OF SCIENCE

B Sc (Chemistry) ... Semester I ... 2000
First Year

CHEM 169 ... PRACTICAL CHEMISTRY

FEBRUARY 2000 ... ONE HOUR

Write your Index Number on the question paper
Circle the correct answers on the question paper
Answer ALL questions.

1. What is the purpose of the ... in the statistical analysis of data ?
communicates the
(A) degree of accuracy
(B) degree of precision
... range of the standard deviation
... range of the mean

2. In an experiment for the preparation and standardization of NaOH and HCl solutions a student was asked to prepare 10% w/v NaOH solution. What is the molarity of this solution?
A. ... M
(B) 2.5 M
C. 2.5 M
D. 4.0 M

Use the following information to answer questions 3-5

In an experiment to investigate the stoichiometry of the reaction of magnesium with hydrochloric acid, a student was provided with the following data.

Weight of Mg = 0.063 g
Volume of 0.5M NaOH used = 25.00 ml
Correct volume of H_2O displaced = 82.0575 ml
Volume of 1.0M HCl added = 15.00 ml

Physical Constants:

Total pressure P_T = 760 torr = 1 atm
Vapour pressure of water at 30°C = 32 torr
Gas Constant (R) = 82.057 ml atm.$K^{-1}mol^{-1}$

3. The number of moles of gas produced by the reaction using the ideal gas equation is
(A) 1.39×10^{-3}
B. 3.16×10^{-3}
C. 1.06×10^{-3}
(D) 2.51×10^{-3}

4. The number of moles of unreacted ... hydrochloric acid left after the reaction is
A. 2.5×10^{-3}
B. 1.25×10^{-2}
(C) 1.5×10^{-3}
D. 2.75×10^{-2}

TURN OVER