2303080201060002
EXAMINATION MARCH 2025
MASTER OF SCIENCE (CHEMISTRY) (FIRST SEMESTER)
SKILL ENHANCEMENT COURSE - CHEMICALS : SOLUTION AND SAFETY

[Time: As Per Schedule] **[Max. Marks: 30]**

Instructions:
1. **Fill up strictly the following details on your answer book**
   a. Name of the Examination : **MASTER OF SCIENCE (CHEMISTRY) (FIRST SEMESTER)**
   b. Name of the Subject : **SKILL ENHANCEMENT COURSE - CHEMICALS : SOLUTION AND SAFETY**
   c. Subject Code No : **2303080201060002**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

Student's Signature

Q.1 Answer any THREE of the following **15**

(a) Give preparation of 0.1N NaOH solution. Write its standardization method and calculate pH of this solution.

(b) Discuss in detail about secondary standards.

(c) Define the following terms that are used to express concentration of solution

(i) w/w, (ii) w/v, (iii) v/v, (iv) ppm, (v) Mole fraction

(d) (i) Calculate the amount of KOH is required to prepare 0.2 M KOH solution in 200 ml aqueous solution.

(ii) Calculate the molality of 2.5 g of acetic acid in 75 g of benzene.

Q.2 Answer any THREE of the following **15**

(a) What is behavior based safety? Discuss how this can be fruitful to avoid major accidents in chemical laboratory and industry?

(b) Discuss various measures for surface storage and landfilling of hazardous waste.

(c) Write a note on Laboratory ventilation.

(d) Discuss about various provision for emergency preparedness to evacuate the building in case of fire.

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