Date: 12-05-2016
9:30 a.m. to 9:50 a.m.

CHEMISTRY PAPER – I
(Science Pre-Engineering & Pre-Medical Groups)

Max. Marks: 17
Time: 20 minutes

The correct answers are highlighted in red colour.

SECTION 'A'
(MULTIPLE CHOICE QUESTIONS) – (M.C.Qs.)

Code No:CH-09

Write this Code No. in the Answerscript.

NOTE:
i) This section consists of 17 part questions and all are to be answered. Each question carries one mark.
ii) Do not copy the part questions in your answerscript. Write only the answer <u>in full</u> against the proper number of the question and its part.
iii) The code of your question paper is to be written <u>in bold letters</u> in the beginning of the answerscript.

1. Choose the correct answer for each from the given options:

i) The Octet rule is not valid for this molecule:
   * N_2 * CO_2 * O_2 * **H_2**

ii) The yield of Ammonia in Haber's process is favoured by:
   * High pressure and high temperature   * **High pressure and low temperature**
   * Low pressure and low temperature   * Low pressure and high temperature

iii) This ion has greatest degree of hydration:
   * Na^+ * Mg^{+2} * **Al^{+3}**   * K^+

iv) The volume of 3.01×10^{23} molecules of N_2 gas at S.T.P. will be:
   * $3 dm^3$ * **$11.2 dm^3$**   * $22.4 dm^3$ * $28 dm^3$

v) $Rate = K \ NH_3{}^2$. Keeping the other conditions same, if the concentration of NH_3 is increased by four times, then the initial rate of reaction X will be:
   * 2X   * 4X   * 8X   * **16X**

vi) This is not extensive property:
   * Entropy   * **Viscosity**   * Enthalpy   * Internal Energy

vii) The extent of reaction will be maximum for this K_c value:
   * 10^{-13} * 0.1   * 10   * **10^3**

viii) This Hydrogen halide has the highest percentage of ionic character:
   * **HF**   * HCl * HBr * HI

ix) These have low values of activation energy:
   * Slow reactions   * **Fast reactions**
   * Moderate reactions   * Ionic reactions

x) The bond angle is maximum in this molecule:
   * CH_4 * **CO_2**   * H_2O * NH_3

xi) Gases behave ideally at these conditions:
   * High pressures and high temperatures   * High pressures and low temperatures
   * **Low pressures and high temperatures**   * Low pressures and low temperatures

xii) Glass is a/an:
   * Crystalline solid   * **Amorphous solid**   * Covalent solid   * Ionic solid

xiii) Bond Energy is the greatest for:
   * CH_4 * O_2 * **N_2**   * Cl_2

xiv) The bulk properties of a system, which are easily measurable, are known as:
   * Microscopic properties   * Chemical properties
   * **Macroscopic properties**   * Physical properties

xv) The characteristic of 10^3 is:
   * 2   * **3**   * 4   * 5

xvi) This molecule has zero dipole moment:
   * NH_3 * **CO_2**   * H_2O * HCl

xvii) The molarity of a solution containing $20g$ $NaOH$ dissolved into $1 dm^3$ solution will be:
   * 0.1   * **0.5**   * 1   * 2

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