Mawanella Educational Zone

‘Sathutin Vidyawa’ Practicals

(English Medium)

Grade 10 and 11

2018

01. Carbohydrate Test

- Grind a piece of Bread / Rice and mix it with water.
- And add a drop of Iodine to the solution.
- Observe it.
- See the colour change and give the reason.

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02. Monosaccharide, Disaccharide Test

- Take a small of glucose in to boiling tube
- Add a drop of bendict solution to it
- Heat it
- Observe the colour change and state it

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03. Disaccharide (sucrose) Test

- Take a small amount of sugar
- Add a drop of benedict solution
- Heat the boiling tube in water
- Observe the colour change and state them

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04. Protein Test

- Crush the dhal or water solution or egg white and take it
- Add NaoH,$CuSO_4$ to the solution
- Observe and state it

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05. Enzyme Test

<u>Practical on examining amylase enzyme in starchy food</u>

- Add 2ml of flour mixture in to the test tube
- And add amylase enzyme to it
- After 2 minutes add a drop of the solution on a white porcelain plate
- And add I_2 (Iodine) solution to it
- Observe the above colour changes in 2 minutes intevals and state it
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06. Determination of presence of water in food

- Things neede:- Egg ahells,plant leaves
- Crush the above separately
- place them in different crubles and heat them until water releases
- And place agiass plate above it
- Add cobalt chloride to the water droplets on the glass
- Observe and state the changes
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07. Practical on presence of carbon on biloical molecules

- make a paste separately by cruhing a piece of fish rice and green leaves
- place them separately in the crucibles and heat them well
- draw the lines on a white sheet by the remained food parhcles
- observe and state the change

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08. Presence of nitrogen on biological motecules

- crush a piece of fish and add water,mix it well made by mixing fish on each test tubes
- and add NaCl and $CuSO_4$ drops to it
- observe and state the canges

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09. Test on the ways of storing sodium metal

- cut a piece of sodium (Na) by knife
- observe and state the property of the observed metal
- Mension the characteristics of the metal

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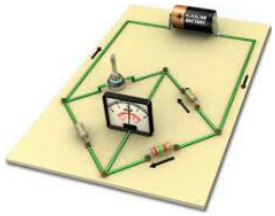
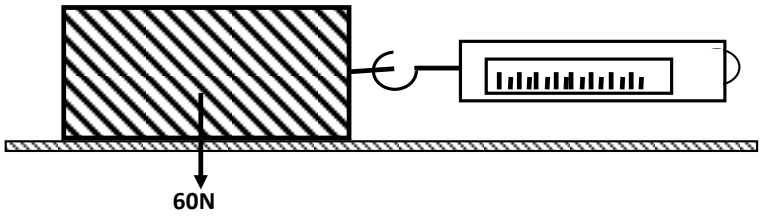


PHYSICS

10. FRICSION



- Attach the balance to a block of wood.
- Pull the block with a very small force.the force would be insufficient to move the block.
- When the force gradualy increased at some point it will just bigin to move .find the force at the movement it just about to move.
- Mention the reading of the newton balance.
- Find the static friction,limiting friction and the dynamic friction.

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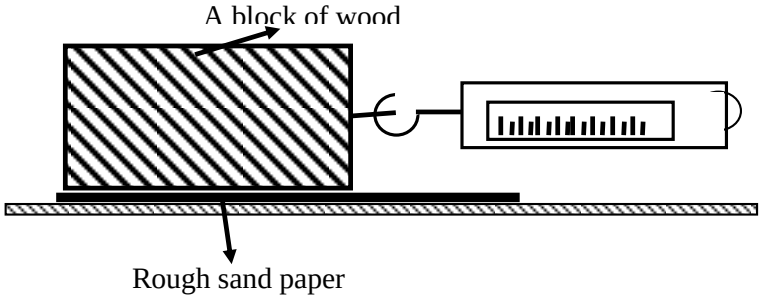
11. Investigate how the limiting frictional force depends on the nature of the contact surfaces



- Fix the block of wood with rhe sand paper with rough side facing out and completely covering the bottom surface.
- Pull the newton balances gradually increase the force and find the limiting frictional force.

- Repeat the above procedure using several sand papers of increasing roughness and record the frictional force each time

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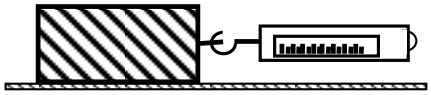
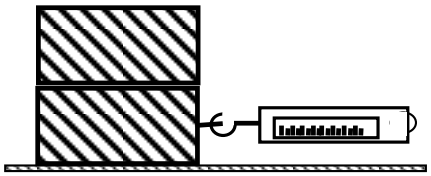
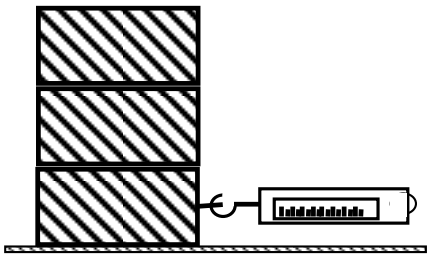
12. Investigate how the limiting frictional force depends on the normal reaction



A



B



C

- Observe the readings for differernt weights and conclude fact.

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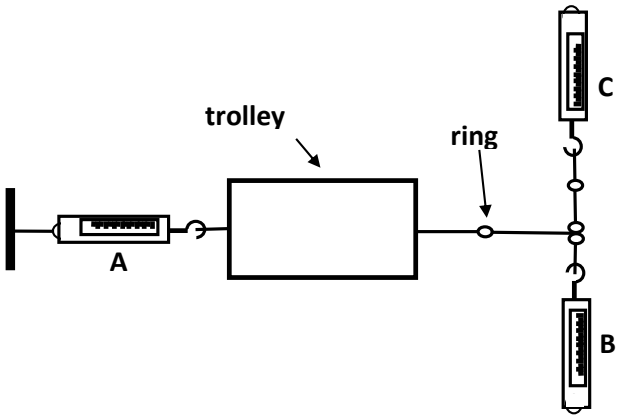
13. Resultant force



- Apply two forces from the two newton balances B and C record the readings of A , B and C.
- Find the relationship between above forces

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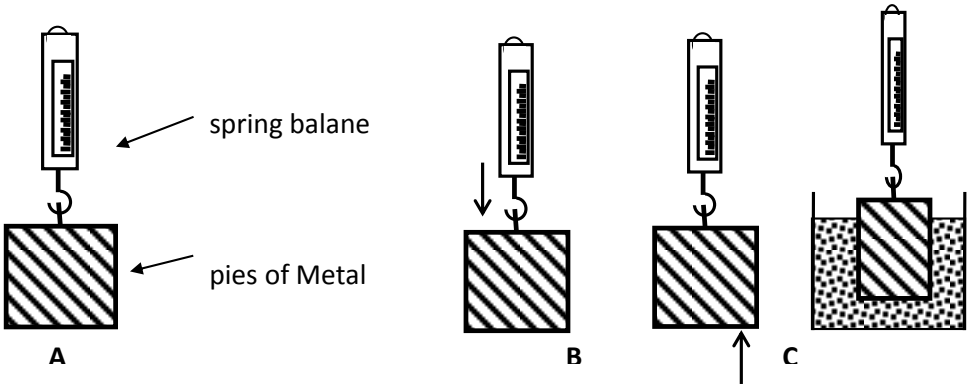
14. Upthrust

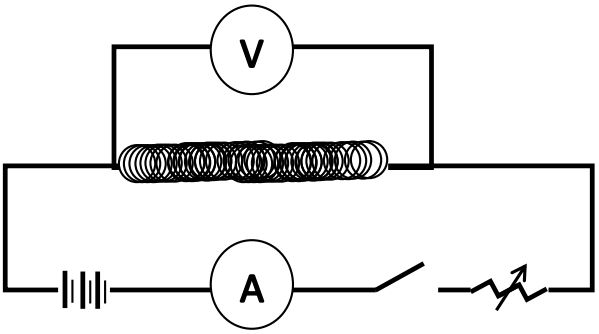


- Read the corresponding reading of the spring balane in the above instansas
- A - suspend apeace of metal on aspring balance .....
- B - exert a downward force on the peace of metal.....

- C - exert an upward force on the peace of metal .....
- D - immerce the peace of metal .....

Conclution .....

16. Relationship between the current flowing through a conductor and potential difference across the conductor

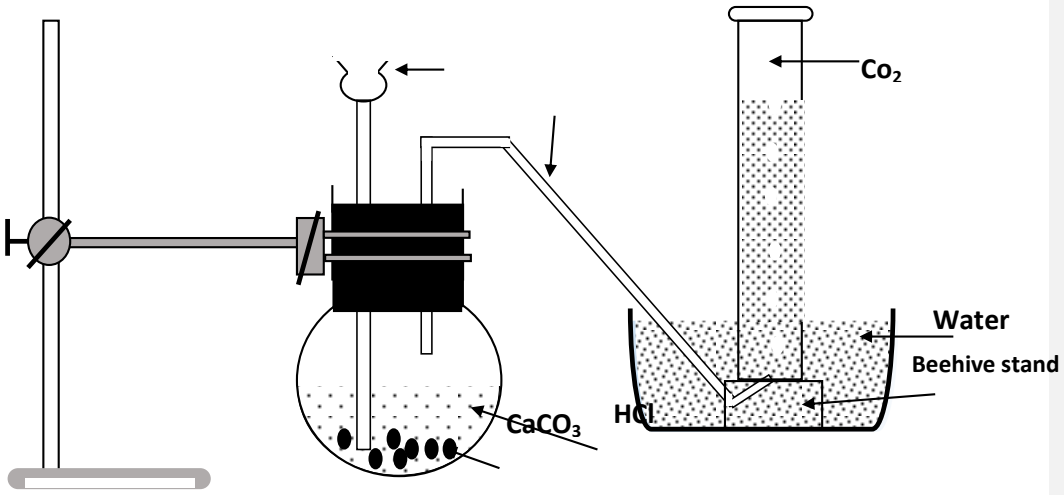


- The current through the circuit using the rheostat, obtain readings for the potrntial difference across the Nichrome coil and the current and tabulate the readings in the given below.
- Plot a graph (V vs I)

	V	I	V/I
1			
2			
3			
4			

CHEMISTRY

15. Preparation of Carbon dioxide gas (Co_2)



- Set apparators as shon above
- Collect the CO_2 gas in to agas jar
- Dissolve a little calcium carbonate in 5 0 ml of water and filter it using the filter paper
- Mix 50 ml of CO_2 to the lime water and shake it well.
- Observe colour change.

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16. Finding out how the surface area of the reactants affects the rate of a reaction

- Add equel volume of acaid into two beakers.
- Add calcium carbonate chips into one beaker with hydrochloric acid and using the stop watch measure the time taken by the chips to disappear.repeat the same procedure using calcium carbonate powder.
- Observation: Time taken by the chips to disappear: .....
  Time taken by the powder to disappear: .....
- Coclution:
  .....

17. Finding out how the temperature of the reactants affects the rate of a reaction.

- Prepare a very dilute potassium permngante dolution.
- Add equal volume of diluted potacium permanganate solution in to the two test tubes.
- Acidify them with equal volume of sulphuric acid.
- Heat one test tube to fairly higher temperature.
- Add equal number of cleaned iron nails equal in size in to the rwo test tubes.
- Using the stop watch, measure the time to disappear the colour in each.
- **Observation**:
    - Time tken in lower temperature to disappear the colour: .....
    - Time tken in higher temperature to disappear the colour: .....
- **Coclution**:

.....

18. Finding out how the cocentration of the reactants affects the rate of a reaction.

- Take three test tubes and add 15ml of water to each tube.
- Mark water level of each tube with arubber band and empty the water.
- Add 2.5ml, 5.0ml and 7.5ml of dilute hydrocloric acid to the three test tubes and fill water to the rubber band mark of each tube.
- Introduce to each test tube a piece of magnesium ribbon and observe the speed of fizzing.
- Observation:

  .....

19 . Identification of acids and bases by indicators

Complete the table below by testing the given solusions using the given indicators

solution	Litmus Red	Litmus blue	Methyl orange	phenopthaleine
Dilute acidhydrochloric				
Lime juice				
Dilute sulphuric acid				
Vinegar				
Dilute sodium hydroxide				
Soap solution				

20. Identify starch produced during photosynthesis

- Pluck a leaf from a plant which was in sunlight and boil in water.
- Place it in the test tube with alcohol and boil in a water bath
- Wash a leaf and put a few drops of iodine solution onto it and observe the colour change.

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21. Light

- Draw ray diagram observing the image formed by **concave mirror** when the object is between center of curvature and the focal point.(Object is between F and 2F)

22.

- Draw ray diagram observing the image formed by **convex mirror**

23.

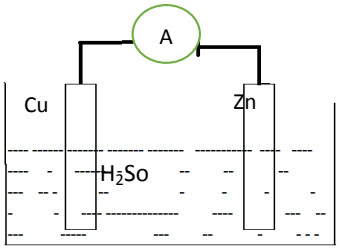
- **Find features of images formed by covex lense**

(I) Draw ray diagram for the image occur by convex lense when the Object is between F and 2F

(II) Draw ray diagram for the image occur by convex lense when the Object distance is 2F

(III) Draw ray diagram for the image occur by convex lense when the Object distance is greater than 2F

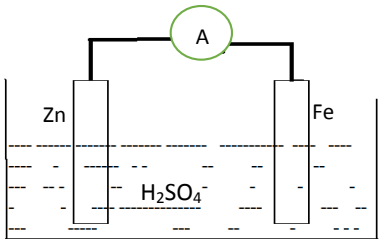
24. Electro chemistry



- Connect the CU, Zn to the Ammeter
- immerce the electrodes in to the dil H_2SO_4
- observation:
  .....
  .....
  .....
- write the reactions occurring at each electrodes
  - Anode (Zn):
    .....
    .
  - Cathode: (CU): .
    .....
- What is mean by oxidation?
  .....
- What is mean by reduction
  .....
- Mension the method of energy trasference
  .....
- Mension the possitive electrode, negative electrode.....
- .....
  .....
  .....
- Mension the type of cell
  .....

Comment [AF1]:

25.



- Connect the CU, Zn to the Ammeter
- Immerce the electrodes in to the dil H_2SO_4 observation:
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  .....
- write the reactions occuring at each electrodes
  - Anode (Zn):
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  - Cathode : (CU):
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    ....
- What is mean by oxidation. ?
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- What is mean by reduction
  .....
- Mension the method of energy trasference
  .....
- Mension the possitive electrode, negative electrode
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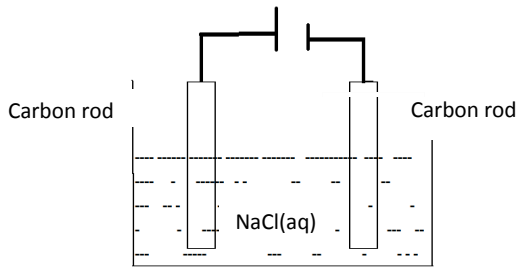
- Mension the type of cell
  .....

26. Electro plating



- Immerce the electrodes in to the dil H_2SO_4
  - observation:
    .....
    .....
    .....
    .....
- write the reactions occurring at each electrodes
  - Anode
    .....
  - Cathode : :
    .....
- What is mean by oxidation. ?
  .....
- What is mean by reduction
  .....
- Mension the method of energy transference
  .....
- Mension the positive electrode, negative electrode
  .....

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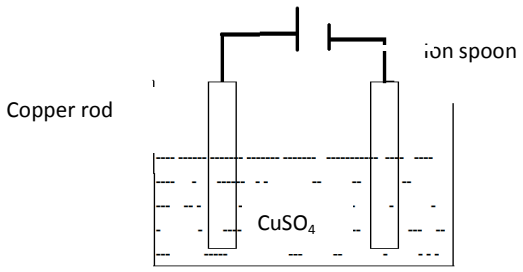
- What is this process called
  .....

27. Electro plating



- Immerce the electrodes in to the dil H_2SO_4

- observation:.....
  .....
  .....
  .....
  - write the reactions occurring at each electrodes
- Anode
  .....
- Cathode:
  .....
  - What is mean by oxidation?
    .....
  - What is mean by reduction
    .....
  - Mension the method of energy trasference
    .....
  - Mension the positive electrode, negative electrode
    .....

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  - What is this process called
    .....