

FBISE PRACTICAL BASED ASSESMENT (PBA)

CHEMISTRY SSC-II

(Curriculum 2006)

Guidelines/instructions for teachers/paper setters:

- i. There will be two Sections in PBA paper. In Section-A there will be one question having parts in it. Similarly, in Section-B there will be one question having parts in it.
- ii. In Section-A, Question No. 1 will be based only on one experiment taken from Part-I of the list of practicals.
- iii. In Section-B, Question No. 2 will be based on multiple experiments taken from Part-II of the list of practicals.
- iv. Weightage of Part-I practicals is 60% while weightage of Part-II practicals is 40% in the PBA paper.
- v. Draw diagram(s) if asked for.
- vi. In the new pattern of practicals i.e. Practical Based Assessment (PBA), there will be no marks for practical note books and viva voce. However, students may record procedures, observations, apparatus and calculation etc on any type of plain papers/work sheets / practical folder for their future memory of all aspects of practical performance in order to attempt the PBA Examination amicably.
- vii. It may be noted that performance of all the prescribed practicals is mandatory in the laboratories during the whole academic year and only those students will be able to attempt the PBA who will have performed the practicals in the laboratories as per requirement of each practical.
- viii. MCQs will not be asked in PBA paper.
- ix. The 0.5 mark question will not be asked in any section of PBA paper.

List of Practical's SSC-II
Chemistry (Curriculum 2006)

| Part-I | |
|---|---|
| 60% of practical marks (6 Marks) | |
| 1. | Standardize the given NaOH solution Volumetrically |
| 2. | Standardize the given HCl solution Volumetrically |
| 3. | Determine the exact molarity of the Na ₂ CO ₃ solution Volumetrically |
| 4. | Determine the exact molarity of Oxalic acid solution Volumetrically |

| Part-II | |
|---|--|
| 40% of practical marks (4 Marks) | |
| S.No. | |
| 1. | Identify saturated and unsaturated organic compounds by KMnO ₄ test |
| 2. | Demonstrate that sugar decomposes into elements or other compounds |
| 3. | Demonstrate the softening of water by removal of calcium ions from hard water |
| 4. | Identify sodium, calcium radicals by flame test |
| 5. | Identify ketones using 2,4-dinitrophenyl hydrazine test |
| 6. | Identify carboxylic acids using sodium carbonate test |
| 7. | Classify substances as acidic, basic or neutral |



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**Model Questions Paper Chemistry SSC-II
Practical Based Assessment (PBA) (2025)**

Total Marks: 10

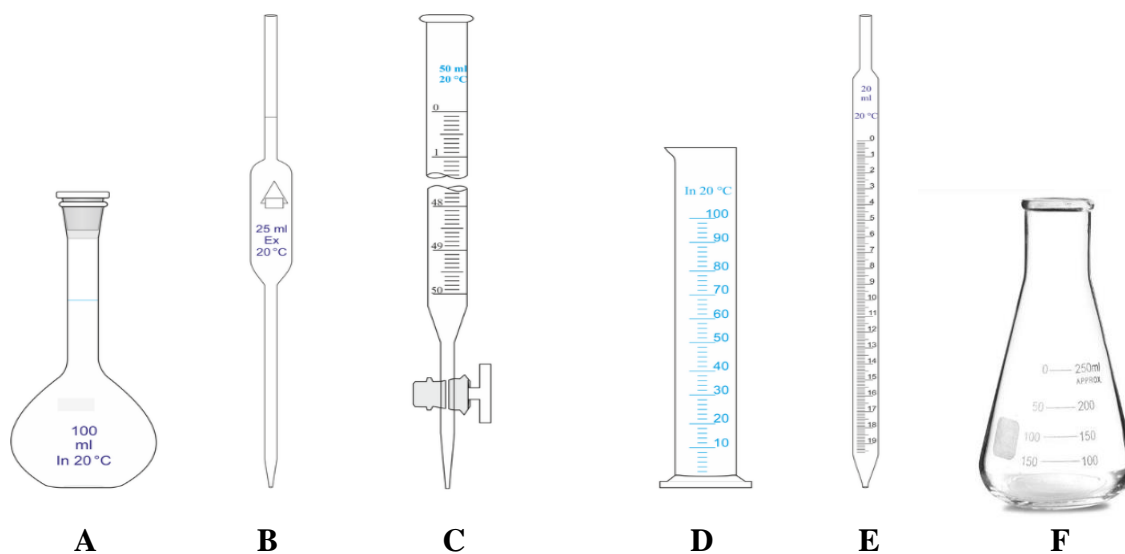
Time: 45 minutes

Section A

Note: Attempt all questions and answer the questions within the provided spaces.

Question no 1: Purpose of this experiment is to determine the exact molarity of Na_2CO_3 volumetrically. 0.1 M HCl is given.

- i. Which of the following apparatus are used in this experiment: Encircle the correct option. [01]



Chemicals used:

Methyl orange

Distilled water

0.1M HCl

$V_1 = 10\text{cm}^3$ (Na_2CO_3 solution)

ii. Refer to the figure given below and complete the observation table.

| Titration 1 | | Titration 2 | | Titration 3 | |
|-----------------|---------------|-----------------|---------------|-----------------|---------------|
| Initial Reading | Final Reading | Initial Reading | Final Reading | Initial Reading | Final Reading |
| | | | | | |

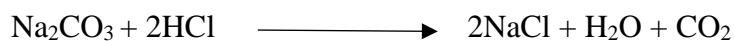
Observation Table:

| Sr. No | Initial Reading | Final Reading | Volume of HCl used |
|--------|-----------------|---------------|--------------------|
| 1 | | | |
| 2 | | | |
| 3 | | | |

[01]
[01]
[01]

Mean volume of HCl used = cm³

iii. Chemical Equations:



Calculations:

[01]

a) Find the value of n_1 for Na_2CO_3 and n_2 for HCl from the above chemical equation.

$n_1 = \dots\dots\dots$

$n_2 = \dots\dots\dots$

b) Calculate the molarity of Na_2CO_3 by using formula:

[01]

$$\frac{M_1V_1}{n_1} = \frac{M_2V_2}{n_2}$$

Result:

Molarity of Na_2CO_3

Section B

Question 2: Give answers to following questions.

- i.** A given organic compound 'X' gives positive Bayer's test(Reaction with KMnO_4). Mention the change observed for this test. **[01]**

- ii.** When an unknown salt is subjected to a flame test, a crimson red flame is obtained. Give procedure of the test and indicate the cation which gave red flame. **[01]**

- iii.** Sugar decomposes on heating. Write the product of decomposition and write the observation of experiment. **[01]**

- iv.** The purpose of experiment is to remove hardness of water containing CaCl_2 . Write a method with chemical equation to remove this hardness. **[01]**
