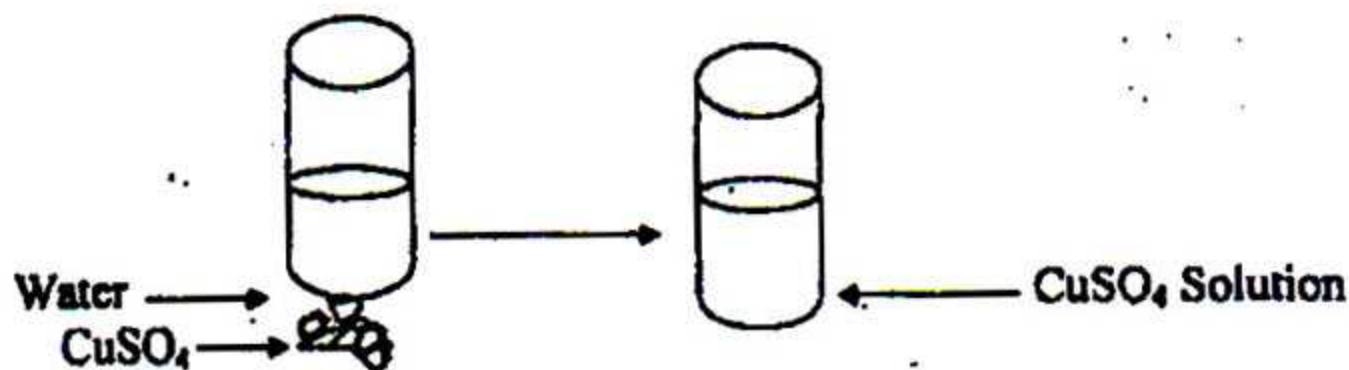
Time — 2 hours 35 minutes

Creative Essay Type Questions

Full marks — 50

[N.B. -The figures in the right margin indicate full marks. Read the stems attentively and answer any five of the following questions.]

1. ►



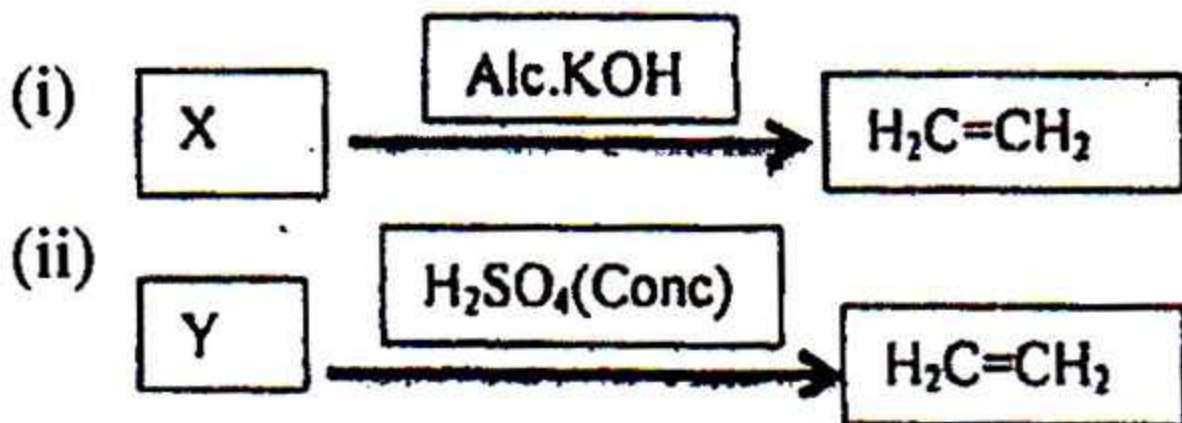
- a. What is weak alkali? 1
- b. Why bleaching powder is used to purify water? 2
- c. What type of process is shown in the process given in the stem? 3
- d. Is it possible to separate the solute and solvent from CuSO₄ solution? Give opinion. 4

2. ►

Reagent	Product
Caustic Soda	Cleaning agent-A
Ammonia solution	Cleaning agent-B

- a. What is tollen reagent? 1
- b. Why Fe₃O₄ is the best ore to extract iron? 2
- c. Explain the cleaning mechanism of cleaning agent-A. 3
- d. Is it possible to use as cleaning agent-B for toilet cleaner? Analyze your logic. 4

3. ►



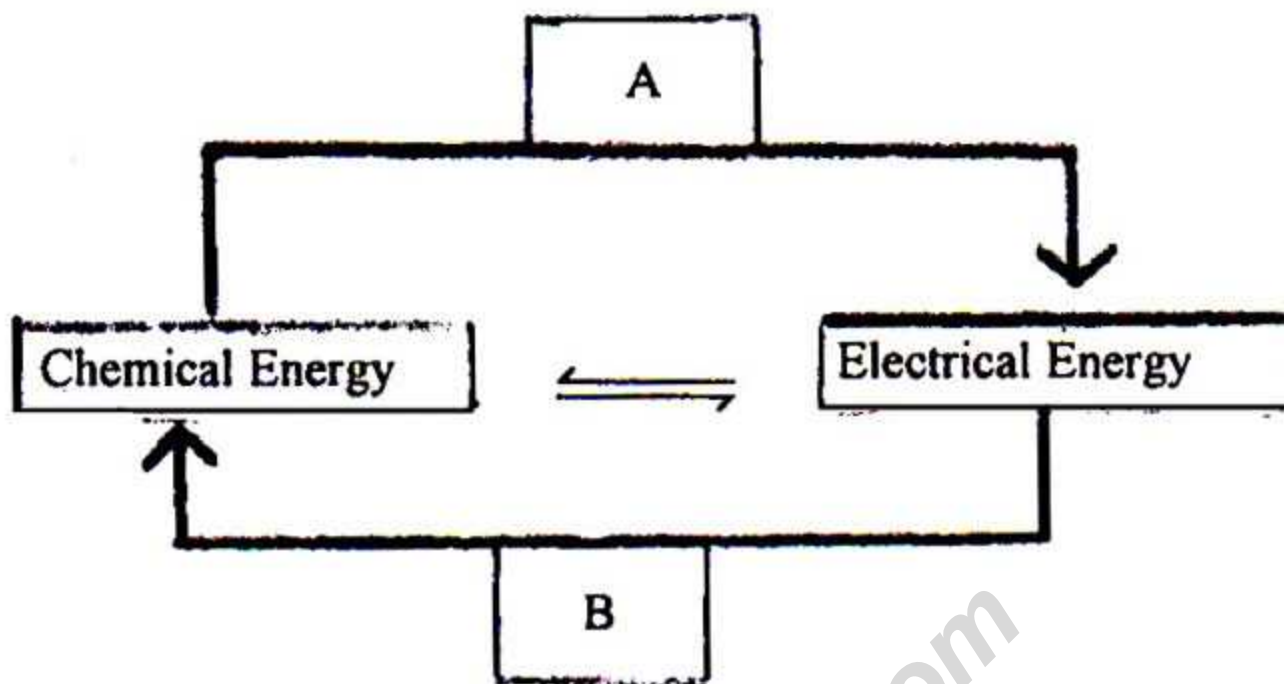
- What is catenation? 1
- Why alkenes are more reactive than alkane? 2
- What will be the reactant of "X & Y" above stem reaction? 3
- How is it possible to prepare "Y" from stem product? Analyze your logic. 4

4. ★

General formula A	General formula B	General formula C	General formula D
$C_nH_{2n+2}, n = 2$	$C_nH_{2n+1}CHO, n = 1$	$C_nH_{2n+1}OH, n = 2$	$C_nH_{2n+1}COO, n = 1$

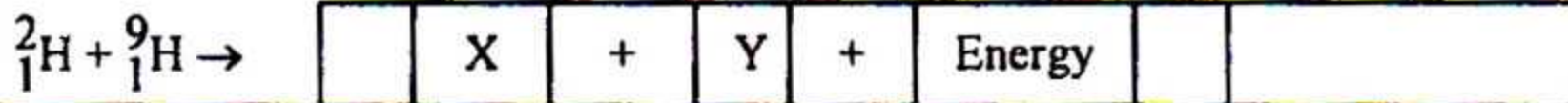
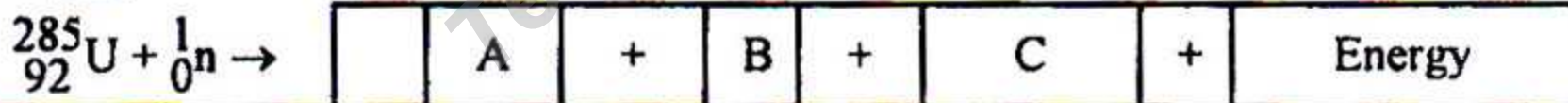
- What is monomer? 1
- Why benzene is called aromatic compound? 2
- Explain preparation method of product D from A. 3
- Which of the stem following act as food preservative & bio-fuel? Explain with your logic. 4

5. ►



- What is the shape of H_2O ? 1
- What does happen in roasting process? 2
- Explain mechanism of stem mention process A. 3
- How can you produce Caustic soda from stem process B? Explain with logic. 4

6. ★



- What is the chemical formula of urea? 1
- What is the significance of ΔH ? 2
- Complete above stem mentions reaction (i) & (ii). 3
- Why the stem reaction (i) & (ii) are totally differencing explain with you logic? 4

7. ► Periodic properties: Metallic properties, non-metallic properties, atomic radius, ionization energy, electro negativity, electron affinity these are the periodic properties of elements in periodic table.

- What is coinage metal? 1
- What is the position of "K" in periodic table? 2
- Between Al & Al³⁺ which one is more atomic size and why? 3
- Which of stem properties can effect on the nature of bonds in molecules? Explain with your logic. 4

8. ★

Element	Amount
H	0.45gm
C	2.7gm
O	3.6gm

A is compound contain three elements. The molecular mass of these compound is 180.

- What is saturated solution? 1
- Write down the two isomer of C₂H₆O. 2
- Determine the percent composition of stem compound "A" mention? 3
- Is it possible to assure the nomenclature of the compound? 4

[NB. Answer all the questions. Each question carries one mark. Block fully, with a ball point pen, the circle of the letter that stands for the correct/best answer in the "Answer Sheet" for the Multiple Choice Questions Examination.]

- What is the atomic mass of 'Na' element?
 - 11
 - 13
 - 22
 - 23
 - Which universal sign is used to express oxidizing gas?
 - Flame of fire
 - Flame of circle
 - Trefoil
 - Dangerous
 - Diffusion of which one is comparatively more?
 - N_2
 - O_2
 - CO_2
 - NH_3
 - ★ In the case of liquid substance—
 - volume is compressible with pressure
 - the intermolecular attraction of molecules is higher than that of solids
 - the motion of molecules is higher than that of solids
 Which one of the following is correct?
 - i & ii
 - ii & iii
 - i & iii
 - i, ii & iii
 - Which electronic configuration is more stable?
 - $(n-1)d^9ns^2$
 - $(n-1)d^8ns^2$
 - $(n-1)d^7ns^2$
 - $(n-1)d^5ns^1$
 - In case of ${}_{26}^{56}Fe^{2+}$
 - electric configuration agent
 - can act as reducing agent
 - neutron number 30
 Which one of the following is correct?
 - i & ii
 - i & iii
 - Which element atomic radii is less?
 - P
 - S
 - Mg
 - Na
 - Which one is metalloid?
 - Be
 - Si
 - Al
 - Cd
 - How many lone pairs of electrons are there in ammonia molecule?
 - Four
 - Three
 - Two
 - One
 - How many molecules are there in 18gm Glucose?
 - 6.02×10^{23}
 - 6.02×10^{22}
 - 3.01×10^{23}
 - 3.01×10^{22}
- Based on the following stem answer the questions No 11 & 12.
- 750 ml 0.125 M K_2CO_3 solution is prepared.
- How many molecule of solute are present in that solution?
 - 5.5×10^{-21}
 - 5.6×10^{-22}
 - 5.64×10^{22}
 - 6.64×10^{23}
 - If HCl is passed through this solution—
 - KCl and CO_2 will be produced
 - Precipitate will be obtained
 - 2.1 L CO_2 will be produced
 Which one of the following is correct?
 - i & ii
 - i & iii
 - ii & iii
 - i, ii & iii
 - What is the shape of water molecule?
 - Angular
 - Pyramidal
 - Linear
 - Tetrahedral

14. ★ What is the optimum temperature and pressure to produce ammonia gas in Haber process?

- (a) 450° C, 200atm
- (b) 550° C, 250atm
- (c) 450-550° C, 200atm
- (d) 200-250° C, 450-550 atm

15. Relative atomic mass—

- i. is measured by using carbon-12 isotope
- ii. is measured by atomic mass of H atom
- iii. has no unit

Which one of the following is correct?

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

16. Which one is used in lithium battery?

- (a) Hg₂O
- (b) LiSiO₂
- (c) LiCoO₂
- (d) Zn and MnO₂

17. What is the ideal pH value for body skin?

- (a) 4.5
- (b) 5.5
- (c) 6.5
- (d) 7.5

18. Fuel of fuel—

- i. CH₃OH
- ii. C₂H₅OH
- iii. Petroleum

Which one of the following is correct?

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

19. Which of the following is weak acid?

- (a) H₂SO₄
- (b) HNO₃
- (c) HCl
- (d) CH₃COOH

20. ★ Rust is—

- i. Hydrated iron oxide
- ii. Formed by Fe, O₂, H₂O
- iii. Black in color

Which one of the following is correct?

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

21. Metal alloys—

- i. Stainless steel, Fe-74%
- ii. Duralumin, Al-90%
- iii. Brass, Cu-90%

Which one of the following is correct?

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

22. Which one of the following is aromatic compound?

- (a) C₃H₅
- (b) C₂H₆
- (c) C₁₀H₅
- (d) C₂H₅OH

23. ★ Which is the functional group of aldehyde compound?

- (a) -COOR
- (b) >CO
- (c) -CHO
- (d) -COOH

24. What is the function of yeast?

- (a) to make bread rise
- (b) to preserve food
- (c) acts as an antioxidant
- (d) acts as a reductant

25. Which one is used as toilet cleaner powder?

- (a) NaOH
- (b) NH₃
- (c) Ca(OH)₂
- (d) Al(OH)₃

Ans.

1	(d)	2	(b)	3	(a)	4	(b)	5	(d)	6	(c)	7	(b)	8	(b)	9	(d)	10	(b)	11	(c)	12	(b)	13	(a)
14	(c)	15	(b)	16	(c)	17	(b)	18	(c)	19	(d)	20	(a)	21	(a)	22	(c)	23	(c)	24	(a)	25	(a)		