

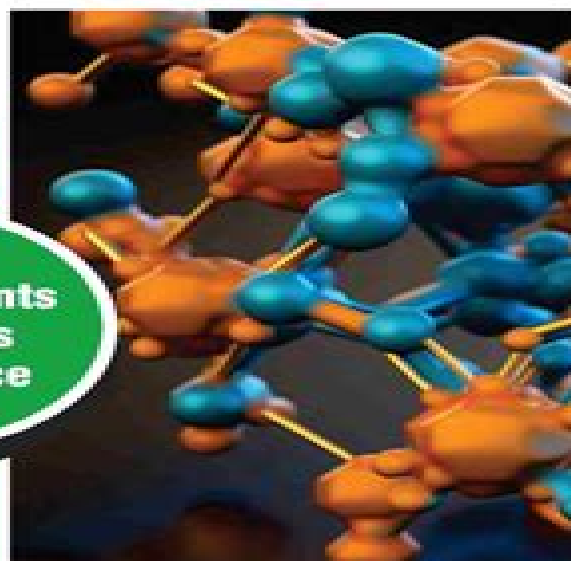


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# **CHEMISTRY**

**CBSE Class XI**

Experiments  
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# Chemistry Lab Manual Class 11 Cbse

**Mr. Rohit Manglik, Mr. Kaushalesh  
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- 1 To cut a glass tube or glass rod
- 2 To bend the glass rod at an angle
- 3 To draw a glass jet from a glass tube
- 4 To bore a cork and fit a glass tube into it

**B Characterisation and Purification of Chemical Substances**

- 1 To determine the melting point of the given unknown organic compound and its identification simple laboratory technique
- 2 To determine the boiling point of a given liquid when available in small quantity simple laboratory method
- 3 To prepare crystals of pure potash alum  $K_2SO_4 \cdot Al_2(SO_4)_3 \cdot 24H_2O$  from the given impure sample
- 4 To prepare the pure crystals of copper sulphate from the given crude sample
- 5 To prepare pure crystals of benzoic acid from a given impure sample

**C Measurement of pH Values**

- 1 To determine the pH value of vegetable juices fruit juices tap water and washing soda by using universal pH paper
- 2 To determine and compare the pH values of solutions of strong acid HCl and weak acid  $CH_3COOH$  of same concentration
- 3 To study the pH change in the titration of strong base Vs strong acid by using universal indicator paper
- 4 To study the pH change by common ion  $CH_3COO^-$  ion in case of weak acid  $CH_3COOH$
- 5 To determine the change in pH value of weak base  $NH_4OH$  in presence of a common ion  $NH_4^+$

**D Chemical Equilibrium**

- 1 To study the shift in equilibrium between ferric ions and thiocyanate ions by changing the concentrations of either of the ions
- 2 To study the shift in equilibrium between  $Co(H_2O)_6^{2+}$  and  $Cl^-$  ions by changing the concentrations of either of the ions

**E Quantitative Analysis**

- 1 To prepare M

10 oxalic acid solution by direct weighing method 2 To prepare M 10 solution of sodium carbonate by direct weighing method 3 To determine the strength of given solution of sodium hydroxide by titrating it against N 10 or M 20 solution of oxalic acid 4 To determine the strength of a given solution of hydrochloric acid by titrating it against a standard N 10 or M 20 sodium carbonate solution F Qualitative Analysis 1 Analysis of Anions 2 Analysis of Cations G Detection of Elements in Organic Compounds 1 To detect the presence of nitrogen sulphur and halogens in a given organic compound by Lassaigne s test 2 To detect the presence of nitrogen sulphur and halogens in the given organic compound sample number by Lassaigne s test INVESTIGATORY PROJECTS A Checking of Bacterial Contamination in Water 1 To check the bacterial contamination in drinking water by testing sulphide ions B Methods of Water Purification 1 To purify water from suspended impurities by using sedimentation 2 To purify water by boiling 3 To purify water by distillation method 4 To purify water by reverse osmosis technique 5 To purify water by GAC method 6 To purify water by bleach treatment 7 To purify water by oxidising agent 8 To purify water by ozone treatment method C Water Analysis 1 To test the hardness of different water samples D Foaming Capacity of Various Soaps 1 To compare the foaming capacity of different washing soaps 2 To study the effect of addition of sodium carbonate on foaming capacity of washing soap E Tea Analysis 1 To study the acidity of different samples of tea leaves tea by using pH paper F Analysis of Fruits and Vegetable Juices 1 To analyse the fruit and vegetable juices for the constituent present in them G Rate of Evaporation 1 To study the rate of evaporation of different liquids H Effect of Acids and Bases on Tensile Strength of Fibres 1 To compare the tensile strength of natural fibres and synthetic fibres 2 To study the effect of acids and bases on tensile strength of different fibres Log Antilog Table **Biology Lab Manual Class XI | As per the latest CBSE syllabus and other State Board following the curriculum of CBSE.** Dr. Priyanka Gupta, Mr.

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web jun 8 2019 figure 1 motor control module note do not ground the mcm this can result in false codes being logged the motor control module mcm incorporates a heat exchanger which uses fuel to cool the mcm the top plate of the heat exchanger incorporates the inlet and outlet fitting for fuel supply entering and exiting the heat

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web please note the following these codes are for your reference only detroit diesel series 60 engines only codes 43 44 45 51 and 53 are critical codes and if they are shown the stop engine light will come on which causes the engine protections to engage and your engine may shut down

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web detroit dd15 epa10 2010 13 fault code spn 677 fmi 5 mcm engine starter relay open circuit description this fault sets when the mcm detects that there is an open on the engine starter relay circuit

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web jun 8 2019 start and bring engine up to operating temperature over 140 f 60 c verify operation is satisfactory and no warning lamps illuminate if warning lamps illuminate troubleshoot the codes if assistance is required call the detroit diesel customer support center at 313 592 5800

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web jun 8 2019 section 111 2 1 verify repairs verify repairs as follows turn ignition off reconnect any electrical connections that were disconnected to perform the diagnosis clear codes with dddl 7 0 or latest version start and bring engine up to

operating temperature over 140 f 60 c verify operation is satisfactory and no warning lamps

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web the motor control module mcm monitors the rail pressure and when rail pressure deviation is greater than 200 bar for eight seconds the mcm sets the code this fault can occur due to the conditions listed below external fuel leakage between the high pressure pump and fuel injectors pressure limiting valve leakage internal

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