

- SYLLABUS -

B.A. First Year. [I Sem.]

History

History of Maratha's [1630 A.D. to 1707 A.D.]

* Chapter - 1 - Sources & Rise of Maratha Power

A) Sources of Maratha History.

B) Rise of Maratha Power.

a) Causes.

b) Geography, Political, Socio-Religious & Economic Background

c) Shahaji Bhosle.

d) Shivaji - Adilshahi Relations.

(15)

* Chapter - 2 - Shivaji-Mughal Relations

a) Attack on Shahistakhan.

b) Invasion of Mewar Raja Jaising & Treaty of Purandare

c) Shivaji's visit to Agra & Back to Rajgadh

d) Coronation of Shivaji

e) Chhatrapati Sambhaji.

(15)

~~Chapter - 3 - Maratha War of Independence~~

~~a) Chhatrapati Rajaram.~~

~~b) Maharani Tarabai.~~

* Chapter - 3 - Maratha War of Independence

a) Chhatrapati Rajaram.

b) Maharani Tarabai.

(15)

* Chapter - 4 - Administration of Maratha Power

a) Civil b) Judicial c) Military.

(15)

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* History of Marathas
[1707 A.D. to 1818 A.D.]

IInd Sem
III Paper
S.A. 1st Year Second Semester

SYLLABUS

Chapter - I - Transfer of power
from Chhatrapati to Peshwa. (15)

Chapter - 2 - Peshwa Bajirao I &
Expansion of Maratha power. (15)

Chapter 3 - Revival of Maratha power (15)

Chapter 4 - Decline of the Maratha
power. — (15)

History of Ancient India. Paper IV
[A.D. 320 TO A.D. 1206]

1) Chapter. I. Gupta & Vakataks
Dynesty — (15)

2) Chapter. 2. Vardhan Dynesty. (15)

3) Chapter. 3. Chalukyas &
Rashtrakutas — (15)

4) Chapter - 4 -
Chalukyas & Kayani. (15)



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(98) (10)

Daily Teaching Activity

Date: 3 July 23 Day: Monday (शुक्र)

Kuldeep, A'bad.

Sr. No.	Class	Sub. & Paper No.	Teaching Techniques	Details of Curriculum Taught
	F.Y.I	P. I	व्याख्यान	प्रकरण I मे- मराठी अलोथा उदय कारण. महाराष्ट्र राज्याचे विभाग
	T.Y	P. 9	व्याख्यान	प्र. I मे. इतिहास. स्वरूप, व्याख्या, महत्त्व.
	T.Y.	P. 12	व्याख्यान	प्रोजेक्ट - लिखिते.
	S.Y.	P. 6	व्याख्यान	प्र. I 18 व्या शतकातील इंग्रजांचा वसाहत विरोध.
	T.Y.	P. 10	व्याख्यान	प्र. I इंग्रज अलोथा उदय व विकास.

Daily Teaching Activity

Date: 10/7/23 Day: Tuesday

Sr. No.	Class	Sub. & Paper No.	Teaching Techniques	Details of Curriculum Taught
10.1	F.Y.	P-1	ವಾರ್ತಾವ್ಯಾಜನ	ಮರಾಠಿ ಸಾಹಿತ್ಯದ ಅಭಿವೃದ್ಧಿ ಪಾಠ್ಯಪುಸ್ತಕ
	F.Y.	P-9	ವಾರ್ತಾವ್ಯಾಜನ	
	T.Y.	P-9	ವಾರ್ತಾವ್ಯಾಜನ	ಇತಿಹಾಸದ ಅರ್ಥ, ವಾರ್ತಾವ್ಯಾಜನ ಮೂಲಮಾಪನ
	T.Y.	P-12	Project	ವಿಷಯ
	S.Y.	P-6	ವಾರ್ತಾವ್ಯಾಜನ	ಪ್ರೆಂಚ್-ಇಂಗ್ಲಿಷ್ ಸಂಬಂಧ ಬ್ರಿಟಿಷ್ ಸಾಹಿತ್ಯದ ಮೂಲಮಾಪನ
	T.Y.	P-10		ಇಂಗ್ಲಿಷ್ ವಾಕ್ಯಗಳ ಸಂಕಲನದ ರೂಪ



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Chemistry - Physical & Inorganic IX
 Non Instrumental - ①

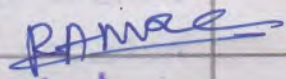
INDEX

Expt. No.	Name of Experiment	Page No.	Date of Experiment	Date of Submission	Remark
1)	To determine the critical sol ⁿ temp of phenol water system.				
2)	To determine the solubility of benzoic acid of different temp & determine ΔH of dissolution process.				
3)	To determine the heat of neutralization of strong acid (HCl) & strong base NaOH				
4)	To determine the partition coefficient of benzoic acid between benzene & water				
5)	To estimate the nickel gravimetrically as Ni-DMG				
6)	To estimate the barium gravimetrically as barium chromate (BaCrO_4)				
7)	To estimate the amount of aluminium gravimetrically aluminium oxinate $\text{Al} [\text{C}_9\text{H}_6\text{ON}]_3$				

Ex. NO.	Name of Experiment	Page.No.	Date of Experiment	Date of Submission	Remarks
8)	To estimate the amount of zinc from the given solution by 0.05 MEDTA using EBT indicator				
9)	To estimate the amount of nikel from the given solution by 0.02m EDTA using murexide indicator.				


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in the college laboratory as down by the university.

Date : 05/02/2024.

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Experiment No. 1

Aim :-

To determine the critical solution temperature of phenol water system.

Apparatus :-

Hard glass test tube, Beaker, standard glass (200 ml), Thermometer, weight box, glass stirrer, phenol etc.

Chemical :-

Phenol, distilled water.

Theory :-

When phenol & water are mixed two immiscible layers will be formed. The mutual solubility of the two layers increases with increase in temperature. The temperature at which two layers form a homogeneous phase is called as critical solution temperature or consolute temperature & it is 65.8°C .

Procedure :-

- 1) Taken 9 clean test tubes and number them as 1 to 9 prepare different mixture solution as shown in the observation table and calculate the percentage of phenol in each test tube.
- 2) Take test tube no. 1 insert thermometer ring stirrer in and heat the test tube in water bath with constant stirring. Note the temp of heating at which turbidity just disappears.

* Observation Table

Test-tube Number	volume of Phenol (ml)	Vol. of water (ml)	% of Phenol	Temp which Disappear T_1	temp which turbidity Reappears T_2	Miscibility temp $T = \frac{T_1 + T_2}{2}$
1	1	8	10	40	28	34
2	2	7	20	50	41	45.5
3	3	6	30	70	62	66
4	4	5	40	64	62	63
5	5	4	50	62	50	56
6	6	3	60	58	52	55
7	7	2	70	56	30	43
8	8	1	80	32	30	31

- 3) stop the heating and take test tube out of water bath and pull slowly with constant stirring. Note the temperature of cooling of which turbidity just appears.
- 4) Repeat the same procedure for each test tube.
- 5) Plot a graph of % composition of phenol against miscibility temperature.

Result :-

The critical solution temperature (CST) of phenol water system = 66°C

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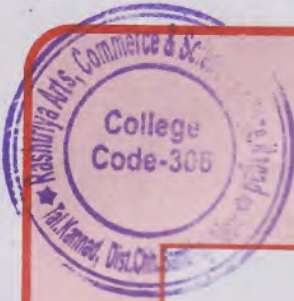
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Botany.

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2)	Estimat ⁿ of important index (IVI) of the basic of relative frequency reative density and relative abundance.		20/7/23		⊗ note
3)	Determinat ⁿ of water bonding capacity of soils.		5/8/23		⊗ note
4)	Determinat ⁿ of present leaf area injury of diff ⁿ infected leaf sample				
5)	Determinat ⁿ of the salinity of different water.		15/8/23		⊗ note
6)	Determinat ⁿ of PH of different solis by PH paper. study of regative by gudral method.				
7)	Study of morphological anatomical adap-				

No.	Name of Experiment	Date of Ex- Periment	Date of Submission	Remark
	tation in hydrophytes.			
①	Hydrilla			
②	Eichnoenia			
③	Nympha			
9)	• The study of meteo- logical instruments			
10)	Study of Morphological adaption in halophytes.			Egmond



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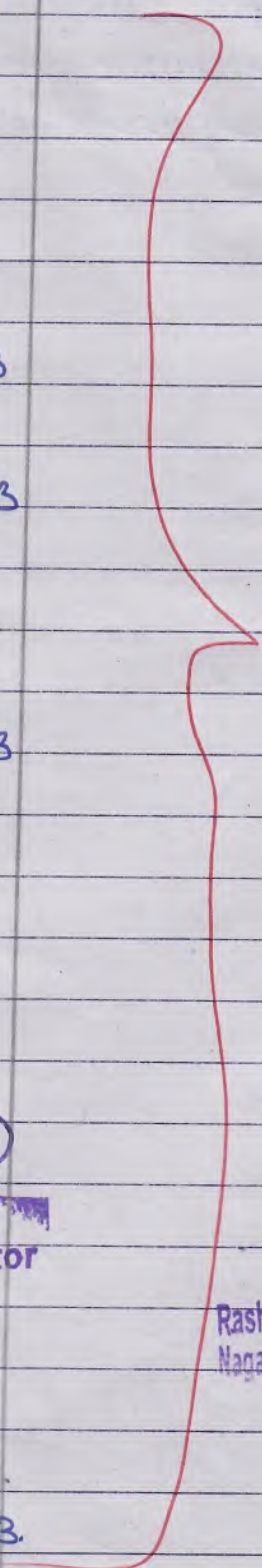


★ Index ★

paper No :- XVI plant physiology



Name of experiment	Date	Remarks	Signature
1) To study the osmosis by eg membrane & potato osmoscope. @ Determination of osmosis by egypt membrane.	5/7/23		
2) To study osmosis by potato osmoscope.	8/7/23		
3) To study the effect of different intensities of light on photosynthesis.	11/7/23		Pravin
4) To study the effect of different colours of light on photosynthesis.	18/7/23		Seem
5) Determination of water potential of any tuber.	19/7/23		
6) Estimation of total and reducing sugar in the fruit juice by fehling's solution.	 IQAC Co-Ordinator		RAMOL Principal
7) Isolation of protein from juice			Rashtriya Arts Comm. & Science Nagad, Tal. Kanad, Dist. Chh. Sambh.
8) Separation of chloroplast pigment by paper chromatography	26/7/23		



Experiment - 1.

Study of morphological anatomical adaptation in xerophytes :- Aloe, nerium, Cuscuta.

Morphological characters :-

1) Root :-

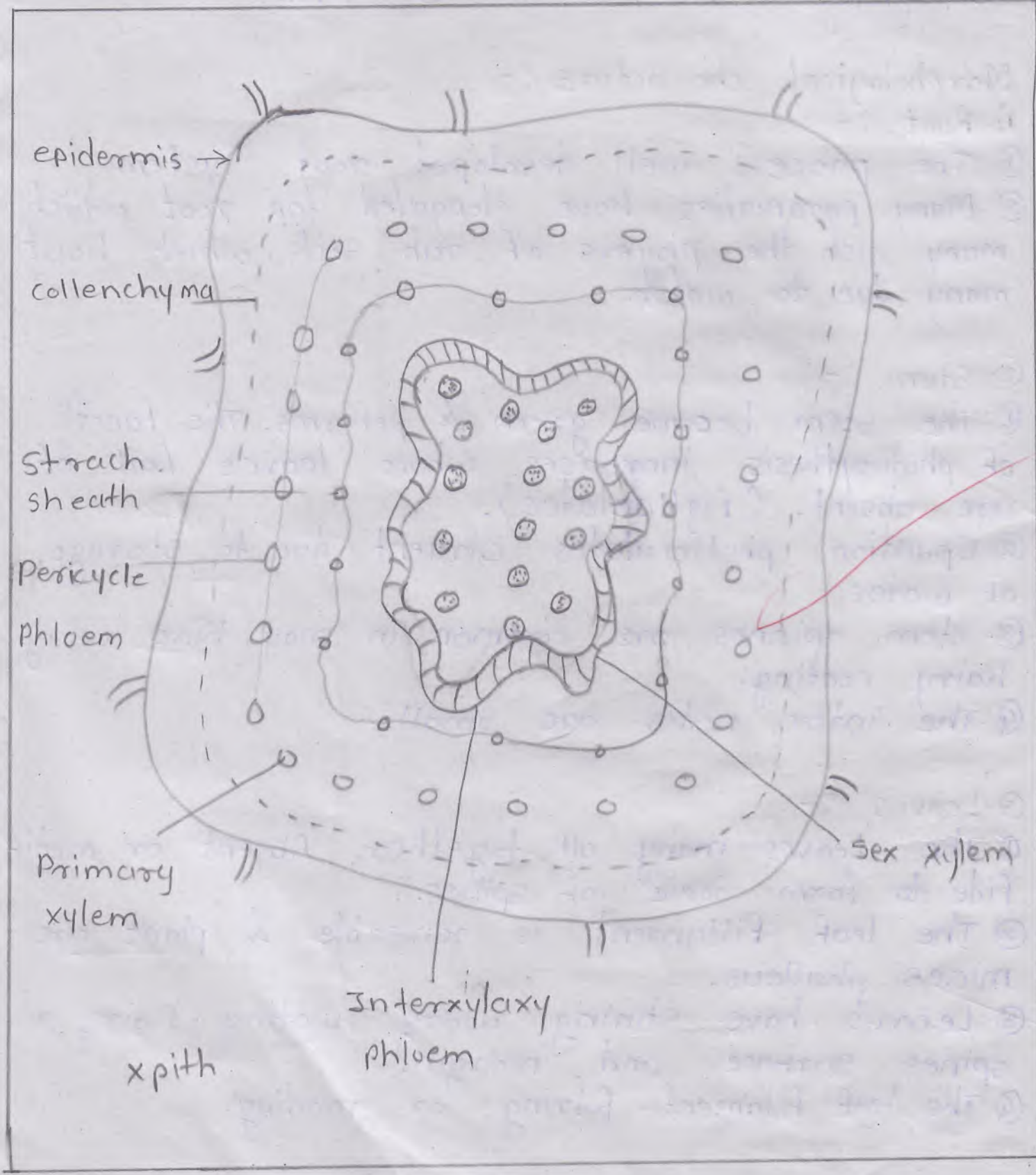
- ① The possess well developed root system
- ② Many xerophytes have elongated tap root which reaches the layers of sub soils, which has many due to water.

2) Stem :-

- ① The stem become green & performs. The function of photosynthesis increases where leaves fall are absent. (Pigment).
- ② Opuntia phylloculata circulate due to storage of water.
- ③ stem spines are common in may have woody hairy coating.
- ④ The inter nodes are small.

3) Leaves :-

- ① The leaves many all together, absent or modified to form scale of spines.
- ② The leaf filament is renewable & plant produces phyllous.
- ③ Leaves have stinging woolly waxy hairy spines surface and margin.
- ④ The leaf filament felting or roading.



⑤ Leaves become vertically oriented so as to reduce.

⑥ All these adaptations are to breadth stand building reduce transpiration and a for protect herbaus.

Alovera :-

① It is commonly called as korphad.

② It is small herb which is Socalant xerophyte.

③ The root system is well-developed profuse branched & extensively spread.

④ It growing habitat with less or more water but. Store water whenever available stem is rhizome leaves are pale green fleshy. Convex below with horny pickle at margin.

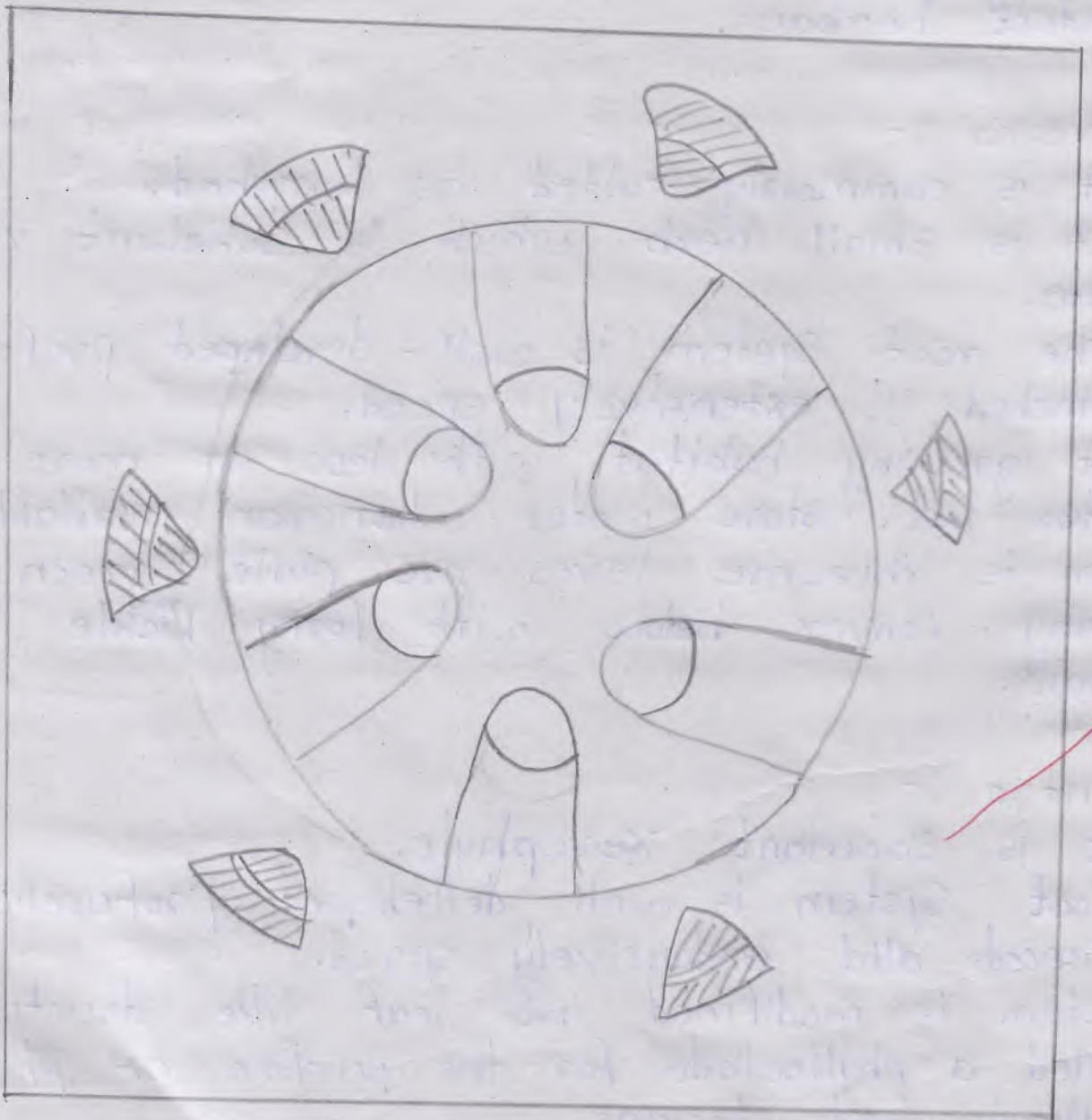
Opuntia :-

① It is Socalant xerophyte.

② Root system is well developed profusely branched all extensively spread.

③ Stem is modified into leaf like structure called a phylloclade for the purpose of photosynthesis and storage.

④ Leaves are very much reduced & reduce the rate of transpiration.



* Study of anatomical characters is the xerophyte
T.S. of stem Casuarina :-

The outline of the section shows ridges & grooves ridges are almost triangular in shape the section show following characters.

① Epidermis :-

This is outermost single row of cells. The cells are highly cuticular.

stomata are highly sunken & grooves & around the stomata.


② Cortex :-

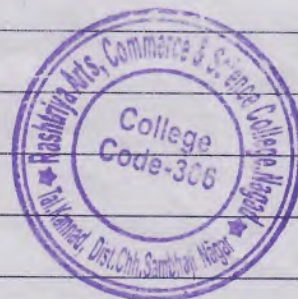
① It is differentiated into by hypodermis palisade parenchyma.

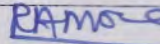
② It is made up of sclerenchyma & arranged in poles.

③ The large of parenchyma ring of the vascular bundle called cortical vascular bundle is present in the parenchymatous region.

④ These are situated only below the ridge each vascular bundle is conjugate cotateral and arch and open a-sclerenchymatous cap is present above the vascular bundle.


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Expt. No.	Name of Experiment	Page No.	Date of Experiment	Date of Submission	Remark
1)	Class Reptilia				
2)	Class Stominal				Repeat
3)	Class bases.				
	* Paper No XV *				
1)	Study of strength. enzymes of cosmach				
2)	Form amount of 25 WBC from given blood sample.				
3)	To prepare haematin crystals from the given blood. sample.				Repeat
4)	To estimate coemoglobin in the given good story.				
5)	Effect of Isotonic Hypotonic and Hypertonic sol ⁿ on blood cells (RBCs)				
6)	Detect ⁿ of Nitrogenous Product animal.				Repeat



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3. Koel

Identification :-

The bird has pale bill red eyes and following features hence it is male *Eudynamis scolopacea*.

Comments :-

① Commonly called an koel.

② Body divisible into beak. Beak adapted for seed eating.

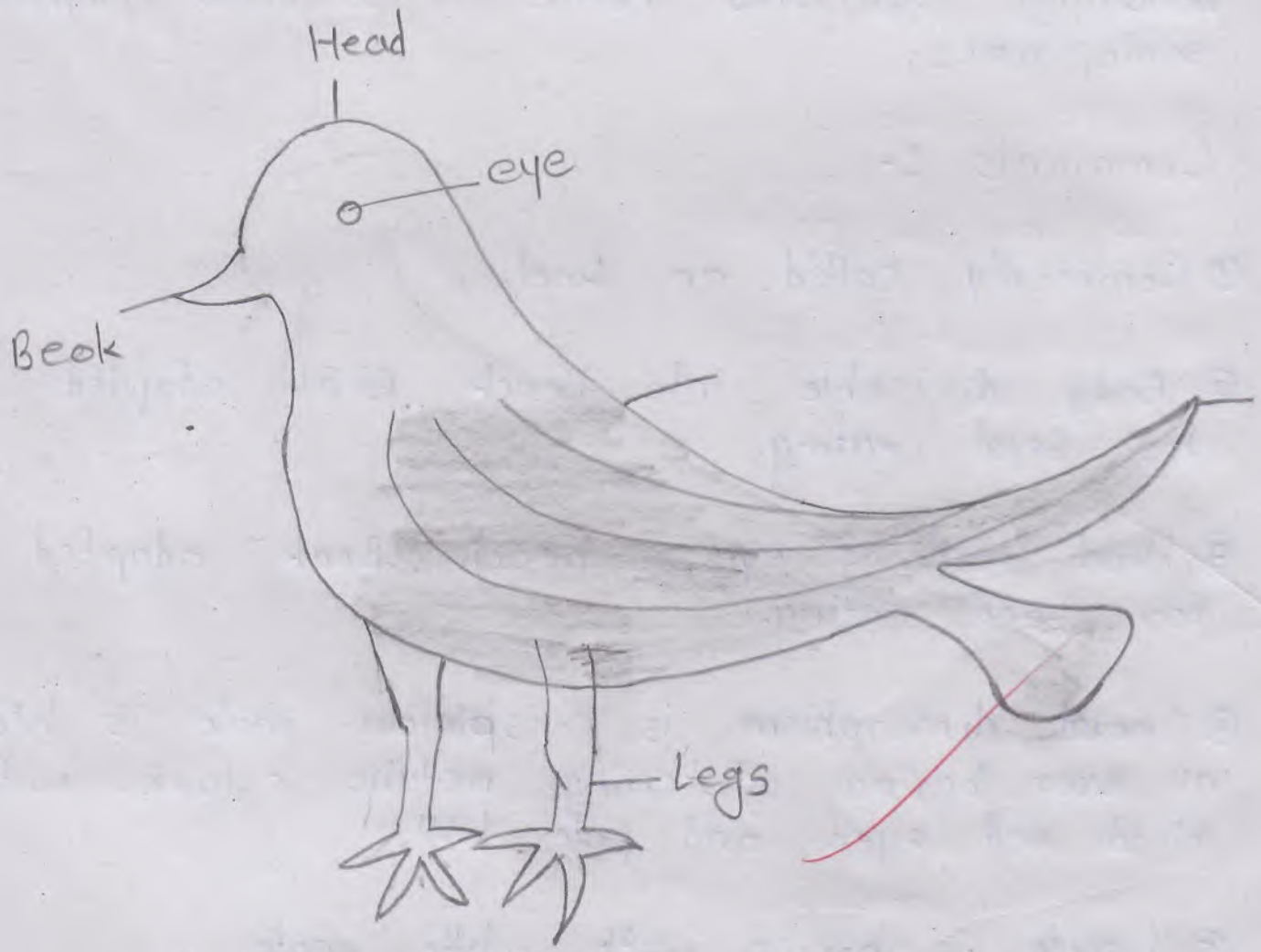
③ Head contains eye & beak. Beak adapted for seed eating.

④ Sexual dimorphism is conspicuous. male is black all over having glistening metallic colour with blood red eyed and pale bill.

⑤ female is brown with white spate.

⑥ Beak tip pointed and curved downwards eyes. small with white rounded pupil. Tail long.

⑦ Hind limbs contain reversible then with 2 imprint and 2 toes behind.

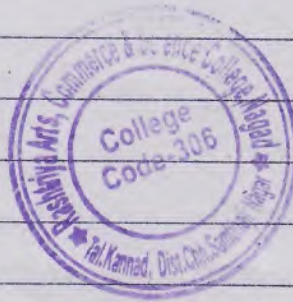


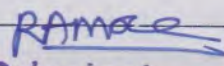
* koel *

⑧ Wing features folded over the body and tail feature long.

⑨ In Summer months the call of the male bird is very familiar kuco-kuco-kou. Female does not sing.


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Experiment no 1.

Aim:-

To prepare 0.1N NaOH solⁿ & standardise it by given 0.1N oxalic acid

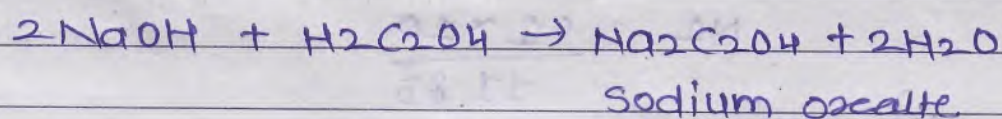
Apparatus:-

Analytical balance, Titration Set, weight bottle, Standard Flask (100ml) etc.

chemicals:-

0.1N oxalic acid solⁿ, NaOH flakes, phenolphthalein indicator, Distilled water.

Reaction:-



Theory:-

A standardisation is a technique of finding the normality of Secondary standard (e.g. NaOH, HCl) with primary standard substance (e.g. $\text{H}_2\text{C}_2\text{O}_4$) by titration.

In this experiment 0.1N NaOH solⁿ is prepared & it is titrated with standard $\text{H}_2\text{C}_2\text{O}_4$ solⁿ is prepared & it is titrated with standard $\text{H}_2\text{C}_2\text{O}_4$ solⁿ & exact normality of NaOH solⁿ is determined.

procedure:-

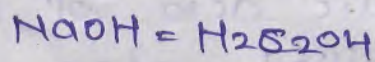
- 1) Weigh accurately 0.4gm of NaOH & transfer to beaker containing about 50ml of distilled water & stir.
- 2) Transfer this NaOH solⁿ & washings to 100ml standard flask.

observation table.

Burette Reading	1	2	3	constant B.R
Final	12.5ml	11ml	12ml	$12.5 + 11 + 12$
Initial Reading	0ml	0ml	0ml	$\frac{35.5}{3}$
Difference	12.5ml	11ml	12ml	$\frac{35.5}{3} = 11.83$

calculations :-

To calculate the normality of NaOH soln



$$N_1 V_1 = N_2 V_2$$

$$N_1 \times \text{B.R} = 0.1 \times 10$$

$$N_1 = \frac{0.1 \times 10}{11.83}$$

$$\text{Normality of NaOH soln} = 0.084 \text{ N.}$$

Strength of NaOH = normality of NaOH \times equivalent weight of Na

$$= 0.084 \times 40$$

$$= 3.36$$

observations \Rightarrow

- a) weight of NaOH pellets = 0.40 gm
- b] Total volume of 0.1N NaOH soln = 10 ml
- 1) soln in burette - NaOH soln
- 2) soln pipetted out - $\text{H}_2\text{C}_2\text{O}_4$ (10ml)
- 3) Indicator - phenolphthalein
- 4) End point - colourless to pink.

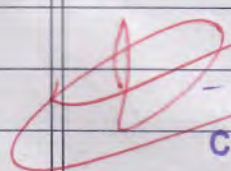
dilute water upto the mark shake the flask
ensure through mixing

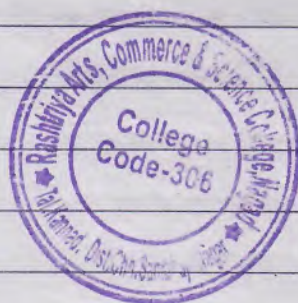
Standardisation of NaOH solⁿ

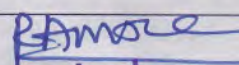
- 1) Rinse & fill the clean burette with given NaOH solⁿ upto the zero mark.
- 2) pipette out 10 ml of standard oxalic acid solⁿ in a clean conical flask. Add 2-3 drops of phenolphthalein as an indicator & titrate against NaOH solⁿ till permanent faint pink colour appears.
- 3) Note the burette reading, Repeat the titration till constant readings are obtained.

Result :-

- 1) Normality of NaOH solⁿ 0.084
- 2) Strength of NaOH solⁿ 3.36 gm / lit


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