

VAAGDEVI DEGREE & PG COLLEGE



DIST: HANUMAKONDA, TELANGANA STATE-506001

(Affiliated to Kakatiya University, Warangal)

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website: www.vaagdevicolleges.com



Metric 2.5.1 :

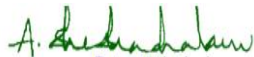
Mechanism of internal assessment is transparent and robust in terms of frequency and mode

Response:

The College follows a fair and transparent internal assessment process and robust mechanism to enhance the quality of higher education and make available various facilities to students to achieve good results in the examination. The college gives freedom to the departments to select the method of evaluation to bring the variety in the method of internal examination and assessment. The continuous internal evaluation (CIE) component includes class tests, tutorials, assignments, class seminars, group discussion etc. Assessment is an integral part of teaching-learning process. With regular interactions of IQAC and Heads of the Department, Examination Committee makes plan for reforms in evaluation system. The college internal evaluation process is decentralized in order to make it more transparent and objective. As per the academic calendar the college prepare tentative schedule and displayed on the notice board, website and on the whatsapp group of the classes. The college adjust academic calendar by including internal assessments, value added courses and university examination. The college takes extra efforts for slow and advanced learners and they are assessed by different methods. The examination committee monitors and conducts internal examination in the college. The college has mechanism for transparent and robust internal assessment as below.

- The transparency is maintained by sharing answer sheet with students and the grievances of the students about assessment if any are addressed.
- Class tests semester wise with Multiple Choice question pattern are conducted by the subject departments.
- The class seminar is organized by every department.
- Question papers are set as per the university examination pattern.
- Students are provided question bank which is maintained in the college library.
- The subject teacher monitors students field work, visit report and project works.
- Oral examination based on practical work is carried out for the assessment.

- The college has various skill oriented certificate courses which are also assessed by the respective subjects.
- To encourage students to participate in NSS, extra marks are assigned who successfully completes two years of NSS camp. Outstanding performance in cultural activities and sports competition is conducted by the college.
- The attendance record is a part of internal assessment maintained by each subject department.
- Group discussion, essay competition, and quizzes are conducted and assessed by the college.
- Marks of various internal examinations are told and discussed in the classroom.


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 Vaagde Deen Dayal College
 Kishanpura, Hanamkonda



VAAGDEVI DEGREE & PG COLLEGE



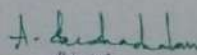
DEPARTMENT OF CHEMISTRY
ASSIGNMENT RECORD UG & PG
2022 – 2023
UG - ASSIGNMENTS
V – SEM

Class : BSc
Group : BZC
Subject : Chemistry
Topic : 1) Electronic Transition
Date : November 2022 – 2023

HALLTICKET_NO	Student Name	Signature
086213304	BANDARI NIKHITHA	Nikhitha
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086213308	BHUKTA NEHRU	Nehru
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086213312	BOCHHU MADHAVAN	Madhavan
086213313	BODA RAVINDRA BHARATHI	Bharathi
086213314	BOINI PRIYANKA	Priyanka
086213316	BOLLA NAGARAJ	Nagaraj
086213318	BURRA BHAVANI	Bhavani
086213319	BUSA GANESH	Ganesh
086213323	DEVANARJUNA RANJITH	Ranjith
086213324	DONTHAGANI ARCHANA	Archana
086213326	GADDA ANIL	Anil
086213330	GOLI SAITEJA	Saiteja
086213332	JARUPULA KEERTHANA	Keerthana
086213334	KANUGULA CHANDANA	Chandana
086213336	KOTHAKONDA SWATHI	Swathi
086213339	LAKIDE PRATHIBHA	Prathibha
086213340	LAVUIYA SANTHOSH	Santhosh
086213344	MARAVENI ASHINAYA	Ashinaya
086213347	MOLLU SRAVANI	Sravani
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086213354	NARRA ABHISHEK	Abhishek
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086213368	RAYARAKULA PRASHANTH	Prashanth
086213369	ROUTHU MANISHA	Manisha
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086213376	THALLA RUSHIKESH	Rushikesh
086213377	THANGALLAPALLY POOJITHA	Poojitha
086213378	THEEGALA SHIRISHA	Shirisha
086213381	VALSA SAI NIVEDI	Nivedi
086213384	VISAMPALLY EMEEMA	Emeema
086213388	BADAVATH GANESH	Ganesh
086213391	MACHA AJAY	Ajay


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Electronic Transitions:-

The electrons in organic molecules may be involved, in bonding as strong σ -bonds. Weak π -bonds can present in the non-bonding form [lone pairs]. A variety of absorptions for electronic transitions within a molecule is thus possible, depending upon the nature of bonding. Absorption of UV-visible radiation, therefore elevates these different types of electrons to excited antibonding orbitals.

Types of Electronic Transitions:-

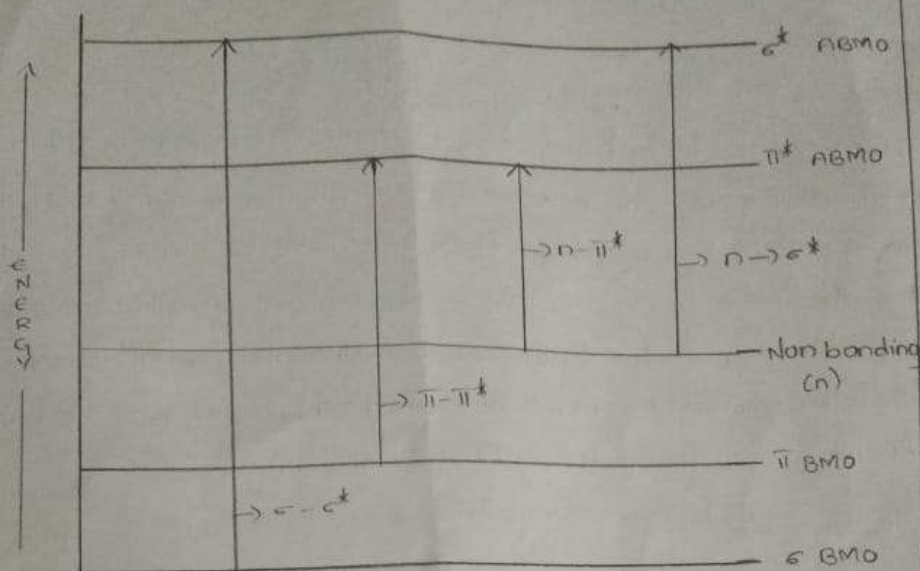
Electronic transitions classified into two types i.e:-

- 1) Transitions between bonding and Antibonding orbitals.
- 2) Transitions between non-bonding atomic orbitals and Antibonding orbitals.

1) Transitions between bonding and Antibonding orbitals:-

These are of two types i.e:-

- i) $\sigma \rightarrow \sigma^*$
- ii) $\pi \rightarrow \pi^*$

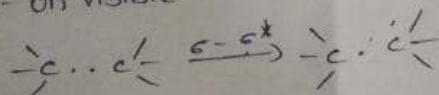


Electronic transitions

i) $\sigma \rightarrow \sigma^*$:-

In these transitions electrons, transferred, from σ bonding molecular orbitals to σ^* Antibonding molecular orbitals. It's a high energy process because there is a large energy difference between σ and σ^* molecular orbitals, σ bonds are in general very strong

ex:- un visible



$S = (2s+1)$ Alkane

$s=0$

$S = (2 \times 0 + 1)$

$S=1$ singlet

$S = (2s+1)$

$S = (2 \times 1 + 1)$

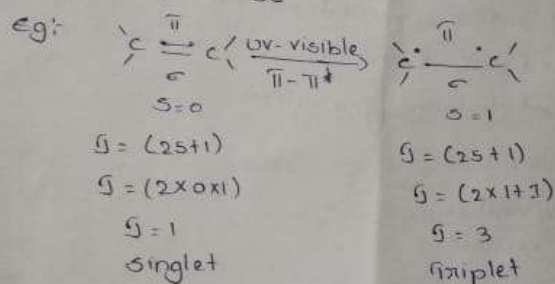
$S=3$ triplet

$s=1$

In $\sigma \rightarrow \sigma^*$ electronic transition spin multiplicity of σ electrons undergoes inversion (singlet state to triplet state).
 $\rightarrow \sigma \rightarrow \sigma^*$ electronic transitions takes place in saturated hydrocarbons.

ii) $\pi \rightarrow \pi^*$:-

In these transitions electrons transferred from π -bonding, molecular orbital to π^* -Anti-bonding molecular orbitals. This type of transitions occur in unsaturated centres of molecules, i.e. in compounds containing double or triple bonds, and also in Aromatics. The excitation of π -electrons requires smaller energy.



2) Electronic transitions between non bonding atomic orbitals and Antibonding molecular orbitals :-

Orbitals :-

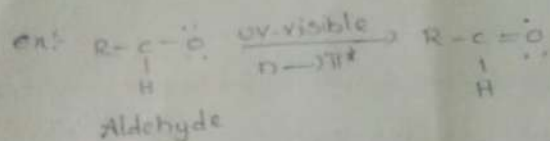
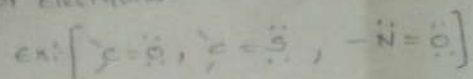
These are of two types i.e. :-

i) $n \rightarrow \pi^*$ ii) $n \rightarrow \sigma^*$.

i) $n \rightarrow \pi^*$:-

In these transitions electrons transferred from non-bonding atomic orbitals to the antibonding π -molecular orbital (π^*). This transition requires least amount of energy at

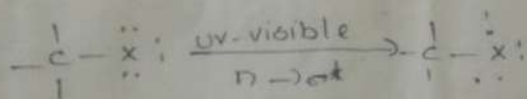
-the transitions it's takes place in compounds containing double bonds involving hetero atoms bearing unshared pair of electrons.



ii) $\text{n} \rightarrow \sigma^*$:

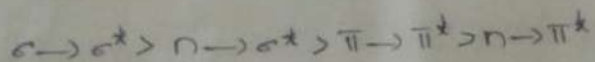
In these transitions electrons transferred from non-bonding atomic orbitals to Antibonding σ -molecular orbital (σ^*). It's takes place in saturated compounds containing one hetero atom with unshared pair of electrons. It's required less energy than $\sigma \rightarrow \sigma^*$ electronic transition.

ex:-



Alkyl halides

energy order of electronic transitions:-



Class : BSc

Group : BtBC

Subject : Chemistry

Topic : 1) Types of chromatography

Date : November 2022 – 2023

HALLTICKET_NO	Student Name	Signature
086213101	AKULA TEJASWINI	Tejaswini
086213102	CHETTI CHANDUPRIYA	Chandu
086213103	HAJRA KHATOON	Khatoon
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086213107	MANUPATI MOSES	Moses
086213108	MANUPATI SATHWIK TEJA	Sathwik
086213109	MORE ANURAG	Anurag
086213110	MUNIGALA PRANAY	Pranay
086213111	MUNIGANTI VISHNU PRIYA	Vishnu
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086213115	PITTALA ANNAMALAH	Annamalai
086213117	RAM SANDEEP	Sandeep
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086213119	THUMMALA SRAVAN KUMAR	Sraavan
086213120	VELPULA BHARATH	Bharath
086213121	ALUVALA SUCHARITHA	Sucharitha
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* Classification of chromatography :-

=> Chromatography is classified into mainly two types:-

1) Based upon phases

2) Based upon principles

1) Based upon phases:- Based upon phase that is stationary and mobile phase chromatography is classified into mainly ~~two~~ four types.

1) solid - liquid chromatography technique

2) solid - gas chromatography technique

3) liquid - liquid chromatography technique

4) liquid - gas chromatography technique

1) solid - liquid chromatography technique:-

In this chromatography technique stationary phase is solid and mobile phase is liquid.

=> It is also called as absorption chromatography

Ex:- Thin layer chromatography, Ion exchange chromatography, column chromatography.

2) solid - gas chromatography technique:-

In this chromatography technique stationary phase is solid and mobile phase is gas.

=> It is also called as absorption chromatography.

Ex:- gas solid chromatography.

3] Liquid - liquid

In this chromatography technique both the stationary and mobile phase are liquid.

=> It is also called as partition chromatography.

Ex:- paper chromatography

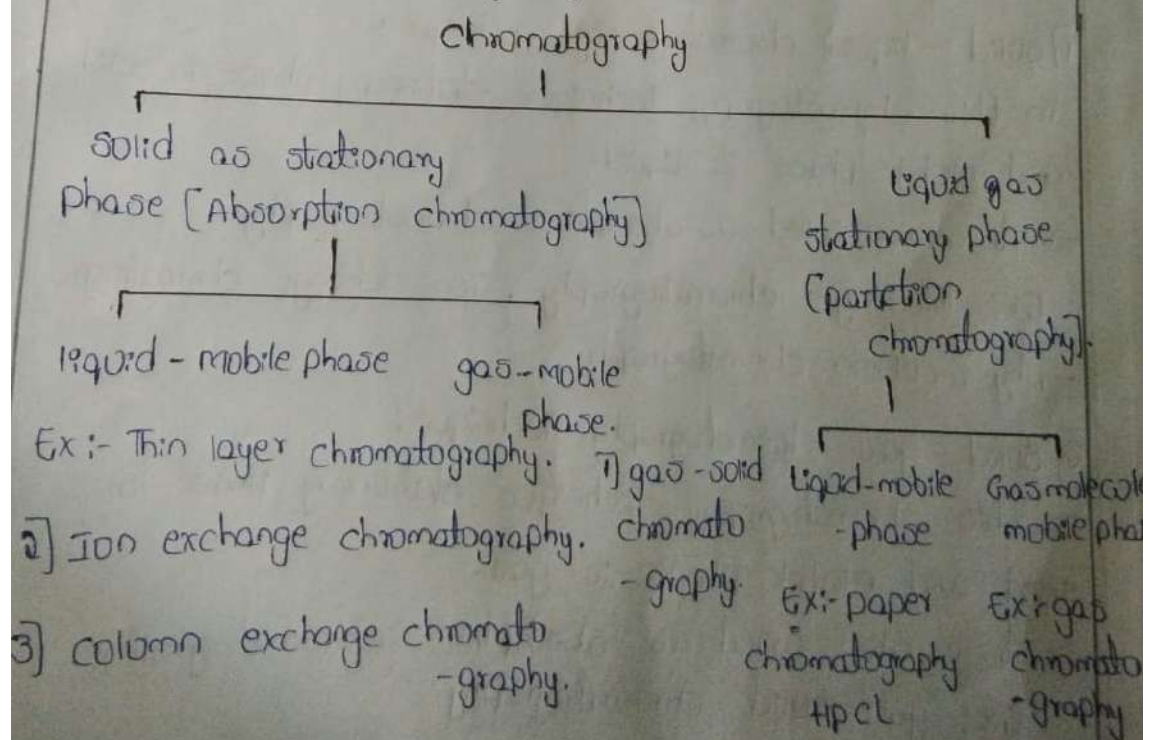
2] HPLC

4] Liquid - gas

In this chromatography technique stationary phase is liquid and mobile phase is gas.

=> It is also called as partition chromatography

Ex:- Gas chromatography



Class : BSc

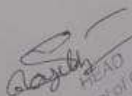
Group : BtZC

Subject : Chemistry

Topic : 1) Finger print region

Date : December 2022 – 2023

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086213851	ADHRASANDI SRIKALA	Srikala
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086213857	CHATLA ARUN KUMAR	Arun
086213858	DEVA SANDEEP	Sandeep
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086213866	KOLA NIKHILA	Nikhila
086213867	MANDA RAJKUMAR	Rajkumar
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086213869	MOHAMMAD SHAMINA	Shamina
086213870	MONDEDLA KRISHNAVENI	Krishnaveni
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086213873	PODILA ANJALIAH	Anjali
086213874	RACHAPALLY SHARANYA	Sharanya
086213875	RAMAGONI MADHURI	Madhuri
086213876	RAMANCHA ROHINI	Rohini
086213877	SANGI SUNNY	Sunny
086213878	SUNKE ANUSHA	Anusha
086213879	THOTA RAJKUMAR	Rajkumar
086213880	MUDAVATH SWATHI	Swathi


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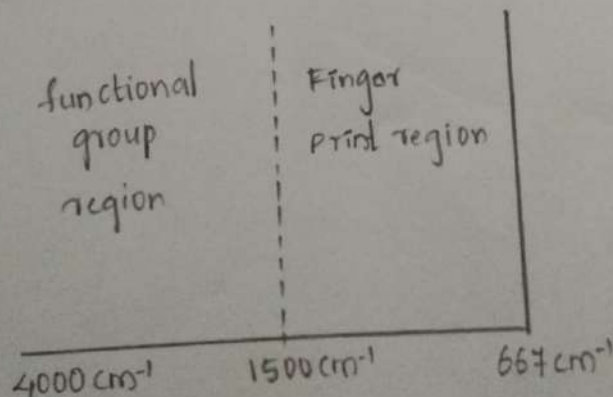

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* Finger Print Region:

In electromagnetic radiation 667 cm^{-1} to 4000 cm^{-1} is called as IR region as. It is classified into two parts, i.e.,

- i) Finger print region ($667 - 1500\text{ cm}^{-1}$)
- ii) Functional group region ($1500 - 4000\text{ cm}^{-1}$).

With the help of finger print region we can determine the identity of organic compounds because in functional group region when the compounds are having same functional group and different structure also gave to same spectrum. so it's not differentiated from each other. But its spectra recorded by using fingerprint region IR radiation then it gives different types of spectra although it containing same functional groups. so it is differentiated from each other with the help of IR spectra of compounds.



Class : BSc

Group : BtMiC

Subject : Chemistry

Topic : 1) Chromophore and Auxochrome

Date : December 2022 – 2023

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086213004	CHERRIPALLY ANJALI	Anjali
086213005	EEKA POOJA	Pooja
086213006	GADDAM RAVALI	Ravali
086213007	JAMPALA VISHAL	Vishal
086213008	KAPIL EEKA	Ekka
086213009	KEERTHI UJWALA	Ujwala
086213010	KONDA KEERTHANA	Keethana
086213011	KOYATI NANDINI	Nandini
086213012	KOYYALA PRANAY	Pranay
086213013	MADURI ROHITH KUMAR	Rohith
086213014	MANKALA SHANTH KUMAR	Shanth
086213015	MEKALA ROHITH	Rohith
086213016	MOHAMMED RABIYA	Rabiya
086213017	MOTHUKURI PREETHI	Preethi
086213018	MUDDAMALA SWARANI	Swarani
086213019	MUNUKUNTALA AMULYA	Amulya
086213020	NANNUTA HARSHITHA	Harshitha
086213021	PIDATALA MOUNIKA	Mounika
086213022	RACHA LOHITHA	Lohitha
086213023	SANA TABASSUM	Tabassum
086213024	SINGU BHAVYA SRI	Bhavya
086213025	VANGALA VIKRAM	Vikram
086213026	VENNA SRIRAM	Sriram
086213027	YERRAM SRI KAVYA	Srikavya



Dr.
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Due to presence of chromophores compound absorbed the light from visible region and its appeared as the coloured compounds to the human eye.

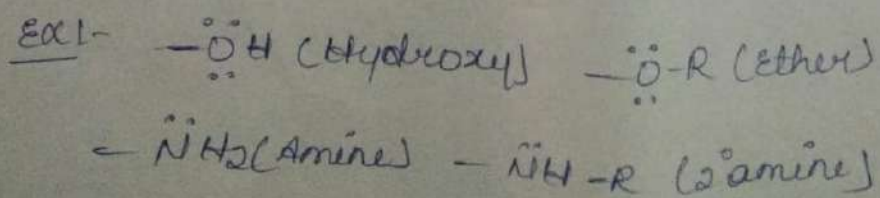
There are two types of chromophores

a) chromophores in which the group contains π -elements and they undergo $\pi \rightarrow \pi^*$ transition.

b) chromophores which contains both π -electrons and non-bonding electron (n) undergo two types of transition $\pi \rightarrow \pi^*$ and $n \rightarrow \pi^*$.

2) Auxochromes:-

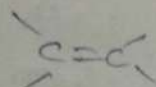
An auxochrome can be defined as any group which doesnot itself act as a chromophore but whose presence brings about a shift of the absorption band towards the longer wave length.



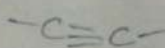
chromophore :-

A chromophore is defined as any system which is responsible for imparting color to the compound

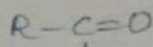
Ex 1 -



Alkene



Alkyne

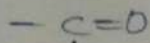


H

Aldehyde



Nitro



Acid

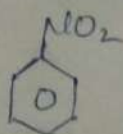


AZO

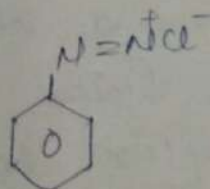


Amide

Nitro compounds are generally yellow in color due to the presence of $-\text{NO}_2$ group



Nitro benzene
chromophore -
(Nitro group)



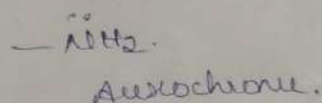
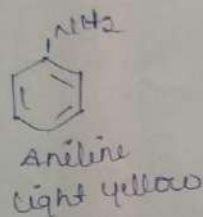
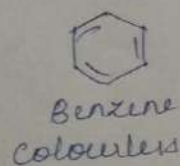
Benzene diazonium
chloride
chromophore - AZO group.

conjugation
region

The Effect of the auxochromes is due to its ability to extend the conjugation of a chromophore by the sharing of non-bonding electrons. Thus, a new chromophore results when has a different value of the absorption maximum as well as the extinction coefficient.

Ex-1-

Benzene shows an absorption maximum at 255 nm where as Aniline absorbs at 280 nm. Hence amino group is an auxochrome.



ASSIGNMENT RECORD

2022 – 2023

DEPARTMENT OF CHEMISTRY

ASSIGNMENT

III – SEM

Class : BSc

Group : NDZC

Subject : Chemistry

Topic : 1) Similarities between Lanthanides and actinides

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086223155	CHEPURI DEEKSHITHA	Deekshitha
086223156	CHIRRA SHIVA KUMAR	Shiva
086223157	ENUKAMETLA SAITEJASWINI	Sai
086223158	GUNDA ANKITHA SREE	Ankitha
086223159	HEBA TABASSUM	Tabassum
086223160	KASHI RASHMIKA	Rashmika
086223161	KAUSAR FATIMA	Fatima
086223162	KURIMINDLA SIRICHANDANA	Sirichandana
086223163	MAZEEN FARHA	Farha
086223164	NEHA AFREEN	Afreen
086223165	PASUNOORI VIJAYALAXMI	Vijayalaxmi
086223166	POLUDASARI NIHARIKA	Niharika
086223167	POLUDASARI PRAVALIKA	Pravalika
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086223169	THUMUGANTI APARNA	Aparna
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086213365	PULICHERU BHARGAVI	Bhargavi


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Date : November 2022 – 2

Similarities between Lanthanides & Actinides:-

- Both series show +3 oxidation state
- In both the series f-orbitals are being progressively filled.
- Both show the decrease of atomic size & with increase atomic number [Lanthanide contraction] & [Actinide contraction].
- Due to f-f transition the absorption spectra of the elements of both the series / elements give sharp line like band spectra.
- The electronegativity value of elements of both the series are low & these elements are quite reactive.
- The nitrate, perchlorate & sulphates of the valence elements of both series are soluble.
- The carbonates & hydroxides of the valence elements of both series are soluble.
- The carbonates & hydroxides of trivalent of both the series are insoluble.
- Members of both the series show ion exchange behaviour.

Lanthanides	Actinides.
→ The chemistry of all members of this series is very similar due to large energy difference in 4f and 5d sublevel. → They have high binding energy. → These elements exhibit a maximum oxidation state of +4. → The paramagnetic properties shown by the elements can be easily explained. → Their complex formation tendency is not very high. These complexes with bidentate ligand are not known. → Except PM, the elements of the series are non-radioactive.	→ Considerable variation is observed in these elements. This is due to very small energy difference of 5f and 6d sublevel. → Their binding energy is low. → Due to lower binding energies these elements show higher oxidation states as well such as +4, +5, +6, +7 oxidation state. → The paramagnetic properties of the elements are different to explain. → They show a very high tendency to form complexes. They form complexes with π-bonding ligand such as thio-ethers. → The elements of this series are radioactive.

Class : BSc

Group : BtBC

Subject : Chemistry

Topic : 1) Heat capacity of a system

Date : November 2022 – 2023

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086223104	DHAKUR SOORAJ	Sooraj
086223105	DOGGALA RANJITH OFIR	Ranjith
086223106	DONTHURI SHASHANK	Shashank
086223107	GAJJELA ARAVIND	Aravind
086223108	GUDIKANDULA NAGARAJU	Nagaraju
086223109	JANAGANI PRASANNA	Prasanna
086223110	KANNOJU SHIREESHA	Shireesha
086223111	KANNOJU VIVEKANANDA	Vivekananda
086223112	KATKURI AKASH REDDY	Akash
086223113	LAKKARSU SRAVANI	Sravani
086223114	MEKALA SATHWIK	Sathwik
086223115	NAGANABOINA SRIVARSHA	Srivarsha
086223116	PARUPATI ABHIRAM REDDY	Abhiram Reddy
086223117	PENTA POOJITHA	Poojitha
086223118	VAVILLA CHANDANA	Chandana


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Heat Capacity of a system (or) a gas

Heat capacity of a system is defined as the amount of heat absorbed by it. In raising its temperature by 1° .

If Q calories is the heat absorbed by a system and the temperature rises from T_1 K to T_2 K then heat capacity (C) of the system or gas is given by the expression.

$$C = \frac{Q}{T_2 - T_1}$$

$$C = \frac{Q}{\Delta T} \quad \text{--- (1)}$$

Heat capacity for 1 gram of a substance are known as specific heat while heat capacities for 1 mole of gas are known as molar heat capacity and designated with ' c '.

If Q is the small amount of heat absorbed by a system and temperature of the system increases by a small amount then the heat capacity of the system is given.

$$C = \frac{\partial Q}{\partial T} \quad c = \frac{\partial q}{\partial T} \quad \text{--- (2)}$$

Thus, heat capacity may be defined as the ratio of the amount of heat absorbed to the rise in temperature.

Units: $\text{cal deg}^{-1} \text{mol}^{-1}$

$\text{cal K}^{-1} \text{mol}^{-1}$

Q is not a state function and depends upon the path.

$\therefore$ Heat capacity is also not a state function.

Hence it is considered as path function.

ASSIGNMENT RECORD

2022 – 2023

DEPARTMENT OF CHEMISTRY

ASSIGNMENT

I – SEM

Class : BSc

Group : BtMiC

Subject : Chemistry

Topic : 1) Hybridization

Date : November 2022 – 2023

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086233013	MANDA RAVEENA	Raveena
086233014	MANTHENA ROHITHA	Rohitha
086233015	MEDIPELLY SOUMYA	Soumya
086233016	MEENA RINKU	Rinku
086233017	MEKALA VINITHA	Vinitha
086233018	SETTY SATHWIKHA	Sathwikha
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- Hybridisation

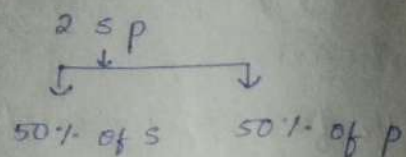
- Intermixing of atomic orbitals nearly same energy to form hybrid orbitals of equal energy and identical shape
- it is proposed by Pauling to explain shapes and bond angles of molecules which can it be explained by VBT

Types:-

- 1) sp
- 2) sp^2
- 3) sp^3
- 4) sp^3d
- 5) sp^3d^2
- 6) sp^3d^2

- sp hybridisation:-

- One s orbital & one p orbital $\Rightarrow$ 2 sp hybrid orbitals

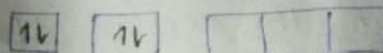


Bond angle = 180°

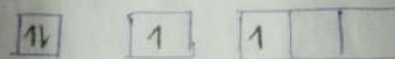
shape = linear shape

Ex: BeCl_2 (Beryllium chloride)

Ground state of Be = $1s^2 2s^2 2p^0$

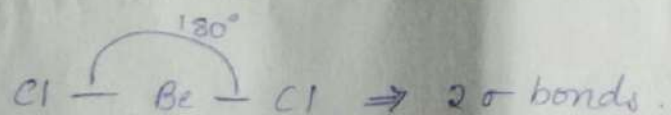
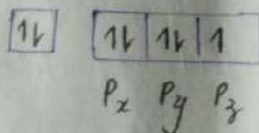


Excited state of Be = $1s^2 2s^2 2p^1$



Sp-hybridisation

Cl = 17 = $[\text{Ne}] 3s^2 3p^5$



Defination:-

One 's' orbital & one 'p' orbital of nearly same energy, intermixing to form two sp hybrid orbitals is called sp hybridisation.

- The bond angle between with these is 180° and each sp hybrid orbital has 50% 's' character and 50% of 'p' character. The valency of Beryllium should be zero but it exhibits valency "two" in its compounds.

- To explain this Beryllium atom is considered to be present in the excited state, when one of the 2s electron enter into the $2p_z$ orbital.

- This is explained by sp hybridisation of Beryllium.

- The two orbitals are linear shape and at an angle 180° .

- These sp hybrid orbitals of Beryllium overlap two $2p_s$ & two $2p_z$ orbitals of chlorine to give two σ bonds in beryllium chloride orbitals (BeCl_2).

- sp^2 hybridisation

Ex: BCl_3 (Boron trichloride)

Ground state B = $1s^2 2s^2 2p^1$

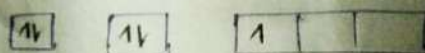
Excited state B = $1s^2 2s^1 2p^2$

- One s orbital and two p orbitals of nearly same energy intermixes to form $3sp^2$ hybrid orbitals is called sp^2 hybridisation

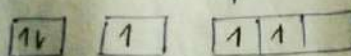
- The bond angle between them is 120° & each sp hybrid orbital has 33.3% "s" character and 66.6% "p" character

ex: BCl_3 (Boron trichloride)

Ground state of B = $1s^2 2s^2 2p^1$



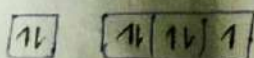
Excited state of B = $1s^2 2s^1 2p^2$



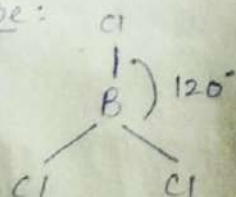
$p_x p_y p_z$

sp^2 hybridisation

Cl = 17 = $[Ne] 3s^2 3p^5$



Shape:



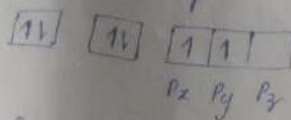
$\Rightarrow$ "3 bonds"

Sp³ hybridisation:

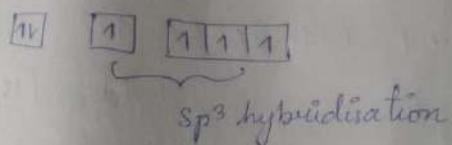
One s orbital and three p orbitals of nearly same energy intermix to form 4 sp³ hybrid orbitals in sp³ hybridisation.

Ex: CH₄ - Methane

Ground state of C = 1s² 2s² 2p²



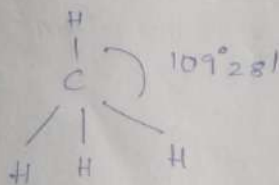
Excited state of C = 1s² 2s¹ 2p³



- H = 1s¹ [H = hydrogen]



Shape:



- 4 σ bonds
- Bond angle 109°28'
- Tetrahedral shape
- In sp³ hybridisation the 's' character has 25% & 'p' character has 75%.

Class : BSc

Group : BtZC

Subject : Chemistry

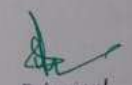
Topic : 1) Hunsdiecker reaction
2) Postulates of VESPER theory

Date : November 2022 – 2023

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086233171	ADEPU SWATHI	Swathi
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086233173	CHENNA RAGHU	Raghu
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086233189	AISHA SULTANA	Sulanya


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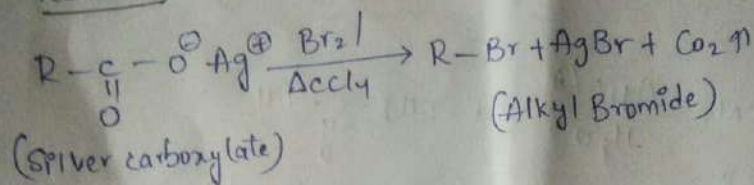



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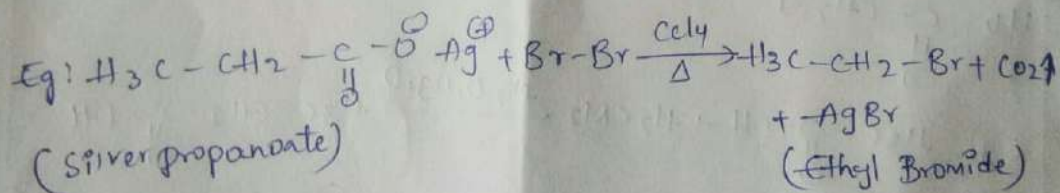
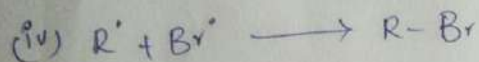
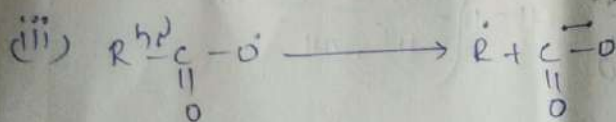
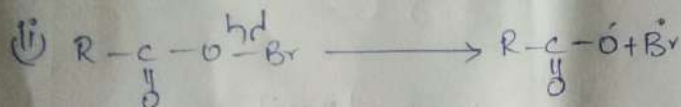
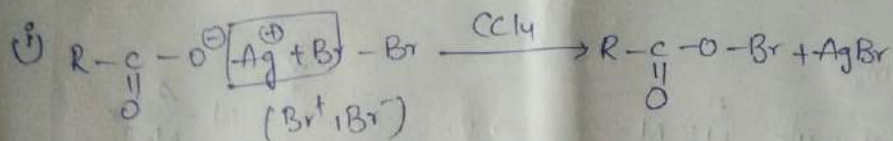
Hunsdiecker Reaction

Silver Carboxylates are Reacted with Bromine in presence of CCl_4 solvent to form Alkyl Bromides

Reaction



Mechanism:

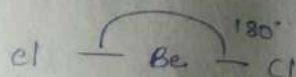
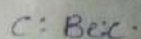


molecule. Schrödinger & Paul proposed this theory.

- Postulates of VSEPR theory:

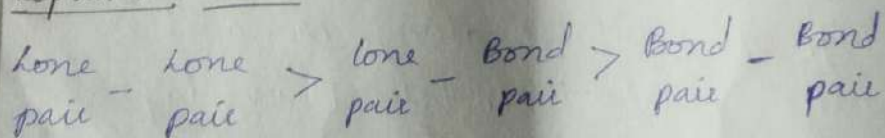
• The shape of a molecule depends upon number of valency shell electron pair around the central atom.

Ex: BeCl_2 - Beryllium chloride



- Number of bond pair electron and number of lone pair electron are depends on the central atom.
- Electron pair arranged around the central atom in such a way in which repulsion between them is minimum.
- Electron pair in which ~~bonding~~ in bonding are, called bond pairs which are not involved in bonding are called lone pairs.

Repulsion order:



- lone pair occupies more space than bond pair (lone pair attracted by single atom and bond pair attracted by two atoms)

Class : BSc

Group : BtZC

Subject : Chemistry

Topic : 1) Types of Silicones
2) Applications of silicones

Date : November 2022 – 2023

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086233305	DENKANI NITHIN	Nithin
086233306	DONGRE SREEJA	Sreeja
086233307	GADDAM KAVYA	Kavya
086233308	GANGADHARI AKSHAYA	Akshaya
086233309	KOUTAM SUCHITHRA	Suchithra
086233310	KUDURUPAKA RAMYA	Ramyas
086233311	MALLELA MEGHAMALA	Megha
086233312	MAMIDI NITHIN	Nithin
086233313	MOTHUKURI SADHIKA	Sadhika
086233314	MUNIGADAPA NANDINI	Nandini
086233315	MUNIGALA DEEPIKA	Deepika
086233316	NEERATI BUNNY	Bunny
086233317	POLU AKHILA	Akhila
086233318	PRATHAPANENI NAVYA	Navya
086233319	PURUSHOTHAM SUVARTHA	Suvarttha
086233320	RAJABOINA AKHILA	Akhila
086233321	RODDA ABHINAYA	Abhinaya
086233322	SATHU RAMYA SRI	Ramyas
086233323	SIDDABOINA SHYAM SUNDER	Shyam
086233324	THOTA ANJALI	Anjali
086233325	UPPULA SRUTHI	Sruthi
086233326	VANGA SANDEEP	Sandeep
086233327	VOLLALA SUSHMA	Sushma
086233328	BANOTH HEMANTH	Hemant
086233329	BHUKYA RAKESH	Rakesh
086233330	POTHA NIKITHA	Nikitha


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SILICONES

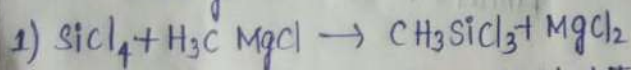
- Silicones are polymers of organometallic compound containing a network of alternating silicone and oxygen atom.
- They are polymeric compounds having Si-O-Si linkage

PREPARATION

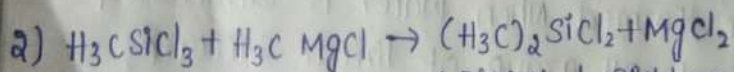
1. By use of Grignard reagent

- SiCl_4 [silane] react with Grignard reagent and form 3 types of silanes

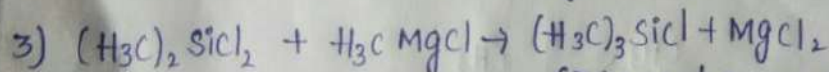
- Mono Methyl Trichloro silane
- Di Methyl Dichloro silane
- Tri Methyl Monochloro silane



(Mono Methyl Trichloro silanes)



(Di Methyl Dichloro silane)



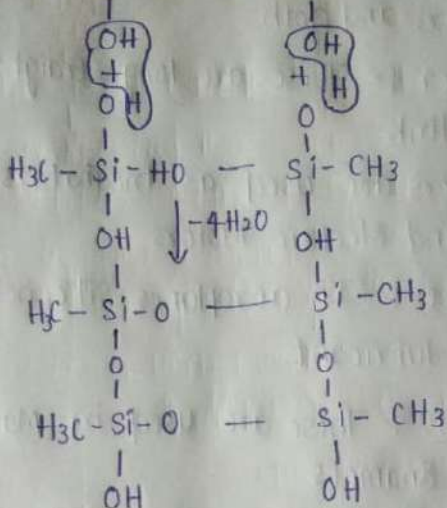
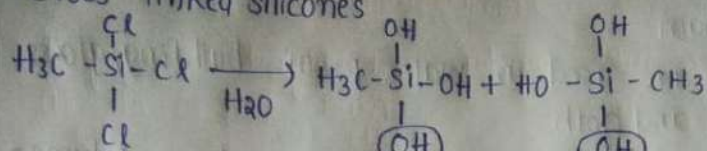
(Tri Methyl Mono chloro silane)

Silicones are classified into 3 types

- 1) Linear Silicones
- 2) Cyclic silicones
- 3) Cross linked silicones

Cross linked Silicones

When alkyl Trichloro silane undergoes hydrolysis, the obtained product undergoes condensation and form cross linked silicones



Properties of Silicones

- Silicones are thermally stable and better than organic compounds
- They are having hardness & inertness in them
- The Elastic nature of silicone rubber is greater than that of Natural Rubber
- Silicones can with stand high temperature and sunlight

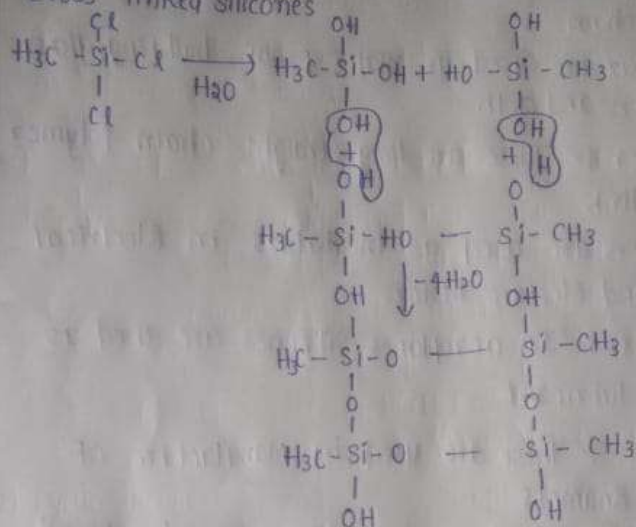
Applications of Silicones

4 types of applications are there

1. Silicone fluids
2. Silicone Rubber
3. Silicone greases
4. Silicone resins

Cross linked Silicones

When alkyl Trichloro silane undergoes hydrolysis, the obtained product undergoes condensation and form cross linked silicones



Properties of Silicones

- Silicones are thermally stable and better than organic compounds
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Applications of Silicones

4 types of applications are there

1. Silicone fluids
2. Silicone Rubber
3. Silicone greases
4. Silicone resins

1. Silicone fluids :- Simple straight chain Silicones containing 20-500 units are used to prepare silicone fluids.
 - They are used as water repellants as they contain organic side chain
 - Silicone vapours are used in water proof building, glass material, papers and cloth
2. Silicone Rubber :- These are long straight chain polymers with cross link.
 - Silicone Rubbers are used as insulators in Electrical instruments and Electric Motors
3. Silicone greases :- In aeroplanes Silicones are used as greases or lubricant
4. Silicone resins :- These are used in manufacture of paints and Enamels.
 - Silicones are also used as Non-stick coating for pans & Moulds for car tyres.



VAAGDEVI DEGREE & PG COLLEGE



DEPARTMENT OF CHEMISTRY

ASSIGNMENT RECORD

2022 – 2023

PG - ASSIGNMENTS

Class : M.Sc

Subject : Chemistry

Group : Organic chemistry

Topic : 1) Explain about electron transfer reaction of

i) inner sphere mechanism.

ii) outer sphere mechanism.

Date : November 2022 – 2023

M.Sc III SEM (CHEMISTRY) NOMINAL ROLLS - 2022

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22117-S-0625	KANDULA RANJITH	Ranjith
22117-S-0626	TIPLE SRIKANTH	Srikanth
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22117-S-0628	BANOTHU CHANDANA TEJA	Chandana Teja
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22117-S-0631	GAJJALAKONDA DINESH	Dinesh
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22117-S-0633	MD.NAZIYAFARHEEN	Naziyafarheen
22117-S-0634	BOORA ARCHANA	Archana
22117-S-0635	NAGOTU PREMSAI	Prem Sai
22117-S-0636	M.DILEEP	Dileep

Electron Transfer Reactions of Complexes (Redox Reactions):-

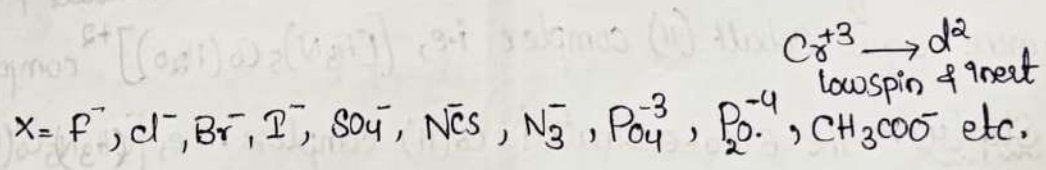
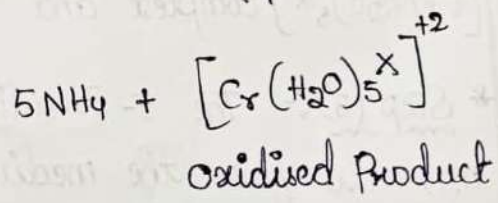
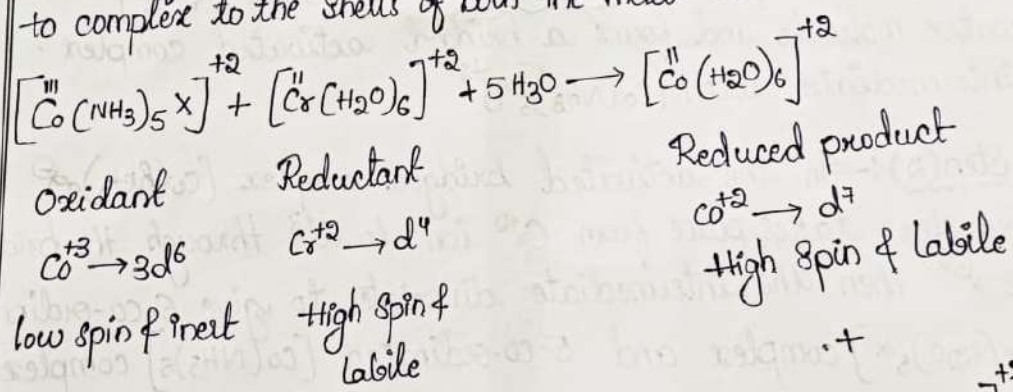
→ These are the reactions in which the transfer of an electron from one atom to other occurs and hence oxidation states of same atoms changes based on mechanism.

⇒ These reactions mainly classified into 2 types

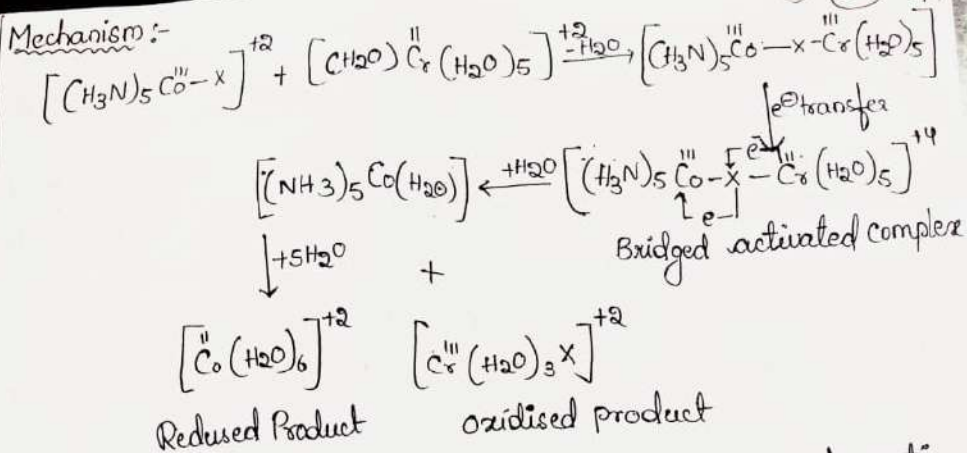
1) Inner sphere mechanism / Atom (or) Group transfer mechanism (or) Bridge activated complex mechanism.

2) Outer sphere mechanism / Direct e^- transfer / Tunneling mechanism

1) Inner Sphere Mechanism :- These are the reactions in which e^- transfer takes place through a bridged group common to complex to the shells of both the metal ions.



Mechanism:-



⇒ In the inner sphere mechanism proceeds through formation of bridged intermediate followed by dissociation and e^- transfer.

* Step (1):- The Hexa aquo chromium (II) $\left[\text{Cr}^{\text{II}}(\text{H}_2\text{O})_6 \right]^{+2}$ loses a water molecule and forms a bridged activated complex intermediate with $\left[\text{Co}(\text{NH}_3)_5\text{X} \right]^{+2}$.

* Step (2):- In the activated bridged complex the e^- transfer takes place from Cr^{+2} ion to Co^{+3} through the bridge i.e. X. Then the intermediate dissociates to give 6-co-ordinated $\left[\text{Cr}(\text{H}_2\text{O})_5\text{X} \right]$ complex and 5-co-ordinated $\left[\text{Co}(\text{NH}_3)_5 \right]$ complex.

* Step (3):- The 5-Co-ordinated Co^{+2} complex reacts with H_2O molecule from the medium and forms 6-co-ordinated penta amine aquo Cobalt (II) complex i.e., $\left[(\text{H}_3\text{N})_5\text{Co}(\text{H}_2\text{O}) \right]^{+2}$ complex.

* Step (4):- The 6-co-ordinated $\text{Co}(\text{II})$ complex i.e., $\left[(\text{H}_3\text{N})_5\text{Co}(\text{H}_2\text{O}) \right]^{+2}$ is unstable. hence, it undergoes complete aquation to give

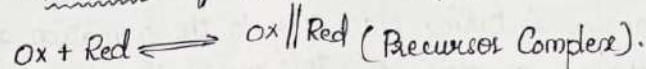
2) Outer Sphere Mechanism

→ These are the reactions in which the co-ordination sphere of ions undergoing redox reaction is not altered.

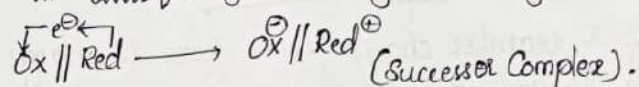
⇒ These reactions occur by direct e^- transfer.

* Generalised Mechanism:

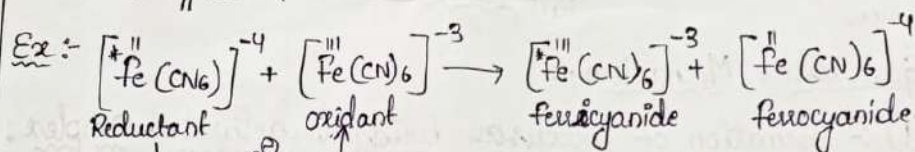
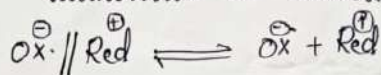
Step (1): Formation of Precursor complex:



Step (2): e^- transfer by rearrangement to give Successor complex:

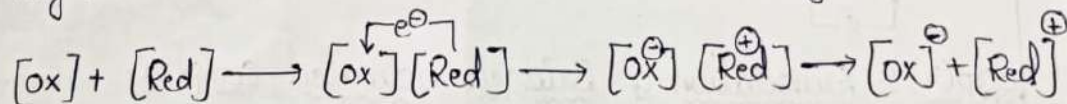
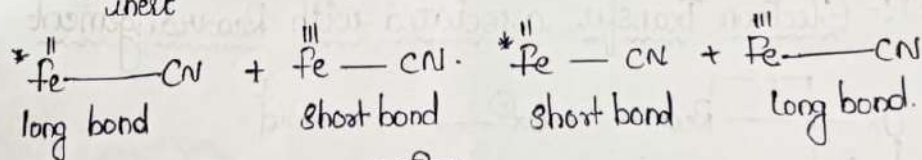


Step (3): Dissociation of Successor complex to form Products:



ferrocyanide
ferricyanide

low spin & inert
low spin & inert



→ In this mechanism, e^- is jumping from one co-ordination sphere to another co-ordination sphere. Hence, it is called as "Outer-sphere mechanism".

ASSIGNMENT RECORD

2022 – 2023

DEPARTMENT OF CHEMISTRY

ASSIGNMENT

VI – SEM

Class : BSc

Group : FsZC

Subject : Chemistry

Topic : 1) Explain about diseases

2) Explain about drug terminology

Date : February 2022 – 2023

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1Q. Explain about diseases?

A. Disease:-- Any condition that impairs the normal functioning of a body or disfunctioning of normal body process is called a disease.

The endogenous biochemical imbalance in humans, animals and plants is called as a disease.

Types of diseases:-

1. Common diseases:-- Diseases which arise due to changes in climate, place season, envt personal hygiene are called as common diseases.

Eg:- fever, cold, body pains, headache, heart diseases

Air borne diseases:- Diseases caused by pathogen, transmitted through air are termed as "Air borne diseases".

Eg:- Small Pox, Chicken Pox - varicella zoster virus, cold - Rhinovirus, TB - Bacterial infection.

Water borne diseases:- Disease caused by pathogens transmitted through water are termed as "water borne disease".

Eg:- Typhoid - Salmonella Typhi bacteria.

Cholera - E-coli (Escherichia coli)

Jaundice - Hepatitis - A.

Insect borne disease: Disease caused by insect borne like housefly, bugs, are called insect borne disease.

-eg:- Malaria - Anaphilis mosquitoes.
dengue fever - Aedes mosquitoes.
chicken gunia - chicken gunia virus.

Hereditary disease: These are genetic diseases caused by genetic mutation that are hereditary.

-eg:- Down syndrome - A genetic chromosome disorder.
Bald head.

- Haemophilia.

Sickle cell anaemia (Damage of blood cells).

Communicable disease: Those disease spread from person to person are considered as communicable diseases.

→ They may caused by micro organism such as bacteria, viruses, parasites, directly or indirectly from one person to another.

→ Some are transmitted through bites from insects while other are caused by ingesting contaminated food or water.

-eg:- Tuberculosis.

Non-Communicable disease: These are non-transmissible, that means they do not spread from one to another person.

-eg:- Diabetic - Auto immune disease, Cancer etc.

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Class : BSc

Group : NDZC

Subject : Chemistry

Topic : 1) Nomenclature of drug
2) Classification of drug

Date : March 2022 – 2023

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Q. Explain about drug nomenclature and explain about
trivial names of drugs?

A. Nomenclature of drugs :- Names of drugs can be studied
under three headings :-

a. Chemical names :- All drugs are chemical substances
they have chemical names, depending upon their molecular
structure. During drug development & production, chemical
names are used. The chemical names are complex
or general use.

Eg :- Acetyl salicylic acid or 2-acetoxy benzoic acid is
familiar as aspirin.

b. Generic names :- After the production during chemical
trials and marketing generic names or non-proprietary
names will be given importance for early use of non-
technical person.

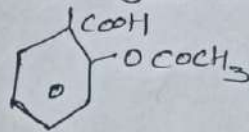
Eg :- Acetyl salicylic acid called as 'aspirin'. These
names will be approved by various higher organisations such
as Food & drug administration (FDA) etc.

Trade name or Trade mark

Commercial developers from pharmaceutical industry
select the names depending on drug grouping activity,
ease to recall drug action, the company. Eg. These trade name

Given by the company should get acceptance from the same name unless permission is granted.

eg: Aspirin is sold as "wisprin"



Chemical name : 2-acetoxybenzoic acid.

Trivial name : Acetyl salicylic acid (ASA)

Generic name : Aspirin.

Trade name : Bufferin, Ecatin, Empirin.

Classification of drugs :

Explain about classification of drugs?

Drugs are classified into two groups.

- i) with respect to the chemical structure.
- ii) With respect to the therapeutic action.

Chemical Structure:-

There is a relation b/w chemical structure and biological activity. Organic functional group in the molecule are responsible for drug activity. Properties like governing drug action at action site, ability to rxn site, dissociation constant, isokron and bio-isoterism. The drug action at active site may be structurally specific & non-specific. Non specific drug biological characteristics depends on physical properties like solubility, vapour pressure, distribution, co-efficient, pH levels etc.

→ After administration of drug, the drug reaches to the active site, after that the factors like absorption, distribution, bio-transformation and excretion occurs.

ii) Therapeutic action:-

a. Chemotherapeutic agents:- Drugs used to fight against the pathogenic organism and are called chemotherapeutic drugs or agents.

→ During the treatment of infections, diseases, drug will destroy the parasite without damaging the host tissue.

b. Pharmacodynamic agents:- The drugs which alter the biochemistry of the body to regulate the body are pharmacodynamic agents.

→ These drugs react selectively on the target of the system of body.

eg:- Central nervous system (CNS), Cardiovascular system.

c. Vitamins & Hormones:-

The supplements are essential to the well being of body. Vitamins are indispensable micro nutrients that organisms cannot produce by themselves. Small quantities of vitamins are required for proper function of metabolism. Hormones serve as chemical messengers from one part of an organism to another.

Vitamins:- Total 13 types of vitamins are essential. These are categorised into two groups as one is water soluble and another is fat soluble.

Class : BSc

Group : BtMiC

Subject : Chemistry

Topic : 1) ADME (Absorption, Distribution, Metabolism and
excretion)

Date : April 2022 – 2023

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50. Explain about ADME [Absorption, Distribution, Metabolism and Excretion] of drugs?

a. Absorption:- Movement of a drug from the site of administration to blood stream is called "Absorption" of drug. Generally most of the drugs are absorbed in small intestine. But drugs spend much less time here due to small surface cross this bi-layer to reach its site. Acidic drug absorbed in intestine.

Routes of administration of drugs;

The way of taking drug into body system is called drug administration.

1. Orally drugs:- Majority of drugs are taken orally. Oral medicines take around 30 min to enter into blood stream and show its activity. It is most common method.

Ex:- Tablets, capsules, Syrup, chewable tablets etc.

2. Parenteral drugs:- The drugs are directly injected into the body is called as "parental drugs". These drugs are oral administration of drugs.

a. Intra muscular (IM):- Drugs which are injected into muscles are called as Intra muscular drugs.

b. Intravenous (IV):- Drugs which injected into veins are called Intravenous drugs.

c. Subcutaneous drugs:- Drugs which are injected under skin are called Subcutaneous drugs.

Ex:- Insulin.

3. Topical / Cutaneous drugs :- Drugs applied to skin are called topical drugs.

Ex:- Creams, ointments, Sprays etc.

Due to chemical prepⁿ drugs are absorbed either by "Passive diffusion" or "active transport".

Passive diffusion :- This is facilitated by the concⁿ gradient across the membrane the drug moves from higher concⁿ to lower concⁿ. It doesn't require an extra carrier or extra energy.

- Water soluble agents use aqueous pores in the membrane.

- Lipid (fat) soluble diffuse directly through membrane.

Active transport :- In this process specific carriers and ATP are required. The specific carrier protein carry the drug that closely resemble the structure of the naturally occurring metabolites specific for carrier. It is capable of transporting from low to high concⁿ compartments.

Distribution :- Movement of drug to various part of body is called distribution.

→ The distribution ability depends on strength of the body.

→ Protein bonding. If the bond is strong the distribution capacity is less.

All these vitamins come from the food. On the other hand, body can produce Vitamin D & K.

Water Soluble vitamins:- These vitamins get dissolved in water easily. In circulation, it will be utilized by the body and excreted from urinary output. As these vitamins cannot be stored in the body, consumption of them on a daily basis.

eg:- Vitamin A, B, C etc.

Fat Soluble vitamins:- Fat soluble vitamins get dissolved in lipids mainly. These vitamins get absorbed in the intestinal. Body can store fat soluble vitamins.

In moderate limits, they help the body in different metabolism, but when they exceed the limits, causes hyper-vitaminosis, and when they lack, causes hypo-vitaminosis. This can be caused by fat soluble vitamins only.

Hormones:- Hormones are body chemical messengers. They travel in the blood stream to tissue or organs. They work slowly over time and effect many different processes including growth & development, metabolism, produced by glands in multi-cellular organisms that are transported by the circulation system to target distant organs to regulate physiology and behaviour.
eg:- Testosterone, Insulin, Estrogen, oxytocin etc.

→ Polar drugs are easily distributed than non polar drugs.

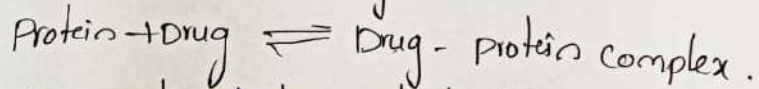
Distribution of drugs from blood stream to effecter site:

When the drug is administered either by intra vascular injection or by absorption from any of the various extra cellular sites, drug is subjected to different distribution process to lower the plasma concentration.

Drug distribution is reversible transfer of a drug b/w one compartment to another.

Plasma-protein binding:- The binding of drugs to plasma protein is reversible compounds can bind to albumin α -1-acid glycoprotein (AGP) or lipoprotein in blood.

→ Binding to plasma protein can effect the pharmacokinetics of the drug substances.



Only the part of drug which is unbound to protein can show activity.

Ex: warfarin drug is used to prevent clotting of blood. which is 97% bound to protein, remaining 3% unbound drugs shown action.

→ If the bonding b/w drug and plasma protein is less, then drug can easily travel or diffuse into the cell.

Factors affecting drug distribution:-

1. Blood-flow rate.
2. Molecule size.
3. Polarity.
4. Binding to Serum Proteins forming Complex.

Metabolism:-

Initial drug consumed will be converted into new compound and this process is called as "Metabolism". Compounds begin to break down as soon as they enter the body. Drug Metabolism is carried out in liver by redox enzymes for majority of small molecule. Metabolites are pharmacologically inert.

i) Phase-I - rxn (Non-synthetic (or) Non-conjugative Phase):-

Drug transforms by the process of oxidation reduction and hydrolysis in presence of enzymes. The change in drug molecule generally result in introduction of a functional group molecule or the exposure of a new functional group molecule. Small polar functional group like -OH, NH_2 , -SH, -COOH etc. are either added or unmasked on the lipid soluble drug, so that the resulting product may undergo Phase-I reaction.

→ Phase-I rxn results in activation, change or inactivation of drug.

ii) Phase II reaction (Synthetic phase):

This is the last step in detoxification reaction and almost always results in loss of biological activity of a compound this may be process by one or more of phase one rxn this involves conjugation of a functional group of molecules with hydrophilic endogenous substances.

"Formation of conjugation". These are formed with endogenous substances such as carbohydrates and amino acids with drugs or its metabolites formed in phase-I rxn. In this phase rxn attachment of small polar endogenous molecules like gluconic acid, Sulphate methyl, amino acids etc. to either unchanged drugs or phase I products. These are called as "conjugates", and these are water soluble metabolites, which are readily excreted from body.

Elimination / excretion:-

Unused, Modified Metabolites and toxic remains are removed from the body by the way of excretion generally elimination is through urine or in excreta some of these compounds expelled through lungs by exhaling sweating. otherwise.

ASSIGNMENT RECORD

2022 – 2023

DEPARTMENT OF CHEMISTRY

ASSIGNMENT

IV– SEM

Class : BSc
Group : FsMiC
Subject : Chemistry
Topic : 1) Job's method
Date : February 2022 – 2023

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d) Determination of composition of complex by continuous variation method (or) JOB's method.

JOB's method :

JOB's method is used to determine the composition of a complex. Different experiment steps are involved in this process are.

- (i) Prepare ten solutions in ten different test tubes of a fixed volume of the complex.
- (ii) In each test tube different amounts of metal and ligands are to be taken.
- (iii) Let the total no. volume of the complex prepared in each of the ten solutions is 10ml.

S. NO.	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Volume of metal ion (ml).	0	1	2	3	4	5	6	7	8	9
Volume of ligand (ml)	10	9	8	7	6	5	4	3	2	1

The sum of the concentrations of the ligand (C_L) and metal (C_M) is constant.

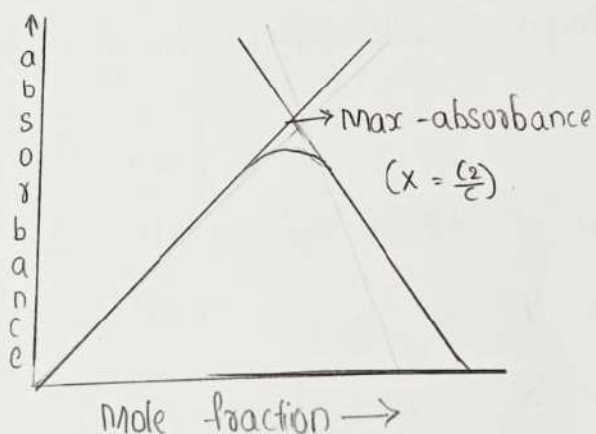
Concentration of metal ion = C_M .

Concentration of ligand = C_L .

Concentration of complex (C) = $C_L + C_M \longrightarrow (1)$

(iv) The optical density (absorbance) of each of the solutions is measured by Spectrophotometer.

(v) Values of mole-fraction of ligand are plotted against the optical density (absorbance) of Solution.



Now, if the formula of the complex is ML_n , then.

$$n = \frac{C_L}{C_M} \longrightarrow (2)$$

divide the equation (1) by 'C'.

$$\frac{C_L}{C} + \frac{C_M}{C} = \frac{C}{C}$$

$$\frac{C_L}{C} + \frac{C_M}{C} = 1 \longrightarrow (3)$$

But $\frac{C_L}{C} = x$ (mole fraction) $\rightarrow$ (4)

Substitute (4) in (3)

$$x + \frac{C_M}{C} = 1$$

$$\frac{C_M}{C} = 1 - x \rightarrow (5)$$

dividing $\frac{(4)}{(5)}$

$$\frac{\frac{C_L}{C}}{\frac{C_M}{C}} = \frac{x}{1-x}$$

$$\frac{C_L}{C_M} = \frac{x}{1-x} \rightarrow (6)$$

Acc. to equation (2) $\frac{C_L}{C_M} = n$; when written in equation (6)

$$n = \frac{x}{1-x}$$

based on 'n' value, it can be possible to determine the composition of complex.

Limitations:-

- (1) It gives unreliable results when more than one complex is formed in the system.
- (2) It is applicable when there is no change in volume on mixing the solution of the metal ion and the ligand.

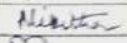
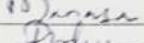
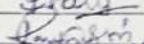
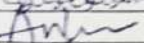
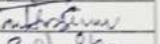
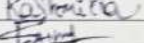
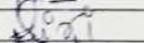
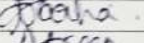
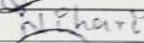
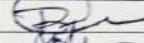
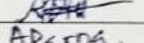
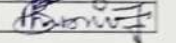
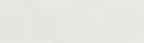
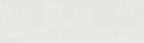
Class : BSc

Group : NDZC

Subject : Chemistry

Topic : 1) Structure elucidation of glucose

Date : March 2022 – 2023

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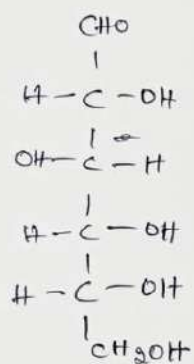
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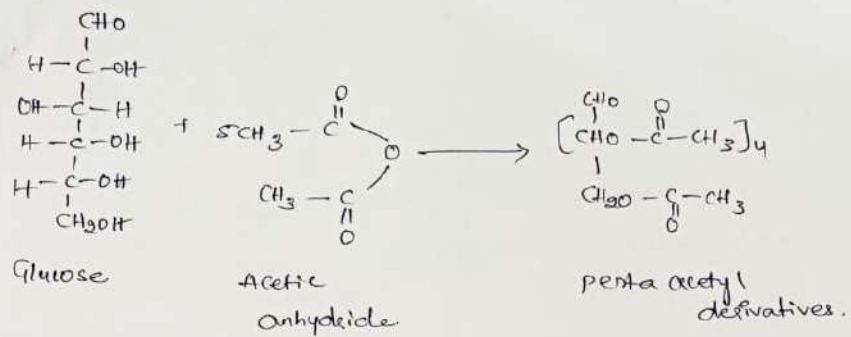
Q Structural elucidation of Glucose
(open chain structure)

- Molecular formula $C_6H_{12}O_6$
- Also called Dextrose / Grape sugar
- Flame test → Aromatic
- Solubility test → Carbohydrates
- Structure of Carbohydrate.

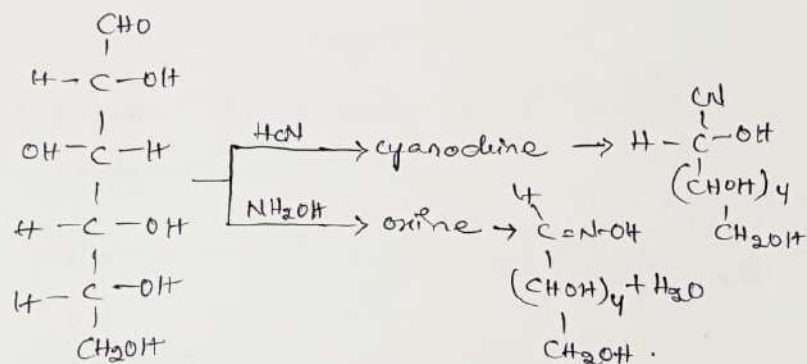


Glucose structure

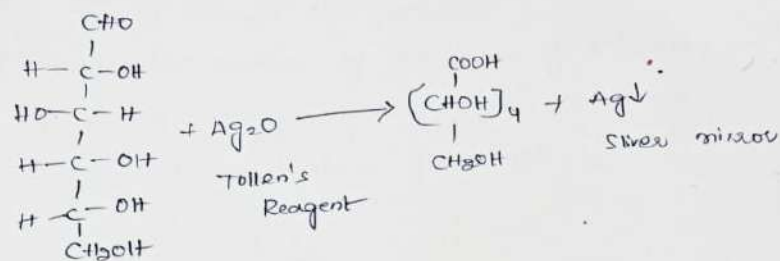
* Evidence for presence of S-OH groups (Acetylation)



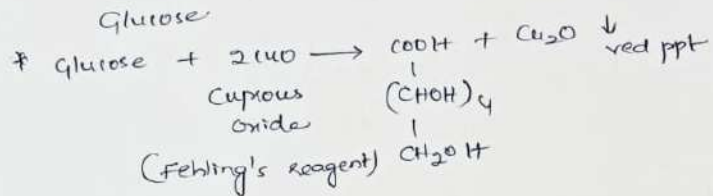
* Evidence for presence of Carbonyl group.



* Evidence for presence of aldehyde group
[Tollen's reagent]

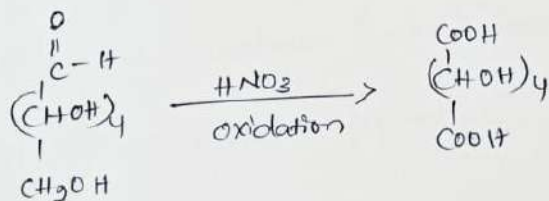


Glucose

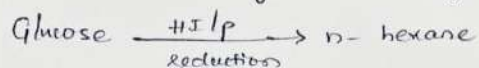


* Evidence for presence of 1° Alcohol

Oxidation:-



* Evidence for straight chain of Glucose.

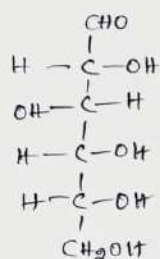


'6' Carbons are present

* Evidence for presence of 'OH' group of 5th carbon on left side



* Open chain structure of Glucose.



Limitations of open chain structure.

→ It fails to explain the following

- 1) It does not react with NaHCO_3 (sodium bisulphate)
- 2) It does not react with ammonia (NH_3)
- 3) Asomatic nature (cyclic) forms flame test
- 4) Mutarotation property.
- 5) Can't restore colour of Schiff's reagent.

Class : BSc

Group : BtZC

Subject : Chemistry

Date : April 2022 – 2023

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086223965	MADISHETTI	M



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HT NO	Student Name	Score
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- Q) Derive the rate constant equation for first order reaction.
The reactions whose rate is determined by the change of only 1 concentration term are known as 1st order reaction.



at $t=0$; $a=0$

after time ' t ' is ; $a-x=0$

rate of reaction $\propto (\text{reactants})^n$; here $n=1$

$$r = \frac{dx}{dt} \propto (a-x)^1$$

$$\frac{dx}{dt} = k_1 (a-x)$$

Where

k_1 = first order rate constant

$$\frac{dx}{(a-x)} = k_1 \cdot dt$$

on integrating the above equation

$$\int_0^x \frac{dx}{(a-x)} = k_1 \int_0^t dt$$

$$-[\ln(a-x)]_0^x = k_1 (t)_0^t + C$$

$$-\ln(a-x) = k_1 t + C \rightarrow \text{①} \quad \text{where } C = \text{integration constant}$$

When $t=0$; then $x=0$; Sub in equation — ①

$$-\ln(a-x) = kt + c$$

$$-\ln a = 0 + c$$

$$-\ln a = c \rightarrow \textcircled{2}$$

Sub eq $\textcircled{2}$ in $\textcircled{1}$

$$-\ln(a-x) = kt - \ln a$$

$$\ln a - \ln(a-x) = k_1 t$$

$$\ln \frac{a}{a-x} = k_1 \cdot t \therefore \ln \frac{a}{b} = \ln a - \ln b$$

$$k_1 = \frac{1}{t} \ln \frac{a}{a-x}$$

$$\text{but, } \ln = 2.303 \log$$

$$k_1 = \frac{2.303}{t} \log \frac{a}{a-x}$$

i) Units:-

$$k_1 = \frac{2.303}{t} \log \frac{a}{(a-x)}$$

$$k_1 = \frac{2.303}{\text{sec}} \cdot \log$$

$$k_1 = \text{sec}^{-1}$$

Half life:- The time taken to complete 50% of a reaction called half life

$$k_1 = \frac{2.303}{t} \log \frac{a}{(a-x)}$$

$$\text{When } t = t_{1/2} ; \text{ then } x = \frac{a}{2}$$

$$k_1 = \frac{2.303}{t_{1/2}} \log \frac{a}{(a-x)}$$

$$k_1 = \frac{2.303}{t_{1/2}} \log \frac{a}{\left(\frac{a}{2}\right)}$$

$$k_1 = \frac{2.303}{t_{1/2}} \log 2$$

$$\log 2 = 0.3010$$

$$k_1 = \frac{2.3010}{t_{1/2}} \times 0.3010$$

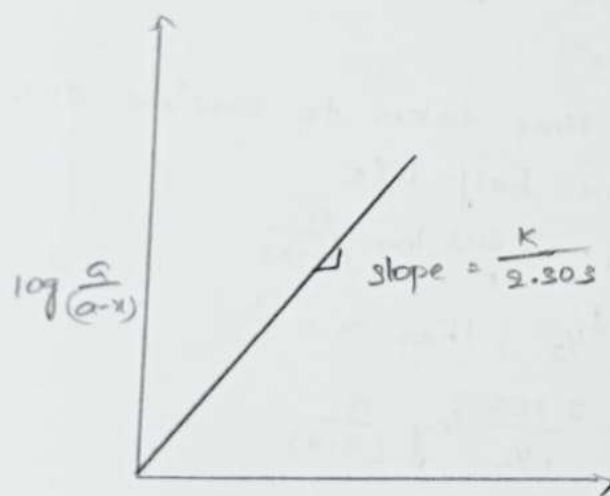
$$k_1 = \frac{0.693}{t_{1/2}}$$

$$t_{1/2} = \frac{0.693}{k_1}$$

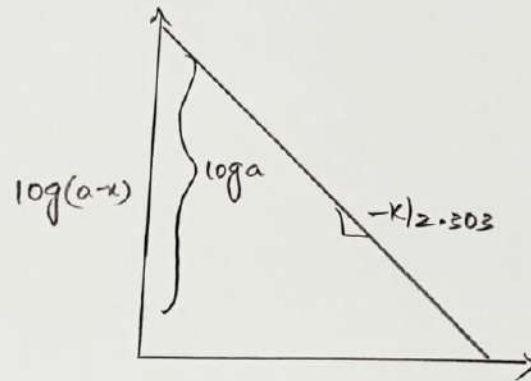
" for a first order reaction, half life is independent on the initial concentration of reactions.

Graph:-

When a graph is plotting between $\log\left(\frac{a}{a-x}\right)$ and 't' the line is passing through origin. Then the slope is equal to $\frac{k}{2.303}$.



Q.8) When a graph is plotting $\log(ax)$ against 't'
slope is equal to $-\frac{k}{2.303}$.



ASSIGNMENT RECORD

2022 – 2023

DEPARTMENT OF CHEMISTRY

ASSIGNMENT

II– SEM

Class : BSc

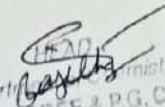
Group : MiCCS

Subject : Chemistry

Topic : 1) Explain about SN^1 reaction

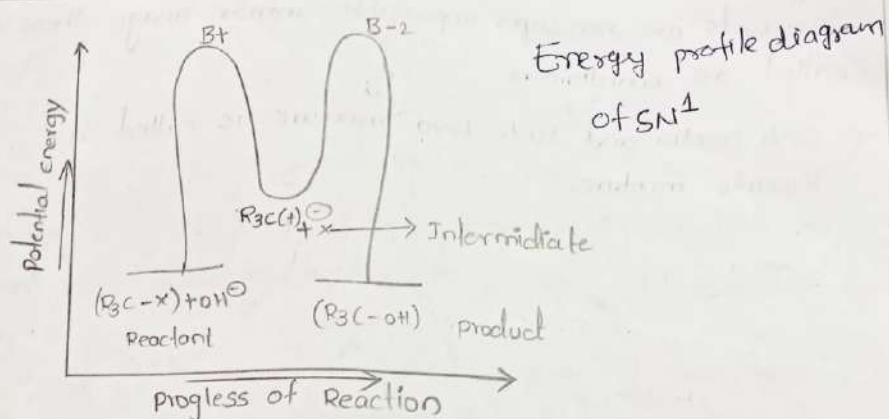
Date : March 2022 – 2023

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086233655	ILAVENI HARIPRIYA VYSHNAVI	Vyshnavi
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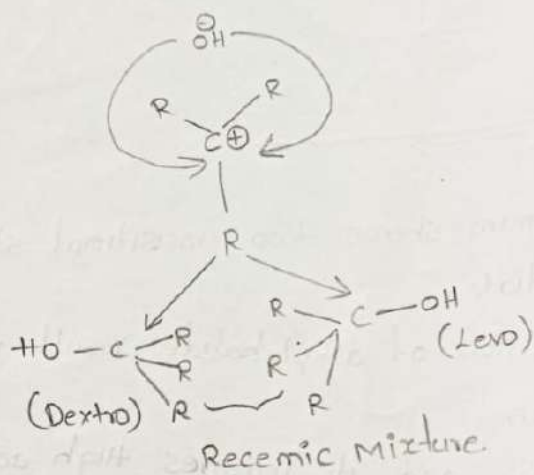
- The energy profile diagram shows two transitional stage with carbocation as intermediate
- In the first step Ionization of alkyl halide result in the formation of carbocation
- it is highly endothermic and it requires high activation energy
- Due to high activation energy it is a slow step hence the rate the reaction depends upon the step.
- In the second step (or) second transitional stage the nucleophile attack the carbocation is highly exothermic. It has low activation energy so it is the first step.

Stereo chemistry S_N1 reaction

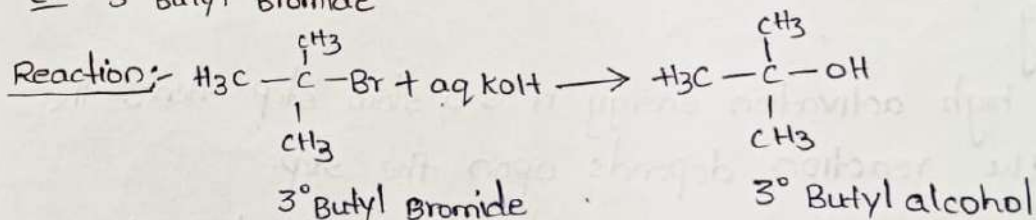
S_N1 reaction the carbocation produced the carbocation is sp^2 hybridised due to these reason the nucleophile is attacked

to the carbocation towards the left side are towards right side and produced racemic mixture --- The compounds are non super imposable mirror image these are called as enantiomers.

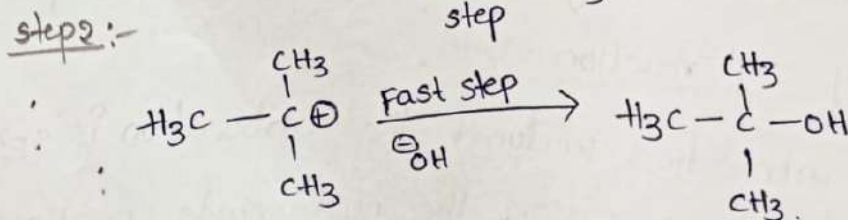
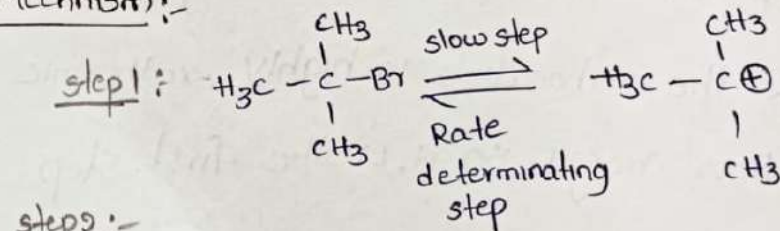
→ 50% Dextro and 50% Levo mixture is called as Racemic mixture.



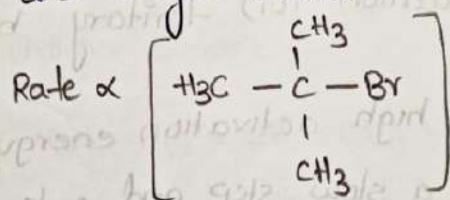
Ex: 3° Butyl Bromide



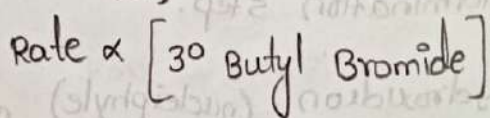
Mechanism:



- Tertiary Butyl Bromide react with aqueous potassium hydroxide and produce tertiary Butyl alcohol
- This reaction takes place in the presence of protic solvent.
- In this Reaction low concentration nucleophile
- This Reaction takes place in two steps.
- In the 1st place tertiary butyl bromide is converted to tertiary carbocation in the slow step and rate determining step.
- The rate of the reaction depending upon the concentration of tertiary butyl bromide so it is called as rate determining step.
- In step 2 unstable carbocation is react with low concentration nucleophile in the fast step and produce tertiary alcohol and butyl alcohol



(or)



Class : BSc

Group : BZC

Subject : Chemistry

Topic : 1) Ostwald dilution law

Date : Febraury 2022 – 2023

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086233307	GADDAM KAVYA	Kavya
086233308	GANGADHARI AKSHAYA	Akshaya
086233309	KOUTAM SUCHITHRA	Suchithra
086233310	KUDURUPAKA RAMYA	Ramy
086233311	MALLELA MEGHAMALA	Megha
086233312	MAMIDI NITHIN	Nithin
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086233314	MUNIGADAPA NANDINI	Nandini
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086233316	NEERATI BUNNY	Bunny
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086233320	RAJABOINA AKHILA	Akhila
086233321	RODDA ABHINAYA	Abhinaya
086233322	SATHU RAMYA SRI	Ramy
086233323	SIDDABOINA SHYAM SUNDER	Shyam
086233324	THOTA ANJALI	Anjali
086233325	UPPULA SRUTHI	Sruthi
086233326	VANGA SANDEEP	Sandeep
086233327	VOLLALA SUSHMA	Sushma
086233328	BANOTH HEMANTH	Hemant
086233329	BHUKYA RAKESH	Rakesh
086233330	POTHA NIKITHA	Nikitha



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Ostwald's dilution law:

This law is applicable only in weak electrolytes - thus according to Ostwald's dilution law.



$$K = \frac{(A)(B)}{(AB)}$$

→ initial 1 mole
after $\frac{(1-\alpha)}{V}$, $\frac{\alpha}{V}$ $\frac{\alpha}{V}$

$$K = \frac{[A^+][B^-]}{[AB]}$$

$$K = \frac{\frac{\alpha \sqrt{V}}{V} \frac{\alpha}{V}}{\frac{(1-\alpha)}{V}}$$

$$K = \frac{\frac{\alpha^2}{V^2}}{\frac{(1-\alpha)}{V}}$$

$$K = \frac{\alpha^2}{V^2} \times \frac{V}{(1-\alpha)}$$

$$K = \left[\frac{\alpha^2}{V(1-\alpha)} \right]$$

concentration of any electrolyte

$$= K = \frac{C\alpha^2}{(1-\alpha)}$$

= $(1-\alpha)$ negligible $\boxed{C = \frac{1}{V}}$ concentration of solution

$$= \boxed{K = C\alpha^2}$$

Class : BSc

Group : BtMiC

Subject : Chemistry

Topic : 1) Interhalogen compounds

Date : April 2022 – 202

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086233005	ARUKALA RAHUL	Rahul
086233006	BANOTH SWAPNA	Swapna
086233007	BOMMATHI LASYAVARDHINI	Lasya
086233008	BUKYA SWATHI	Swathi
086233009	KARANGULA SUCHITHA	Suchitha
086233010	KUNAL BHADRA	Bhadra
086233011	KUNDARAPU HARINI	Harini
086233012	MANDA MOKSHAGNA	Mokshagna
086233013	MANDA RAVEENA	Raveena
086233014	MANTHENA ROHITHA	Rohitha
086233015	MEDIPELLY SOUMYA	Soumya
086233016	MEENA RINKU	Rinku
086233017	MEKALA VINITHA	Vinitha
086233018	SETTY SATHWIKA	Sathwika
086233019	SHANIGARAM SAI VAMSHI	Sai Vamshi
086233020	THOKALA ASHWINI	Ashwini
086233021	NERA AISHWARYA	Aishwarya




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Interhalogens :-

- Each halogen can combine with other halogen under suitable conditions to form a new type compounds known as inter halogen compounds (or) inter halogens.
- General formula of inter halogen compounds is AX_x
A = less EN halogen x = more EN halogen

Classification :-

Inter halogen are classified into 4 types

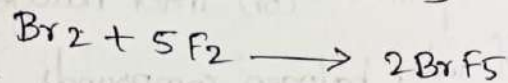
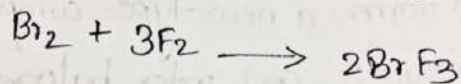
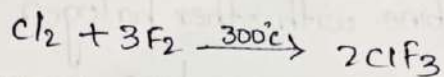
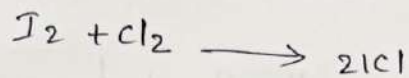
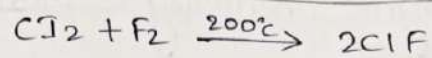
AX , AX_3 , AX_5 , AX_7

AX	AX_3	AX_5	AX_7
ICI	ICI ₃	IF ₅	IF ₇
ClF	ClF ₃	BrF ₃	
BrF	BrF ₃		
BrCl	—		
IF	—		

Preparation :-

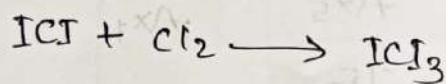
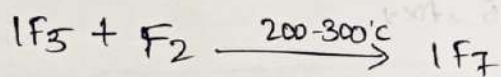
① Direct combination :-

By the direct combination the two halogens form inter halogen compounds.



Indirect Method:-

By the action of a halogen on a lower inter halogen to form another inter halogen compound.



Class : M.Sc

Subject : Chemistry

Group : Organic chemistry

Topic : 1) Florence life time and Florence quenching.
2) Write about Carbozole

Date : March 2022 – 2023

M.Sc III SEM (CHEMISTRY) NOMINAL ROLLS - 2022

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22117-S-0605	PRATHYUSHA RAVULA	Prathyusha
22117-S-0606	THOTA RAMYA	Ramya
22117-S-0607	MERUGAVENI SATHISH	Sathish
22117-S-0608	BOKKA SPANDANA	Spandana
22117-S-0609	VEERAGONI SRITHASRI	Srithasi
22117-S-0610	GORLA MOUNIKA	Mounika
22117-S-0611	GODISHALA AKHILA	Akhila
22117-S-0612	RAKAM SINDHUJA	Sindhujar
22117-S-0613	DAMERA SRAVANTHI	Sravanthi
22117-S-0614	SOLLETI MOUNIKA	Mounika
22117-S-0615	JELLA SHRUTHI	Shruthi
22117-S-0616	GOSULA ARUN KUMAR	Arun Kumar
22117-S-0617	AKULA KALYANI	Kalyani
22117-S-0618	KUVARAPU ROHITH	Rohith
22117-S-0619	LAKAVATH SAIDU	Saidu
22117-S-0620	JATOTH MANJULA	Manjula
22117-S-0621	MOTTE ANJALI	Anjali
22117-S-0622	MANCHALA BIKSHAPATHI	Bikshapathi
22117-S-0623	DEVANAPALLY PAVAN	Pavan
22117-S-0624	KAMPELLA NAVEEN	Naveen
22117-S-0625	KANDULA RANJITH	Ranjith
22117-S-0626	TIPLE SRIKANTH	Srikanth
22117-S-0627	GOGULA MOUNIKA	Mounika
22117-S-0628	BANOTHU CHANDANA TEJA	Chandana Teja
22117-S-0629	PERVARAM VAAGDEVI	Vaagdevi
22117-S-0630	VELPULA SWETHA	Swetha
22117-S-0631	GAJJALAKONDA DINESH	Dinesh
22117-S-0632	D.PRAVALIKA	Pravalika
22117-S-0633	MD.NAZIYAFARHEEN	Naziyafarheen
22117-S-0634	BOORA ARCHANA	Archana
22117-S-0635	NAGOTU PREMSAI	Prem Sai
22117-S-0636	M.DILEEP	Dileep

1) Fluorescence life time and Fluorescence quenching?

2) Fluorescence life time (FLT) is the time a fluorophore spends in the excited state before emitting a photon & returning to the ground state.

FLT can vary from pico seconds to hundreds of nanoseconds depending on the fluorophore.

FLT is not an intrinsic property of a fluorophore, FLT does not depend upon fluorophore concentration, absorption by the sample, sample thickness, method of measurement. The fluorescence life time is calculated by the following equation.

$$\tau = 1 / (k_f + k_{nr})$$

τ = Fluorescence life time.

k_f = Radiative decay rate.

k_{nr} = Non Radiative decay rate.

Fluorescence quenching : decrease of fluorescence intensity by interaction of the excited state of the fluorophore with its surroundings is known as quenching. It is classified into 3 types i.e.

1) Collision/dynamic quenching :- In this process collision returns fluorophore to ground state without photon emission.

2) Static quenching :- In this process excited state compounds or e^- formed as a complex non fluorescent material.

3) Apparent Quenching! - Turbidity optical density of fluorescence caused for this type of quenching

2) Write the Applications of Fluorescence Spectroscopy?

Ans) ① Indicator for DNA Hybridisation! - In DNA Hybridisation, the fluorescent dye and quencher molecules become attached to the ends of single strand DNA & close to one another causing a loop. As DNA becomes hybridised & attaches to another single strand DNA chain, the fluorescent dye-quencher complex is cleaved, allowing for the fluorescent dye to generate light.

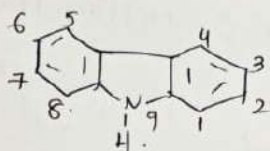
② DNA Interaction with metal ions!

Interaction of DNA with metal ions is also identified with the help of fluorescence quenching. The ends of short DNA fragment connected with a fluorescent dye & quencher through a covalent bond, are divided in a solution. The dye is producing light.

③ DNA Interaction with drugs!

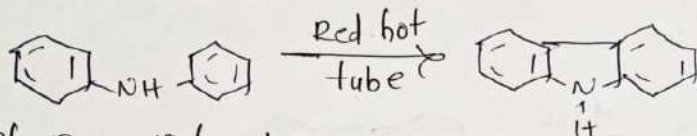
The effective interaction of drugs with DNA usually causes a significant enhancement of the fluorescence intensity as a consequence of different factors. Thus in the case of intercalating drugs, the molecules are inserted into the base stack of the helix.

write about carbazole?

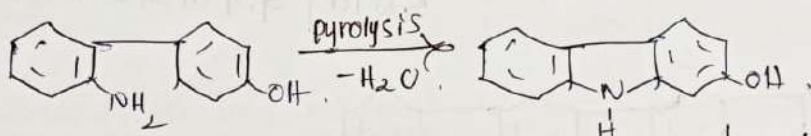
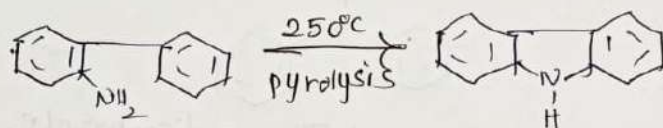


synthetic methods :-

1) from biphenyl :-

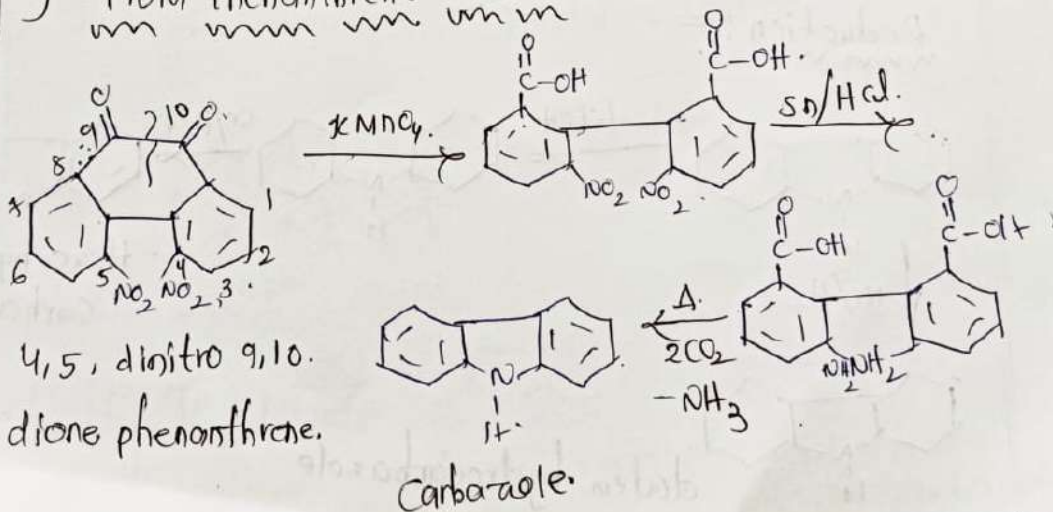


2) from diphenyl :-



2-hydroxy carbazole.

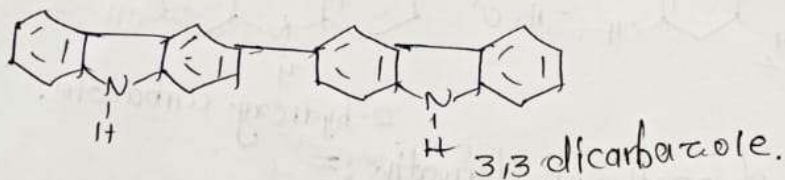
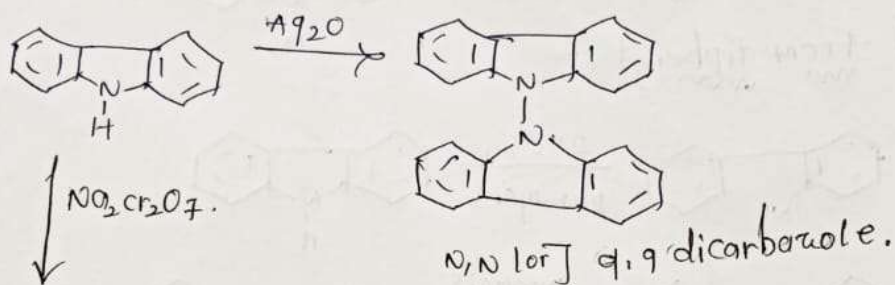
3) from phenanthrene derivative :-



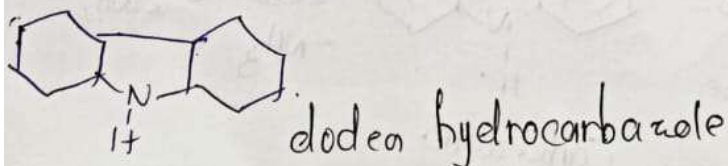
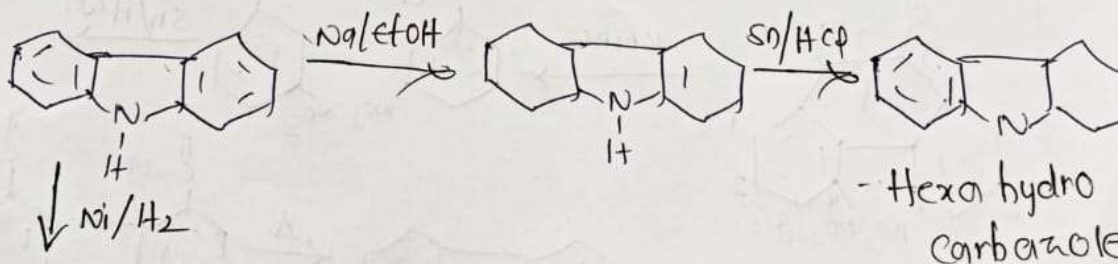
properties :-

- Carbazole is a solid, $245-247^{\circ}\text{C}$ - Melting point.
- It is an aromatic compound.
- Its Resonance energy 74 k.cal.
- N-H bond carbazole shows acidic property and it reacts with Grignard reagent.

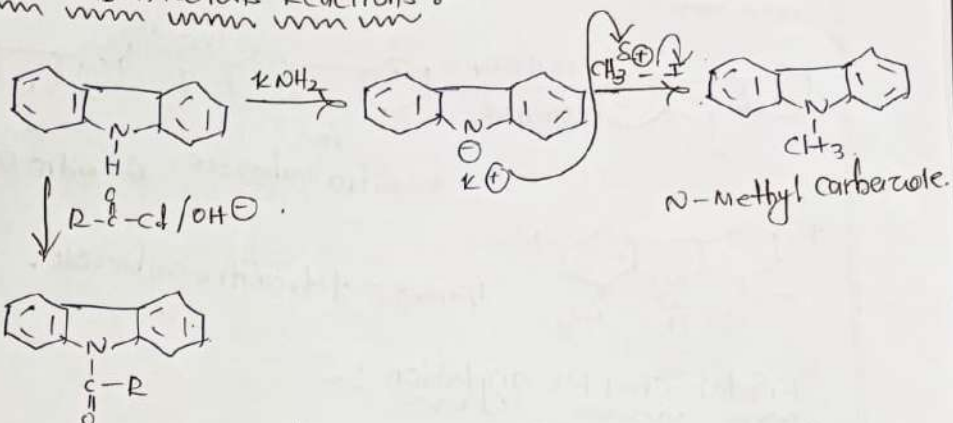
Oxidation :-



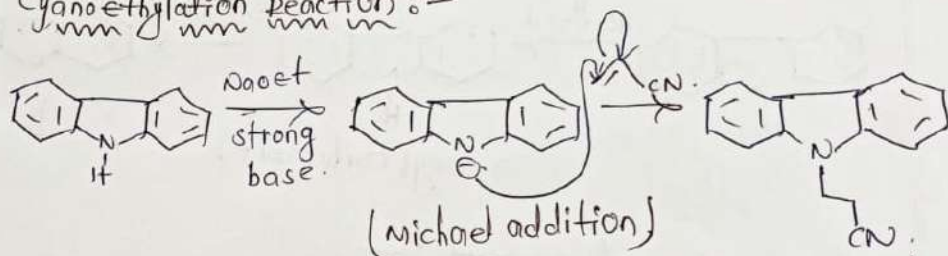
Reduction :-



N-substitutions Reactions :-

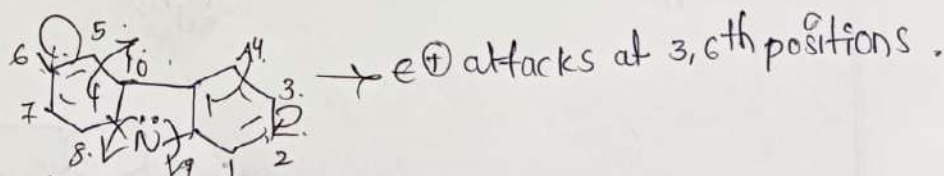


Cyanoethylation reaction :-

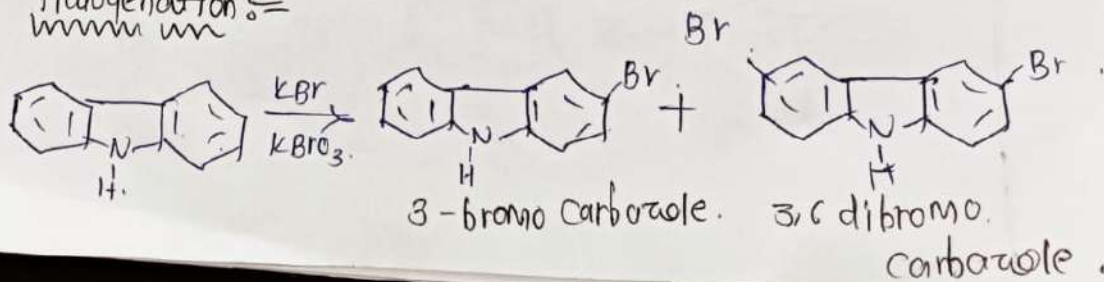


Electrophilic substitution reactions :- α [3-cyanoethyl carbazole]

The carbazole is an aromatic compound, and undergoes electrophilic substitution reactions.



Halogenation :-



Department of Physics and Electronics

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Student's Assignment list

Subject assignments are critical components of the educational system, performing various functions to improve students' learning experiences and academic progress. This encompasses skill development, knowledge application, autonomous learning, etc. In this regard, the Department of Physics and Electronics has taken steps to arrange assignment tests for the students during the academic year 2022-23.

BSc (MPCs-III) Sem-5

Assignment topics:

- Postulates of Vector Atom Model and associated quantum numbers
- Theory of Zeeman Effect – Zeeman shift

List of students who submitted assignment

Ht. No	Name of the student	Date of submission
86214301	Aavunuri Shravani	15/9/2022
86214302	Abbu Induja	14/9/2022
86214304	Adeeba Muskan	13/9/2022
86214306	Aitha Anila	19/9/2022
86214308	Akula Soumya	15/9/2022
86214313	Appani Mahesh	13/9/2022
86214314	Asalla Sindhu	15/9/2022
86214315	Badavath Akhil	14/9/2022
86214329	Bhukya Ajith	15/9/2022
86214330	Bhukya Anil	15/9/2022
86214331	Bhukya Naveen	14/9/2022
86214340	Bonagiri Lavanya	15/9/2022
86214343	Burgula Navya	13/9/2022
86214345	Burra Ranadheer	15/9/2022
86214347	Byreddy Jyothika	13/9/2022
86214354	Chikatla Poojitha	15/9/2022
86214359	Daida Bravitham	14/9/2022
86214361	Dandem Pardha Saradhi Swamy	13/9/2022
86214363	Dasari Laxmiprasanna	15/9/2022
86214364	Dasari Saikumar	19/9/2022


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86214367	Diguva Abhiroop	19/9/2022
86214372	Edurugatla Ashwini	19/9/2022
86214379	Eslavath Vinod	15/9/2022
86214383	Gaddam Arun Kumar	14/9/2022
86214384	Gaddam Gnani	19/9/2022
86214390	Ganipaka Pranay	15/9/2022
86214393	Godumala Anamika	19/9/2022
86214400	Gunti Mahesh	14/9/2022
86214408	Jatoth Bhumika	15/9/2022
86214421	Kavvamapally Jeevan Kumar	19/9/2022
86214430	Lakka Varsha	15/9/2022
86214444	Maragani Ramya	14/9/2022
86214447	Mekala Tharun	15/9/2022
86214450	Mohammad Ameer Pasha	13/9/2022
86214451	Mohammad Ameer Pasha	15/9/2022
86214456	Mohammed Azhar	15/9/2022
86214457	Mohammed Shadab	19/9/2022
86214458	Mohammed Talha	15/9/2022
86214463	Munja Sumanth	19/9/2022
86214479	Pallapu Madhukar	15/9/2022
86214484	Pasula Niharika	15/9/2022
86214485	Pathakala Sai Kiran	15/9/2022
86214492	Porika Pranitha	15/9/2022
86214495	Pulluri Navya Sri	15/9/2022
86214498	Ramarapu Maneesha	13/9/2022
86214503	Reddy Kiran	13/9/2022
86214506	Remudala Tejaswini	15/9/2022
86214508	Routhu Omkar	15/9/2022
86214517	Shaik Jamsheed	15/9/2022
86214519	Shivarathri Ramu	19/9/2022
86214520	Singa Upendra	15/9/2022
86214522	Sonnaila Chandana	15/9/2022
86214525	Sunkari Karthik	15/9/2022
86214529	Thati Rakesh	19/9/2022
86214539	Vakkanthula Akhil	15/9/2022
86214540	Vallala Nithish Kumar	14/9/2022
86214546	Varikilla Varun	14/9/2022
86214554	Bhuma Rajesh	13/9/2022
86214557	Gellu Koushik	15/9/2022
86214565	Goparaju Praveen	14/9/2022

BSc (MPCs-III) Sem-4

Assignment topics:

- Transverse wave propagation along a stretched string – Wave equation
- Cosine law – Interference in thin films due to reflection
- Construction and working of Fresnel's Biprism

List of students who submitted assignment

Ht. No	Name Of The Student	Date of submission
086224301	Abbaravena Sravya	9/3/2023
086224303	Adhe Ramyasri	8/3/2023
086224304	Adunuri Anusha	11/3/2023
086224308	Angala Rakesh	9/3/2023
086224312	Bachu Eshwar	9/3/2023
086224320	Banda Vamshi	9/3/2023
086224322	Bandi Ravali	8/3/2023
086224323	Bangari Shruthi	9/3/2023
086224324	Banoth Praneeth	8/3/2023
086224329	Barupati Durga Prasad	9/3/2023
086224330	Bashaboina Deekshitha	8/3/2023
086224331	Baskara Praneeth	9/3/2023
086224340	Bhutham Sushmitha	9/3/2023
086224348	Botuka Deepika	9/3/2023
086224359	Darni Suryaprakash	8/3/2023
086224375	Ekula Rahul	9/3/2023
086224376	Endla Kavya	9/3/2023
086224379	Gaddam Amulya	8/3/2023
086224382	Ganagani Soumya	9/3/2023
086224383	Ganapuram Lavanya	9/3/2023
086224384	Gandham Vinay	9/3/2023
086224392	Gorre Bhavana	8/3/2023
086224395	Gudelli Likith	8/3/2023
086224399	Gulla Manikanta	9/3/2023
086224403	Jakkula Shiva Kumar	9/3/2023
086224404	Jampala Tharun	9/3/2023
086224405	Jatoth Akhila	8/3/2023
086224406	Jatoth Ganesh	9/3/2023
086224411	Kandunuri Varshini	8/3/2023
086224415	Kashaveni Aravind	9/3/2023
086224420	Keshoju Sai Kiran	9/3/2023
086224421	Kesoju Ruchitha	9/3/2023
086224424	Kodari Nikhil	9/3/2023

086224425	Kokkarakonda Roop Sagar	8/3/2023
086224428	Komandla Yashwanth	9/3/2023
086224430	Kondeti Meghana	9/3/2023
086224431	Konukanti Ranadheer	9/3/2023
086224433	Kore Aravindu	9/3/2023
086224434	Kota Rakshitha	8/3/2023
086224438	Kuchanapelli Kavya	9/3/2023
086224440	Kukkala Chandana	9/3/2023
086224444	Lingampally Saipavan	9/3/2023
086224448	Malleboina Nemiya	11/3/2023
086224449	Maloth Kotes	11/3/2023
086224454	Mamilla Sainikhl	9/3/2023
086224457	Mandhala Amulya	9/3/2023
086224472	Mora Sindhuja	9/3/2023
086224474	Mudethula Akhil	9/3/2023
086224476	Mukkera Rajkumar	9/3/2023
086224480	Muthyala Ravali	9/3/2023
086224481	Mydaraboina Deekshitha	9/3/2023
086224483	Nagalagani Sairam	9/3/2023
086224484	Nagapuri Akhil	11/3/2023
086224497	Padala Ajay Kumar	11/3/2023
086224502	Pathuri Sandhaya	8/3/2023
086224503	Peddoju Ramyasree	8/3/2023
086224507	Pidugu Navya	11/3/2023
086224509	Pillala Kavya	11/3/2023
086224511	Pingili Samatha	9/3/2023
086224513	Pittala Sanjay	11/3/2023
086224516	Polsani Akshitha	11/3/2023
086224526	Punithraj Palleboina	9/3/2023
086224527	Punnam Soumya	9/3/2023
086224528	Pusala Nithinvas	11/3/2023
086224533	Rangu Srija	8/3/2023
086224539	Samudrala Anil Kumar	11/3/2023



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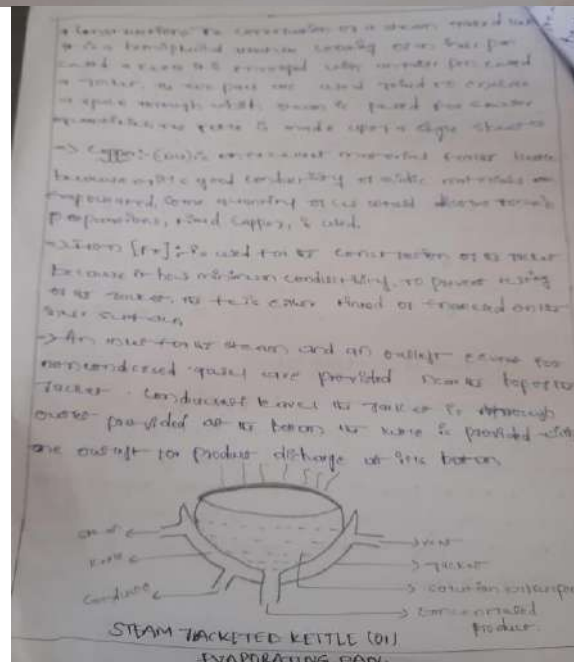
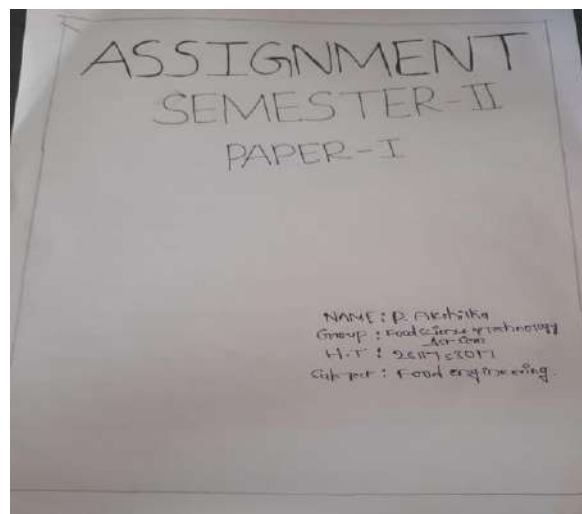
Kishanpura, Hanamkonda



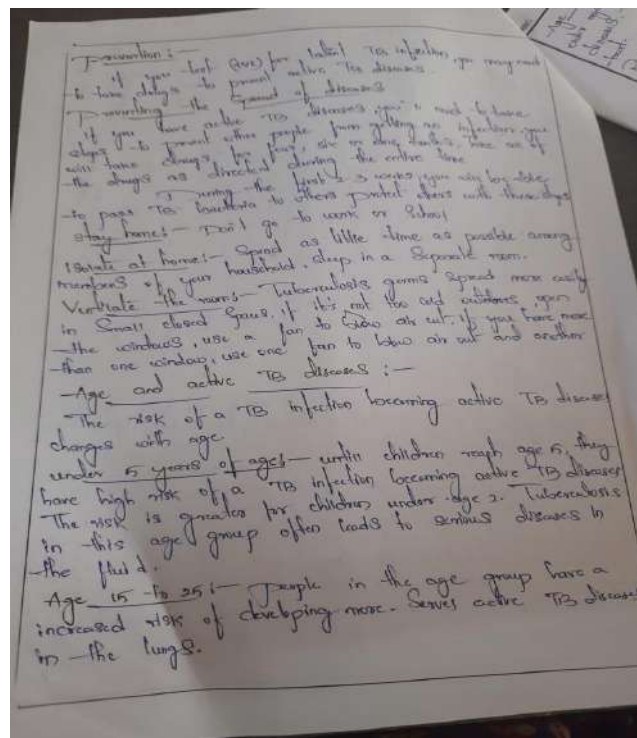
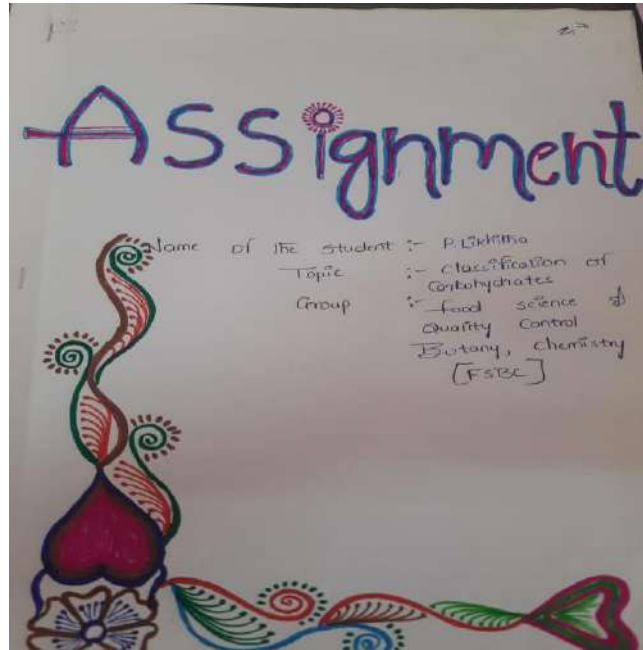
DEPARTMENT OF FOOD SCIENCE AND QUALITY CONTROL AND DEPARTMENT OF NUTRITION AND DIETETICS

(FOOD AND NUTRITION DEPARTMENT)

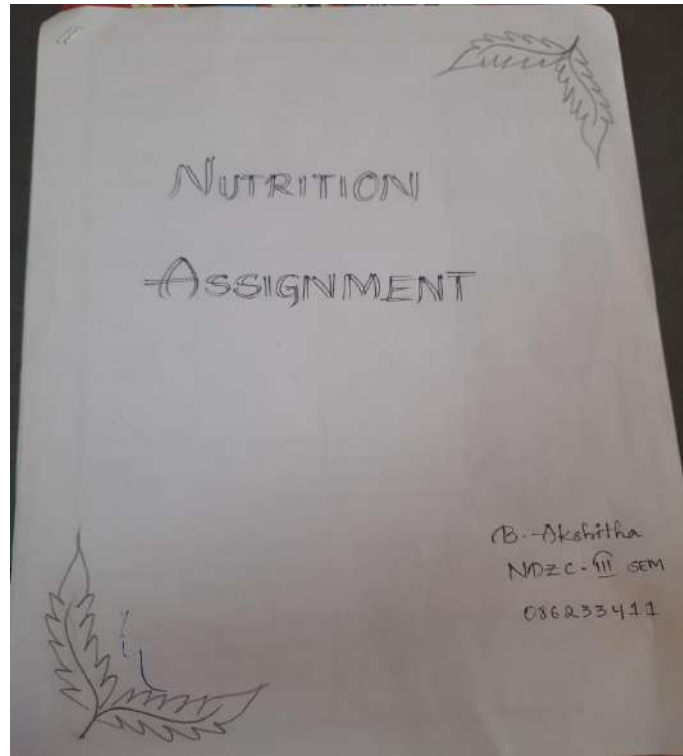
Assignments First year



Assignments II year



Assignments III year



VITAMINS			
Vitamins	Sources	Functions	Deficiency diseases
Vitamin-A (Retinol)	Liver oil, fish, carrot, milk, spinach, fruits such as papaya & mango	Vision and growth	Night blindness, xerophthalmia, keratinization of skin.
Vitamin-B (Thiamine)	Veget, milk, cereals, grains, vegetables, liver, peat	Co-enzyme in the form of thiamine pyrophosphate (TPP) in glycolysis	Beri-beri [peripheral nerve damage]
Vitamin-B ₂ (Riboflavin)	Soybean, green vegetables, yeast, egg white, milk, liver, kidney	Co-enzyme in the form of FMN [flavin mononucleotide] & FAD (flavin adenine dinucleotide) in redox reactions	Chesley's (lesions of corners of mouth, lips & tongue).
Vitamin-B ₃ (Niacin)	Cereals, leafy vegetables, liver, kidney	Co-enzyme in the form of NAD & NADP in redox reactions	Pellagra [photo sensitive dermatitis]
Vitamin-B ₅ (pantothenic acid)	Mushroom, wheat, egg yolk, sunflower oil	part of co-enzyme in amino acid metabolism, formation of haem of in haemoglobin	Convulsions.
Vitamin-B ₇ (Biotin)	Liver, kidney, milk, egg yolk, vegetables, grains	Co-enzyme in fatty acid biosynthesis	perosis, hair loss, muscle pain
Vitamin-B ₉ (Folic acid)	Egg, meat, yeast, leafy vegetables, cereals, yeast	Nucleic acid synthesis, maturation of red blood cells.	Megaloblastic anaemia.

SNo	Admin No	HT_NO	Student Name	Student Signature
1	23-3-1132	086233801	PESARI SAMBARAJU	
2	23-3-1103	086233802	ANDRALA ANKITHA	Ankitha
3	23-3-1102	086233803	ARAKALA SUSHIMA	Sushima
4	23-3-1125	086233804	BANOTHU PALLAVI	Pallavi
5	23-3-1116	086233805	BASHABOINA PRASANNA	Prasanna
6	23-3-1127	086233807	DABBETA SRIJA	Srija
7	23-3-1110	086233808	DUBYALA JHANSI RANI	Jhansi
8	23-3-1128	086233809	KANDI ANUSHA REDDY	Anusha
9	23-3-1135	086233810	KORAVENA CHANDANA	Chandana
10	23-3-1120	086233811	KUKKALA RAKSHITHA	Rakshitha
11	23-3-1104	086233812	PENTHALA PRIYANKA	Priyanka
12	23-3-1112	086233813	PUJARI PAVANI	Pavani
13	23-3-1121	086233814	RADARAPU SRAVANTHI	Sravanthi
14	23-3-1123	086233815	RAMAGONI SATHVIKA	Sathvika
15	23-3-1134	086233816	ROUTHU SANGEETHA	Sangeetha
16	23-3-1119	086233817	SANIYA	Saniya
17	23-3-1111	086233818	SHAIK NIKATH FARAHANA	Farahana
18	23-3-1105	086233819	SONAM THANZILA	Thanzila
19	23-3-1124	086233820	THANDA SRI VENNELA	Sri Vennela
20	23-3-1109	086233821	THIMMAPURAM SHASHANK	Shashank
21	23-3-1133	086233822	UDUTHA SOUMYA	Soumya
22	23-3-1130	086233823	VEMULA VARSHA	Varsha

SNo	Admission No	HALLTICKET_NO	Student Name	Student Signature
1	21-3-005	086213401	ADIBA SAMREEN	Samreen
2	21-3-019	086213402	ERROJU SRAVYA SRI	Sravya
3	21-3-009	086213403	GUDEPU BINDUSRI	Bindusri
4	21-3-003	086213404	HABEEBUNNISSA BEGUM	Habeebunnissa
5	21-3-013	086213405	JALLIGAMPALA SATHYANARAYANA	Sathyanarayana
6	21-3-011	086213406	KOYYADA SHIVANI	Shivani
7	21-3-008	086213407	KURLA SOUMYA	Soumya
8	21-3-010	086213408	MACHARLA SARITHA	Saritha
9	21-3-002	086213409	MOHAMMED RAHIYA	Rahiya
10	21-3-016	086213410	NAMALA BHARANI	Bharani
11	21-3-006	086213411	POLABOENA SAI SUPRIYA	Supriya
12	21-3-001	086213412	SANA KHATOON	Khatoon
13	21-3-004	086213413	SANIA MAHVEEN	Mahveen
14	21-3-014	086213414	THANDA SATHWIK	Sathwik
15	21-3-018	086213415	VELDANDI POOJITHA	Poojitha
16	21-3-007	086213416	ARSHIYA NAZNEEN	Nazneen


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 Kishanpura, Hanamkonda

Department
of

Botany

Assignment
Book

2022-23

Department :- Botany

Assignment Book

class :- Bsc I year Isem

Subject :- Botany

Group :- Bzc

Topic :- Transmission of plant virus.

Date :- 13/09/2022



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S.No	Hall ticket NO.	Name of the student	Signature.
1	086233301	Akireddy Srilekha	Srilekha
2	33302	Balla Raghu	Raghu
3	33303	Bashaboina Poojitha	Poojitha
4	33304	Deeguntala Ganesh	Ganesh
5	33305	Denkani Nilbin	Nilbin
6	33306	Dongre Sreeja	Sreeja
7	33307	Eladdam Kavya	Kavya
8	33308	Elangadhari Akshaya	Akshaya
9	33309	Koutam Suchithra	Suchithra
10	33310	Kudurupaka Ramya	Ramya
11	33311	Mallela Meghamala	Meghamala
12	33312	Mamidi Nilbin	Mamidi Nilbin
13	33313	Mothukuri Sathika	Sathika
14	33314	Munigadapa Nandhini	Nandhini
15	33315	Munigala Deepika	Deepika
16	33316	Neerati Bunny	Bunny
17	33317	Polu Akhila	Akhila
18	33318	Prathapaneni Navya	Navya
19	33319	Puvashotham Suratha	Suratha
20	33320	Rajaboina Akhila	Akhila
21	33321	Rodda Abhinaya	Rodda Abhinaya
22	33322	Sathu Ramyasree	Ramyasree
23	33323	Sidhaboina shyamsunder	Shyamsunder
24	33325	Uppula Shrutika	Shrutika
25	33326	Vanga Sandeep	Sandeep
26	33327	Vollala Sushma	Sushma
27	33328	Banoth Hemant	Banoth Hemant
28	33329	Bhukya Rakesh	Rakesh
29	33330	Potha Nikitha	Nikitha



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2022 - 23

Department of Botany

Assignment Book

Class :- BSc I year II sem

Subject :- Botany

Group :- BZCS

Topic :- Bentham & Hooker classification

Date :- 22/02/2023



Principal
VAAGDEVI DEGREE & P.G. COLLEGE
Kishanpura, Hanamkonda.



Sl.NO	Hall ticket NO	Name of the Student	Signature
1	086233501	Akula Siri Vennela	Siri Vennela
2	086233502	Baikani Varshini	Baikani Varshini
3	33503	Bashapathini Sai Dhareshan	Sai Dhareshan
4	33506	Byru Lahari	Lahari
5	33507	Chowda Rachana	Rachana
6	33508	Damera Kaushik Vardhan	Romura Krishni
7	33509	Diddigi Sai Dinesh	Diddigi
8	33510	Dindigala Snehitha	Snehitha
9	33511	Durishetty Sai Teja	Sai Teja
10	33512	Fashath	Fashath
11	33513	Goshikonda Rahul	Rahul
12	33514	Gingulath Anjali	Anjali
13	33515	Gundekari Sandeep	Gingulath Anjali
14	33516	Hetchu Ashwini	Ashwini
15	33517	Kandula Sumolika	Sumolika
16	33518	Kanuganti Poojitha	Kanuganti Poojitha
17	33519	Kavati Pavan	Pavan
18	33520	Kodam Akhil	Akhil
19	33521	Koppula Rakesh	Rakesh
20	33522	Kottem Pavani Varshitha	Pavani Varshitha
21	33523	Malyala Sai Teja	Sai Teja
22	33524	Mohammed Rizwana	Rizwana
23	33525	Mokidi Karunya	Karunya
24	33526	Moola Madhukar	Madhukar
25	33527	More Abhilash	Abhilash
26	33528	Mothukuri Pavan	Pavan
27	33529	Mudavath Sai Shivani	Shivani
28	33530	Murahari Rani	Rani
29	33531	Nalla Sai Charan	Charan
30	33532	ODapelli Sai Krishna	Sai Charan
31	33533	ODapelli Vasalakshmi	Vasalakshmi
32	33534	Palleboina Ashwini	Ashwini

- 33535 Painati Spathnik
 33536 Pasunuri Suletha.
 33537 Pogu Shiva.
 33538 Polepally Akhila
 33539 Polepally Sravanthi
 33540 Radharapu Lakshmi Prasanna
 33541 Ramagiri Bhanusri
 33542 Renukuntla Rakesh
 33543 Sandra Jyothsna
 33544 Terala Nithyusha.
 33545 Thallapalli Sai Manoj
 33546 Thanda Sravani
 33547 Thota Sai Krishna
 33548 Vallala Rishikesh
 33549 Valupadase Manasa
 33550 Vanga Thanuja
 33551 Vangusi Sreevani
 33552 Velpula Smriti
 33553 Velpula Smriti
 33554 Ganti Siri Chandana

SPUTHNIK

Sweetha.

Shiva

Akshita

Srikanth

Lakshmi Prasanna

Ravi

Kakesh

Jyothsna

Nithyusha

Sai Manoj

Sya Vahi

Sai Krishna

Rishikesh

Manasa

Thangaraj

Sreevani

Smriti

Chandana



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 Kishanpura, Hanamkonda.

2022-23

Department of Botany

Assignment Book

class :- BSc II year I Sem

Subject :- Botany

Group :- BZC

Topic :- Polyembryony

Date :- 21/09/2022



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Kishanpura, Hanamkonda.



Sl-No	Hall ticket NO	Name of the student	Signature
1	086223301	Arula Akhila	Akhila
2	3302	Arjunani Lohitha	Lohitha
3	3303	Ajmeera Soujanya	Soujanya
4	3304	Amrutha Rajender	Rajender
5	3305	Ashly Meghana	Meghana
6	3306	Azmeera Hanmanthu	Hanmanthu
7	3307	Banala Madhuvani	Madhuvani
8	3308	Bandari Pravalika	Pravalika
9	3309	Bhukya Anuritha	Anuritha
10	3310	Bonihala Nagaraju	Nagaraju
11	3311	Busa Rishitha	Rishitha
12	3312	Chinnala Ananya	Ananya
13	3317	ERRA Rana Prathap	Rana Prathap
14	3318	Gayireddy Ramadevi	Ramadevi
15	3320	Glattu Vamsi	Vamsi
16	3322	Godde Arjun Nivas	Arjun Nivas
17	3323	Gugulothu Yochana	Yochana
18	3326	Gugulothu Sathish	Sathish
19	3328	Hathiya Banu	Banu
20	3333	Kandala Tarang reddy	Tarang Reddy
21	3335	Karingula Nilhin	Nilhin
22	3336	Katta Shalini	Shalini
23	3337	Kollu Ashwini	Ashwini
24	3339	Kummari Sangeetha	Sangeetha
25	3340	Lakavathi Shireesha	Shireesha
26	3341	Madasi Gracy	Gracy
27	3344	Memmasi Harshini	Harshini
28	3346	Nukala Nagesh	Nagesh
29	3348	Palnati Arinash	Arinash
30	3349	Peddavenu Anusha	Anusha
31	3351	Puppala Sahithya	Sahithya
32	3353	Samudrala Tharun	Tharun

33	3354	Shaik - Ayesha
34	3355	Shaik Imran
35	3356	Siddaou Pooia
36	3357	Soudaou Nivas
37	3358	SRizamoou Sindhya
38	3359	Thalla Pravallika
39	3360	Thota Aisha
40	3361	UPPU Naveen kumar
41	3363	Vardhaman Sorneshwar

Aisha
 Imran
 Pooia
 Nivas
 Sindhya
 T. Pravallika
 Aisha
 Naveen kumar
 Sorneshwar



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2022-23

15

Department of Botany
Assignment Book

Class: BSc II year II Sem

Subject: Botany

Group: BTBC

Topic: Mitosis & Meiosis

Date: 24/01/2023



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Sl. No	Hall Ticket NO	Name of the student	Signature
1	086223101	Appa Nagahimadurtha	A. Nagahimadur
2	223102	Bandi Vijayalakshmi	B. Vijayalakshmi
3	223103	Chitryala Praithyusha	C. Praithyusha
4	223104	Dhakur Sootaj	Sootaj
5	223105	Daggala Ranjith Ofia	D. Ranjith
6	223106	Donthuati Shashank	Shashank
7	223107	Elajjala Aravind	Aravind
8	223108	Eudikandula Nagaraju	E. Nagaraju
9	223109	Janagani Prasanna	Prasanna
10	223110	Kannoju Shirreesha	S. Shirreesha
11	223111	Kannoju Vivekananda	Vivekananda
12	223112	Katkuai Akash Reddy	Akash
13	223113	Lakkasru Sravani	Sravan
14	223114	Mekala Sathwika	Sathwika
15	223115	Nagaboina Saivaesha	Saivaesha
16	223116	Parupathi Abhisam Reddy	Abhisam Reddy
17	223117	Penta Poojitha	Poojitha
18	223118	Varilla Chandana	Chandana
19			



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VAAGDEVI DEGREE & P.G. COLLEGE
Kishanpura, Hanamkonda

2022-23

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Department of Botany

Assignment Book

Class :- BSc III year I Sem

Subject :- Botany

Group :- NPBC

Topic :- Organizations of biodiversity
Management

Date :- 25/03/2023



Principal
VAAGDEVI DEGREE & P.G. COLLEGE
Kishanpura, Hanamkonda.

Sl. No	Hall ticket NO	Name of the student	Signature
1	08622.3251	Cherkuri Jahnvi	Jahnvi
2	3252	Danampelli Narendaa	D. Narendra
3	3253	Devakani Santhoshini	D. Santhoshini
4	3254	Fasheen	Fasheen
5	3255	Gangajula Bhavani	Bhavani
6	3256	Khansa Fathima	K. Fathima
7	3257	Sumaiya Anam	Sumaiya Anam
8	3258	Suram kavya	Kavya
9	3259	Syeda Navsheenfatima	N. Navsheen
10	3260	Thaera fatima	Thaera



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2022 - 23

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Department of Botany

Assignment Book

Class :- Bsc III year II Sem

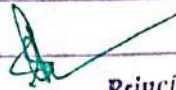
Subject :- Botany

Group :- NDBZ

Topic :- Sterilization test

Date :- 03/04/2023




Principal
VAAGDEVI DEGREE & P.G. COLLEGE
Kishanpura, Hanamkonda.

Sl. No	Hall Ticket NO	Name of the student	Signature
01	086223651	Akarapu Poojitha	Poojitha
2	3652	Boilepalli Sathwika	B. Sathwika
3	3653	Chetkuri Sathwika	C. Sathwika
4	3654	Fareeha Naz	Fareeha Naz
5	3655	Kalvakuntla Navya Bhavana	K. Navya Bhavana
6	3656	Kampela Pradeep	Pradeep
7	3657	Kurra Soumya	Soumya
8	3658	Macharla Akshitha	Akshitha
9	3659	Mandha Prathyusha	Prathyusha
10	3660	Pabbathi Akhila	P. Akhila
11	3661	Siliveru Praveenkumar	Praveen Kumar
12	3662	Soumya Lingaboina	L. Soumya
13	3663	Mohammed Sumaya	Sumaya



Principal
VAAGDEVI DEGREE & P.G. COLLEGE
Kishanpura, Hanamkonda.

Biotechnology Assignment

Submitted by : M. Rohitha

Group : Bt. Mi. C

Admission NO : 801

Hall Ticket NO : 08623-3014


Signature of Lecturer


Signature of HOD.

MITOCHONDRIA

- "KOLLIKER" is the first person to identify the mitochondria in striated muscles.
- "FLEMMING" "Filia" (thread structure) termed the word.
- "ALTMAN" named mitochondria "Bioplast" in 1892.
- "BENDA" given name to the Bioplast as "MITOCHONDRIA" in 1898. He used crystal violet to stain it.

It has own DNA, actively involved in production energy, self replicatory and maternal inheritance. And extra chromosomal DNA (inheritance).

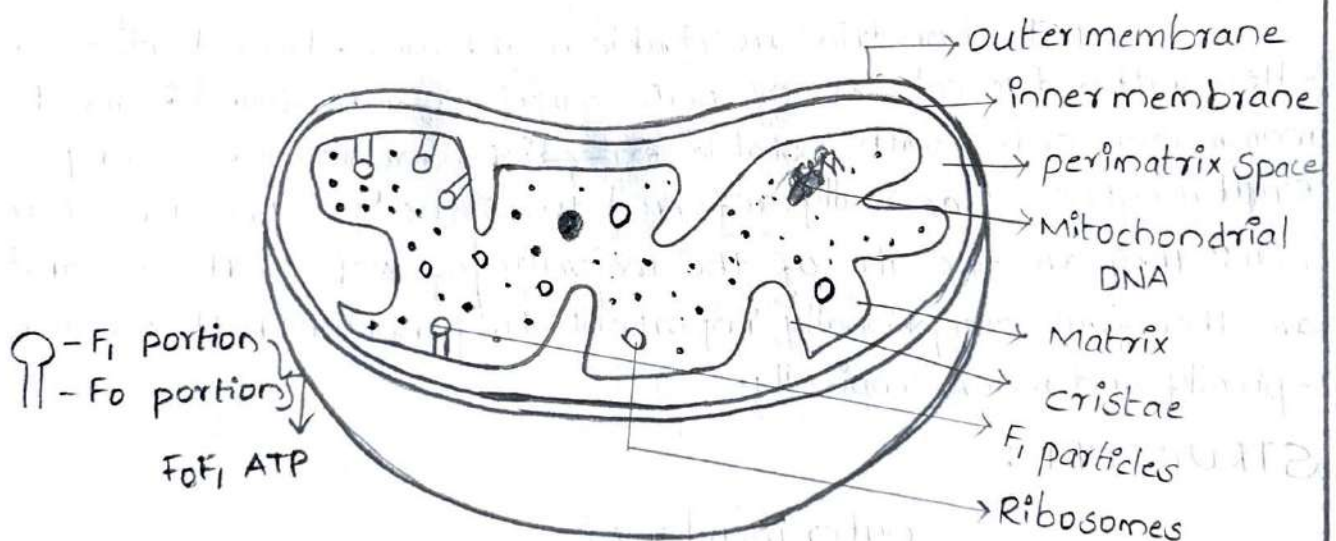
Mitochondria are double membrane-bound cell organelles, with a typical size of $0.75 - 3 \mu\text{m}^2$. They are found in most mammalian cells, with notable exceptions including maturing erythrocytes. Classically referred to as the 'powerhouse of the cell', they are the site of the majority of ATP synthesis and are therefore exceptionally important to function both microscopically and macroscopically.

STRUCTURE:

- Outer membrane
- Inner membrane
- Perimitchondrial Space
- cristae
- Matrix

Mitochondria have an inner and outer membrane, with an intermembrane space between them. The outer membrane contains proteins known as porins, which allow movement of ions into and out of the mitochondrion. Enzymes involved in the elongation of fatty acids and the oxidation of adrenaline can also be found on the outer membrane.

The space within the inner membrane of the mitochondrion is known as the matrix, which contains the enzymes of the krebs (TCA) and fatty acid cycles, along side DNA, RNA, ribosomes and calcium granules.



The inner membrane contains a variety of enzymes. It contains ATP synthase which generates ATP in the matrix, and transport proteins that regulate the movement of metabolites into and out of the matrix.

The inner membrane is arranged into cristae in order to increase the surface area available for energy production via oxidative phosphorylation.

Outer membrane :

- encloses entire organelle; 60-75 Å thick
- It has protein - to - phospholipid ratio similar to that of cell membrane (about 1:1 by weight)
- Enzymes includes monoamine oxidase, rotenone - insensitive NADH - cytochrome c - reductase, hydrolase, fatty acid Co-A ligase.
- Mitochondrial outer membrane can associates with Endoplasmic reticulum membrane, in a structure called "Mitochondria associated Endoplasmic Reticulum membrane [MAM]", involves in calcium signalling and transfer of lipids between Endoplasmic Reticulum and Mitochondria.

Intermembrane Space :

- Space between outer & inner mitochondria membrane - perimitchondrial space is approximately 70 Å
- It has high proton concentration. Concentration of small molecules such as ion and sugars in the intermembrane space is same as that of cytosol.

Inner membrane :

- It is rich in many enzymes, coenzymes and other components of electron transport chain.
- It also contains pumps and many permease proteins for transport of various molecules such as citrates, ATP, phosphate and ATP.
- It contains proteins with three types of functions:
 - perform electron transport chain redox reactions
 - ATP Synthase, which generates ATP in the matrix.

Cristae :

- Inner membrane gives out finger like outgrowths is compartmentalized into numerous folds called cristae.
- It expands surface area of inner mitochondrial membrane, enhancing ability to produce ATP.
- These folds are studded with small round bodies known as F_1 particles (or) oxysomes.

Matrix :

- It is the space enclosed by inner membrane.
- It consists about $\frac{2}{3}$ of total proteins in a mitochondrion.
- Matrix is important in production of ATP with the aid of ATP Synthase contained in the inner membrane.
- Matrix contains a highly concentrated mixture of hundreds [of ATP Syn] enzymes, special mitochondrial ribosomes, tRNA & several copies of mitochondrial DNA genome.
- Major functions includes oxidation of pyruvate and fatty acids.

Mitochondrial DNA:

- Small, ds, covalently closed, circular molecule, occurs in multiple copies, has 16,569 base pairs.
- Usually remains attached to inner mitochondrial membrane. Stores biological information.
- Encode RNAs and proteins that are essential for mitochondrial function. Codes 2 rRNAs, 22 tRNAs and 13 mitochondrial membrane proteins.
- It can undergo replication & duplication and depends on nuclear DNA.

FUNCTIONS:

The mitochondrion is the site of ATP synthesis for the cell. The number of mitochondria found in a cell are therefore a good indicator of the cell's rate of metabolic activity; cells which are very metabolically active, such as hepatocytes, will have many mitochondria.

- Store caspases responsible for triggering apoptosis.
- Are able to transiently store calcium contributing to calcium haemostasis.

In brown adipose tissue mitochondria have an alternative function of heat production using the electron transport chain.

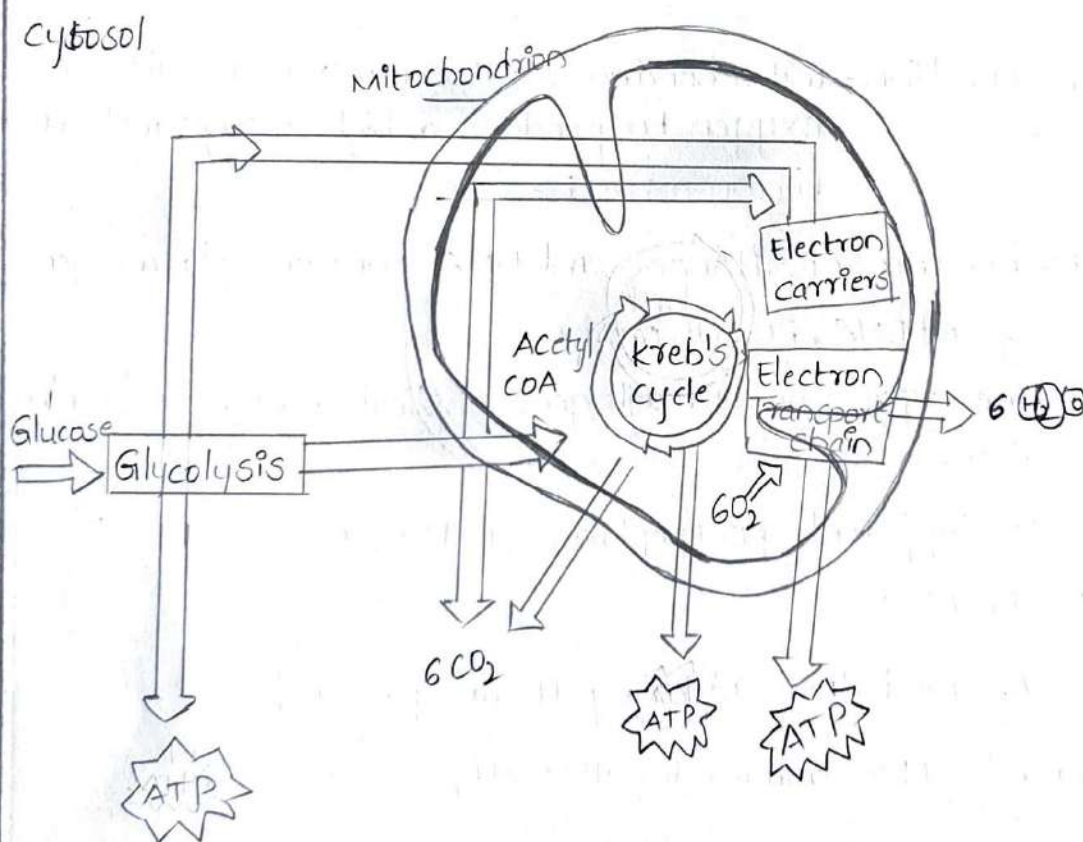
- Aerobic respiration - mitochondria uses complex molecules and oxygen to produce a high energy molecule known as ATP.
- Extra mitochondria inheritance - mtDNA contains plasma genes
- Synthesis of mtDNA, RNA & protein
- Bring out gene expression through gene duplication, transcription and translation.
- Synthesis 13 different polypeptides in human

OTHER FUNCTIONS:

- production of heat [non shivering thermogenesis]
- Role in apoptosis [Programmed cell death]
- Synthesis of estrogen and testosterone
- Role in neurotransmitter metabolism
- Role on cholesterol metabolism
- Role in heme synthesis

SITE OF SEVERAL METABOLIC REACTIONS:

- OUTER MEMBRANE: Oxidation of epinephrine,
Degradation of tryptophan,
Elongation of fatty acid.
- INNER MEMBRANE: Oxidation phosphorylation
- MATRIX: Kreb's cycle
Beta oxidation
Detoxification of ammonia in urea cycle
Storage of calcium ions.



PRACTICE OF LIFE INSURANCE

ASSIGNMENT-2

K. Pijitha
B.Com B.A
086232332

1. What is a settlement of claims ?

A An insurance claim is a formal request to an insurance company asking for a payment based on the terms of the insurance policy. The insurance company reviews the claim for its validity and then pays out to the insured or requesting party once approved.

2. What is a survival benefit?

A Survival benefit is often the primary outcome measure in clinical research relating to palliative chemotherapy. This suggests a difference in perspective between palliative care clinicians, for whom "palliative" refers to improvement in quality of life, and those clinicians who focus on prolonging life.

3. What is a death claim?

A Death benefit is the amount on a life insurance policy, annuity or pension that is payable to the beneficiary when the insured or annuitant passes away. Alternatively, a death benefit may be a large, lump-sum payment from a life insurance policy.

What is a Maturity claim?

Maturity claim is associated with the Maturity Benefit of the policy i.e., the claim which arises when the policy matures. It simply means that when the policy completes its tenure, a certain amount of money called Maturity claim amount is settled towards the life assured.

5. Write down Intimation Procedure?

A. The claimant must submit the written intimation as soon as possible to enable the insurance company to initiate the claim processing. The claim intimation should consist of basic information such as policy number, name of the insured, date of death, cause of death, place of death, name of the claimant, etc.

6. What is a need for Nominee?

A. Nominee is a right of the policyholder of the life insurance policy on his own life, to select or appoint a person or persons to receive the proceeds of the insurance policy in event of his death during the policy term.

7. What is a Assignment in Insurance claim?

A. Assignment refers to the transfer of certain or all rights to another party. The party which transfers its rights, is called an assignor, and the party to whom such rights are transferred is called an assignee.

What is a claim concession clause?

A When a policy has not acquired paid up value and claim concession rules are not applicable, nothing is payable in case of death. However some insurers relax the rules in favour of the claimant.

9. What is a Presumption of death?

A Presumption of death means the assumption of death of a person who unexpectedly disappeared and was continuously absent for an extended period, especially seven years.

10. What is Concept of Underwriting?

A Underwriting is the procedure by which an underwriter brings a new security issue to the investing public in an offering. In such a case, the underwriter will guarantee a certain price for a certain number of securities to the Party that is issuing the security.

11. What is a financial planning?

A Financial planning is the process of estimating the capital required and determining its competition. It is the process of framing financial policies in relation to procurement, investment and administration of funds of an enterprise.

Assignment

Name :- P. Sumanth Sai

Group :- B. Com (B.A)

HT. No :- 086212353

Section :- B

Subject :- Cost Accounting

following transactions occurred in the
recharge of an issue of a material.

Jan - 2 nd	Purchase	4000 units @ 4-00 per unit
Jan - 20 th	Purchase	500 units @ 5-00 per unit
Feb - 5 th	Issued	2000 units
Feb - 10 th	Purchase	6000 units @ 6-00 per unit
Feb - 12 th	Issued	4000 units
Mar - 2 nd	Issued	1000 units
Mar - 5 th	Issued	2000 units
Mar - 15 th	Purchase	4500 units @ 5-50 per unit
Mar - 20 th	Issued	3000 units

Prepare the stores ledger Account using

- LIFO
- FIFO
- Weighted Average
- Simple Average.

stones ledgen

LIFO method

LIFO METHOD				Issued				Balance			
Date	Received			Requisition Order No	Unit cost Quantity	Unit cost no	Total	Quantity	Unit cost no	Total	Balance
	Purchase Order No	Quantity	Unit cost no								
Jan-2	-	4000	4.00	-	-	-	-	4000	4.00	16000	16000
Jan-20	-	500	5.00	-	-	-	-	4000 500	4.00 5.00	16000 2500	16000
Feb-5	-	-	-	-	2000	4	8000	2500	4.00	10,000	10,000
Feb-10	-	6000	6	-	-	-	-	2500 6000	4.00 6.00	36,000	36,000
Feb-12	-	-	-	-	4000	6	24000	2500 2000	4.00 6.00	16,000 12,000	16,000
Mar-2	-	-	-	-	1000	6	6000	2500 1000	4.00 6.00	10,000 6,000	10,000
Mar-5	-	-	-	-	2000	6	12000	1500 1500 4500	4.00 4.00 5.50	6000 6000 24750	6000
Mar-15	-	4500	5.50	-	-	-	-	1500 1500	4.00 5.50	6000 8250	6000
Mar-20	-	-	-	-	3000	5.50	16500	1500 1500	4.00 5.50	6000 8250	6000
							Closing stock = 300 units and Amt is = 14250.				

Stones ledgen

Received				Issued				Balance			
Date	Purchase order no	Quantity	Unit cost no	Total	Requist order no	Quantity	Unit cost no	Total	Quantity	Unit cost no	Total
Jan-2	-	4000	4-00	16000	-	-	-	-	4000	4-00	16000
Jan-20	-	500	5-00	2500	-	-	-	-	4500	4-10	18500
Feb-5	-	-	-	-	-	2000	4-10	8200	2500	4-12	10300
Feb-10	-	6000	6-00	36000	-	-	-	-	8500	5-44	46300
Feb-12	-	-	-	-	-	4000	5-44	21760	4500	5-45	24540
Mar-2	-	-	-	-	-	1000	5-45	5450	3500	5-45	19090
Mar-5	-	-	-	-	-	2000	5-45	10900	1500	5-46	8190
Mar-15	-	4500	5-50	24750	-	-	-	-	6000	5-49	32940
Mar-20	-	-	-	-	-	3000	5-49	17940	3000	5-00	15000

Assignment no := 02

Name := G. Manasa

Group := Bcom. BA(B) III sem 2nd year

Subject := BSS

Hall ticket no := 086222321

Calculate mean

73 97 100 125 128 132 133 135 140 141 168

Answer :- calculation of Mean

Direct method

73
97
100
125
128
132
133
135
140
141
168

$$\Sigma X = 1372$$

$$\bar{X} = \frac{1372}{11} = \underline{\underline{124.72}}$$

Shortcut Method :-

73	0
97	24
100	27
125	52
128	55
132	59
133	60
135	62
140	67
141	68
168	95
	569

$$\begin{aligned}\bar{X} &= A + \frac{\Sigma di}{N} \\ &= 73 + \frac{569}{11} \\ &= \underline{\underline{124.72}}\end{aligned}$$

Variable	10	20	30	40	50	60	70
frequency	22	27	21	32	18	14	16

Data	F(N)	Fx
10	22	220
20	27	540
30	21	630
40	32	1,280
50	18	900
60	14	840
70	16	1,120
	150	5,530

Discrete arithmetic mean direct method $\rightarrow \frac{\sum fx}{n} = \frac{5530}{150} = 36.86$

* Shortcut method

data	F(N)	D (assumed mean)=10	fd
10	22	0	0
20	27	10	270
30	21	20	420
40	32	30	960
50	18	40	720
60	14	50	700
70	16	60	960
	150		4030

$$\text{formula at } \frac{\sum fd}{n} = 10 + \frac{4030}{150}$$

$$= \frac{1500 + 4030}{150} = \frac{5,530}{150} = 36.86$$

calculate a.m by continuous series (Direct method)

class Interval	F(N)	midvalue (M)	FM
0-10	8	5	40
10-20	12	15	180
20-30	14	25	350
30-40	16	35	560
40-50	15	45	675
50-60	9	55	495
60-70	6	65	390
	80		2690

$$\text{formula} \Rightarrow \frac{\sum fm}{n} = \frac{2690}{80} = 33.6$$

calculate combined mean.

Data	No. of students	weights
A	50 (N_1)	40 (x_1)
B	30 (x_2)	45 (N_2)
C	20 (x_3)	50 (N_3)

$$\begin{aligned}
 \text{formula} &\rightarrow \frac{N_1x_1 + N_2x_2 + N_3x_3}{N_1 + N_2 + N_3} \\
 &= \frac{50(40) + 45(30) + 50(20)}{50 + 45 + 50} \\
 &= \frac{2000 + 1350 + 1000}{145} = 30
 \end{aligned}$$

Calculate Weighted Arithmetic mean

Data (subject)	Marks	no. of students (Arb-weights)	ΣW
English	75	1	75
Hindi	90	1	90
Mathematics	70	3	210
Physics	80	2	160
Chemistry	60	3	180
			715

$$\bar{y} = \frac{\Sigma WX}{\Sigma W}$$
$$= \frac{715}{10} = 71.5$$

Name :- Sohail

Sub :- FIT

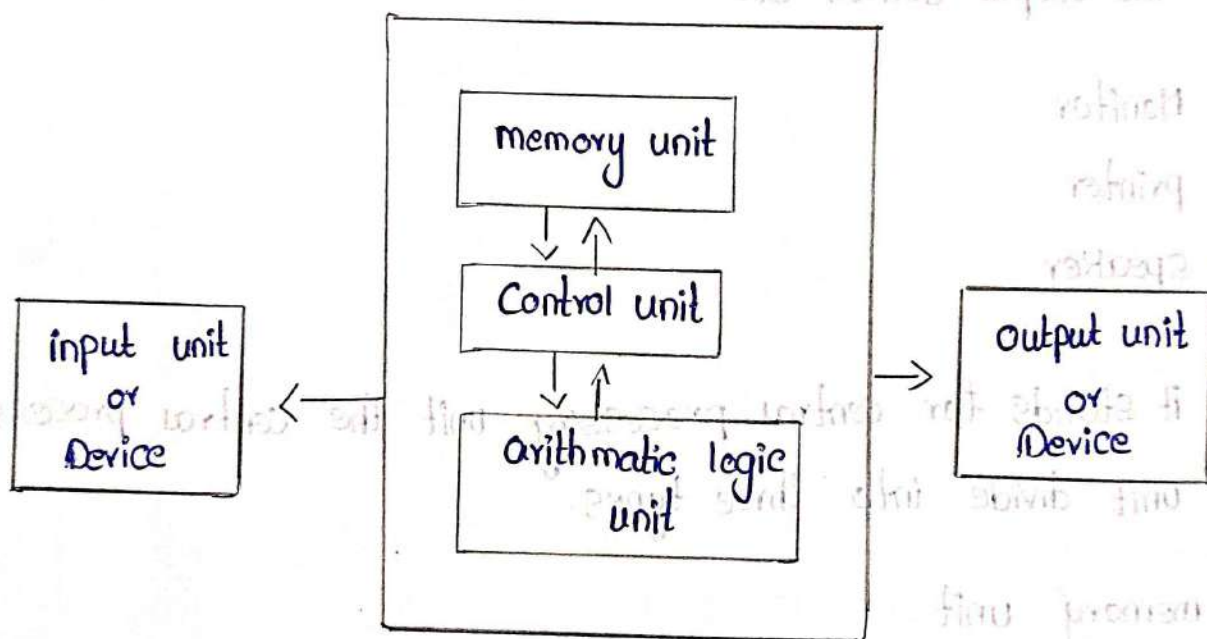
Class :- B.com CA (C)

Roll no :- 358

Block Diagram of computer or logical organisation of computer

The computer can be treated as a system consisting of various subsystem integrated with each other to achieve common objective

- 1] input unit
- 2] CPU
- 3] output unit



1] input device: The process of entering the data & instruction to the computer system is known as input

The input devices are

- 1] keyboard
- 2] Mouse
- 3] Joy stick

4] Track ball

5] light pen

6] Scanner

7] Barcode reader

Output: output is a process data given by the computer after data processing output is called as result. we can see the result in storage device for the future use.

The output devices etc

1] Monitor

2] printer

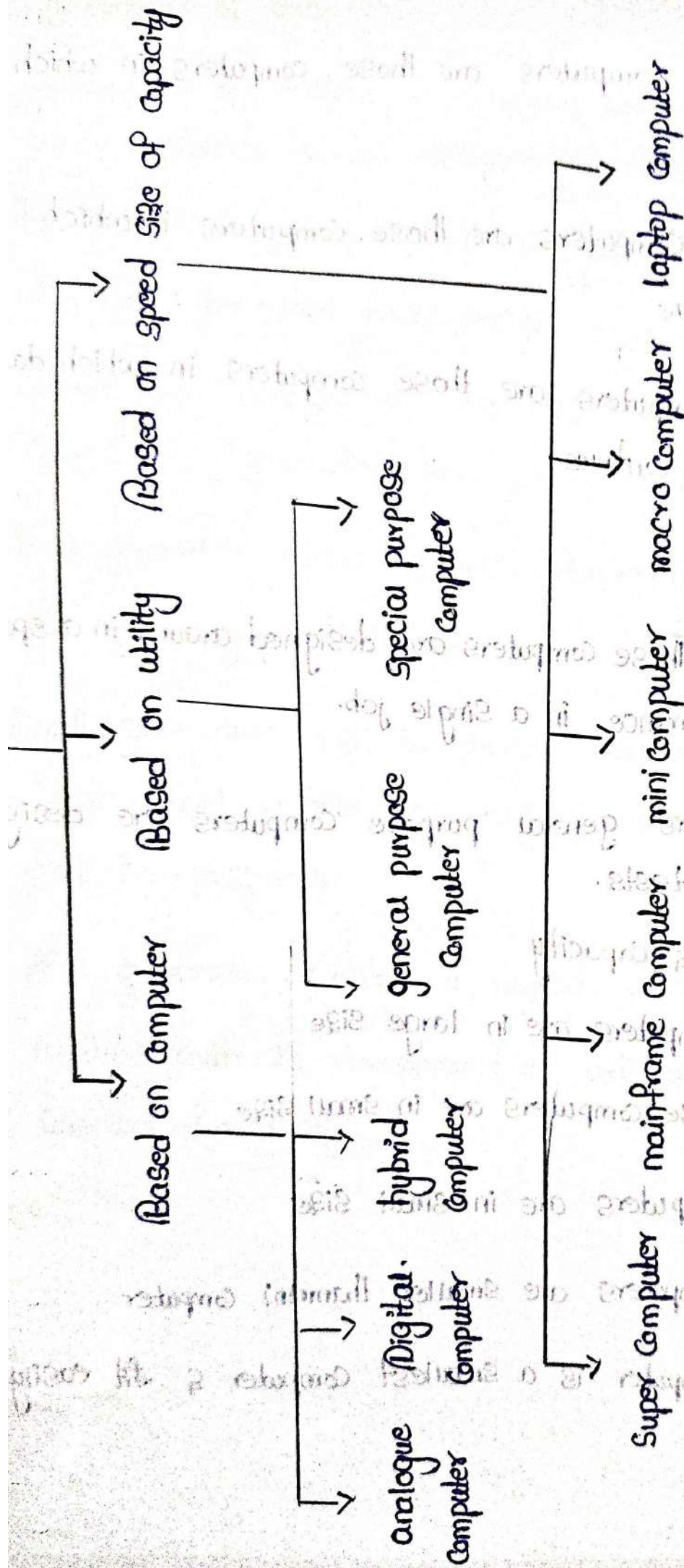
3] speaker

CPU: it stands for central processing unit the central processing unit divide into three types.

1] memory unit

2] control unit

3] arithmetic logical unit



Based on Computer

analog computer: analog computers are those computers in which data flow is continue

Digital computer: These computers are those computers in which data flow in non-continue

3] Hybrid computer: These computers are those computers in which data flow in continue & non-continue

Based on utility

1] special purpose utility: These computers are designed around in a specific application performance in a single job.

2] general purpose computers: general purpose computers are designed to perform a variety of tasks.

Based on speed size & capacity

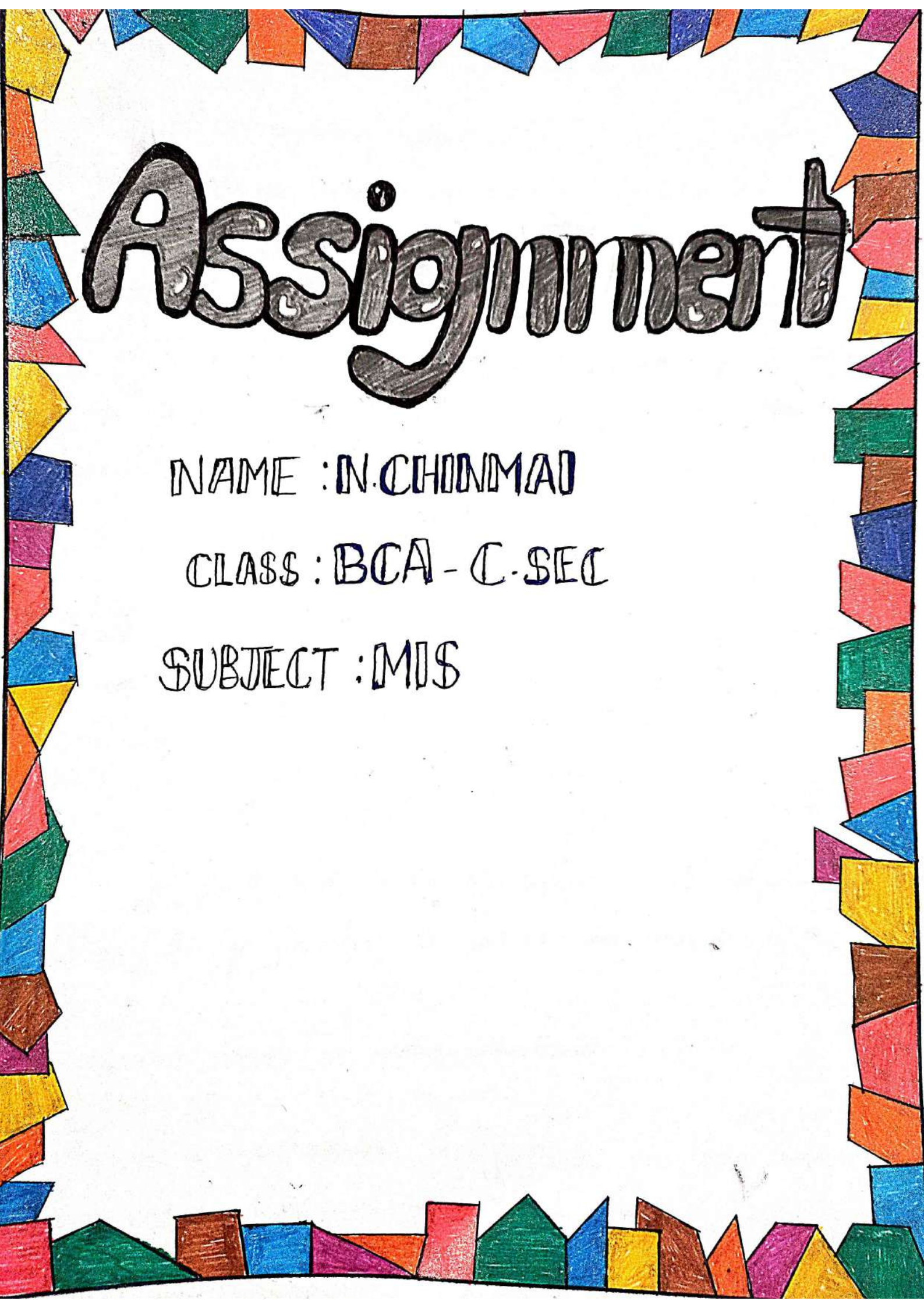
1] super computer: These computers are in large size

2] main frame computer: These computers are in small size

3] mini computer: These computers are in small size

4] micro computer: These computers are smaller than mini computer

5] laptop computer: This computer is a smallest computer & fit easily inside the brief case



Assignment

NAME : N. CHONMAI

CLASS : BCA - C. SEC

SUBJECT : MIS

① What is the structure of information system:

MIS is an organisal system which consists of peoples, hardware, software data source and communication networks that collects, transforms and distribules information in an organisation.

It is a tool which helps managers in making decisions by providing regular flow at accurate information in an organisation.

structure of MIS consist of following components

- 1) Hardware
- 2) software
- 3) Database
- 4) procedures
- 5) personal

* Hardware:

The equipment and devices for inputting and outputting secondary storage processing as well as communication in the system.

Ex: keyboard, mouse, cpu, speaker, motherboard.

* software:

The set of programmes to facilitate processing procedure or the set of instructions given to the computer to perform

a transaction is called software. It includes system software & application software.

* system software:

To run the computer hardware and work with it, operating system, Anti-virus software, programming language etc

* Application software:

end user programs word processor, documents, graphics, CAD/CAM, Email etc

* Data base:

The organizational data to be used by various software programs is usually stored in the form of files. The data can be easily accessed, managed, modified, updated, controlled and organized.

* procedures:

The operating procedures are documented in the form of physical manuals constitute an important part of MIS components. These documents could be divided into three major types
→ operating manuals, user manuals and system manuals.

* operating personnel:

The man power operating these information systems include system manager, system analysis, data administrators, programmers, data entry and computer operators.

Control is management control and operational control:

* Management control:

Management control is based on a process of setting objectives, planning, budgeting, monitoring projects, implementation, analysing results and taking corrective actions.

* Operational control:

It focus on all the operations of an organisations (or) units (or) branches (or) departments.

Ex: production, scheduling, order, processing, payroll, accounting etc

* Difference between management control and operational control.

1) Focus: Management control concerns the whole of an organisation (or) Division. It's focus is on all the operations of an organisation.

on the other hand, the focus of operational control is limited to a single task (or) operation.

2) Nature:

In Management control psychological considerations are dominant, There are very little rules and a high degree of judgement or decision making or involved.

An operational control system is a rational system because the action to be taken is decided by a set of logical rules.

* Time Horizon:

In management control involves weekly, monthly, (or) yearly time frames.

where as the time horizon operational system tends to be day to day.

4) Degree of difficulty:

control is more difficult to in management control than in operational control due to the lack of a scientific standard with which the actual performance can be compared.

A good operational control system can be provided a much higher degree of assurance that actions are proceeding as desired than can a management control.

5) Type of Data:

A management control system is usually built around financial data

where as operational system are open like non-monitory

ex: Man-Hours, no. of items.

ASSIGNMENT

NAME :- G. VENNELA

SUB :- MIS

CLASS :- BCA 1st SEM

SEC :- 'C'

What is the structure of Information System.

MIS is an organised system consists of people hardware, software, data source and communication networks that collect, transform and distribute information in an organisation.

It is a total which helps managers in making decision by providing regular flow of accurate information in an organisation.

→ Structure of MIS consists of following components

1) Hardware

2) Software

3) Database

4) Procedures

5) Personnel.

* Hardware :- The equipment and devices for inputting and outputting, secondary storage processing as well as communication in the system.

Ex:- Keyboard, mouse, CPU, speaker, motherboard.

* Software :- The set of programmes to facilitate processing procedure or the set of instructions given to the computer to perform a transaction is called software. It includes system software and application software.

* System software :- To run the computer hardware and work it, operation system, anti virus software, programming language etc.

* Application Software:- End user programs word processor, documents, graphics, CAD/CAM, E-mail etc.

* Database:- The organizational data to be used by various software programs is usually stored in the form of files. The data can be easily accessed, managed, modified, updated, controlled, and organized.

* Procedures:- The operating procedures are documented in the form of physical manuals constitute an important part of MIS components. These documents could be divided into three major types.

→ operating manuals, user manuals, and system manuals.

* Operating personnel:- The manpower operating these information systems include system managers, system analysts, data administrators, programmers, data entry and computer operators.

MIS is management control and operational control.

* Management control:- Management control is based on a process of setting objectives, planning, budgeting, implementation, analysing results and taking corrective actions.

* Operational control:- It focuses on all the operations of an organization (or) units (or) branches (or) departments.

Ex:- production, scheduling, order processing, pay roll, accounting check handling etc.

Difference between management control and operational control:-

1) Focus:- Management control considers the whole of an organisation (or) division its focus is on all the operations of an organization. On the other hand, the focus of operations control is limited to a single task or operation.

2) Nature:- In management control psychological considerations are dominant. There are very little rules and a high degree of judgement or decision making or involved.

An operational control system is a rational system because the action to be taken is decided by a set of logical rules.

3) Time horizon:- In management control involves weekly, monthly or yearly time frames.

where as the time horizon of operational system tends to be day to day.

Degree of Difficulty:- Control is more difficult in Management control than in operational control due to the lack of a scientific standard with which the actual performance can be compared.

A good operational control system can be provided a much higher degree of assurance that actions are proceeding as desired than can be management control.

Financial Accounting System.

Account of finance	Marketing	production	Human Resources
Fixed assets	Prospect leads	Purchasing	position Control
Sales order Processing	contact information	Receiving	employee profile
Accounts receivable	micromarketing & Data warehousing	Quality control	employee skills inventory
Account payable	Telemarketing	Shipping	Performance Management
Inventory Control	Direct mail	Automated material handling	government reporting
Purchase order processing	point of sale	computer aided design/ manufacturing-	selection & placement
Pay roll	Delivery tracking & routing	Image Management	Training
Billing/Invoice	electronics shopping	material section	-
-	electronic advertising	shop floor scheduling	-
-	-	mass customisation	-
-	-	shop floor	-

Assignment

Name :- Samera Yasmeen

Class :- BBA 'B'

Roll No :- 07

Topic :- Definitions of marketing, selling concept

Subject :- Marketing ^{marketing concept.}

Marketing Definition :-

Marketing is a process by which company creates value for the customer and build strong customer relations in order to capture the value from the customer in return.

- 2) Marketing is a business process by which products are matched with market and through which transfers of ownership is effected.
- 3) Marketing is getting and keeping the customer.
- 4) Marketing is a process of discovery and translating consumer needs and wants into products of services specification, creating demand for those products and services and then, in turn, expanding the demand.

* Selling concept :

The philosophy of selling concept is that customer or consumer will not buy enough of the firms products unless it under take a large scale selling and promotional efforts.



* Situation 1 :-

production concept followed by the organization in two situations.

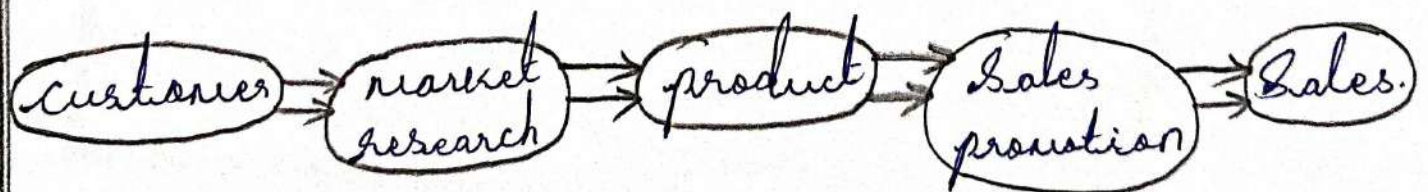
- 1) When the product demand exceeds the supply of the product.
- 2) When the production cost is too high.

* Marketing Concept :-

The marketing management philosophy says or holds that achieving organizational goals depending and knowing the customer needs and wants of target markets and delivery desire satisfaction better than the competitors do.

* Assumptions :-

- 1) Firms should produce only that products as designed by the consumer.
- 2) Management is to integrate all activities in order to satisfy the customer needs and wants.
- 3) Management is guided by long term profits.



ENGLISH Assignment

2022 - 2023

Name : K. Murali Krishna .

Topic : Misspelt Words.



MISSPELT - WORDS

Wrong words

1. Assesment
2. akward
3. Endeavour
4. Belive
5. wiend
6. achille
7. greateful
8. Biographay
9. Seperate
10. calender
11. unnecessary
12. questionnaire
13. accidentally
14. neccessary
15. suprise
16. embazzass
17. accomodation
18. recieve
19. pronounciation

Right words

- Assessment
- awkward
- Endeavour
- Believe
- weird
- achieve
- grateful
- Biography
- Separate
- calendar
- unnecessary
- questionnaire
- accidentally
- necessary
- surprise
- embarrass
- accommodation
- receive
- pronunciation

- | | | |
|-----|------------------|------------------|
| 20. | Accomodate | - accommodate |
| 21. | Acknowledgement | - Acknowledgment |
| 22. | Dependant | - Dependent |
| 23. | Indispensible | - Indispensable |
| 24. | Vacuum | - Vacuum |
| 25. | occassion | - occasion |
| 26. | Brocoli | - Broccoli |
| 27. | occurrence | - occurrence |
| 28. | Persavence | - Perseverance |
| 29. | Ketchup | - Ketchup |
| 30. | privilege | - Privilege |
| 31. | definate | - Definite |
| 32. | perogative | - prerogative |
| 33. | Mispell | - Misspell |
| 34. | Amateur, amature | - Amateur |
| 35. | Appaxantly | - Apparently |
| 36. | Bizzare | - Bizarre |
| 37. | Begining | - Beginning |
| 38. | concensus | - consensus |
| 39. | curiousity | - curiosity |
| 40. | Embarrassing | - Embarrassing |
| 41. | colleague | - colleague |

Dilemma	- Dilemma
Writting	- Writing
Explaination	- Explanation
Rhythm , Rythem	- Rhythm
Sieze	- Seize
Millennium, millenium	- Millennium
Tomorrow	- Tomorrow
Dissappears	- Disappears
Deterioreit	- Deteriorate
Arguement	- Argument
wensday	- wednesday
occured	- occurred
que	- queue
Thies	- Theirs
Twelth	- Twelfth
Nieghbours	- Neighbour.
Definateley	- Definitely
Noticable	- Noticeable
convinient	- convenient
february	- february
Ignor	- Ignore.

64.	<u>o</u> pertunity	- <u>o</u> ppportunity
65.	s <u>p</u> each	- s <u>p</u> eech
66.	T <u>a</u> uely	- T <u>a</u> uely
67.	L <u>i</u> esure	- L <u>e</u> isure
68.	fo <u>r</u> iegn	- fo <u>r</u> eign
69.	E <u>x</u> cede	- E <u>x</u> cee de
70.	du <u>m</u> bell	- du <u>m</u> bbell
71.	di <u>s</u> sappoint	- di <u>s</u> appoint
72.	di <u>f</u> frence	- di <u>f</u> ference
73.	coo <u>l</u> y	- coo <u>l</u> ly
74.	da <u>a</u> quiri, da <u>a</u> quiri	- da <u>a</u> quiri
75.	disa <u>s</u> terous	- disa <u>s</u> trous
76.	dr <u>u</u> nkeness	- dr <u>u</u> nken <u>ne</u> ss
77.	Ex <u>i</u> late	- Ex <u>i</u> hilarate
78.	com <u>o</u> flage, com <u>o</u> flague	- cam <u>a</u> flage
79.	car <u>r</u> i <u>b</u> ean	- car <u>i</u> bb <u>e</u> an
80.	cau <u>h</u> gt, cau <u>g</u> t	- cau <u>g</u> ht
81.	cem <u>e</u> t <u>a</u> ry, cem <u>e</u> t <u>e</u> ry	- cem <u>e</u> t <u>e</u> ry
82.	ch <u>e</u> if	- ch <u>i</u> ef
83.	col <u>u</u> m	- col <u>u</u> mn
84.	con <u>c</u> eed	- con <u>c</u> ede

congratulate

- congratulate

comming

- comming

annally, annally

- annally

artic

- artic

athiest, athist

- atheist

awfull, awfeful

- awful

because

- because

adress

- adress

adultery

- adultery

adviseable, advizable

- advisable

acquire, acquire

- acquire

buissness

- buissness

Boueyant

- Buoyant

Bouy

- Buoy

benifit

- benefit

Belleweather

- Belleweather

promiss

- promise

proufe

- proof

publically

- publically

professor

- professor

105. playright , playwrite - playwright
106. protestor - protester
107. libarey , liberrey - library
108. loose - lose
109. lisence - license
110. Maintainance , Maintance - Maintenance
111. Miniscale - Minuscale
112. Miniture - Miniature
113. Marshmellow - Marshmallow
114. Momento - Memento
115. lightening - lightning.
116. Immitate - Imitate
117. Inteligence , Intelligance - Intelligence
118. Judgement - Judgment
119. Jewelerey - Jewelrey [us] / Jewellery [uk]
120. Indite - Indict.



ENGLISH

Assignment

2022 - 2023

Name :- B. Shirisha

Topic : parts of speech
(Nouns & pronouns)



NOUNS

NOUNS:-

A Noun is a word which shows names of them Person, Places, Animals, things, ideas, feelings.

Examples:-

- 1) The Name of this cat is Maul.
- 2) Finally she realized that her friend did not like her and was extremely upset.
- 3) I could not go to school early because I studied lesson until last night.
- 4) The movie is perfect.
- 5) Beauty is in the eye of the beholder.
- 6) I love Cats.
- 7) She won't have sent the email yet.
- 8) She has been in Prison for 6 months.
- 9) It was a small animal like a mouse.
- 10) This plant comes from a tropical land.
- 11) Cow milk is beneficial for health.
- 12) English is the first language that I learned.
- 13) She can not play the Guitar.
- 14) My grandfather is very old now.
- 15) My brother was promoted today.
- 16) This is mine cat.
- 17) She always carries an umbrella with her.
- 18) They are players.
- 19) I bought a watch yesterday.
- 20) I am very hungry but the fridge is empty.
- 21) Pass me that book.
- 22) I bought Apple yesterday.
- 23) My little sister is so naughty.

PRONOUNS

PRONOUN:-

A pronoun is a word used in place of a noun. It is used to avoid the repetitions of nouns in a sentence.

Examples:-

- 1) All the door where closed.
- 2) She slapped him on the face.
- 3) He wants to buy a house which is in your locality.
- 4) Anu and I went to the movie.
- 5) Anybody can meet him.
- 6) I Examined Everything.
- 7) Few can like his behaviour.
- 8) I myself will do all this.
- 9) She hereself decided to go.
- 10) This is a sweet potato.
- 11) That bag is mine.
- 12) Nobody was yet home.
- 13) Their is nobody except me.
- 14) You can eat whatever you like.
- 15) I have two books choose either.
- 16) Her Eyes are grey in colour.
- 17) Those cars are expensive.
- 18) Give me that book.
- 19) Somebody was beating at the door.
- 20) Ram shyam and I will come Ourself.
- 21) I don't like him.

- 22) Anybody can meet him.
- 23) Everyone was present there.
- 24) I myself can do it.
- 25) What do you want to do.
- 26) Few can like his behaviour.

V.V. good

ENGLISH Assignment

2022 - 2023

Name : K. Murali Krishna .

Topic : Misspelt Words.



MISSPELT - WORDS

Wrong words

1. Assesment
2. akward
3. Endeavour
4. Belive
5. wjerd
6. achille
7. greateful
8. Biographey
9. Seperate
10. calender
11. unnecessary
12. questionnaire
13. accidentally
14. neccessary
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16. embarrass
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70.	du <u>m</u> bell	- du <u>m</u> bbell
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72.	diff <u>e</u> rence	- diff <u>e</u> rence
73.	coo <u>l</u> y	- coo <u>l</u> ly
74.	da <u>a</u> quiri, da <u>a</u> quiri	- da <u>a</u> quiri
75.	disa <u>s</u> terous	- disa <u>s</u> trous
76.	dr <u>u</u> nkeness	- dr <u>u</u> nken <u>ne</u> ss
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78.	com <u>o</u> flage, com <u>o</u> flague	- cam <u>a</u> flage
79.	car <u>r</u> i <u>b</u> ean	- car <u>i</u> bb <u>e</u> an
80.	cau <u>h</u> gt, cau <u>g</u> t	- cau <u>g</u> ht
81.	cem <u>e</u> t <u>a</u> ry, cem <u>e</u> t <u>a</u> ry	- cem <u>e</u> t <u>e</u> ry
82.	ch <u>e</u> if	- ch <u>i</u> ef
83.	col <u>u</u> m	- col <u>u</u> mn
84.	con <u>c</u> eed	- con <u>c</u> ede

congratulate

- congratulate

comming

- comming

annally, annally

- annally

artic

- artic

athiest, athist

- atheist

awfull, awfeful

- awful

because

- because

adress

- address

adultary

- adeltary

adviseable, advizable

- advisable

acquire, adquire

- acquire

bisness

- business

Boeyant

- Buoyant

Bouy

- Buoy

benifit

- benefit

Belleweather

- Belleweather

promiss

- promise

prove

- proof

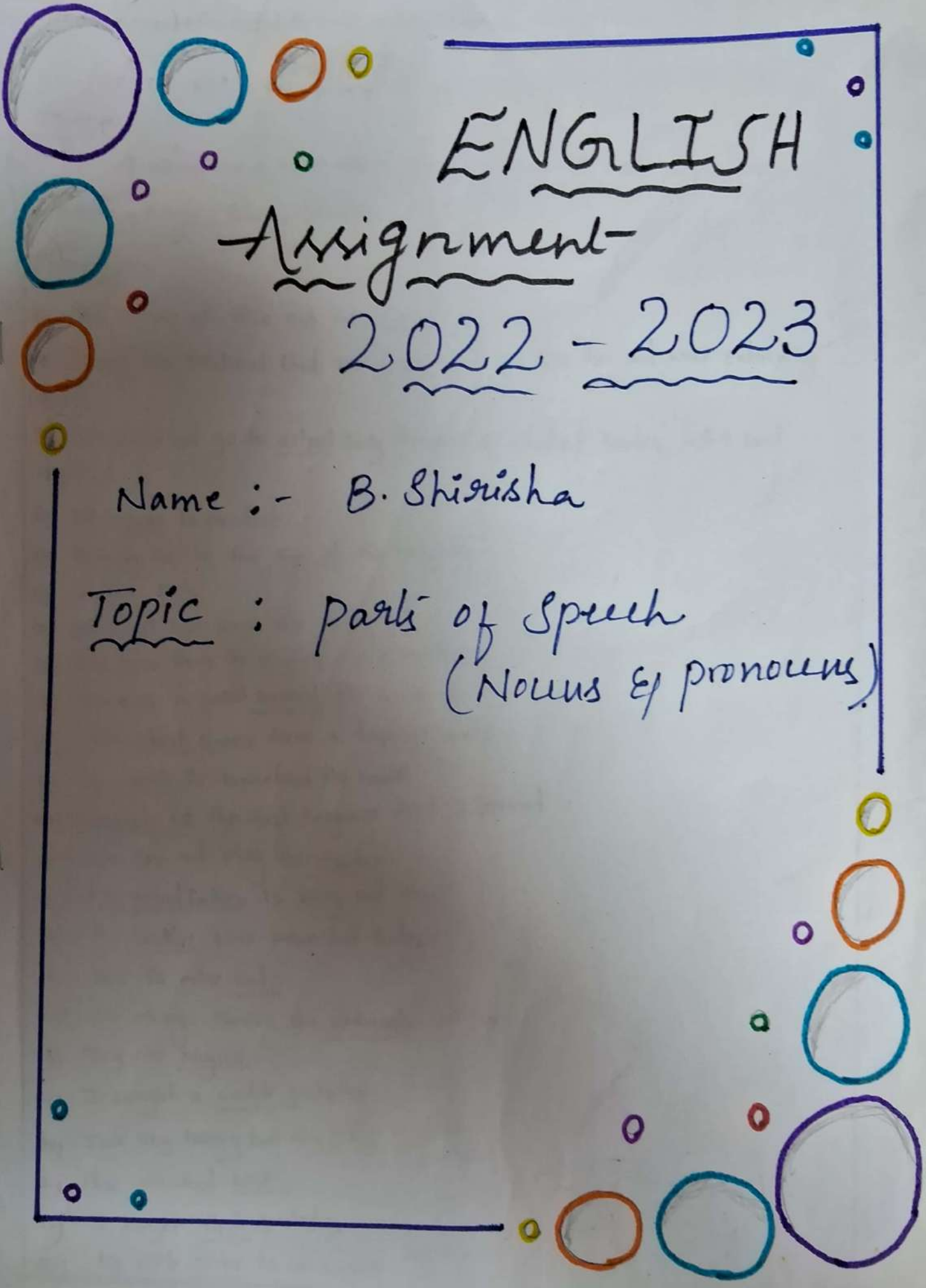
publically

- publicly

professor

- professor

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ENGLISH

Assignment-

2022 - 2023

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(Nouns & pronouns)

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V.V. good

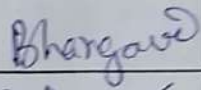
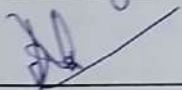
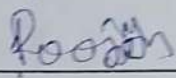
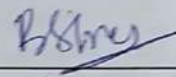
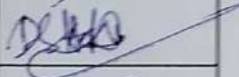
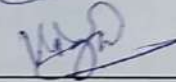
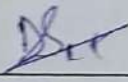
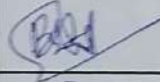
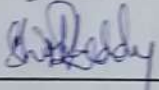
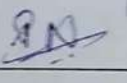
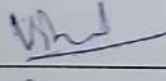
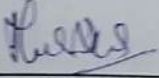
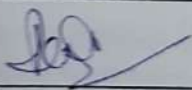
English - Assignment

VAAGDEVI DEGREE & PG COLLEGE

Kishanpura , Hanamkonda

Department of English

Assignment

S.No	HTNO	Name	Signature
1	86213112	NALLA SAHAJA	
2	86213365	PULICHERU BHARGAVI	
3	86213524	RADHARAPU NIKITH	
4	86213526	SARVU POOJITHA	
5	86223002	AYESHA FARHEEN	
6	86223003	BULLE SHIRISHA	
7	86223004	DEVUNURI SRIHARSHA KUMAR	
8	86223005	DURGALA VIGNESH	
9	86223006	DURGAM SHASHIKANTH	
10	86223007	ESARAPU SATHWIK	
11	86223008	ITHIREDDY SHIRISHAREDDY	
12	86223009	IYLA NITHISHA	
13	86223010	JANGILI VINAY	
14	86223012	KASARLA MURALI KRISHNA	
15	86223013	KOTHAPPELLY RESHMA	
16	86223014	KURIMILLA SATHWIK	

17	86223016	PALLERLA SOUMYA	Soumya
18	86223017	THEEGALA VIVEK CHAITHANYA	Vivek
19	86223018	THUMMALA SAI RAM	Sai Ram
20	86223019	VAJJAKESHAVULA PRANAY KUMAR	Pranay
21	86223051	BETHESDA AKSA	Akshar
22	86223052	KATUKU SAHITHYA	Sahithya
23	86223053	NIMMANI NITHIN RAO	Nithin
24	86223101	APPE NAGA HIMADWITHA	Nagany
25	86223102	BANDI VIJAYALAKSHMI	Vijayalakshmi
26	86223103	CHITYALA PRATHYUSHA	Prathusha
27	86223104	DHAKUR SOORAJ	Chithyany
28	86223105	DOGGALA RANJITH OFIR	Ranjith
29	86223106	DONTHURI SHASHANK	Shashank
30	86223107	GAJJELA ARAVIND	Aravind
31	86223108	GUDIKANDULA NAGARAJU	Nagasai
32	86223109	JANAGANI PRASANNA	Prasanna
33	86223110	KANNOJU SHIREESHA	K. Shireesha
34	86223111	KANNOJU VIVEKANANDA	K. Vivekananda
35	86223112	KATKURI AKASH REDDY	Akash Reddy
36	86223113	LAKKARSU SRAVANI	Sarvani

37	86223115	NAGANABOINA SRI VARSHA	N. Sri Varsha
38	86223116	PARUPATI ABHIRAM REDDY	P. Abhiram
39	86223117	PENTA POOJITHA	P. Poojitha
40	86223118	VAVILLA CHANDANA	V. Chandana
41	86223151	ANNA NIKITHA	A. Nikitha
42	86223152	BASANI MANASA	B. Manasa
43	86223153	BHUKYA INDU	B. Indu
44	86223154	BURRA RAMYASREE	B. Ramyasree
45	86223155	CHEPURI DEEKSHITHA	C. Deekshitha
46	86223156	CHIRRA SHIVA KUMAR	C. Shiva Kumar
47	86223157	ENUKAMETLA SAITEJASWINI	E. Saitejaswini
48	86223158	GUNDA ANKITHA SREE	G. Ankitha Sree
49	86223159	HEBA TABASSUM	H. Tabassum
50	86223160	KASHI RASHMIKA	K. Rashmika
51	86223161	KAUSAR FATIMA	K. Fatima
52	86223162	KURIMINDLA SIRICHANDANA	K. Sirichandana
53	86223163	MAZEEN FARHA	M. Farha
54	86223164	NEHA AFREEN	N. Afreen
55	86223165	PASUNOORI VIJAYALAXMI	P. Vijayalaxmi
56	86223166	POLUDASARI NIHARIKA	P. Niharika

57	86223167	POLUDASARI PRAVALIKA	<i>Pra</i>
58	86223168	PONAGANTI AAKANKSHA	<i>Anel</i>
59	86223169	THUMUGANTI APARNA	<i>Aparna</i>
60	86223202	BANDARI SAHITHI	<i>Sh</i>
61	86223203	GUMMADI SAI RAJ	<i>Sai Raj</i>
62	86223205	POCHAMPALLI AKASH	<i>AKASH</i>
63	86223206	SIRIKONDA ASRUTHA	<i>ASR</i>
64	86223251	CHERUKURI JAHNAVI	<i>JAHNAVI</i>
65	86223252	DANAMPELLI NARENDRA	<i>Naren</i>
66	86223253	DEVAKARI SANTHOSHINI	<i>Santh</i>
67	86223254	FARHEEN	<i>Farheen</i>
68	86223255	GANGOJULA BHAVANI	<i>Bharg</i>
69	86223256	KHANSA FATHIMA	<i>Fathim</i>
70	86223257	SUMAIYA ANAM	<i>Anam</i>

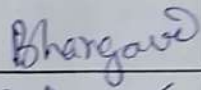
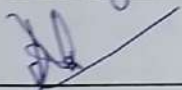
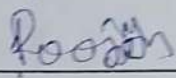
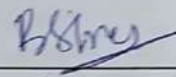
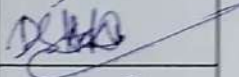
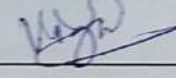
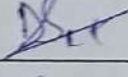
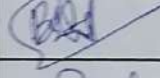
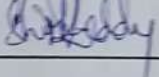
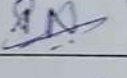
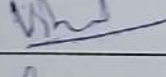
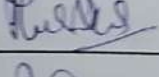
English - Assignment

VAAGDEVI DEGREE & PG COLLEGE

Kishanpura , Hanamkonda

Department of English

Assignment

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6	86223003	BULLE SHIRISHA	
7	86223004	DEVUNURI SRIHARSHA KUMAR	
8	86223005	DURGALA VIGNESH	
9	86223006	DURGAM SHASHIKANTH	
10	86223007	ESARAPU SATHWIK	
11	86223008	ITHIREDDY SHIRISHAREDDY	
12	86223009	IYLA NITHISHA	
13	86223010	JANGILI VINAY	
14	86223012	KASARLA MURALI KRISHNA	
15	86223013	KOTHAPELLY RESHMA	
16	86223014	KURIMILLA SATHWIK	

17	86223016	PALLERLA SOUMYA	Soumya
18	86223017	THEEGALA VIVEK CHAITHANYA	Vivek
19	86223018	THUMMALA SAI RAM	Sai Ram
20	86223019	VAJJAKESHAVULA PRANAY KUMAR	Pranay
21	86223051	BETHESDA AKSA	Akshar
22	86223052	KATUKU SAHITHYA	Sahithya
23	86223053	NIMMANI NITHIN RAO	Nithin
24	86223101	APPE NAGA HIMADWITHA	Nagany
25	86223102	BANDI VIJAYALAKSHMI	Vijayalakshmi
26	86223103	CHITYALA PRATHYUSHA	Prathusha
27	86223104	DHAKUR SOORAJ	Chithyany
28	86223105	DOGGALA RANJITH OFIR	Ranjith
29	86223106	DONTHURI SHASHANK	Shashank
30	86223107	GAJJELA ARAVIND	Aravind
31	86223108	GUDIKANDULA NAGARAJU	Nagasai
32	86223109	JANAGANI PRASANNA	Prasanna
33	86223110	KANNOJU SHIREESHA	K. Shireesha
34	86223111	KANNOJU VIVEKANANDA	K. Vivekananda
35	86223112	KATKURI AKASH REDDY	Akash Reddy
36	86223113	LAKKARSU SRAVANI	Sarvani

37	86223115	NAGANABOINA SRI VARSHA	N. Sri Varsha
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44	86223154	BURRA RAMYASREE	B. Ramyasree
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62	86223205	POCHAMPALLI AKASH	<i>AKASH</i>
63	86223206	SIRIKONDA ASRUTHA	<i>ASR</i>
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67	86223254	FARHEEN	<i>Farheen</i>
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69	86223256	KHANSA FATHIMA	<i>Fathim</i>
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VAAGDEVI DEGREE AND PG COLLEGE
Kishanpura, Hanamkonda, Telangana
Department of B.Sc Microbiology

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year-2022-23

Assignment and Record

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4	086223004	D. Sriharsha Kumar	Immune cells	Yes
5	086223005	D. Vignesh	Immune cells	Yes
6	086223006	D. Shashikanth	Immune cells	Yes
7	086223007	E. Sathwik	Immune cells	Yes
8	086223008	D. Sheenisha	Immune cells	Yes
9	086223009	D. Nithisha	Immune cells	Yes
10	086223010	J. Vinay	Immune cells	Yes
11	086223011	K. Varun	Immune cells	Yes
12	086223012	K. muralikrishna	Immune cells	Yes
13	086223013	K. Reshma	Immune cells	Yes
14	086223014	K. Sathvika	Immune cells	No
15	086223015	O. Saivamshi	Immune cells	Yes
16	086223016	P. Soumya	Immune cells	Yes
17	086223017	T. vivek chaitanya	Immune cells	Yes
18	086223018	T. Sairam	Immune cells	Yes
19	086223019	V. pranay kumar	Immune cells	Yes
20	086223801	A. Rishi varun	Immune cells	Yes
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25	086223806	K. Bhavani	Immune cells	Yes
26	086223807	M.K. Shamshuddin	Immune cells	Yes
27	086223808	R. Sandhya	Immune cells	Yes
28	086223809	S. Nageen	Immune cells	Yes
29	086223810	V. Navya	Immune cells	Yes
30	086223451	B. Sindu	Immune cells	No
31	086223452	D. Sathvika	Immune cells	Yes
32	086223453	G. manoj kumar	Immune cells	Yes
33	086223454	G. Sravani	Immune cells	Yes

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36	086223457	J. Akhil	Immune cells	Yes
37	086223458	K. Kaarthik	Immune cells	Yes
38	086223459	R. Saagarika	Immune cells	Yes
39	086223461	M. Sandeep	Immune cells	Yes
40	086223612	G. Ashwitha	Immune cells	No
41	086223051	B. AKsa	Immune cells	Yes
42	086223052	K. Sahithya	Immune cells	Yes
43	086223053	N. Nithin Rao	Immune cells	Yes

Microbiology Assignment

TOPIC :- Immune Cells

Name :- N. Akshitha.

Class :- IInd year III sem
MICCS

Hall ticket :- 086233661

Source :- Internet

Immune cells

I Lymphocytes:

Lymphocytes are the main cell types which recognize the antigen and elicit the immune response, both humoral and cell mediated. Although, it was long suspected that the Lymphocyte may be the immune cell. It was only in 1948 that Fagraeus clearly demonstrated that Lymphocytes are converted into antibody producing plasma cells. In the light of involvement of lymphocytes in hypersensitivity reactions, it was thought that lymphocytes is a single entity possessing multifunctions.

The lymphocytes are capable of responding to antigens. These are one of the classes of white blood cells. Lymphocytes production, differentiation and maturation takes place in the central lymphoid organs and enter into blood circulation, peripheral lymphoid organs and tissues. Thus, they are found in peripheral blood, lymph, lymph nodes and lymphoid organs. Mature lymphocytes, also called naive cells will be educated or acquire immune competence in central lymphoid organs and become immune competent cells [1cc]. Lymphocytes serve the following functions:

1) Recognition of antigen - Lymphocytes have antigen recognition mechanism on their surface, enabling each cell to recognise only one antigen.

2) Induction of immune response or tolerance to specific organs. antigens, however, each mature B cell, possess receptors specific only for a particular antigenic determinant.

* **plasma cells**: Upon antigenic stimulation, B-cells undergo rapid clonal proliferation and blast transformation. Majority of activated B-cells transform into plasma cells and some become long lived memory cells. plasma cells are end cells and have a lifespan of 5 to 7 days. A mature plasma cell manufactures an antibody of single specificity, of a single Ig class and all type and of a single light chain type only. Thus, plasma cells are literally protein factories that produce about 2,000 antibodies per second during their life span.

3) **Null cells**: Null cells are a small proportion (5%) of lymphocytes that lack the surface markers and other characteristics of T & B cells and arise in the bone marrow and thymus. They are nonphagocytic but can kill malignant, virus infected and transplanted cells by direct cytotoxic action. Null cells are large with abundant cytoplasm containing azurophilic granules. Hence also known large granular lymphocytes (LGL). In this features also they differ from T and B cells.

Null cells are of three types:-

1. Nature killer [Nk] cells
2. killer [k] cells
3. Lymphokine activated killer [LAK] cells.

3) storage of immunological memory

Lymphocytes are divided into three main types:

1) T Lymphocytes

2) B Lymphocytes

3) Null cells

* T and B Lymphocytes are differentiated by their surface markers. whereas null cells do not possess surface markers.

1) T-Lymphocytes

The precursors of the T-cells (Pro-T cells) are derived from the hematopoietic stem cells in the fetal yolk sac, liver and postnatal bone marrow. These undifferentiated lymphocytes migrate to the thymus and undergo development, maturation and differentiation. These processed cells are called thymus-derived or T-lymphocytes or T cells. Some T cells are transported away from the thymus and enter the blood stream where they comprise 70 to 80% of the circulating lymphocytes. Other T cells tend to reside in various organs of the lymphatic system, such as lymph nodes and spleen. This thymus-dependent differentiation of T-cells occurs during early childhood and by adolescence the secondary lymphoid organs of the body generally contain a full complement of T-cells.

T-lymphocytes are primarily responsible for cell immunity & can also help humoral response. They acquire new surface antigens and are educated in thymus, so that they become capable of mounting immune response and are called immunocompetent cells. Based on their surface

markers, MHC restriction, target cells and functions. T-cells may be classified into two broad groups:

a) **T-Regulator [TR] cells**: These cells develop into T_H and T_S cells and control balance between enhancement and suppression of antibody formation.

i) T_H [T-Helper] cells are necessary for B cell activation by T-dependent antigens and for activation of T-effector cells.

ii) T-Suppressor [T_S] cells suppress activation of T_H cells and B cells.

b) **Effector T-cells**: These are further 2 types:

i) T-cytotoxic (T_C) cells bring about cytolysis and death of cells recognised as nonself and parasite infected cells.

ii) T-delayed type hypersensitivity [T_{DTH}] cells provide protection against intracellular infections agents, mediate inflammation and activate macrophages in delayed type IV hypersensitivity.

2) **B-Lymphocytes**:

The lymphocytes derived from bone marrow are called bone marrow derived lymphocytes or B-cells. In birds, B-cells develop from Bursa of Fabricius. They constitute about 20-30% of the circulating lymphocytes. These circulating B-cells contain surface immunoglobulin IgM and IgD. However, IgM is the major receptor for its appropriate antigen. B-cells also have receptors for the F_c part of some immunoglobulin classes and may have receptors for complement (C3b). Each B cell may have as many as 10,000 of these specific antigen receptor sites. The total mature B-cells population of each individual thus carries receptors specific for many.

II. Macrophages or phagocytes:

phagocytic cells ingest invading microorganisms and other foreign particulate matter and in most cases, kill and digest them. These are two types of macrophages.

a) Monocytes in blood: These cells enter into blood and become macrophages.

b) Polymorphonuclear neutrophils (PMNs): These form a large circulation pool of phagocytic cells.

Macrophages are found in the lymph nodes [dendritic macrophages], spleen, perivascular connective tissue, connective tissues of the skin, lungs [alveolar macrophages], serous cavities, liver [Kupffer cells], bone marrow [osteoclasts], nervous system [microglial cells] and synovium [type A lining cells].

Phagocytes carry out several important functions:

- 1) The primary function is phagocytosis. Antibody coated [opsonized] microorganisms are phagocytosed more readily. They accumulate in areas of inflammation and tissue damage and carry out phagocytosis.
- 2) They function as antigen presenting cells (APC). They trap the antigen and process the phagocytosed particles and provide it in optimum concentration to T_H cells in association with MHC class II molecules.
- 3) Phagocytes remove immune complexes and other immunologically active substance from blood.

4) They become giant cells which in turn coalesce to become epithelioid cells, which are effective in containing intracellular pathogens.

5) Activated macrophages produce IL-1, IL-6 and TNF α /B that is vital for antigen specific activation of CD4⁺ T_H cells.

6) Phagocytes produce several other biologically active substances such as hydrolytic enzymes, binding proteins (fibronectin, transferrin) and some complement components.

III Neutrophils:

They constitute about 60% of the leucocytes in blood circulation. Their primary function is phagocytosis of foreign or dead cells and pinocytosis of pathological immune complexes. They can also exhibit antibody-dependent-cell mediated cytotoxicity (ADCC). The phagocytic property of neutrophils is non-specific, except for its augmentation by opsonins. They are capable of rapid activation and mobilization in response to chemotactic (C5a). They constitute the dominant cell type in acute inflammation.

IV. Eosinophils:

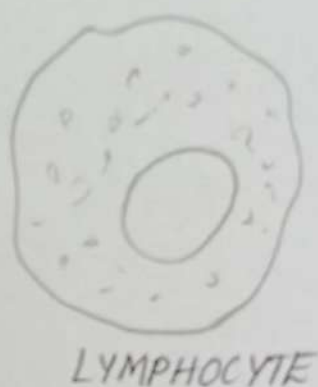
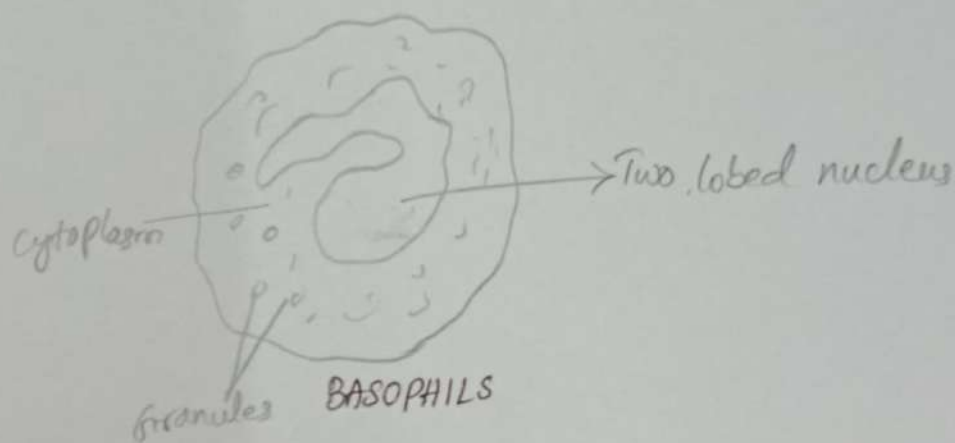
They account for 3-5% of the leukocytes. They are found in large numbers in allergic inflammation, parasitic infections and around antigen-antibody complexes. They primarily inhabit tissues rather than blood stream.

They can engulf and remove immune complexes by phagocytosis or pinocytosis. They possess receptors for F_c portion of immunoglobulins and can mediate ADCC. They bind to worm larvae such as schistosomes coated with IgG, degranulate and release toxic proteins which are damaging to the parasite.



Basophils and Mast cells:

Basophils constitute less than 4% of WBC. Basophils are found in blood circulation, however, when found in tissues they are called mast cells. Their cytoplasm has large numbers of prominent basophilic granules containing pharmacological mediators, histamine, heparin, serotonin and other hydrolytic enzymes that mediate type I hypersensitivity. IgE antibodies get attached to Fc receptors on the surface of mast cells and basophils when stimulated with allergen, granules release their contents.



ACADEMIC YEAR

2022 - 2023

ASSIGNMENTS

ACADEMIC YEAR
2022 - 2023

87

ASSIGNMENT

DEPARTMENT OF ZOOLOGY

CLASS :- BSC Iyr - I Sem

SUBJECT :- Zoology

GROUP :- BSC

TOPIC :- Life cycle of obelia colony

DATE :- 19/10/2022

Group :- BZCS.

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09	086233510	D. Snehith	
10	086233511	D. Sai teja	
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14	086233515	G. Sandeep	
15	086233516	H. Ashwini	
16	086233517	K. Sumolika.	



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CLASS:- BSC I year II sem

SUBJECT:- Zoology

GROUP:- BSC

TOPIC:- Retrogressive metamorphosis in urochordates

DATE:- 04/02/2023



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CLASS:- BSC I Year I Sem

SUBJECT:- Zoology

GROUP:- BSC

TOPIC:- Enzymes:- classification, inhibition,
Digestion of Carbohydrates, proteins, Lipid.

DATE:- 19/11/22



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CLASS:- BSC IInd TISem

SUBJECT:- Zoology

GROUP:- BSC

TOPIC:- protein synthesis - Transcription, Translation
Gene expression - Genetic Code, operon Concept

DATE: 16/02/23



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Kishanpura, Hanamkonda

CLASS:- BSC IIIrd Term

SUBJECT:- Zoology

GROUP:- BSC

TOPIC:- Types of immunity, major
Histocompatibility Complex, Hypersensitivity

DATE:- 21/12/22



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25	086213354	N. Abhishek	Abhishek



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CLASS:- BSC IIIyr - II Sem.

SUBJECT:- Zoology

GROUP:- BSC

TOPIC:- Ecosystem structure & Functions,
Ecological Succession, Ecological adaptations

DATE:- 17/04/23.



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VAAGDEVI DEGREE & P.G. COLLEGE
Kishanpura, Hanamkonda.

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11	086213981	M. Thirupathi	Thirupathi
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13	086213983	Mohammad Safia	Safia
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15	086213985	R. Sreya	Sreya
16	086213986	R. Lavanya	Lavanya
17	086213987	S. Ajay Kumar	Ajay
18	086213988	T. Meghana Sai	Meghana
19	086213989	T. Prathyusha	Prathyusha
20	086213991	Razina Ahmed	Razina



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