T.R.R. GOVERNMENT DEGREE COLLEGE
KANDUKUR

1.1.1: Effective Curricular Planning and Delivery

Students Seminars

Sem - II

T.R.R. GOVT. DEGREE COLLEGE

KANDUKUR - 523 105, Prakasam Dist.::08598-223546
NAAC ACCREDITED B+
2017- 2018

ACADEMIC ACTIVITY - SEMINAR

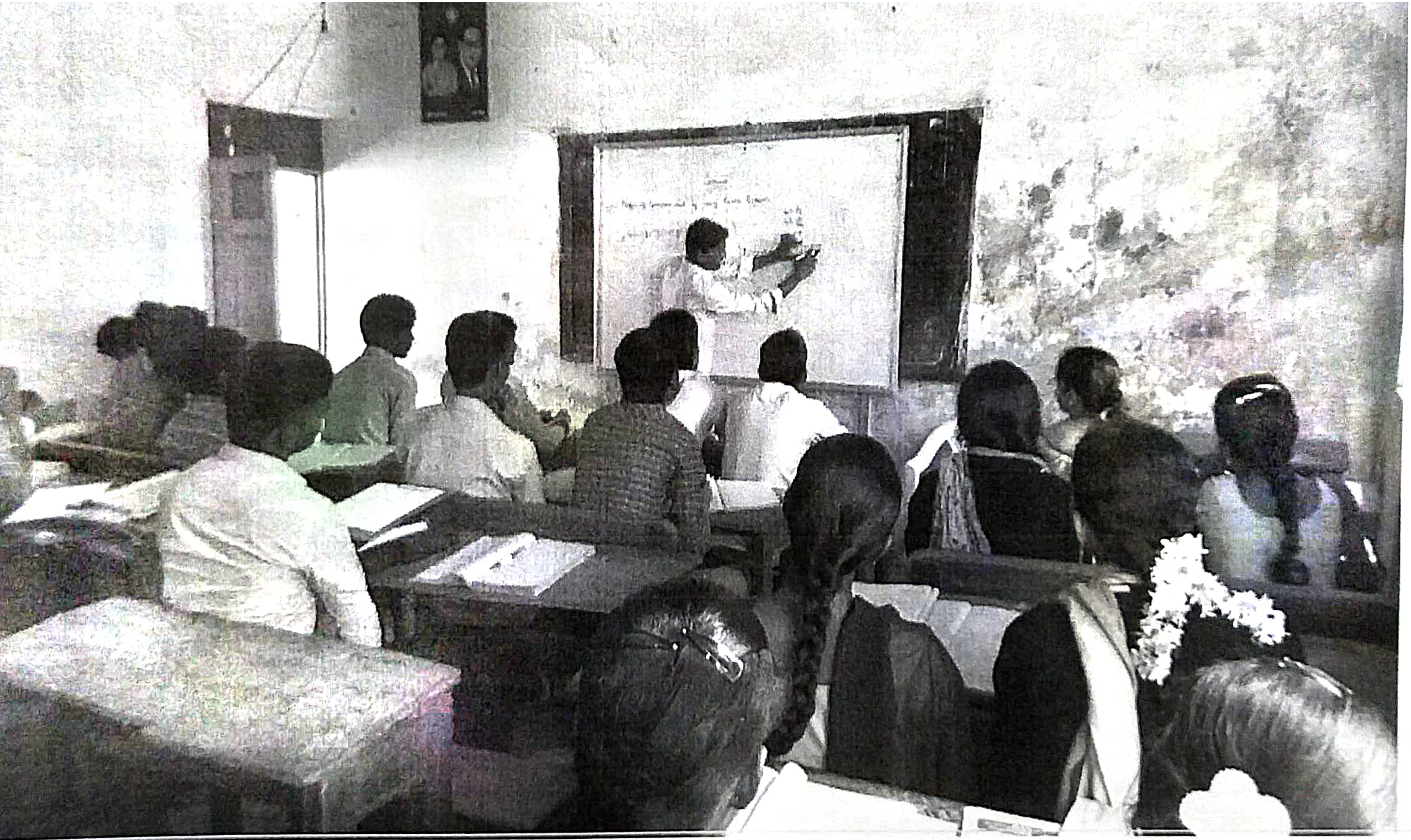
CLASS I B.Sc GROUP : MPC, MPCs DATE : 16/12/17 HOUR: V
SUBJECT : Waves & Oscillations PAPER : II TIME : 15min.

S.No.	Roll No.	Name of the Student	Topic ~~Signature~~ of the Student
1		Govind.	Forced oscillations
2		Ajay Kumar	Triangular wave analysis
3		Mubina . Sk	Saw tooth wave analysis .
4			

No of Students Present :

Signature of the Lecturer

S.No.	Roll No.	Name of the Student	Signature of the Student
1		Shaik. Mubeena	Sk. Mubeena
2		G. Sharon Roja	G. Sharonroja
3		M. swapna	M. swapna
4		D. Anusha	D. Anusha
5		Md. Salma Banu.	Md. Salmabanu.
6		P. Keerthi	P. Keerthi
7		P. Siddaiah	P.S..
8		A. Ramesh Babu	A Ramesh Babu
9		J. Sasi kumar	J. Sasi kumar
10		K. Vamsi	K. Vamsi
11		N. Venkata Swami	N Venkatta Swami
12		Sk. Mabjani	Sk. Mabjani
13		A. Divya	A. Divya.
14		A. Siva nagaraju	A. Siva Nagaraju
15			
16			



T.R.R GOVT DEGREE COLLEGE, KDKR....

STUDENT SEMINAR

NAME : B. Ajay Babu

CLASS : Ist B.Sc (mPCs)

Roll no : 01

SUBJECT : physics

Topic : Analysis triangular wave using fourier theorem.

SUBMITTED TO

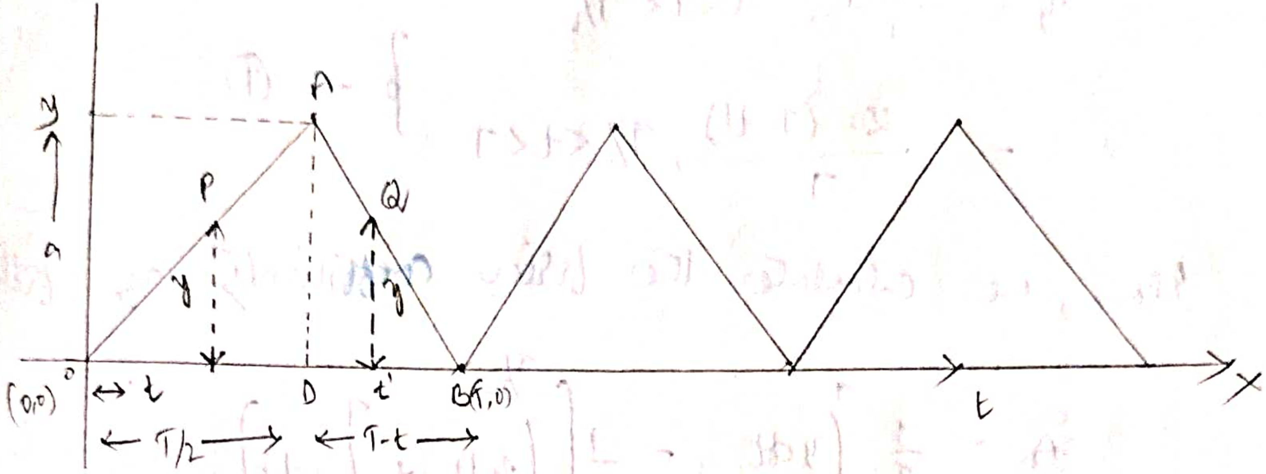
D. Vijaya Sri, Madam

SUBMITTED BY

B. Ajay Babu

Analysis of Triangular wave using fourier theorem:

A typical triangular wave is as shown in fig.



Let us consider a triangular wave OAB. The time and displacement coordinates of the points O,A,B are (0,0), $(T/2, 0)$ & $(T,0)$ respectively.

Now, we calculate the displacement and time equations for OA and AB i.e amplitude of the wave.

Consider a point P, whose coordinates are (t,y) as shown. Hence, $y/a = t/(T/2) \Rightarrow y = \frac{2at}{T}$

from $0<t<T/2$

Similarly Triangles ADB & $Qt'B$ are similar hence,

$$\frac{y}{a} = \frac{T-t'}{T-T/2} = y = \frac{2a(T-t')}{T}$$ from $T/2 < t < T$.

∴ The displacement function at any time 't' may be written as

$$y = \frac{2at}{T}, \quad 0<t<T/2$$

$$= \frac{2a(T-t)}{T}, \quad T/2<t<T \qquad \Big\} — ①$$

Now, we calculate the fourier coefficients as follows.

$$A_0 = \frac{1}{T}\int_0^T y\,dt = \frac{1}{T}\left[\int_0^{T/2} y\,dt + \int_{T/2}^{T} y\,dt\right]$$

$$= \frac{1}{T}\int_0^{T/2} \frac{2at}{T}\,dt + \frac{1}{T}\int_{T/2}^{T} \frac{2a(T-t)}{T}\,dt$$

$$= \frac{1}{T}\cdot\frac{2a}{T}\left[\frac{t^2}{2}\right]_0^{T/2} + \frac{1}{T}\cdot\frac{2a}{T}\left[Tt - \frac{t^2}{2}\right]_{T/2}^{T}$$

$$= \frac{2a}{T^2}\left[\frac{T^2}{8}\right] + \frac{2a}{T^2}\left[T\times T - \frac{T^2}{2} - \frac{T^2}{2} + \frac{T^2}{8}\right]$$

$$= \frac{2a}{T^2}\left[\frac{T^2}{8} + T^2 - T^2 + \frac{T^2}{8}\right]$$

$$= \frac{2a}{T^2}\left[\frac{2T^2}{8}\right]$$

$$\boxed{A_0 = a/2}$$

This shows that the axis of displacement curve is at a distance a/2 from the time axis.

Now,

$$A_q = \frac{2}{T}\int_0^T y\cos q\omega t\,dt$$

$$= \left[\frac{2}{T}\int_0^{T/2}\frac{2at}{T}\cos q\omega t\,dt + \frac{2}{T}\int_{T/2}^{T}\frac{2a(T-t')}{T}\cos q\omega t\,dt\right]$$

$$= \frac{2}{T}\left[\int_0^{T/2}\frac{2at}{T}\cos q\omega t\,dt + \int_{T/2}^{T}2a\left(1-\frac{t'}{T}\right)\cos q\omega t\,dt\right]$$

$$= \frac{4a}{T^2}\cdot\left[\frac{t\sin q\omega t}{q\omega} + \frac{\cos q\omega t}{q\omega}\right]_0^{T/2} + \frac{4a}{T}\left[\frac{\sin q\omega t'}{q\omega} - \frac{t'\sin q\omega t}{q\omega} - \frac{\cos q\omega t'}{q^2\omega^2 t}\right]_{T/2}^{T}$$

$$\frac{4a}{T^2}\left[t\,\frac{\sin q\omega t}{q\omega}\right]_0^{T/2} + \frac{4a}{T^2}\left[\frac{\cos q\omega t}{q\omega}\right]_0^{T/2} + \frac{4a}{T}\left[\frac{\sin q\omega t}{q\omega}\right]_{T/2}^{T} -$$

$$\frac{4a}{T}\left[t'\,\frac{\sin q\omega t'}{q\omega}\right]_{T/2}^{T} - \frac{4a}{T}\left[\frac{\cos q\omega t'}{q^2\omega^2 t}\right]_{T/2}^{T}$$

All sine terms are zero

$$\therefore A_q = \frac{4a}{q^2\omega^2T^2}\left[\cos\frac{q\omega T}{2} - \cos 0\right] - \frac{4a}{q^2\omega^2T^2}\left[\cos q\omega T - \cos q\omega\frac{T}{2}\right]$$

$$= \frac{4a}{4\pi^2q^2}\left[\cos\frac{2\pi q}{2} - 1 - \cos 2\pi q + \cos\frac{2\pi q}{2}\right]$$

$$= \frac{a}{\pi^2q^2}\left(\cos\pi q - 1 - 1 + \cos\pi q\right)$$

$$= \frac{a}{\pi^2q^2}\left(2\cos\pi q - 2\right) = \frac{2a}{\pi^2q^2}\left(\cos\pi q - 1\right)$$

$$\therefore \boxed{A_q = \frac{2a}{\pi^2q^2}\left(\cos\pi q - 1\right)}$$

$A_r = 0$, when r is even ($\because \cos \pi r = 1$ where r is even)

$A_r = \frac{-4w}{\pi^2 r^2}$ when r is odd

Similarly

$$B_r = \frac{2}{T}\left[\int_0^{T/2} \frac{2wt}{T} \sin r\omega_0 t\,dt + \int_{T/2}^{T} 2a\left(1-\frac{t'}{T}\right) \sin r\omega_0 t\,dt\right]$$

$$= \frac{2}{T}\left(\frac{2a}{T}\right)\left[\int_0^{T/2} t \sin r\omega_0 t\,dt + \int_{T/2}^{T} T \sin r\omega_0 t'\,dt - \int_{T/2}^{T} t' \sin r\omega_0 t'\,dt\right]$$

Solving these integrals, we have –

$B_r = 0$ for all values of r

X(ω), we write the Fourier series for triangular wave

$$\boxed{y = f(t) = a/2 - \frac{4a}{\pi^2}\left[\cos\omega_0 t + \frac{\cos 3\omega_0 t}{3^2} + \frac{\cos 5\omega_0 t}{5^2} + \dots\right]}$$

Go end

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ACADEMIC ACTIVITY - SEMINAR

II B.Sc. GROUP : A.Z.C. .... DATE : 26-07-22 , HOUR: I
T: chemistry PAPER : IV TIME : 15 min.

Roll No.	Name of the Student	Seminar Topic	Signature of the Student
03	K. Allen christina	Structure of Glucose	K. Allen christina

Students Present : 07

K.V.Padma
Signature of the Lecturer

Roll No.	Name of the Student	Signature of the Student
06	T. Kranthi Mai	T. Kranthi Mai
12	J. Akshaya	J. Akshaya
05	T. kiran Jyothi	T. kiran Jyothi
04	A. Raja kumar	A. Raj kumar
09.	M. Raja sekhar	M. Raja sekhar.
01	G.V.V.S. Balaji	G.V.V.S. B
13	N. prabhas	N. prabhas

Feedback by the students:
(i.) develop the Presentation skills
(ii) they can develop listening skills.

Miss.K.AllenChristina,IIB.Sc.A.Z.C is giving the seminar on structure of glucose

T.R.R.GOVERNMENT DEGREE COLLEGE, KANDUKUR.

DEPARTMENT OF CHEMISTRY

STUDENT SEMINAR

NAME OF THE STUDENT: K. ALLEN CHRISTINA

CLASS : II B.Sc.

GROUP : A.Z.C

REGISTRATION NO ; Y203037022

TOPIC : STRUCTURE OF GLUCOSE

SUBMITTED TO : Smt. K. PADMAVATHI MADAM
Lecturer in chemistry

26-07-2022.

CARBOHYDRATES

a carbohydrate is a naturally occuring ompound or a derivative of such a ompound, with the general chemical rmula $C_x(H_2O)_n$, made up of molecules f carbon (C), hydrogen (H) and oxygen (O).

efinition:

rbohydrates are defined as polyhydroxy ldehydes or ketones having three or ore carbon atoms

x: glucose $C_6H_{12}O_6$
Fructose $C_6H_{12}O_6$ etc.

lassification of carbohydrates

arbohydrates are classified into two groups

Sugars : Carbohydrates which are sweet ystallize and soluble in water are lled sugars. They are sub divided into

Mono saccharides : which cannot be ydrolysed further to form simpler sugars

x: Glucose, Fructose

Oligo saccharides : which give 2 to 10 nono saccharides on hydrolysis.

x: Sucrose, Lactose

Non - Sugars : These are amorphous lids insoluble or soluble to form lloids in water.

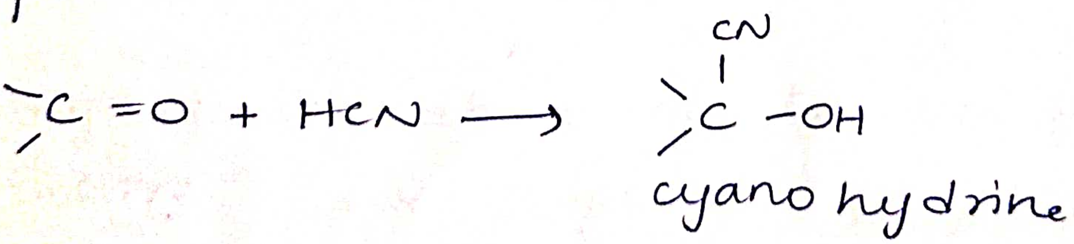
x: starch, cellulose

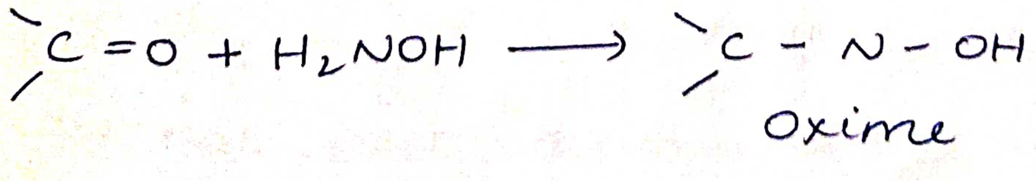
ructure of Glucose

The molecular formula of glucose is $, H_{12}O_6$.

Presence of Hydroxyl groups : Glucose acts with acetic anhydride to give enta acetyl derivative which indicates e presence of five OH groups.

Presence of carbonyl group: Glucose eacts with HCN to give cyano hydrine. t reacts with hydroxyl amine, ydrazine to give oxime, hydrazone etc. hich indicates the presence of carbonyl roup.

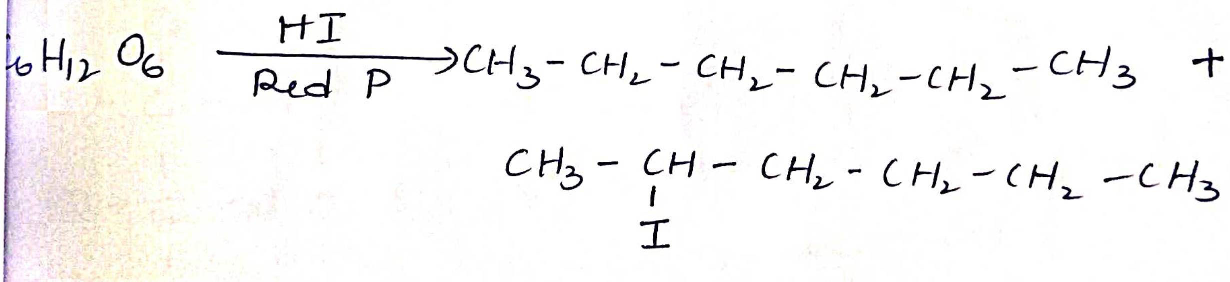




Presence of aldehyde group : Glucose n oxidation with bromine water gives luconic acid. From the structure of luconic acid it is clear that glucose ontains six carbon atoms one of hich is an aldehydic carbon atom resent at the end of the chain.

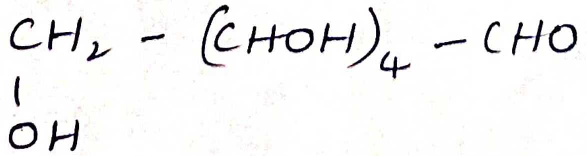
$$C_6H_7O(OH)_5 \xrightarrow{\text{Oxidation}} (HO)_5C_5H_6COOH$$

Nature of carbon chain : Glucose eacts with HI in presence of red hosphorous to give a mixture of -iodohexane and n-hexane. This indicates he presence of straight chain in glucose.



$$_6H_{12}O_6 \xrightarrow[\text{Red P}]{HI} CH_3-CH_2-CH_2-CH_2-CH_2-CH_3 + CH_3-\underset{\displaystyle I}{\underset{|}{CH}}-CH_2-CH_2-CH_2-CH_3$$

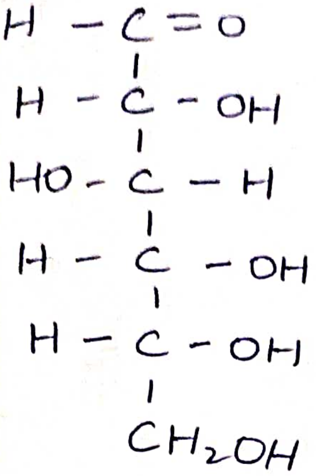
Basing on the above points the following Structure was proposed for glucose.



$$\underset{\displaystyle OH}{\underset{|}{CH_2}}-(CHOH)_4-CHO$$

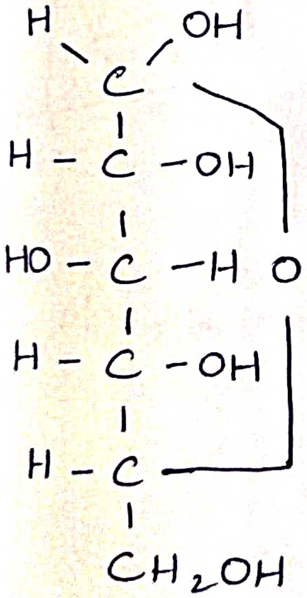
Glucose has four chiral carbon atoms. So it has 16 optical isomers.

Open chain structure of glucose

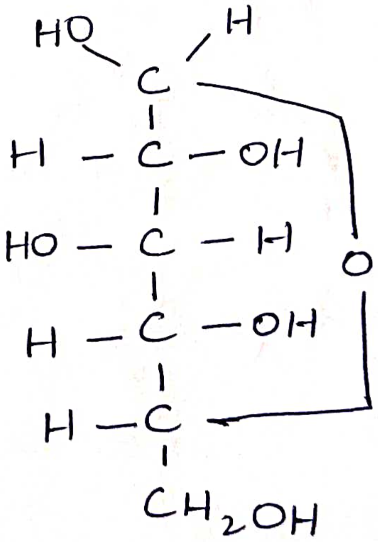


Fischer projection formula

α and β forms: Due to ring formation he aldehydic carbon become assymmetric ence the structure of α and β glucose an be written as follows.



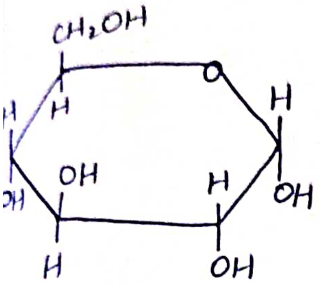
α - D glucose



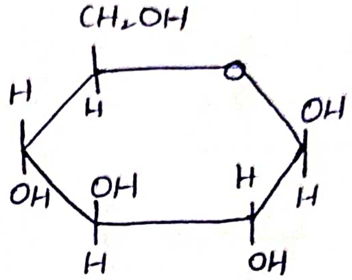
β - D glucose

ranose ring structure

c structures of α and β glucose
n be represented as pyranose ring.

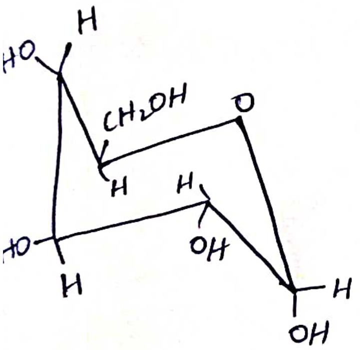


-D-glucopyranose

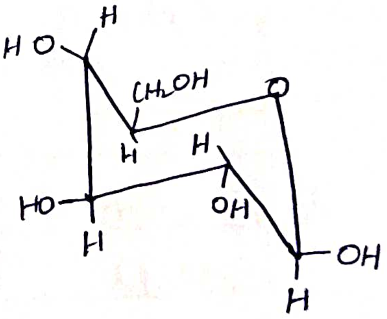


β-D-glucopyranose

nformations (Haworth Projections)



α-glucose



β-glucose

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ACADEMIC ACTIVITY - SEMINAR

: II B.Sc. GROUP : A.Z.C. .... DATE : 02-08-22. HOUR: I

CT : chemistry PAPER : IV TIME : 15 min.

Roll No.	Name of the Student	Seminar Topic	Signature of the Student
06	T. kranthimai	Preparation methods of pyridine	T. kranthimai
09.	M. Raja sekhar.	18 electron rule	M. Raja sekhar.

K.V. Padma
Signature of the Lecturer

f Students Present : 06

Roll No.	Name of the Student	Signature of the Student
05	T. kiran Jyothi	T. kiran Jyothi
12	J. Akshaya	J. Akshaya
04	A. Rajakumar	A. Raj kumar
01	G.V.V.S. Balaji	G.V.V.S. Balaji
13	N. prabhas	N. prabhas
03	K. Allen christina	K. Allen christina

Miss.T.Kranthimai,IIB.Sc.A.Z.C is giving the seminar on " Preparation and Properties of Pyridine"

T.R.R.GOVERNMENT DEGREE COLLEGE, KANDUKUR.

DEPARTMENT OF CHEMISTRY

STUDENT SEMINAR

NAME OF THE STUDENT: T. Kranthi Mai

CLASS : II BSc

GROUP : A.Z.C

REGISTRATION NO ; Y203037025

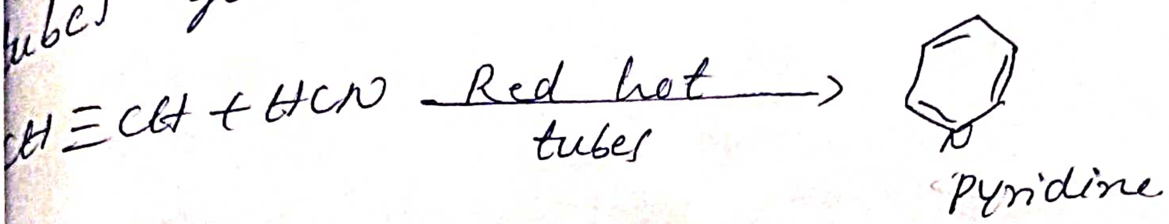
TOPIC : Preparation methods of pyridine and properties.

SUBMITTED TO : Smt. Dr. K. Padmavathi (madam) Lecturer in chemistry.

02-08-2022.

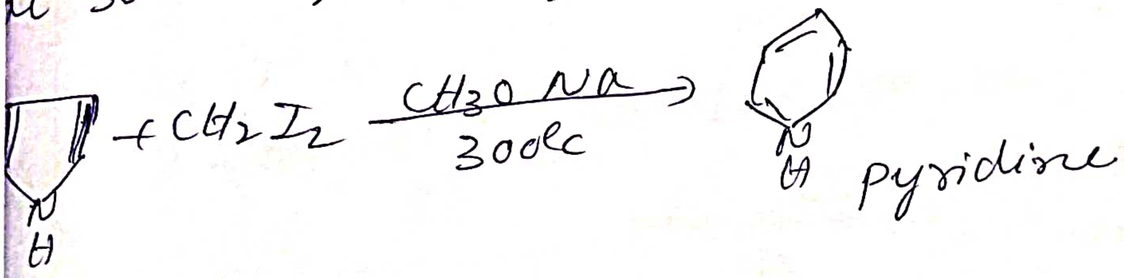
Pyridine

y Passing two molecules of acetelene nd hydrogen cynide through Red hot ubes gives Pyridine



rom pyrrol :-

yrrol react with methelene Iodide n the presence of sodium methoxide t 300°c gives pyridine.

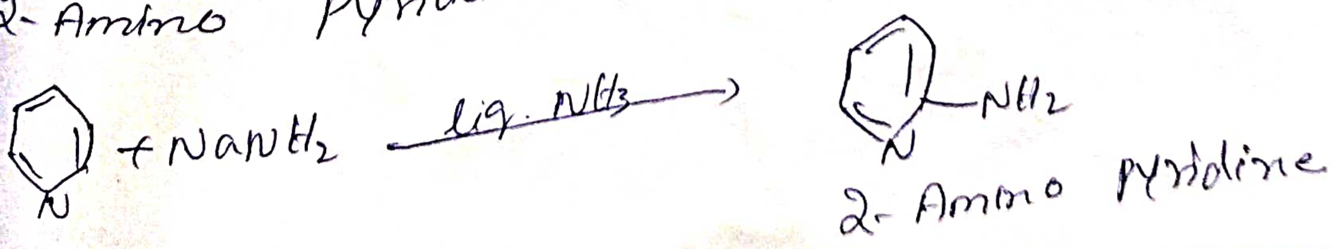


Properties :-

Nucleophilic Substitution Reaction :-

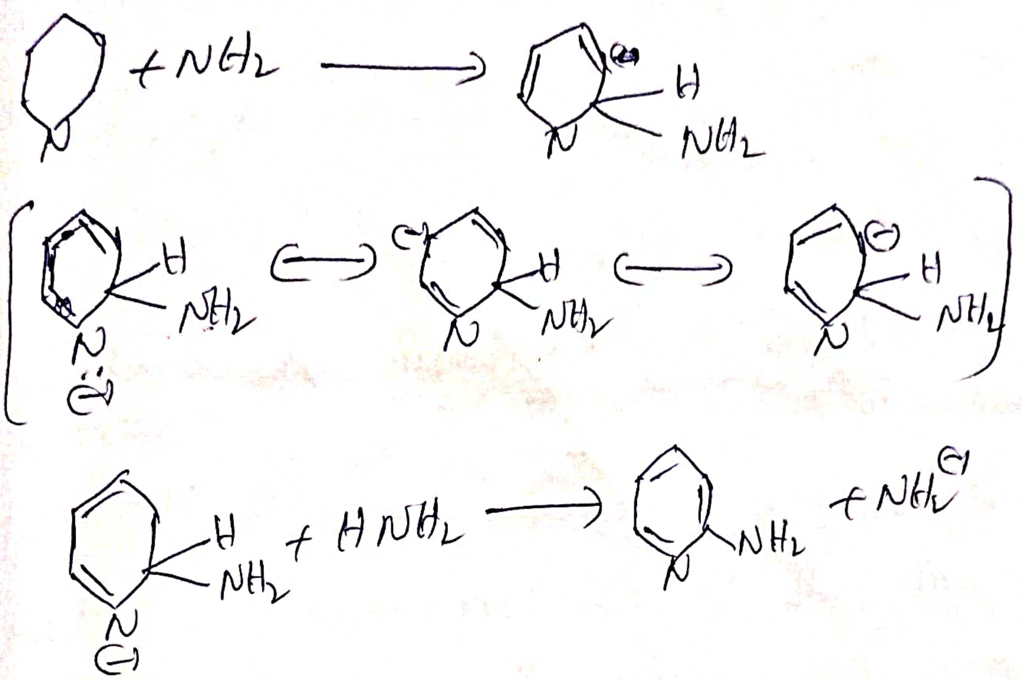
i Chichibabin Reaction :

Pyridine reacts with Sodamide in the Presence of liquified ammonia gives 2-Amino Pyridine



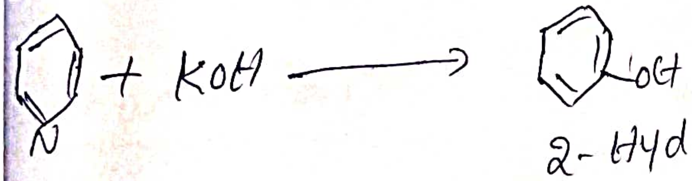
Mechanism :

$NaNH_2 \longrightarrow Na^+ + NH_2^-$



Reaction with KOH :

Pyridine reacts with potassium Hydroxide gives 2-Hydroxy. Pyridine.



2-Hydroxy pyridine

iii) Reaction with phenyl lithium :

Pyridine reacts with phenyl lithium gives 2-phenyl pyridine.

2-phenyl pyridine

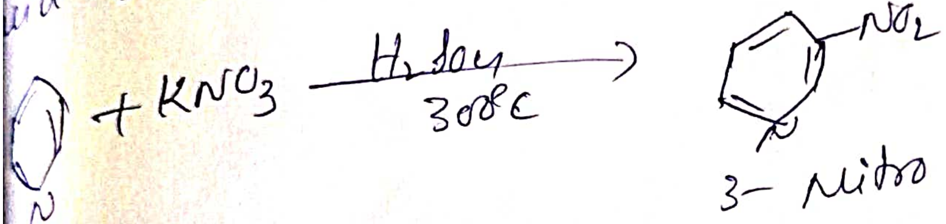
Reaction with n-Butyl Lithium:-

ridine reacts with Butyl lithium gives Butyl pyridine.

2-Butyl pyridine

lectrophilic Substitution Reaction.

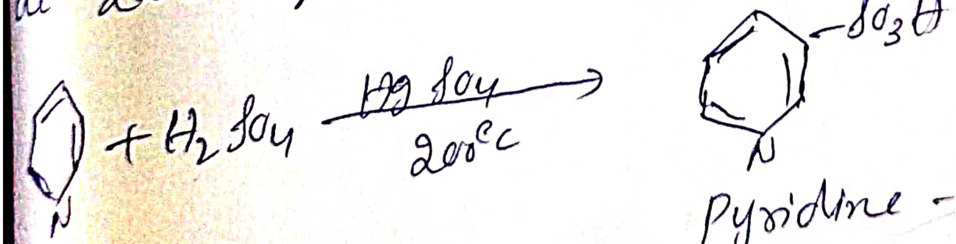
tration:- pyridine reacts potassium itrate in the presence of Sulphuric id at 300°c gives 3-Nitro pyridine



3- Nitro pyridine

ulphanation:-

yridine reacts with Sulphuric acid n the presence of mercurous sulphate at 200°c gives Pyridine -3- Sulphate



Pyridine -3- Sulphonic acid.

Bromination:-

pyridine reacts with Bromine in the presence of charcoal at 300°c gives 3- Bromo pyridine and 3,5 di- Bromo pyridine.

3- Bromo pyridine

3,5 di Bromo pyridine.

Sri.M.Rajasekhar, II B.Sc.A.Z.C gave the seminar on 18 electron rule

T.R.R.GOVERNMENT DEGREE COLLEGE, KANDUKUR.

DEPARTMENT OF CHEMISTRY

STUDENT SEMINAR

NAME OF THE STUDENT: M. Raja Sekhar.

CLASS : II B.SC

GROUP : [A.Z.C]

REGISTRATION NO ; Y203037023

TOPIC : 18 electron Rule.

SUBMITTED TO : Dr. K.V. PADMAVATHI Madam.
Lecturer in ~~Zoology~~. chemistry

02-08-2022.

8 electron rule :-

The sum of valance electrons of central etal atom and number of electrons donated by igands for the Formation of complex is 18 (or) an integer of 18, That complex should stable.

ormula For 18 Electron rule :-

= (No.of valance eletrons in central metal atom) + (No.of electrons donated by ligands)

(or)

= (No.of valance electrons of central Metal atom) × (No.of central atoms (n)) + 2 (no.of M-M bonds) +

(No.of electrons contributed by ligands) ± (Charge) = 18 × n.

pplications :-

$Ni(CO)_4$:-

Electronic configuration of $_{26}Fe$- $\longrightarrow [Ar]3d^8 4s^2$

No.of valence electrons in Ni = $1 \times 10 = 10$

No.of electrons donated by 4 'CO' ligands = $4 \times 02 = 08$

Total No.of electrons = 18 electrons.

∴ It's stable complex.

$[Fe(CO)_5]$:-

electronic configuration of $_{26}Fe$ $\longrightarrow [Ar]\ 3d^6 4s^2$

No.of valence electrons in Fe = $1 \times 8 = 08$

No.of electrons contributed by 5 'CO' ligands. = $5 \times 2 = 10$

Total No.of electrons = 18 electrons.

∴ stable complex.

$Fe(CO)_9$:-

electronic configuration of $_{26}Fe$ → $[Ar]\ 3d^6\ 4s^2$

of valance electrons 2 'Fe" atoms = 2×8 = 16

of electrons by 9 'CO' ligands = 9×2 = 18

~~of electrons donated by 9~~

one "Fe - Fe" Bond = 1×2 = 02

Total electons = 36 electrons.

$= \frac{36}{2} = 18$ electrons.

∴ stable complex.

$Fe_3(CO)_{12}$:-

electronic configuration of $_{26}Fe$ → $[Ar]\ 3d^6\ 4s^2$

of valance electrons in 3 "Fe" atoms = 03×8 = 24

of electrons donated by "12 'CO" ligands = 12×2 = 24

3" Fe - Fe" bonds = 03×2 = 06

Total electrons = 54 electrons.

$= \frac{54}{3} = 18$ electrons

∴ stable complex.

$Fe(CO)_9$:-

electronic configuration of $_{26}Fe$ → $[Ar]\ 3d^6 4s^2$

f valance electrons 2 "Fe" atoms = 2 × 8 = 16

f electrons by 9 'CO' ligands = 9 × 2 = 18

of ~~electrons donated by 9~~

one "Fe - Fe" Bond = 1 × 2 = 02

Total electons = 36 electrons.

$= \frac{36}{2} = 18$ electrons.

∴ stable complex.

$Fe_3(CO)_{12}$:-

electronic configuration of $_{26}Fe$ → $[A~~r~~]\ 3d^6 4s^2$

of valance electrons in 3 "Fe" atoms = 03 × 8 = 24

of electrons donated by "12 "CO" ligands = 12 × 2 = 24

3" Fe - Fe" bonds = 03 × 2 = 06

Total electrons = 54 electrons.

$= \frac{54}{3} = 18$ electrons

∴ stable complex.

SEMINAR.

T.R.R. GOVT DEGREE COLLEGE
KANDUKUR.

SUBJECT : ZOOLOGY.
SEMESTER : V
PAPER : VI
TOPIC : Viral diseases in poultry.
DATE : 28-12-2021
DAY : Tuesday
HOUR : 3rd

Submitted to
Smt. M. Jyothi
Lecturer in Zoology.

Submitted by
1. G. Sandhya Rani
B.Sc [BZC] No: 13.
2. J. Neelima
B.Sc [BZC] No: 14.
3. K. Sowjanya.
B.Sc [BZC] No: 18

VIRAL DISEASES :-

1) Marek's Disease (or) Lympho-proliferative Disease.

2) Ranikhet Disease (or) New castle Disease.

3) Infectious bronchitis in poultry.

4) Infectious Laryngo-Trachitis.

5] Fowl pox (or) Avian pox (or) Avian Diptheria.

6). Avial inbluenza.

7). Gumboro Disease (or) Inbectious Bursal disease.

1) Marek's Disease:-

⇒ This is a Contagious Viral disease Caused by "DNA Herpes Virus."

⇒ Named abter its discoverer prob. Marek in "1907."

⇒ Most Common disease occuring in the chickens ob all age groups.

⇒ The disease expressed their in acute or classical forms.

⇒ Acute Condition by the formation ob lymphoid tumours in gonads, liver, Spleen, Kidneys, Lungs, proventriculus, feather follicles and skeletal muscles.

⇒ Classical Condition is expressed by the paralysis ob wings and legs, loss ob weight, diarrhoea, respiratory disorders and whitening ob pupil.

⇒ No treatment is available except vaccinating the one day aged chicks with HVT vaccine which may give protection.

→ Separation of the infected birds and keeping them in virus free environment with free flow air.

2) Ranikhet disease (or) New castle disease :-

→ It is a dreadful contagious disease, first reported from Raniket Village.

→ Causative agent is the viral particle from the group of paramixo virus.

⇒ It expresses as viz., Lentogenic (lowest).
Mesogenic (Medium)
Velogenic (high) virulence forms.

Symptoms :- Depression, Prostration, dropping wings, Paralysis and Caughing.

Treatment :- Mild doses of R2B, R.Lasote vaccines followed by booster doses. Reduces the risk of disease.

3]. Infectious bronchitis in poultry :-

→ This is a highly contagious disease caused by "Corona Virus"

Symptoms :- Sneezing, Coughing, retarded growth, drop in egg production, diarrhoea, nephrosis identified by enlargement of kidneys due to urates.

Treatment :- No specific treatment, but mass vaccination with IB vaccine of young chicks is effective in preventing the infection.

4] Infectious Laryngo - Trachitis :-

→ This is a contagious respiratory disease affecting the older birds.

⇒ Causative agent is the highly pathogenic herpes virus.

→ **Symptoms** :- Respiratory problems, swelling of the face, drop in egg production, conjuctivities, coughing, gasping and nasal exudation with blood streaks.

Treatment :- No definite treatment but vaccination controls the disease to some extent.

5] fowl pox (or) Avian pox (or) Avian Diptheria :-

→ A mild disease caused by DNA virus affecting featherless parts of young chicken and layers.

→ The disease is expressed in cutaneous, diptheric and ocular forms.

Symptoms :- formation of typical yellowish or brown wart like nodules on the comb, wattles, face, skin or mouth, difficulty in breathing.

Treatment :- there is no treatment for fowl pox.

D Control and prevention of chickens by vaccination. fowl pox or pigeon pox vaccine. Administered all chickens at 12-16 weeks age.

⑥ Avian influenza :-

→ This bird Subbers from Severe depression.

→ The Swelling ob the structures ob head is one ob most frequent external findings associated with highly Pathogenic avian influenza.

Symptoms :- Cough, fever, Sore throat, muscle aches, Headache, shortness ob breath.

Treatment :- Many inbluenza Viruses have become resistant to antiviral drugs that includes amantadine and rimantadine.

) Gumboro Disease :-

- It is an infectious disease caused by a resistant type ob IBD Virus abbecting the younger birds ob 4-8 weeks
- Disease Spreads through food and water. The bird becomes Susceptible to infectious Causing Coryza, enterities etc.

Symptoms :- Watery diarrhoea, depression, dry skin and muscles and nephrosis in young ones.

Treatment :- 1) The spread ob Virus can be done by using disinbectants like formalin.

2] Prevention is possible through Vaccination.

T.R.R. GOVT DEGREE COLLEGE
KANDUKUR

DEPARTMENT OF ZOOLOGY
SEMINAR

SEMESTER - II

PAPER - ANIMAL DIVERSITY - BIOLOGY OF CHORDATES

TOPIC - Dentition in mammals.

DATE - 18/8/22

DAY - Thursday

HOUR - 3rd

Submitted To
Dr I. Anusha
madam
Lecturer in zoology

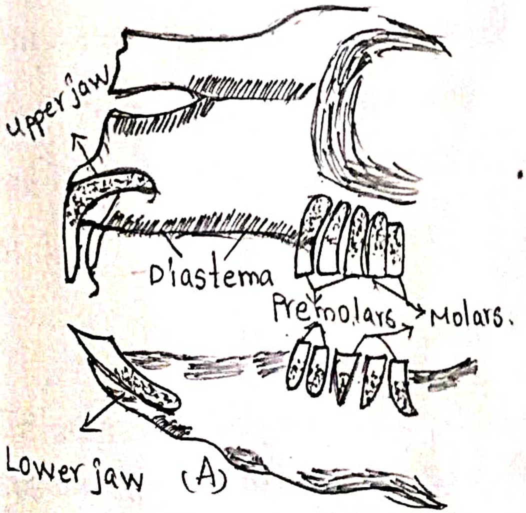
Submitted By
K. Vasantha.
Y213037006

Dentition in mammals.

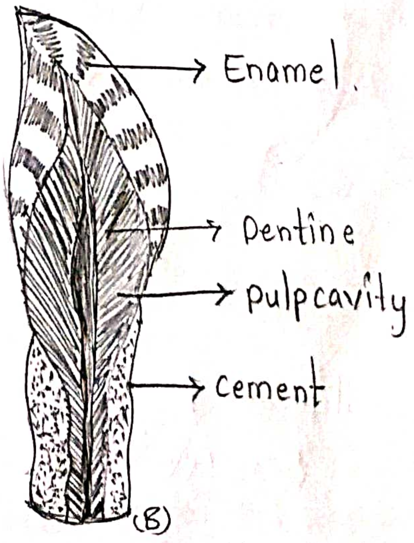
The arrangement of teeth in the jaws is known as Dentition. The dentition in mammals is one of the important factors to trace the evolution of mammals.

The teeth of mammals are developed in the soft tissues, which cover the borders of premaxilla, maxilla and mandible. But teeth are entirely absent in the adults of some whales, monotermes and some American ant eaters.

The teeth of mammals are enclosed in sockets, and hence this condition is known as thecodont condition. The part of the tooth which projects above the gum is called the crown and the part embeded in socket is the root. The part between the root and crown's known as the neck. The grinders have more than one root. The tooth contains a central pulp cavity, which has an opening at the base of the root. This cavity contains connective tissue, blood vessels and nerves.



A. Dentition in Rabbit



B. Rabbit tooth V.S.

The tooth consists of "dentine", which is covered by enamel on the crown and by cement on the root. In ddentates and in the tusks of elephants enamel is entirely absent.

The two most marked characteristics of teeth of mammals are "heterodontism" and "diphyodontism".

Heterodontism :- Heterodontism consists of different kinds of teeth in different parts of the jaw. There are mainly four kinds of teeth in each jaw. They are incisors, with their chisel like edges, canines with their pointed edges and premolars and molars with their flat edges. The latter two sets of teeth are useful for grinding, and hence they are also known as grinders. In most cases the Incisors are situated infront, next comes canines and,they are followed by premolars and molars.

Diphyodontism :- The presence of two functional sets of-teeth is known as diphyodontism. In that case the first set is called milk teeth and the later set is called permanent teeth. occasionally, there is only one set of teeth, which lasts throughout life is called monophyodont dentition. Ex :- Whales and Kangaroo.

Dental formula : The dental formula is a short way of expressing the number and kinds of teeth present in one half of each jaw. Numerator represents the number and kind of teeth is one half of the upper jaw, while the denominator indicates that of lower jaw. The typical mammalian dental formula is.

$$I-\frac{3}{3},\ C-\frac{1}{1},\ PM-\frac{4}{4},\ M-\frac{3}{3}.$$

In order to simplify the dental formula the initial letters are customarily omitted, so that the simplified form of the above dental formula is $\frac{3}{3}\frac{1}{1}\frac{4}{4}\frac{3}{3}$. Since the number and kinds of teeth in the two.

alves of each jaw, multiplied by 2 gives the total of numerator and that of the denominator and total number of teeth resent in both jaws. Thus in the above case the total number of teeth are 44.

The number of each kind of teeth varies in different forms and in some cases a certain type of teeth may be absent. In such cases the absence of a kind of tooth is indicated by ero in the corresponding place in the dental formula. For xample in cow, the incisors and canines are lacking in the upper jaw and the same is indicated in its dental formula.

Sheep, Goat & Cow - $\frac{0033}{3133} \times 2 = 32$

In rat the canines and premolars are lacking in both the jaws

Dental formula of rat - $\frac{1003}{1003} \times 2 = 16$

Dental formula of rabbit - $\frac{2033}{1023} \times 2 = 28$

Man & Monkey $= \frac{2123}{2123} \times 2 = 32$

Pig, zebra, horse : $\frac{3143}{3143} \times 2 = 44.$

The dental formula can be used to express the deciduous as well as the permanent dentition. A recognizable gap present between two types of teeth is known as diastema. In Rodents and Lagomorphs, which lack canines a diastema is present between the last incisor and the first premolar. In rat and mouse a diastema is present between the incisor and the first molar, on each side of the jaw.

Cope and Osborn theory : The crown surface of the molar tooth of mammals shows a wide range of pattern which is of classificatory value. A primitive form of tooth with three cups it is called triconodont ; when the three cusps are in one plane, it is called tritubercular. Such a tooth is further complicated by the addition of a posterior cusp or talon, which may have one or two cusps. Finally cusps may be added between the three primary cusps. Finally the teeth may have more than six cusps in which case they are multicuspidate type.

Cope and Osborn have endeavoured to show that all cusped, mamadlian grinders are referred to the "tritubercular theory" According to cope and osborn theory of tritubercular starting with a simple reptilian cone which was assumed to have elongated in an anterio- posterior direction and two subsidiary cones have arlsen one on the front and one on the hind border thus producing a triconodont tooth. These two cusps were then supposed to have rotated in opposite direction in the upper and lower jaws to form triangular or tritubercular tooth. The ~~a~~ apex of the triangle points inwards in the upper tooth and outward in the lower. The cusps at the apex of the triangle being supposed to represent the original ~~repta~~ reptilian cone was named the protocone in the upper and protoconid in the lower tooth.

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File Wrapper

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SEMINAR PAPER

T.R.R. GOVT. DEGREE COLLEGE
KANDUKUR

TOPIC: Nitrogen Metabolism

Presented by : Shaik Taslima

Class: 2nd BZC

Date: 14.11.19

Submitted to

Dr. Shaik Mastan Vali
Lecturer in Botany

The Nitrogen Cycle

Nitrogen is essential to life because it is a key component of proteins and nucleic acids. Nitrogen occurs in many forms and is continuously cycled among these forms by a variety of bacteria. Although nitrogen is abundant in the atmosphere as diatomic nitrogen gas (N2), it is extremely stable, and conversion to other forms requires a great deal of energy. Historically, the biologically available forms NO3- and NH3 have often been limited; however, current anthropogenic processes, such as fertilizer production, have greatly increased the availability of nitrogen to living organisms. The cycling of nitrogen among its many forms is a complex process that involves numerous types of bacteria and environmental conditions.

In general, the *nitrogen cycle* has five steps:

1. *Nitrogen fixation* (N2 to NH3/ NH4+ or NO3-)
2. *Nitrification* (NH3 to NO3-)
3. *Assimilation* (Incorporation of NH3 and NO3- into biological tissues)
4. *Ammonification* (organic nitrogen compounds to NH3)
5. *Denitrification*(NO3- to N2)

Nitrogen Fixation

Nitrogen fixation is the process by which gaseous nitrogen (N2) is converted to ammonia (NH3 or NH4+) via biological fixation or nitrate (NO3-) through high-energy physical processes. N2 is extremely stable and a great deal of energy is required to break the bonds that join the two N atoms. N2 can be converted directly into NO3- through processes that exert a tremendous amount of heat, pressure, and energy. Such processes include combustion, volcanic action, lightning discharges, and industrial means. However, a greater amount of biologically available nitrogen is naturally generated via the biological conversion of N2 to NH3/ NH4+. A small group of bacteria and cyanobacteria are capable using the enzyme nitrogenase to break the bonds among the molecular nitrogen and combine it with hydrogen.

Nitrogenase only functions in the absence of oxygen. The exclusion of oxygen is accomplished by many means. Some bacteria live beneath layers of oxygen-excluding slime on the roots of certain plants. The most important soil dwelling bacteria, Rhizobium, live in oxygen-free zones in nodules on the roots of legumes and some other woody plants. Aquatic filamentous *cyanobacteria* utilize oxygen-excluding cells called *heterocysts*.

Nitrification

Nitrification is a two-step process in which NH3/ NH4+ is converted to NO3-. First, the soil bacteria *Nitrosomonas* and *Nitrococcus* convert NH3 to NO2-, and then another soil bacterium, *Nitrobacter*, oxidizes NO2- to NO3-. These bacteria gain energy through these conversions, both of which require oxygen to occur.

Assimilation

Assimilation is the process by which plants and animals incorporate the NO3- and ammonia formed through nitrogen fixation and nitrification. Plants take up these forms of nitrogen through their roots, and incorporate them into plant proteins and nucleic acids Animals are then able to utilize nitrogen from the plant tissues.

Ammmonification

Assimilation produces large quantities of organic nitrogen, including proteins, amino acids, and nucleic acids. *Ammonification* is the conversion of organic nitrogen into ammonia. The ammonia produced by this process is excreted into the environment and is then available for either nitrification or assimilation.

Denitrification

Denitrification is the reduction of NO3- to gaseous N2 by anaerobic bacteria. This process only occurs where there is little to no oxygen, such as deep in the soil near the water table. Hence, areas such as wetlands provide a valuable place for reducing excess nitrogen levels via denitrification processes.

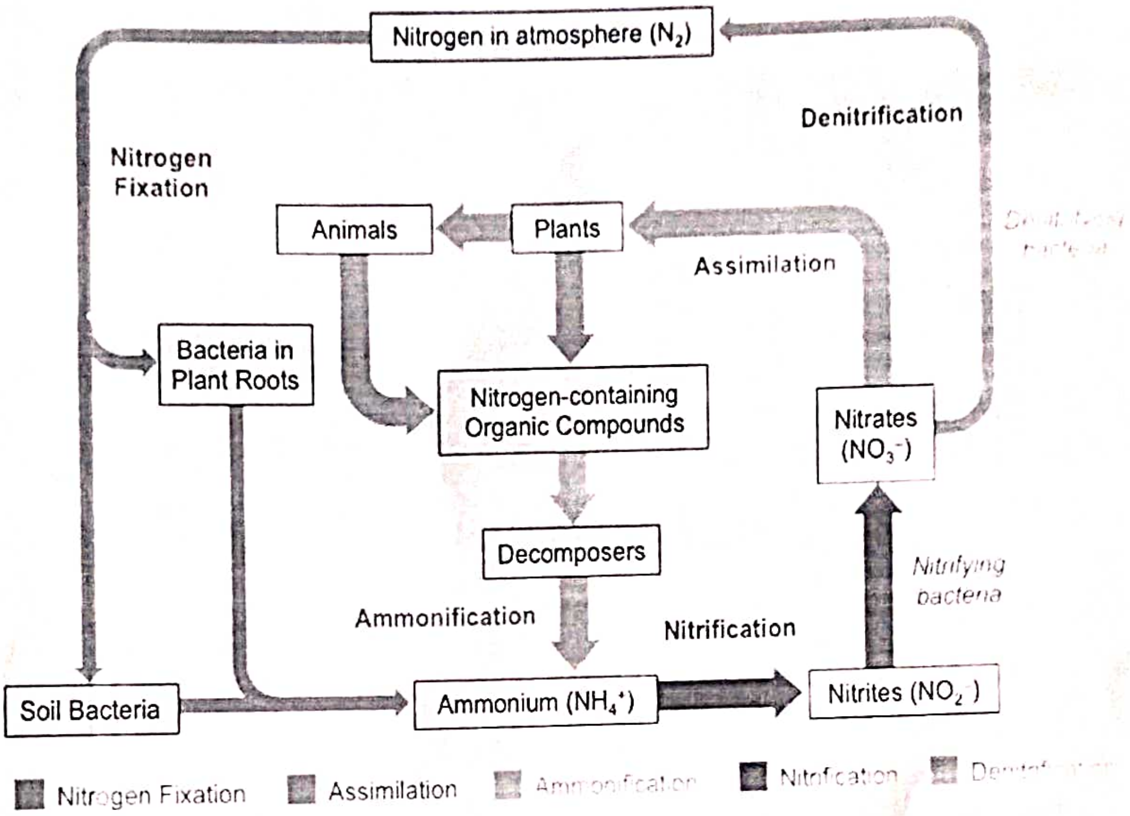
Common Forms of Nitrogen

The most common forms of inorganic nitrogen in the environment are diatomic nitrogen gas (N2), nitrate (NO3-), nitrite (NO2-), ammonia (NH3), and ammonium (NH4+). The species that predominate depend on the chemical, physical, and biological environment.

In aquatic environments, the presence of nitrogen as unionized ammonia (NH3) or ammonium (NH4+) is dependent on the pH and temperature.

When the pH is below 8.75, NH4+ predominates. Increases in pH signify increases in the hydroxyl ion (OH-) concentration of the water, meaning the above reaction will shift to the left in order to reach equilibrium. Above a pH of 9.75, NH3 predominates (Hem, 1985). NH3 is a more toxic to aquatic life. If biological assimilation of NH3 is not occurring at a sufficient rate, NH3 may accumulate and cause detrimental effects to aquatic life.

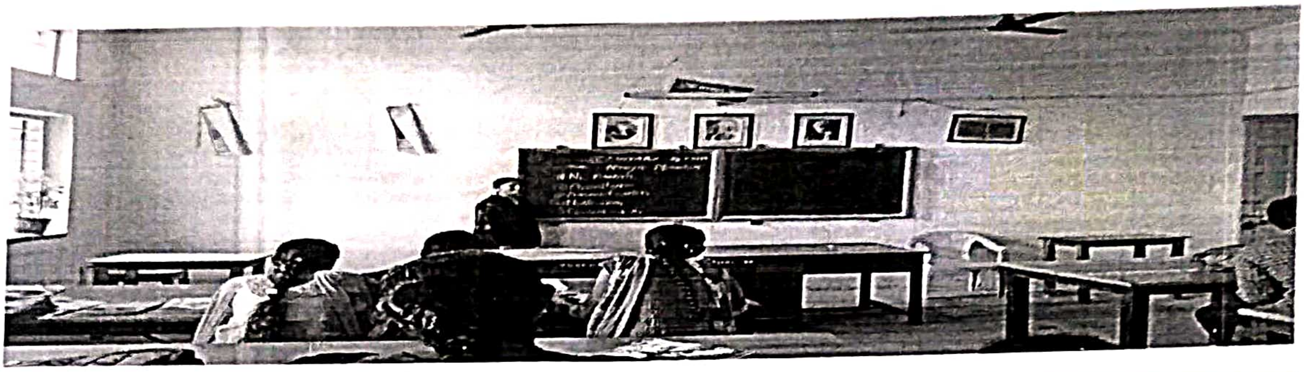
In soils, NH4+ ions are strongly sorbed by clay particles and organic matter, which have a net negative surface charge. In alkaline soils, NH4+ will be converted to NH3 gas, and lost to the atmosphere. Under warm growing conditions, NH4+ in the soil will be transformed to NO3- via nitrification. NO3- is very soluble, and can easily be leached from soils under wet conditions.

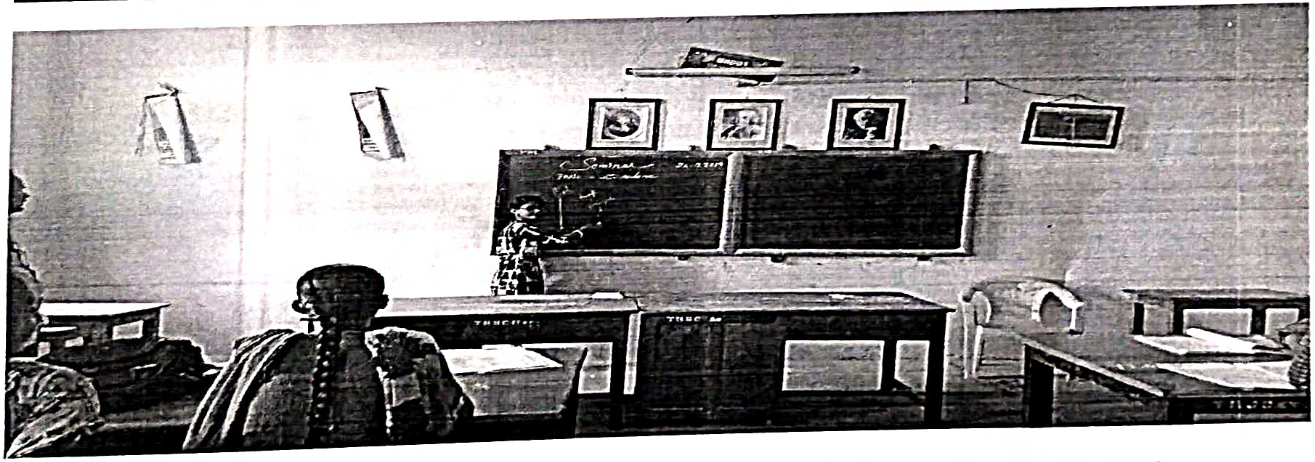


Nitrogen Monitoring

Monitoring nitrogen levels is necessary for many reasons, including detecting baseline nutrient levels and trends, preventing eutrophication, maximizing soil productivity, and minimizing toxic effects of ammonia or nitrite poisoning.

SEMINARS (2019-2020) 2ND BZC





1. IST PHOTO – Shaik Taslima delivering seminar on Nitrogen Metabolism on 14.11.19
2. 2nd PHOTO- Tejesh Kumar delivering seminar on Krebs cycle on 09-12.19
3. 3rd PHOTO – Aishwarya delivering seminar on Z-scheme on 09-12-19

SEMINAR PAPER

TOPIC: Z Scheme

Presented by : T. Ishwarya

Class: 2nd BZC

Date: 09.12.19

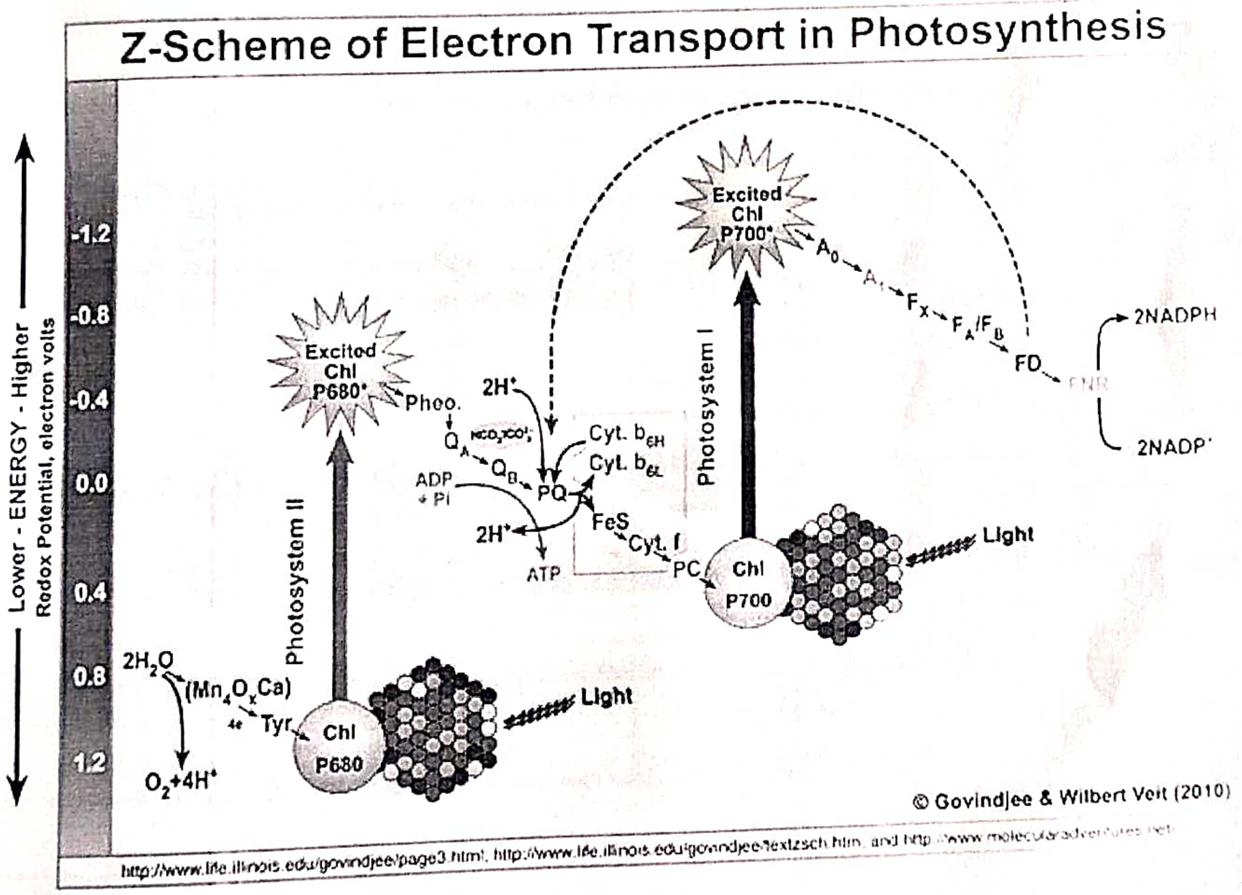
Submitted to

Dr. Shaik Mastan Vali
Lecturer in Botany

Z scheme of light reaction

The "Z-scheme" describes the oxidation/reduction changes during the light reactions of photosynthesis. The vertical axis in the figure represents the reduction potential of a particular species—the higher the position of a molecular species, the more negative its reduction potential, and the more easily it donates electrons

In the Z-scheme, electrons are removed from water (to the left) and then donated to the lower (non-excited) oxidized form of P680. Absorption of a photon excites P680 to P680*, which "jumps" to a more actively reducing species. P680* donates its electron to the quinone-cytochrome bf chain, with proton pumping. The electron from cytochrome bf is donated to PSI, converting P700 to P700*. This electron, along with others, is transferred to NADP, forming NADPH. Alternatively, this electron can go back to cytochrome bf in cyclic electron flow.



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http://www.life.illinois.edu/govindjee/page3.html, http://www.life.illinois.edu/govindjee/textzsch.htm, and http://www.molecularadventures.net

T.R.R. GOVT. DEGREE COLLEGE

KANDUKUR, Prakasam Dist.

2019 - 2020

DEPARTMENT OF MATHEMATICS

Student Seminar

T.R.R. GOVT. DEGREE COLLEGE

KANDUKUR - 523 105, Prakasam Dist.::08598-223546
NAAC ACCREDITED B+
2019-2020

ACADEMIC ACTIVITY - SEMINAR

SS : I BSC GROUP : (MPC & MPCS) DATE : 02.01.2020 HOUR:

ECT : Mathematics PAPER : II-Solid Geometry. TIME : 15min.

Roll No.	Name of the Student	Signature of the Student
02	A. Sai, IBSC-MPC	A. Sai
02	Y.V. Hemanth, IBSC-MPCS	Y.V. Hemanth.
05	M. Lavanya, IBSC-MPC	M. Lavanya
09	K. Padma, IBSC-MPCS	K. Padma

Students Present : 19

Signature of the Lecturer

Roll No.	Name of the Student	Signature of the Student
06	N. Narasimharao 1st B.Sc(MPC)	N. Narasimharao
05	P. Mahendra Babu 1st B.Sc(MPCS)	P. Mahendra Babu
25	Ch. Narendra kumar 1st B.Sc(MPCS)	Ch. narendra kumar.
16	M. Nagendra Babu 1st B.S.(MPCS)	M. Nagendra Babu
08	V. Vireendra 1st Bsc (mpcs)	V. Vireendra
06	T. Anthoni 1st B.S.C (M.P.C.S)	T. Anthoni
04	SK. Rahaman 1st BSC (M.P.CS)	SK. Rahaman.
20	J. Issac 1st BSC (M.P.Cs)	J. Issac
04	K. Hari Krishna (MPC)	K. Hari Krishna
03	Ch. Sivaramaiah (MPC)	Ch. Siva Rmaiah
03	Y. Mamatha (MPC)	Y. Mamatha
07	M. Mrudula (MPC)	M. Mrudula
13	E. Kaveri (MPCS)	E. Kaveri
17	P. Yamuna (MPCS)	P. Yamuna.
21	M. Sravya (MPCS)	M. Sravya.
22.	B. Deepthi (MPCS)	B. Deepthi

P.T.O

S.No.	Roll No.	Name of the Student	Signature of
17	02	CH. Gayathri [MPC]	CH. Gayath
18	01	MD. Afreen [MPC]	MD. Afreen
19	03	Sk. Saudani (MPC)	Sk. Sau
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T. R. R

Govt Degree College KDKR

Student Seminar

Name :- A. Sai

group :- 1st B.Sc MPC (EM).

Subject :- MATHAMATICS PAPER - II

Topic :- Angles between two lines.

Submitted to
Suresh Kumar

Submitted by.
A. Sai

Find the angles between the lines $\frac{x-2}{1} = \frac{y-4}{0} = \frac{z-5}{-1}$, $\frac{x}{3} = \frac{y}{4} = \frac{z}{5}$.

Given lines are

$$\frac{x-2}{1} = \frac{y-4}{0} = \frac{z-5}{-1} \longrightarrow ①.$$

$$\frac{x}{3} = \frac{y}{4} = \frac{z}{5} \longrightarrow ②.$$

r's of the line ① are $(l_1, m_1, n_1) = (1, 0, -1)$.

r's of the line ② are $(l_2\ m_2\ n_2) = (3, 4, 5)$.

If θ is the angle between the lines, then.

$$\cos\theta = \left| \frac{l_1 l_2 + m_1 m_2 + n_1 n_2}{\sqrt{l_1^2 + m_1^2 + n_1^2}\sqrt{l_2^2 + m_2^2 + n_2^2}} \right|.$$

$$= \left| \frac{1(3) + 0(4) + (-1)5}{\sqrt{(1)^2 + (0)^2 + (-1)^2}\sqrt{3^2 + 4^2 + (5)^2}} \right|$$

$$= \left| \frac{3 + 0 - 5}{\sqrt{1+0+1}\ \sqrt{9+16+25}} \right|.$$

$$= \left| \frac{-2}{\sqrt{2}\ \sqrt{50}} \right|$$

$$= \frac{2}{\sqrt{2}\ \sqrt{25 \times 2}} = 1/5$$

$$\cos\theta = 1/5.$$

o that the condition for lines $x = ay+b$, $z = cy+d$ and $'y + b'$, $z = c'y + d'$ to be perpendicular is $aa' + cc' = 0$

Given lines are

$x = a'y + b$, $z = cy + d \longrightarrow$ ①

$x = a'y + b'$, $z = c'y + d' \longrightarrow$ ②

① $\Rightarrow$ $x = ay + b$, $z = cy + d'$

$x - b = ay$ | $z - d = cy$

$\frac{x-b}{a} = y$ | $\frac{z-d}{c} = y$.

$$\frac{x-b}{a} = \frac{y-0}{1} = \frac{z-d}{c}.$$

The Dr's of the line ① are $a, 1, c$.

$\Rightarrow$ $x = a'y + b'$, $z = c'y + d'$.

$x - b' = a'y$ | $z - d' = c'y$.

$\frac{x-b'}{a'} = y$ | $\frac{z-d'}{c'} = y$.

$$\frac{x-b'}{a'} = \frac{y-0}{1} = \frac{z-d'}{c'}$$

Dr's of the line ② are $a', 1, c'$.

two lines are perpendicular then $l_1l_2 + m_1m_2 + n_1n_2 = 0$

$aa' + 1(1) + cc' = 0$

$aa' + cc' + 1 = 0$.

ow that the value of k is $\frac{-10}{7}$ is the lines $\frac{x-1}{-3} = \frac{y-2}{2k} = \frac{z-3}{2}$, $\frac{x-1}{3k} = \frac{y-5}{1} = \frac{z-6}{-5}$ are perpendicular.

Given lines are

$$\frac{x-1}{-3} = \frac{y-2}{2k} = \frac{z-3}{2} \longrightarrow ①.$$

$$\frac{x-1}{3k} = \frac{y-5}{1} = \frac{z-6}{-5} \longrightarrow ②$$

Dr's of the line ① are

$$(l_1\ m_1\ n_1) = (-3, 2k, 2).$$

$$(l_2, m_1\ n_1) = (-3, 2k, 2).$$

If two lines are perpendicular.

$$l l_2 + m_1 m_2 + n_1 n_2 = 0$$

$$-3(3k) + 2k(1) + 2(-5) = 0$$

$$-9k + 2k - 10 = 0$$

$$-7k - 10 = 0$$

$$7k = -10 \Rightarrow k = \frac{-10}{7}$$

show s.t the value of k is also if the lines $\frac{x+1}{-3} = \frac{+2}{2k} = \frac{z-3}{2}$, $\frac{x-1}{3k} = \frac{y+5}{1} = \frac{z+6}{7}$ are rpendicular.

$$\frac{x+1}{-3} = \frac{y+2}{2k} = \frac{z-3}{2} \longrightarrow ①$$

$$\frac{x-1}{3k} = \frac{y+5}{1} = \frac{z+6}{7} \longrightarrow ②$$

Dr's of the line ① are.

$$(l_1\ m_1\ n_1) = (-3, 2k, 2).$$

Dr's of the line ② are

$(l_2, m_2, n_2) = (3k, 1, -5)$

If two lines are perpendicular.

then $l_1 l_2 + m_1 m_2 + n_1 n_2 = 0$

$-3(3k) + 2k(1) + 2(-7) = 0$

$-9k + 2k - 10 = 0$

$-7k - 14 = 0$

$\boxed{k = 2}$

T.R.R. GOVT DEGREE COLLEGE

STUDENT SEMINAR

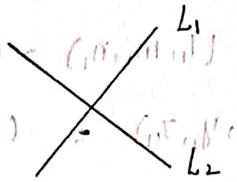
NAME	K. PADMA
CLASS	DEGREE
GROUP	BSc MPcs
SUBJECT	MATHEMATICS
TOPIC	COPIANAR LINES

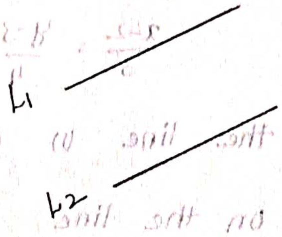
SUBMITTED BY	SUBMITTED TO
K. Padma	CH. Suresh Kumar Sir

Coplanar lines

If two lines are in a plane then these lines are called coplanar lines.

Coplanar lines are either parallel or intersecting.





Theorem :

The necessary and sufficient condition for the lines

$$\frac{x-x_1}{l_1} = \frac{y-y_1}{m_1} = \frac{z-z_1}{n_1} \text{ ——— } ① \text{ and}$$

$$\frac{x-x_2}{l_2} = \frac{y-y_2}{m_2} = \frac{z-z_2}{n_2} \text{ ——— } (2)$$

$$\begin{vmatrix} x_1-x_2 & y_1-y_2 & z_1-z_2 \\ l_1 & m_1 & n_1 \\ l_2 & m_2 & n_2 \end{vmatrix} = 0.$$

The equation of the plane parallel to the line (1) and containing the line (1) is

$$\begin{vmatrix} x-x_1 & y-y_1 & z-z_1 \\ l_1 & m_1 & n_1 \\ l_2 & m_2 & n_2 \end{vmatrix} = 0.$$

(1). Show that the lines $\frac{x-1}{2} = \frac{y-2}{3} = \frac{z-3}{4}$ and $\frac{x-2}{3} = \frac{y-3}{4}$ are coplanar and also find their point of interse ctio and equation of the plane containing these lines.

Given lines are

$$\frac{x-1}{2} = \frac{y-2}{3} = \frac{z-3}{4} \quad \text{——} \quad ①$$

$$\frac{x-2}{3} = \frac{y-3}{4} = \frac{z-4}{5} \quad \text{——} \quad ②$$

Dr's of the line (1) are $(l_1, m_1, n_1) = (2, 3, 4)$

The point on the line $(x_1, y_1, z_1) = (1, 2, 3)$

Dr's of the line (2) are $(l_2, m_2, n_2) = (3, 4, 5)$

The point on the line $(x_2, y_2, z_2) = (2, 3, 4)$

$$\begin{vmatrix} x_1 - x_2 & y_1 - y_2 & z_1 - z_1 \\ l_1 & m_1 & n_1 \\ l_2 & m_2 & n_2 \end{vmatrix} = 0$$

$$\begin{vmatrix} 1-2 & 2-3 & 3-4 \\ 2 & 3 & 4 \\ 3 & 4 & 5 \end{vmatrix} = \begin{vmatrix} -1 & -1 & -1 \\ 2 & 3 & 4 \\ 3 & 4 & 5 \end{vmatrix}$$

$-1(\cancel{3\times5} = -1(15-16) + 1(10-12) - 1(8-9)$

$= -1(-1) + 1(-2) - 1(-1)$

$= 1 - 2 + 1$

$= 0$

Given lines are coplanar.

$\frac{l_1}{l_2} = \frac{2}{3}$; $\frac{m_1}{m_2} = \frac{3}{4}$; $\frac{n_1}{n_2} = \frac{4}{5}$

Since $\frac{l_1}{l_2} \neq \frac{m_1}{m_2} \neq \frac{n_1}{n_2}$ the given lines are not parallel

Hence,

the given lines are intersecting

1) ⇒ $\frac{x-1}{2} = \frac{y-2}{3} = \frac{z-3}{4} = r$ (say)

$\frac{x-1}{2} = r \Rightarrow x-1 = 2r = x = 2r+1$

$\frac{y-2}{3} = r \Rightarrow y-2 = 3r \Rightarrow y = 3r+2$

$\frac{z-3}{4} = r \Rightarrow z-3 = 4r \Rightarrow z = 4r+3$

Any point on the line (1) $P(x,y,z) = (2r+1, 3r+2, 4r+3)$

2) ⇒ $\frac{x-2}{3} = \frac{y-3}{4} = \frac{z-4}{5} = t$ (say)

$x-2 = 3t \Rightarrow x = 3t+2$

$y-3 = 4t \Rightarrow y = 4t+3$

$z-4 = 5t \Rightarrow z = 5t+4$

Any point on the line (2) $Q(x,y,z) = (3t+2, 4t+3, 5t+4)$

If $P = Q$.

$(2r+1, 3r+2, 4r+3) = (3t+2, 4t+3, 5t+4)$

$2r+1 = 3t+2 \Rightarrow 2r-3t-1 = 0$ ——— (3)

$3r+2 = 4t+3 \Rightarrow 3r-4t-1 = 0$ ——— (4)

$4r+3 = 5t+4 \Rightarrow 4r-5t-1 = 0$ ——— (5)

Solving (3) & (4)

$\frac{r}{3-4} = \frac{t}{-3+2} = \frac{1}{-8+9}$

$\begin{matrix} -3 & -1 & 2 & -3 \\ -4 & -1 & 3 & -4 \end{matrix}$

$\frac{r}{-1} = \frac{t}{-1} = \frac{1}{1}$

$r = -1$; $t = -1$

Substitute r & t values in (5).

$$4r - 5t - 1 = 4(-1) - 5(-1) - 1$$
$$= -4 + 5 - 1$$
$$= 0$$

The point of intersection $P = (2r+1,\ 3r+2,\ 4r$

$= (2(-1)+1,\ 3(-1)+2,\ 4$

$= (-1, -1, -1)$

The equation of the plane containing these lin

$$\begin{vmatrix} x-x_1 & y-y_1 & z-z_1 \\ l_1 & m_1 & n_1 \\ l_2 & m_2 & n_2 \end{vmatrix} = 0$$

$$\begin{vmatrix} x-1 & y-2 & z-3 \\ 2 & 3 & 4 \\ 3 & 4 & 5 \end{vmatrix} = 0$$

$$x-1(-1) - y-2(-2) + z-3(-1) = 0$$
$$-x+1+2y-4-z+3 = 0$$
$$-x+2y-z = 0 \Rightarrow x-2y+z = 0$$

(2) Show that the lines $\frac{x-1}{2} = \frac{y+1}{-3} = \frac{z+10}{8}$ & $\frac{x-4}{1} =$ are coplanar and also find their point of intersection equation of the plane containing these lines.

Given lines are $\frac{x-1}{2} = \frac{y+1}{-3} = \frac{z+10}{8}$ ——

$\frac{x-4}{1} = \frac{y+3}{-4} = \frac{z+1}{7}$ —— (

Dr's of the line (1) are $(l_1, m_1, n_1) \Rightarrow (2, -3, 8$

The point on the line $(x_1, y_1, z_1) \Rightarrow (1, -1, -10$

Dr's of the line (2) are $(l_2, m_2, n_2) = (1, -4, 7)$

The point on the line $(x_2, y_2, m_2) = (4, -3, -1)$

$$\begin{vmatrix} 1-4 & -1+3 & -10+1 \\ 2 & -3 & 8 \\ 1 & -4 & 7 \end{vmatrix}$$

$$\begin{vmatrix} -3 & 2 & -9 \\ 2 & -3 & 8 \\ 1 & -4 & 7 \end{vmatrix}$$

$$-3(11) - 2(6) - 9(-5) = -33 - 12 + 45$$

$$= 0$$

Given lines are coplanar

$\frac{l_1}{l_2} = \frac{2}{1}$; $\frac{m_1}{m_2} = \frac{-3}{-4}$; $\frac{n_1}{n_2} = \frac{8}{7}$

Since $\frac{l_1}{l_2} \neq \frac{m_1}{m_2} \neq \frac{n_1}{n_2}$ the given lines are not parallel

Hence,

the given lines are intersecting

(1) $\Rightarrow \frac{x-1}{2} = \frac{y+1}{-3} = \frac{z+10}{8} = r$ (say)

$x - 1 = 2r \Rightarrow x = 2r + 1$

$y + 1 = -3r \Rightarrow y = -3r - 1$

$z + 10 = 8r \Rightarrow z = 8r - 10$

Any point on the line (1) $P(2r+1, -3r-1, 8r-10)$

(2) $\Rightarrow \frac{x-4}{1} = \frac{y+3}{-4} = \frac{z+1}{7} = s$ (say)

$x - 4 = s \Rightarrow x = s + 4$

$y + 3 = -4s \Rightarrow y = -4s - 3$

$z + 1 = 7s \Rightarrow z = 7s - 1$

Any point on the line (2) $Q(s+4, -4s-3, 7s-1)$

If $P = Q$

$(2r+1, -3r-1, 8r-10) = (s+4, -4s-3, 7s-1)$

$2r+1 = s+4 \Rightarrow 2s-r-3=0$ —— (3)

$-3r-1 = -4s-3 \Rightarrow -3r+4s+2=0$ —— (4)

$8r-10 = 7s-1 \Rightarrow 8r-7s-9=0$ —— (5)

Solving (3) & (4)

$\frac{r}{-2+12} = \frac{s}{9-4} = \frac{1}{8-3}$

$-1 \quad -3$
$4 \quad 2$

$\frac{r}{10} = \frac{s}{5} = \frac{1}{5}$

$r=2 \; ; \quad s=1$

Substitute r & s values in (5)

$8r-7s-9 = 8(2)-7(1)-9$
$= 16-7-9=0$

The point of intersection $P = (2r+1, -3r-1, 8r-10)$
$= (2(2)+1, -3(2)-1, 8(2)-$
$= (5, -7, 6)$

The equation of the plane containing these lines is

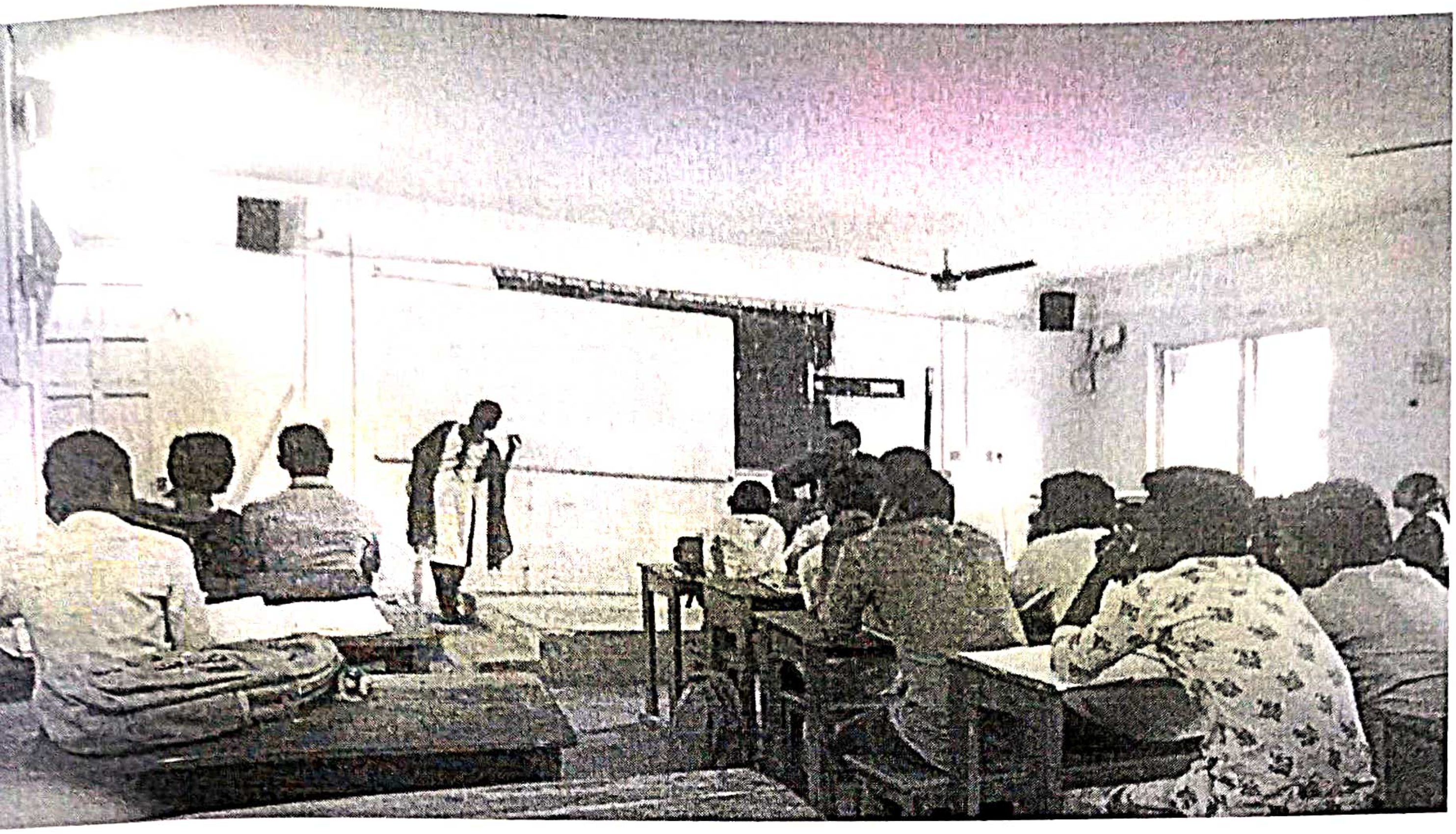
$$\begin{vmatrix} x-1 & y+1 & z+10 \\ 2 & -3 & 8 \\ 1 & -4 & 7 \end{vmatrix} = 0$$

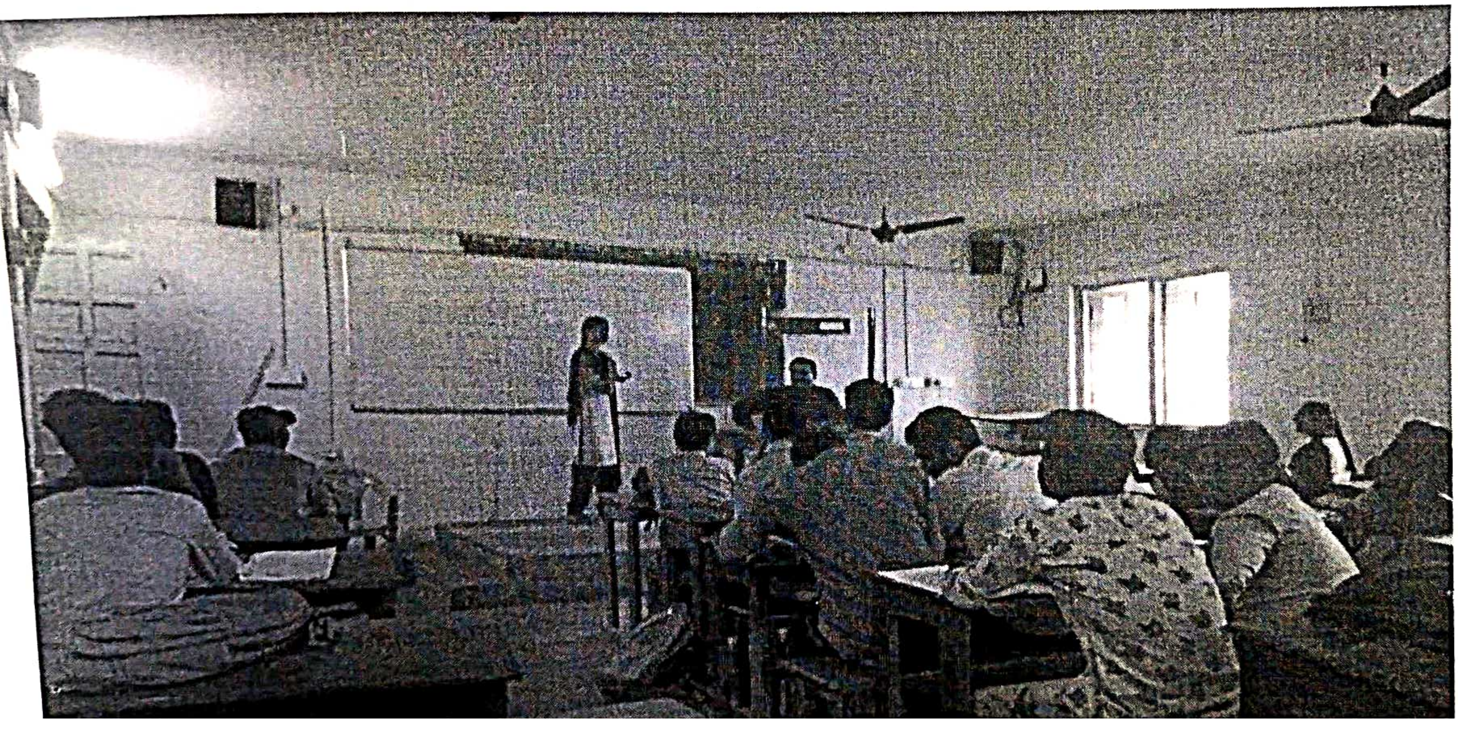
$x-1(11) - y-1(6) + z+10(-5) = 0$

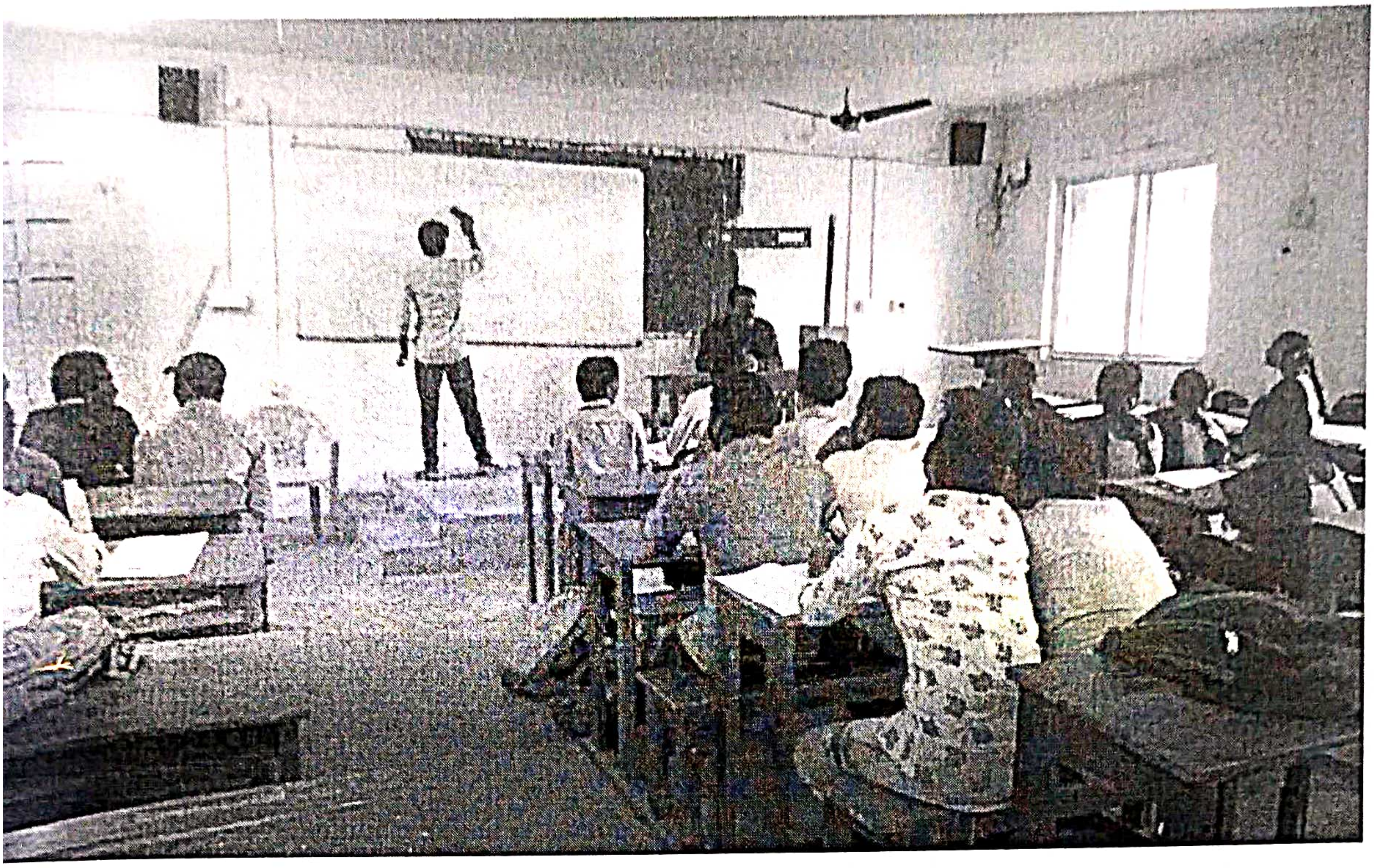
$11x-11-6y-6-5z-50=0$

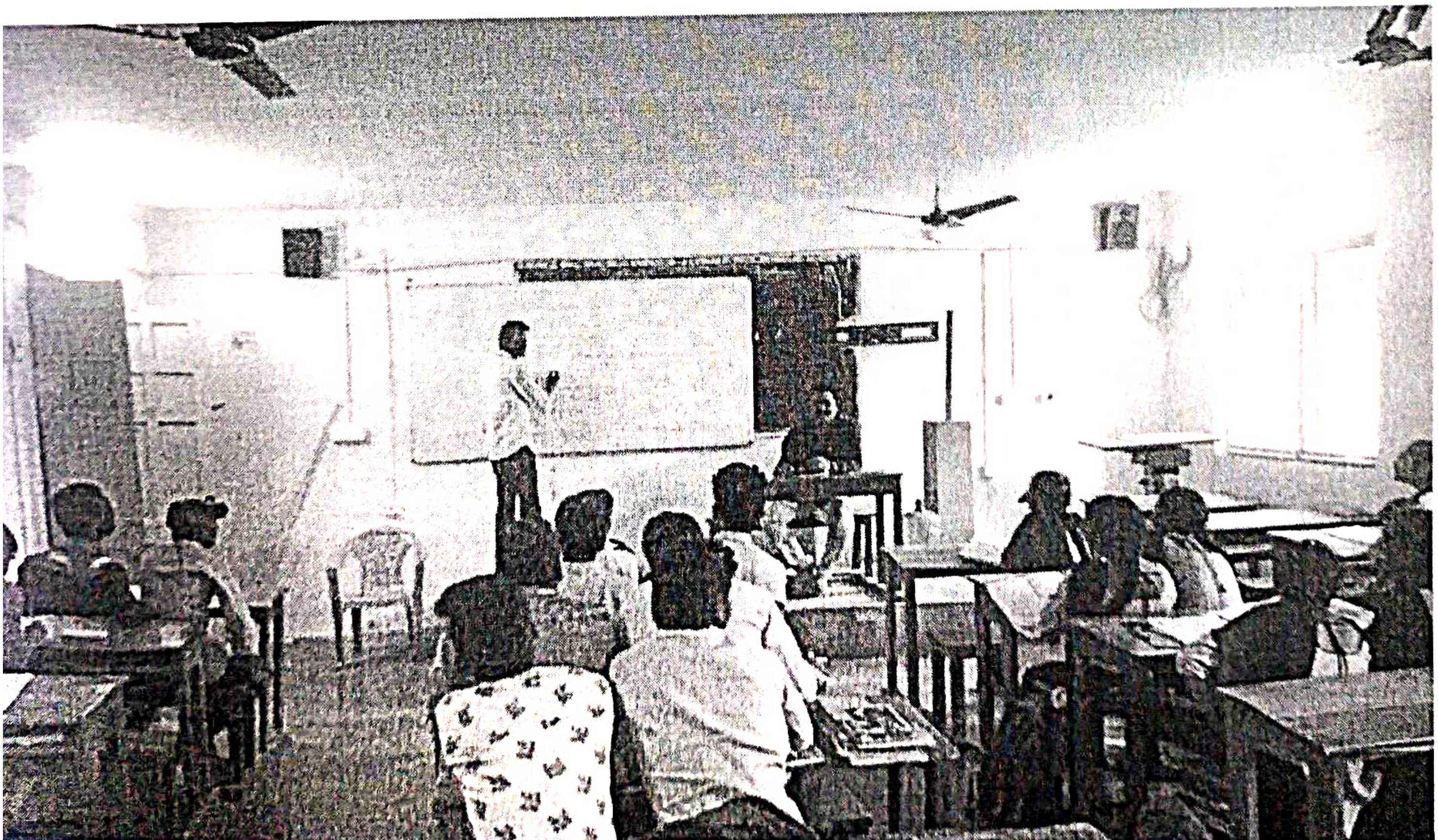
$11x-6y-5z-11-6-50=0$

$11x-6y-5z-67=0.$









TRR Government Degree College,Kandukur, SPSR Nellore District

Department of Telugu.

NAAC Accredited B

2021-2022

CLASS ROOM SEMINAR 11-4-2022.

II B.A. III Sem

S.No.	Name of the student, class, section, R.No	Seminar topic	Signature
01	I Sinduja. H.T.NO: Y201037023.	'రహస్యం' పుస్తక సమీక్ష.	I Sinduja
02	K. Pavan Kalyan. H.T.NO: Y201037023	"అన్నీ తెలుసు కాని...."	K. Pavankaly
03	D. Siva Kumari H.T. NO:	'అమ్మ వలంటు'	D Sivaku..
04	K. Samson H.T.NO: Y201037004.	'కష్టఫలి'	K.Samson
05	R. Pradeep. Y201037063.	'మంచి స్నేహం'	R.pradeep
06	A. Ganesh. Y201037051	'నమ్మకం'	A.Ganesh
07	K. Bhargavi Y201037026.	'కొరుంతి కథ'	K.Bhargavi
08	S. Naga Raju	'భార్య మంచిదే'	S.Nag..

Lecture concerned

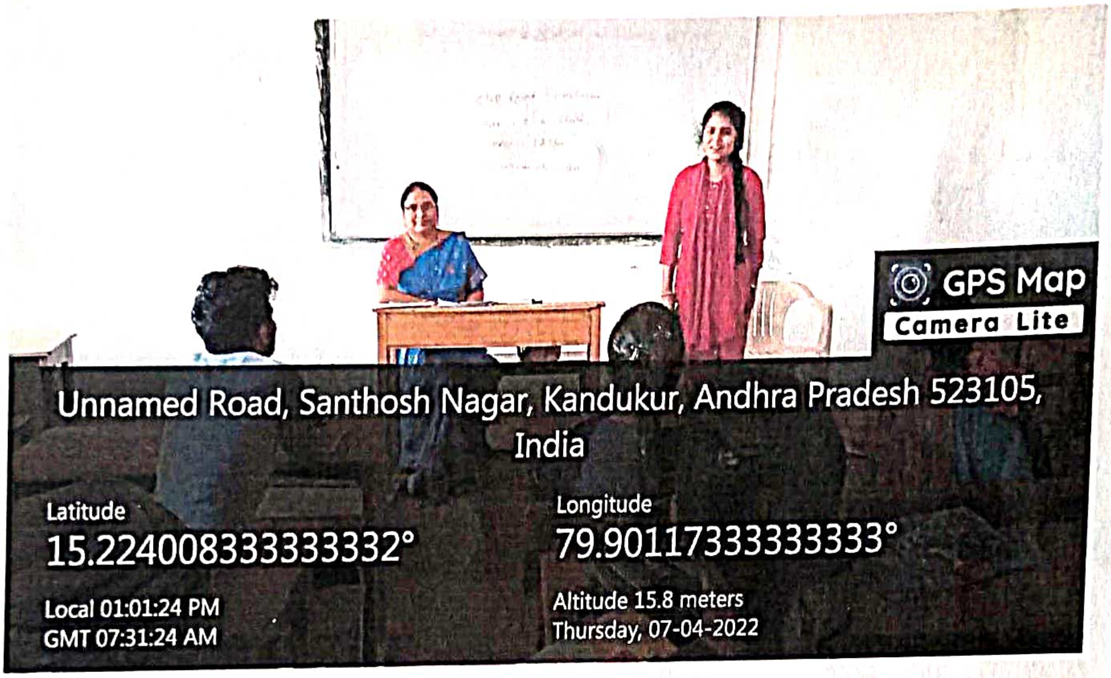
Head of the Department

PRINCIPAL

Seminar

Class :- II B.A.

Date :- 7-4-2022.



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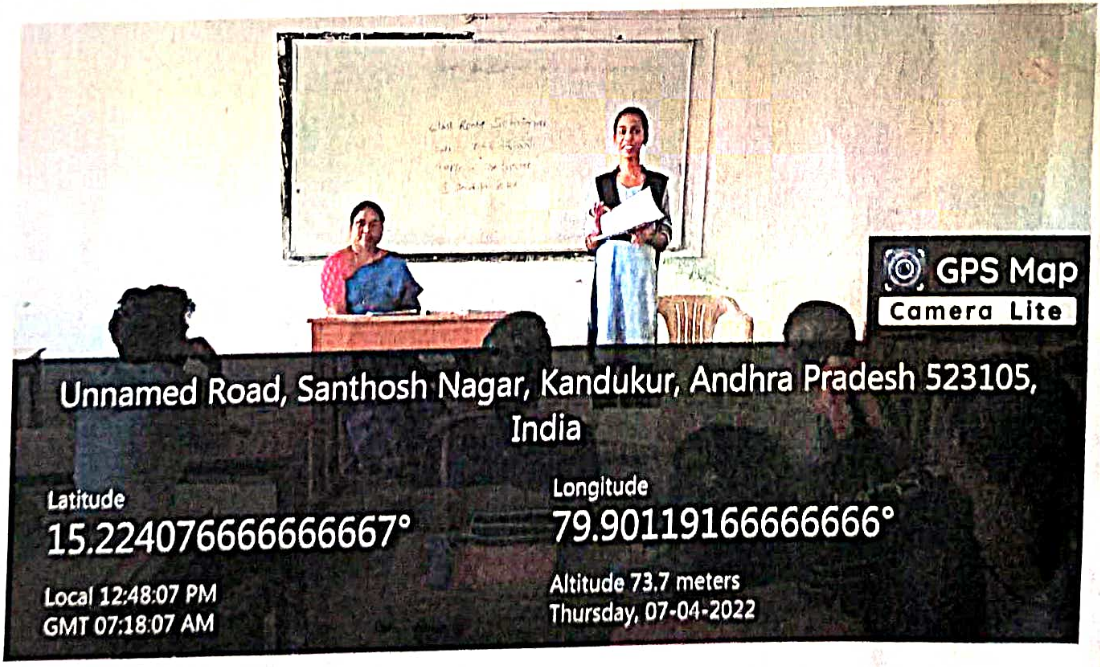
Local 01:01:24 PM
GMT 07:31:24 AM

Altitude 15.8 meters
Thursday, 07-04-2022



Unnamed Road, Santhosh Nagar, Kandukur, Andhra Pradesh 523105, India

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GMT 07:18:07 AM

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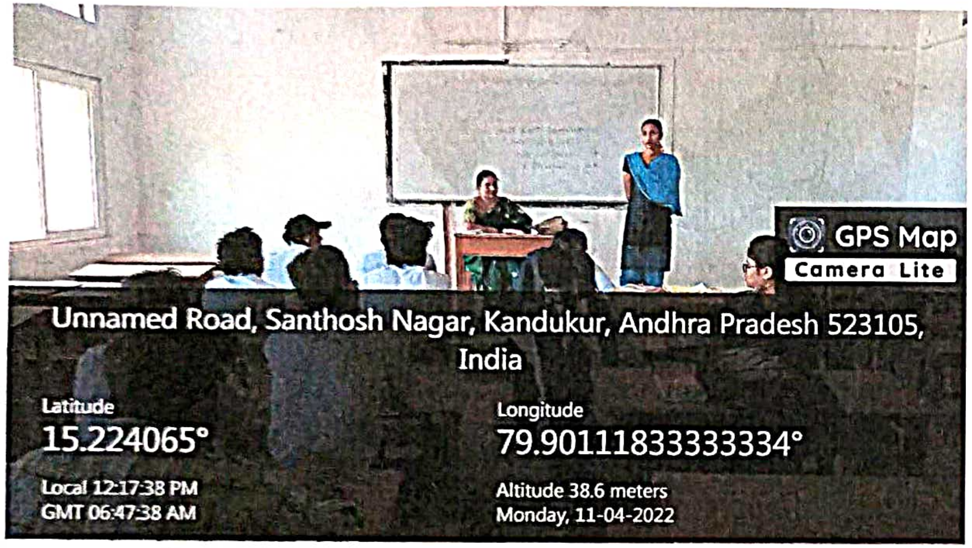
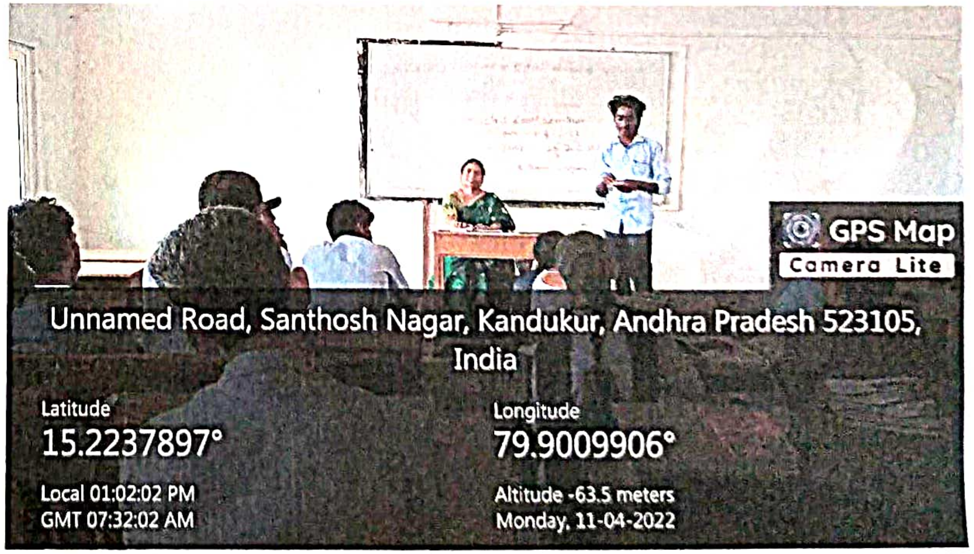
Thursday, 07-04-2022

Seminar
11-4-2022.





SEMINAR

T.T.R. Govt. DEGREE COLLEGE, KANDUKUR.

TELUGU DEPARTMENT

విద్యార్థి పేరు :- కాకాని. సాంసన్

గ్రూప్ :- B.A.II సంవత్సరం , SEM :- III (సృజనాత్మక రచన)

హాల్‌టికెట్ నెం:- Y201037004

కథ పేరు :- "కష్టేఫలి" - కథా రచన

ఫోన్ నెం. :- 7997064645.

సథస్సు సమన్వయకర్త

Dr. K. సుజాత గారు,
M.A , Ph.D.
తెలుగు అద్యాపకురాలు.

కృషిఫలి

అనగనగ ఒక జ్ఞానాపురం ఉంది. ఒక అందమైన పల్లెటూరు. ప్రకృతి అందాలతో ఎంతో ఆహ్లాదకరంగా ఉంది. ఆ ఊరిలో ఒక స్కూల్ ఉంది. అదే ఊరిలో ముగ్గురు స్నేహితులు ఉన్నారు. వారు ఆ స్కూల్లో చదువుతున్నారు. వారి పేర్లు గుణ, రవి మరియు చంద్ర. ఆ స్కూల్లో ఒక టీచర చాలు చక్కగా పాఠాలు చెప్తారు. అయితే ఈ ముగ్గురికి కొన్ని కోరికలు ఉన్నాయి. వాటిని ఆ టీచరకి చెప్తారు. అవి విని ఆ టీచర చాలా ఆనందిస్తారు. అయితే వాటిని మేము తీర్చుకోవాలి అంటే ఏమి చేయ్యాలి అని ఆ టీచరని అడుగుతారు. ఆ టీచర మీ కోరికలు నెరవేరాలి అంటే నేను ఒక మార్గం చెప్తాను. అన్నారు. ఆ ముగ్గురు విద్యార్థులు ఆ చెప్పండి టీచర అని ఎంతో ఆనందంగా అడుగుతారు. ఆ టీచర ఇలా అన్నారు. మీరు నేను ఒక ప్రదేశం చెప్తాను అక్కడి మీరు రావాలి. అంటారు వెంటనే విద్యార్థులు ఆ సరే టీచర వస్తాము అని చెప్తారు. మీరు ఆ ప్రదేశాని వచ్చేటప్పుడు మీతో పాటు ఒక చెక్కని తీసుకొని రావాలి అది కూడా 10మీ పొడవు ఒక అడుగు గల చెక్కని తీసుకొని రావాలి అంటారు. ముగ్గురు ఆ తీసుకొని వస్తాము టీచర అని సంతోషంగా చెప్తారు.

ఆ ముగ్గురు ఆ చెక్కని సిద్ధం చేసుకొని మరుసటి రోజు బయలుదేరుతారు. దారిలో ఒకరితో మాట్లాడుకుంటు ఆ చెక్కని మోసుకుంటు వస్తారు. వారి కల నెరవేరుతుంది అనుకుంటు ఊహించుకుంటు ఆనందంగా నడుచుకుంటూ ఆ ప్రదేశం వైపు ఇటు వస్తారు. అయితే రవి అనే విద్యార్థి ఎంతకు ఇంత బరువు గల చెక్క మోయాలి అని ఆలోచించుకుంటూడు. ఆ చెక్కని కొంచెం విరుస్తాడు. అది బరువు తగ్గుతుంది. వేగంగా నడుచుకుంటు వెళ్తాడు. అది చూసి గుణ మరియు చంద్ర అరే ఎంట్రా వీడు ఇంత వేగంగా వెలుతున్నాడు అనుకుంటారు. ఆశ్చర్యపోతారు. అయితే చంద్ర అనే విద్యార్థి కూడా రవి లా ఆలోచించి వాడు కూడా కొంచెం చెక్కను విరుస్తాడు వాడు కూడా వేగంగా నడుచుకుంటు వెళ్తాడు. గుణ దానిని చూసి ఎంట్రా వీళ్ళు ఇంత వేగంగా వెలుతున్నారు అని నేను ఆ చెక్కని విరచాలా! వద్దా! అనుకుంటాడు. అమ్మో టీచర చెక్కని తీసుకొని రమ్మన్నారు. ఎందుకో ఏమో అనుకుంటు అది ఎంత బరువుగా ఉన్న మోసుకుంటు నడుస్తాడు.

రవి అనే విద్యార్థి అది కొంచెం భరిస్తే ఎంత వేగంగా వెళుతున్నాను ఎంతో వేగంగా వెళ్లాలి అని కాని ఎంతో కొంచెం ఆ చెక్కని విరుస్తాడు. ఎంతో వేగంగా నడుచుతుంటు తన దారిలో నేను చాలా తెలివిగల వాడిని వాళ్ళు చూడా ఇంకా వెనకాలె ఉన్నారు వాళ్ళు ఒక పిచ్చోళ్ళు అనుకుంటు వెళ్తాడు. చంద్ర అనే విద్యార్థి అయ్యో టీచర్ చెక్కని తీసుకొని రమ్మన్నారు ఎందుకో ఏమో!! విరిచి తప్పు చేసాను అని ఎంత ఆ చెక్కని ఏమి చేయకుండా నడుచుతుంటు వెళ్తాడు. గుణ అనే విద్యార్థి ఆ చెక్క ఎంత బరువుగా ఉన్న అంతే మోసుకుంటు వస్తాడు.

రవి ఆ ప్రదేశానికి దగ్గరలో ఉంటాడు. అయితే ఆ ప్రదేశానికి వెళ్ళే దారిలో ఒక కాలువ ఉంటుంది అది చాలా పెద్దగా ఉంటుంది. రవి ఆ కాలువ దగ్గరకి వస్తాడు. అది చూసి రవికి ఏమి అర్థం కాదు. ఇది ఏంటి కాలువ వచ్చింది అని చూస్తాడు ఆ కాలువ దాటాలి అంటే 8 నుండి 10 మీ॥ గల చెక్క గాని తెప్ప గాని కావాలి. అయితే రవి తనతో చెక్కని కాలువ ఆ దరి గట్టుకు వేస్తాడు అది సరిపోదు కాలువలో పడి కొట్టుకు పోతుంది. అయితే రవి విరిచి చాలా తప్పు చేశా అనుకుంటు ఎలా అయిన ఆ చివరికి వెళ్ళాలి అని కాలువలో దూకి ఈత కొట్టుతుంటు వెళ్ళాలి అనుకుంటాడు. దూకుతాడు. తనకి ఈత రాదు. ఇక ఆ కాలువలో పడి కొట్టుకొని పోతాడు.

చంద్ర కాలువ దగ్గరకు వస్తాడు. అది చూసి చంద్ర ఆశ్చర్యపోతాడు ఏంటి ఇది కాలువ అని చూస్తాడు. అందుకు ఏమో టీచర్ చెక్క తీసుకొని రమ్మన్నారు ~~[illegible]~~ అనుకుంటు తనతో తెచ్చుకున్న చెక్కని అటువైపు గట్టుకు వేస్తాడు అది గట్టు చివర అనుకుంటుంది అది సరిగా సరిపోదు భయంగా చిన్నగా దానిపై నడుచుతుంటు వస్తాడు. అయితే తన బరువుకి ఆ చెక్క కాలువలో పడిపోతుంది వెంటనే చంద్ర కాలువ గట్టుకు దగ్గరలో ఉన్న రాయి మీదకు దూకుతాడు. చంద్ర కాలుకి కొంచెం దెబ్బ తగులుతుంది. చంద్ర ఏమి చెయ్యాలో ఆ రాయి మీద కూర్చుంటాడు

గుణ ఆ కాలువ దగ్గరకు వస్తాడు ఆ కాలువను చూసి అయ్యో అనుకుంటాడు. టీచర్ ఎందుకోనేమో చెక్కలు తీసుకొని రమ్మన్నారు అని అనుకుంటాడు. అంత బరువుగా ఉన్న దానిని ఎలా చెయుతుందా తీసుకొని వచ్చాడు. ఇంత బరువుగా ఉన్న కష్టపడి తీసుకొని వచ్చాను అనుకొని టీచర్ మాట విని మంచి పని చేశా అనుకొని. నా కష్టం ఫలించింది అనుకుంటూ ఆనందంగా ఆ చెక్కలు కాలువ గట్టుకు వేసి నడుచుకుంటూ గట్టు చివరికి వస్తాడు. అంతలో ఆక్కడ చంద్ర ఉంటాడు. చంద్రని పైకి లాగి తీసుకొని వస్తాడు. చంద్ర తనను హత్తుకొని బాధపడుతాడు. ఇద్దరు కలసి టీచర్ చెప్పిన ప్రదేశాని దగ్గరకు వెళ్తారు. టీచర్ కూడిస్తాడు. వారు టీచర్ని చూసి ఎంతో ఆప్యాయతతో టీచర్ దగ్గరకు వెళ్తారు. టీచర్ వాళ్ళని చూసి ఆనందిస్తాడు. ఏవి చెక్కలు అని అడుగుతారు. వారు ఏమో మాకంటే ముందు వేగంగా వచ్చాడు అని చెప్తారు,

టీచర్ వాళ్ళ కారణం అడిగి అడుగుతారు. చంద్ర టీచర్ నాకు ఒక ప్రభుత్వ ఉద్యోగం కావాలి అంటాడు. సరే అని తనకు ప్రభుత్వంకు గల మార్గం చెప్తాడు. తనకి కుటుంబాన్ని బాగా చూసుకోవాలి అని అంటాడు చంద్రకి ప్రభుత్వ ఉద్యోగం వస్తుంది. చంద్ర ఆనందంగా తన కుటుంబాన్ని బాగా చూసుకుంటాడు. గుణ తన కలను వివరిస్తాడు. గురు టీచర్ నేను ఒక పేద విద్యార్థిని ఒక పేద కుటుంబం నుండి వచ్చాను నా కల నాలాంటి విద్యార్థులను చదివించాలి. అందుకు నాకు చాలా ~~అం~~ డబ్బు కావాలి అని ఒక పెద్ద వ్యాపారవేత్తని కావాలి అంటాడు. టీచర్ ఆ మాట విని ఆనందంతో సరే అంటాడు. దానికి కావాల్సిన మార్గం చెప్తాడు. గుణ కల నెరవేరుతుంది.

"మన జీవితం మన చేతిలో ఉంది"
"మన జీవితం మన ఆలోచనలో ఉంది"
"మన కష్టం మనకు ఏదో రూపంలో ఉపయోగపడుతుంది"

" కష్టేఫలి."