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Vidya Prasarak Mandal's  
**ADVANCED STUDY CENTRE**  
C/o. B.N.Bandodkar College of Science, Thane.

**POST GRADUATE DIPLOMA IN APPLIED ANALYTICAL CHEMISTRY**  
(Re-Examination (Sem-I) 2004-05 )

Date: 25.04.2005

**PAPER-I**

Marks: 50

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Note: All questions are compulsory.

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| 1) Write in brief:<br>a) Quality b) Quality control c) Quality assurance d) TQM  | 10 |
| 2) A) Define normality, molarity, mole fraction, stoichiometry   | 06 |
| B) i) With reason, mention what will be the pH of $\text{NH}_4\text{Cl}$ & $\text{NaCl}$<br>a) less than 7 b) 7 c) more than 7   | 03 |
| ii) What is analyte and matrix?  | 02 |
| 3) In brief explain what is ISO 9000, ISO 14000 and Kaizen?  | 09 |
| 4) Explain the following:  | 20 |
| i) In comparison of pH value of 0.1N HCl and 0.1N acetic acid, the pH value will be same or different, give reason.  |    |
| ii) How will you prepare 100ml of 220 ppm manganese solution from 0.1 molar $\text{KMnO}_4$ solution (K=39, O=16, Mn=55)   |    |
| iii) What is normality of 10 % $\text{H}_2\text{SO}_4$ solution?   |    |
| iv) If one gram of sodium bicarbonate is decomposed at high temperature and the $\text{CO}_2$ evolved is absorbed in lime solution, what will be the amount of $\text{CaCO}_3$ formed? |    |
| v) One gm of mixture contains equal proportion of NaCl and KCl. It was dissolved in water and treated with excess $\text{AgNO}_3$ solution. What will be the weight of AgCl formed?    |    |

----- All the Best -----