

CBSE Class 12 Chemistry Viva Questions 2025: The CBSE Class 12 Chemistry Viva Questions 2025 are an important resource for students preparing for the practical exams. These questions assess students' understanding of experimental concepts, chemical reactions, and laboratory techniques.

The viva voce is an integral part of the practical exam, offering students an opportunity to showcase their grasp of theoretical principles applied in experiments. By reviewing the 2025 viva questions, students can gain confidence, improve their conceptual clarity, and secure better marks. Preparing systematically for the viva ensures a strong performance in the practical exam.

CBSE Class 12 Chemistry Viva Questions 2025

The CBSE Class 12 Chemistry Viva Questions 2025 are an important part of the practical exam. These questions check if students understand the concepts and know how to perform experiments in the lab.

During the exam, an external examiner asks oral questions based on the experiments. Students need to give short and clear answers. Practicing and revising these questions regularly can help students prepare well, feel confident, and score good marks in the practical exam.

CBSE Class 12 Chemistry Viva Questions 2025 PDF

The CBSE Class 12 Chemistry Viva Questions 2025 PDF is a helpful resource for students preparing for their practical exams. This PDF contains a collection of important viva questions that cover key concepts, experiments, and practical techniques.

It is created to assist students in understanding what to expect during the viva and how to answer confidently. By referring to this PDF, students can enhance their preparation and improve their performance. Access the PDF through the link provided below for detailed questions and answers.

CBSE Class 12 Chemistry Viva Questions 2025 PDF

CBSE Class 12 Chemistry Viva Questions with Answers

Here are the CBSE Class 12 Chemistry Viva Questions with Answers which are an important part of the practical exam preparation. These questions help evaluate the student's understanding of the experiments conducted throughout the year, the theoretical concepts behind them, and their ability to explain the procedures and results effectively.

Students are often asked to describe the methods used in experiments like volumetric analysis, salt analysis, and chemical reactions, along with identifying laboratory apparatus and applying safety protocols. Preparing for these questions requires a solid grasp of the concepts, chemical equations, and the ability to articulate observations clearly. Mastering these skills will ensure a confident performance in the viva and contribute to a higher score.

Q1. What is an indicator?

Answer: An indicator is a chemical substance that changes color at the endpoint of a titration.

Q2. Why must you not rinse a titration flask?

Answer: A titration flask must not be rinsed because rinsing leaves liquid sticking to the flask, which increases the pipetted volume taken in the titration flask.

Q.3. Why must the burette and pipette be rinsed with the solution with which they are filled?

Answer: Burette and pipette are rinsed with the solution they are filled with to remove any water sticking to their sides, which could otherwise dilute the solution and affect its concentration.

Q.4. What is titration?

Answer: Titration is the process of adding one solution from a burette to another in a conical flask to complete a chemical reaction.

Q.5. What is the weight of a rider?

Answer: The weight of a rider is 10 mg.

Q.6. Why is the front door of the balance closed at the time of weighing?

Answer: The front door is closed to prevent vibrations caused by the operator's breath, which can lead to inaccurate results.

Q.7. What is the basicity of H_2SO_4 ?

Answer: The basicity of H_2SO_4 is 2.

Q.8. What is the equivalent mass of KMnO_4 when it acts as an oxidizing agent in an acidic medium?

Answer: KMnO_4 loses 5 electrons per molecule in an acidic medium, so its equivalent mass is one-fifth of its molecular mass.

Q.9. What will be the normality of 0.10M KMnO_4 ?

Answer: It will be $0.1 \times 5 = 0.5 \text{ N}$.

Q.10. What is the maximum weight that can be weighed on a chemical balance?

Answer: The maximum weight that can be weighed is 100 grams.

Q.11. What is the principle of volumetric analysis?

Answer: The principle involves determining the concentration of a solution by allowing a known volume to react quantitatively with another solution of known concentration.

Q.12. What volume of 10M HCl must be diluted with water to get 1L of 1M HCl?

Answer: To prepare 1L of 1M HCl, 0.1L of 10M HCl must be diluted with water.

Q.13. What is an endpoint?

Answer: The endpoint is the stage during titration when the chemical reaction is just complete.

Q.14. What is a standard solution?

Answer: A standard solution is one whose concentration is known.

Q.15. Why should the oxalic acid solution be heated to around 60-70°C before titrating it with KMnO_4 solution?

Answer: Heating speeds up the reaction by promoting the formation of Mn^{2+} ions, which autocatalyze the reaction. It also expels CO_2 , allowing the reaction to proceed to completion.

Q.16. What are primary and secondary standard substances?

Answer: A primary standard is a substance of high purity, stability, and solubility, while a secondary standard lacks these properties and is less stable.

Q.17. Is sodium hydroxide a primary standard?

Answer: No, sodium hydroxide is not a primary standard. It is a secondary standard.

Q.18. What is the difference between molality and molarity?

Answer: Molality measures the number of moles of solute per 1000 grams of solvent, whereas molarity measures the number of moles of solute per liter of solution.

Q.19. What is a normal solution?

Answer: A normal solution contains one gram-equivalent mass of solute per liter of solution.

Question 20: Why should you not blow out the last drop from the pipette?

Answer: The last drop in the pipette represents extra liquid that is not included in the measured volume, so blowing it out leads to an inaccurate measurement.

Question 21: What is acidimetry and alkalimetry?

Answer: Acidimetry and alkalimetry are methods of volumetric analysis that involve the chemical reaction between an acid and a base to determine their concentrations.

Question 23: Why does KMnO_4 act as its own indicator in titrations?

Answer: KMnO_4 itself acts as an indicator because, when it is in excess, it imparts a pink color to the solution, signaling the endpoint of the titration.

Question 24: Why are dilute H_2SO_4 and not other acids used in KMnO_4 titrations?

Answer: Dilute sulfuric acid is used in KMnO_4 titrations because it provides the necessary acidic medium for the reaction to occur without interfering with the reaction.

Question 25: What is a standard solution?

Answer: A standard solution is a solution whose exact concentration is known, often used for titrations and determining the concentration of unknown solutions.

Question 26: Why should a titration flask not be rinsed with water?

Answer: Rinsing the titration flask with water can introduce extra liquid that increases the volume in the flask, leading to an inaccurate measurement of the solution.

Question 27: What is the principle behind volumetric analysis?

Answer: Volumetric analysis involves determining the concentration of a solution by reacting it with a solution of known concentration, and measuring the volume required to complete the reaction.

Question 28: Why are Mohr's salt and not ferrous sulphate preferred in volumetric analysis?

Answer: Mohr's salt is preferred over ferrous sulphate because it is more stable and does not get easily oxidized by air, unlike ferrous sulphate which easily oxidizes to ferric sulphate.

Question 29: Why should a burette with a rubber pinch cock not be used in KMnO_4 titrations?

Answer: A rubber pinch cock should not be used in KMnO_4 titrations because KMnO_4 can attack rubber, leading to contamination of the solution and inaccurate results.

Question 30: What is the endpoint in KMnO_4 titrations?

Answer: The endpoint in KMnO_4 titrations is reached when the solution changes from colorless to a permanent light pink color, indicating the complete oxidation of the reducing agent.

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Marks Distribution for CBSE Class 12 Chemistry Viva Questions

The following is the marks distribution for CBSE Class 12 Chemistry Viva which includes different sections of the practical exam. Each section assesses specific skills and knowledge. Here's the detailed breakdown:

Topic	Marks Distribution
Experiment 1 (on Volumetric Analysis)	8 marks
Experiment 2 (on Salt Analysis)	8 marks
Experiment 3 (Based on Content)	6 marks
Investigatory Project	4 marks
Class Record and Viva-Voce	4 marks
Total Marks	30 marks

CBSE Class 12 Chemistry Viva Questions Preparation Tips

Preparing for the CBSE Class 12 Chemistry Viva can be challenging, but with the right approach, you can perform well. Here are some tips to help you prepare effectively:

Understand the Basics:

- Make sure you have a solid understanding of the theory behind the experiments you will perform. Knowing the chemical reactions, formulas, and principles involved in each experiment is crucial.

Revise Important Experiments:

- Focus on the common experiments such as volumetric analysis, salt analysis, and preparation of solutions. Be sure you can explain the procedure, observations, and results in detail.

Know the Chemical Reactions:

- Learn the chemical equations involved in your experiments, and be prepared to explain the reasoning behind the reactions during the viva.

Focus on Laboratory Techniques:

- Practice the correct laboratory techniques such as measuring liquids, using a burette, handling a pipette, and performing titrations. The examiner might ask questions on the accuracy and precision of your techniques.

Prepare for Common Questions:

Be ready to answer questions like:

- What is the purpose of this experiment?
- What is the theory behind the experiment?
- Why do we use specific chemicals or equipment?
- What safety precautions should be taken during the experiment?
- What are the possible errors in the experiment, and how can they be minimized?

Work on Your Presentation:

- When explaining experiments, speak clearly and confidently. If you don't know the answer to a question, it's better to admit it than to guess. Examiners appreciate honesty.

Stay Updated with the Syllabus:

- Review your Class 12 chemistry syllabus and ensure that you cover all the experiments, including the ones mentioned for the board exams.

Practice with Peers or Teachers:

- Conduct mock vivas with friends or teachers. This will help you gain confidence and become familiar with the types of questions you might encounter.

Review Your Lab Record:

- Ensure your lab record is complete and well-maintained. Review your observations, calculations, and results carefully. If possible, revise the experiments and their procedures as they might be discussed during the viva.

Stay Calm During the Viva:

- Finally, stay calm during the viva. Focus on the questions being asked and take your time to answer them thoughtfully. If you're unsure, ask for clarification rather than rushing into an answer.