**[Model Paper](http://www.result.pk)**

**[Chemistry](http://www.result.pk)** [-](http://www.result.pk) **[I](http://www.result.pk)**

**[Total Time: 3 Hours Max: Marks: 85](http://www.result.pk)**

**[Note:](http://www.result.pk)** **[There are THREE Sections of this Paper i.e. A.B and C, attempt each according to the given instructions.](http://www.result.pk)**

**[Time: 20 Minutes](http://www.result.pk)****[SECTION-A](http://www.result.pk)** **[Marks: 15](http://www.result.pk)**

**[Note:](http://www.result.pk)** [Attempt all parts of Section – A. Section –A must be return to the superintendent after 20](http://www.result.pk)

[minutes even if you have not attempted any question. Overwriting/ defacing/Cutting etc is](http://www.result.pk)

[prohibited in Section-A and no credit will be given to such answer.](http://www.result.pk)

**[I.                   Write the correct option i.e. A/B/C/D in the empty boxes.](http://www.result.pk)**

[i.           http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image001.gifWhich electrolyte is used in the salt bridge?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) Kcl (B) KBr (C) NaCl (D) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image003.gif](http://www.result.pk)

[ii.         In which of the following compounds does hydrogen bonding occur \_\_\_\_\_\_\_\_\_\_\_.http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image004.gif](http://www.result.pk)

[http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image004.gif(A) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image006.gif (B) He (C)LiH (D) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image008.gif](http://www.result.pk)

[iii.       A reactant which controls the amount of the product is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) Excess reactant (B) Limiting reactant (C) Equal reactant (D) None of these](http://www.result.pk)

[http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image004.gifiv. The value of R in SI unit is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image010.gif.](http://www.result.pk)

[(A) 1.987 (B) 62.4 (C) 0.821 (D) 8.3143http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image001.gif](http://www.result.pk)

[v.         Which one of the following is not a state function \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) Enthalpy (B) Heat (C) Temperature (D) Pressure](http://www.result.pk)

[vi.       The change in concentration of reactant per unit time is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image004.gif](http://www.result.pk)

[(A) Rate equation (B) Rate constant (C) Rate of reaction(D) None of these](http://www.result.pk)

[vii.     Very large Ka value means that the solution is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image004.gif](http://www.result.pk)

[(A) Strong acid (B) Weak acid (C) Strong base (D) Neutral](http://www.result.pk)

[viii.   Which of the following have lowest polarisibility \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image012.gif (B) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image014.gif (C) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image016.gif (D) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image018.gif](http://www.result.pk)

[ix.       At the same temperature & pressure, which of the following gas have the greatest](http://www.result.pk)

[density \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image019.gif](http://www.result.pk)

[(A) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image021.gif (B) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image023.gif (C) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image014.gif (D) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image026.gif](http://www.result.pk)

[x.         The shape of http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image023.gifmolecule is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image004.gif](http://www.result.pk)

[(A) Linear (B) Trigonal (C) Pyramidal (D) Tetrahedral](http://www.result.pk)

[xi.       To which series of spectral lines of photon belongs, when electron jump from](http://www.result.pk)

[http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image028.gif\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) Balmer (B) Lyman (C) Paschen (D) Bracket](http://www.result.pk)

[xii.     Structure of diamond is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image004.gif](http://www.result.pk)

[(A) Hexagonal (B) Cubic (C) Rhombic (D) Trigonal](http://www.result.pk)

[http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image019.gifxiii. In which of the following values of Kc, the reaction goes to completion in forward](http://www.result.pk)

[direction \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image030.gif (B) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image032.gif (C) 1 (D) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image034.gif](http://www.result.pk)

[http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image004.gifxiv. The total pressure of mixture of different gases is the result of the total \_\_\_\_\_\_\_\_\_\_](http://www.result.pk)

[per unit area.](http://www.result.pk)

[(A) Temperature (B) Volume (C) No. of moles (D) No. of collision](http://www.result.pk)

[http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image019.gifxv. The efficiency of a reaction is expressed by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ yield.](http://www.result.pk)

[(A) Actual (B) Experimental (C) Theoritical (D) Percent](http://www.result.pk)

[http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image019.gifxvi. Fog is the example of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) Solution (B) Collides (C) Suspension (D) None of these](http://www.result.pk)

[http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image019.gifxvii. In Down’s process of electrolysis of molten NaCl the substance produced at anode](http://www.result.pk)

[is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) Sodium (B) Oxygen (C) Chlorine (D) Hydrogen](http://www.result.pk)

[http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image019.gifxviii. One molar solution of http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image036.gifis mixed with IM solution of HCl, the solution formed is \_\_\_.](http://www.result.pk)

[(A) Acidic (B) Basic (C) Neutral (D) Amphoteric](http://www.result.pk)

**[Model Paper](http://www.result.pk)**

**[Chemistry](http://www.result.pk)** [-](http://www.result.pk) **[I](http://www.result.pk)**

**[Note:](http://www.result.pk)****[Time allowed for section B and C is 2 hours and 40 minutes.](http://www.result.pk)**

**[SECTION “B” Marks: 40](http://www.result.pk)**

[II.                Attempt any TEN Parts out of the following. Each Part carries equal marks.](http://www.result.pk)

[i. Write the properties of Canal Rays.](http://www.result.pk)

[ii. Calculate the no. of oxygen atoms in 22g of http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image021.gif](http://www.result.pk)

[iii. Explain Avogadro’s law.](http://www.result.pk)

[iv. How gases deviate from ideal behaviour?](http://www.result.pk)

[v. Explain why water droplet is spherical?](http://www.result.pk)

[vi. Differentiate between plane of symmetry & axis of symmetry.](http://www.result.pk)

[vii. What is common ion effect?](http://www.result.pk)

[viii. Determine the PH of 0.15M NaOH solution.](http://www.result.pk)

[ix. What is the effect of temperature on rate of reaction?](http://www.result.pk)

[x. Write note on Fuel cell.](http://www.result.pk)

[xi. Explain electrochemical series.](http://www.result.pk)

[xii. Differentiate between Anode & Cathod?](http://www.result.pk)

[xiii. Define Enthalpy & Standard Enthalpy.](http://www.result.pk)

**[SECTION “C” Marks: 27](http://www.result.pk)**

**[Note: Attempt any THREE questions of the following. Each question carries equal Marks.](http://www.result.pk)**

**[III.](http://www.result.pk)** [(a) Explain limiting & excess reactant.](http://www.result.pk)

[(b) Balance the following equation by half reaction method.](http://www.result.pk)

[(i) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image039.gif (ii) http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image041.gif](http://www.result.pk)

**[IV.](http://www.result.pk)** [(a) Define dipolmoment. How does it help to find out the geometry of molecule?](http://www.result.pk)

[(b) Explain bonding in http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image043.gifwith the help of MOT.](http://www.result.pk)

**[V.](http://www.result.pk)** [(a) State & explain law of Mass action.](http://www.result.pk)

[(b) A mixture of 1 Mole acetic acid & 3 Moles of ethyl alcohol is heated at http://www.bisess.edu.pk/model_papers_hssc/hssc_chemistry_files/image045.gif. Calculate](http://www.result.pk)

[the moles of ethyl acetate at equilibrium. Kc = 4.](http://www.result.pk)

**[VI.](http://www.result.pk)** [Write short note on any three of the following:](http://www.result.pk)

[(a) Hybridization (b) Voltaic cell](http://www.result.pk)

[(c) Valence bond theory (d) Hydrogen bonding](http://www.result.pk)