

Date - 26.10.2024

Department of Chemistry

Document given for
Criteria I

- 1) Departmental / Individual Time table
- 2) Department meeting record
- 3) Teaching plan for academic year
- 4) syllabus completion Report
- 5) Department result analysis
- 6) Question bank, previous year papers
- 7) Academic Teaching diary
- 8) Attendance Record
- 9) Guest lecture record.
- 10) Student Seminar Record
- 11) Notice for student
- 12) Test / seminar mark list

Rayat Shikshan Sanstha's

ABASAHEB MARATHE ARTS AND NEW COMMERCE, SCIENCE COLLEGE, RAJAPUR

DEPARTMENT OF CHEMISTRY

TIME TABLE - 2023-24

DAYS	MON		TUE		WED		THU		FRI		SAT	
	F. Y. B. Sc.	S. Y. B. Sc.	F. Y. B. Sc.	S. Y. B. Sc.	F. Y. B. Sc.	S. Y. B. Sc.	F. Y. B. Sc.	S. Y. B. Sc.	F. Y. B. Sc.	S. Y. B. Sc.	F. Y. B. Sc.	S. Y. B. Sc.
09.20-10.10												
10.10-11.00	PRACT. KAS/ HNA		PRACT. HNA/ KAS				PRACT. KRM			PRACT. SGK		PRACT. KAS
11.00-11.50												
11.50-12.00												
SHORT RECESS												
12.00-12.50												
12.50-01.40	HNA											
01.40-02.30		SGK										
02.30-03.20												

1) HNA: Dr. H.N. Akolkar 2) KAS: Dr. K. A. Sasane 3) KRM: Dr. K.R.Mahanwar 4) SGK: Ms. S.G. Kamble

(Signature)
 HILAD
 DEPARTMENT OF CHEMISTRY
 M.A. & N.C. COLLEGE RAJAPUR

Meeting

Notice

Date - 09/03/2023

All faculty members hereby informed that the departmental meeting is held on 13th March 2023. All should remain present for the same.

Agenda of meeting

- 1] Review of completion of syllabus from faculty.
- 2] Preparation of practical examination for this semester.
- 3] Review of departmental work.
- 4] Any other.

Minutes of meeting

As per the meeting held on 13th March 2023 following points were discussed

- 1] Review of completion of syllabus were taken from all faculty & give them instruction to complete remaining syllabus.
- 2] Preparation of chemicals & standardisation of instruments for upcoming practical examination. Arrangement of practical examination was done.
- 3] Give instructions to all faculty to complete distributed work from department.

4] Any other

Discuss with faculty & suggest them to give seminar, assignment, question paper solution to third year students

The following members were present & attended the meeting...

1] Dr. H-N. Akolkar
(Head, Dept. of Chemistry)

(Signature)

2] Dr. K. A. Sasane

(Signature)

3] Dr. K. R. Mahanwar

(Signature)

4] Ms. S. G. Kamble

(Signature)

(Signature)
HEAD
Department of Chemistry
A.M.A. & N.C.S. College, Rajapur



Rayat Shikshan Sanstha's

Abasaheb Marathe Arts & New Commerce Science, College, Rajapur

ANNUAL TEACHING PLAN 2023-24

Department: Chemistry

Semester: II

Paper No: I and II

Name of the Teacher: Miss S.G. Kamble

Title: Physical Chemistry

CLASS: F. Y. B. Sc.

Month	Week	Unit/(S)	Periods /Credits Allotted	Periods/ Credits Required	Remark/ Lecture in Vacation
Dec	04	Unit-I: i) Gaseous State	06	02	
Jan	01	Unit-I: i) Gaseous State	--	02	
	02	Unit-I: i) Gaseous State	--	02	
	03	Unit-I: ii) Electrochemistry -I	04	01	01 extra lecture
	04	Unit-I: ii) Electrochemistry -I	--	02	
	05	Unit-I: iii) Chemical Equilibria and Thermodynamics parameters	05	--	01 extra lecture
Feb	01	Unit-I: iii) Chemical Equilibria and Thermodynamics parameters	--	02	
	02	Unit-I: iii) Chemical Equilibria and Thermodynamics parameters	--	02	
	03	Unit-I: i) Ionic Equilibria	07	01	
	04	Unit-I: i) Ionic Equilibria	--	02	
	05	Unit-I: i) Ionic Equilibria	--	02	
March	01	Unit-I: i) Ionic Equilibria	--	02	
	02	Unit-I: ii) Photochemistry	04	02	
	03	Unit-I: ii) Photochemistry	--	02	
	04	Unit-I: iii) Molecular Spectroscopy	04	02	
	05	Unit-I: iii) Molecular Spectroscopy		02	
Second Semester Exam					

Teachers Signature

H.O.D HEAD
Department of chemistry
A.M.A. & N.C.S. College, Rajapur

Principal



Rayat Shikshan Sanstha's
Abasaheb Marathe Arts & New Commerce Science, College Rajapur

ANNUAL TEACHING PLAN 2023-24

Department: Chemistry

Semester: VI

Paper No: I

Name of the Teacher: Miss Kamble S.G

Title: Physical Chemistry

CLASS: T. Y. B. Sc.

Month	Week	Unit/(S)	Periods /Credits allotted	Periods/ Credits Required	Remark/ Lecture in Vacation
Dec	03	Unit- I: i) Electrochemistry	15	04	
	04	Unit- I: i) Electrochemistry	--	04	
Jan	01	Unit-I: i) Electrochemistry	--	05	
	02	Unit-I : i) Electrochemistry	--	02	
	03	Unit-II i) Polymers	15	04	
	04	Unit-II i) Polymers	--	04	
	05	Unit-II ii) Polymers	--	04	
Feb	01	Unit-II ii) Polymers	--	03	
	02	Unit-III: i) Basics of Quantum Chemistry	10	04	
	03	Unit-III: i) Basics of Quantum Chemistry	--	03	
	04	Unit-III: i) Basics of Quantum Chemistry	--	03	
	05	Unit-III: ii) Renewable energy Resource	05	03	
March	01	Unit-III: ii) Renewable energy Resource	--	02	
	02	Unit-IV: i) NMR Spectroscopy	07	03	
	03	Unit-IV: i) NMR Spectroscopy	--	04	
	04	Unit-IV: ii) ESR Spectroscopy	08	04	
	05	Unit-IV: ii) ESR Spectroscopy	--	04	
Sixth Semester Examination					

Teachers Signature

H. O. D.
Department of Chemistry
A.M.A. & N.C.S. College, Rajapur

Principle



Rayat Shikshan Sanstha's

ABASAHEB MARATHE ART'S & NEW COMMERCE, SCIENCE COLLEGE, RAJAPUR

Department of Chemistry

SYLLABUS COMPLETION REPORT

Academic Year- 2023-2024

In the academic year, 2023-24 and for the Semester **II, IV and VI** the following syllabus of **F.Y, S.Y. and T.Y. B.Sc.** theory and practicals respectively have been completed by the faculty.

Name of faculty:

Sr. No.	Semester	Class	Paper /Unit Taught
1)	II	F.Y. BSC.	General chemistry - physical chemistry - I
	II	F.Y. BSC.	chemistry paper II - physical chemistry
2)	IV	S.Y. BSC.	Chemistry paper I - physical chemistry
	IV	S.Y. BSC.	Chemistry paper II - physical chemistry
		S.Y. BSC.	practical paper II
3)	VI	T.Y. BSC.	physical chemistry paper I
	VI	T.Y. BSC.	physical chemistry practical

The above syllabus is 100% completed.

Signature of faculty

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Department of chemistry
A.M.A. & N.C.S. College, Rajapur



Rayat Shikshan Sanstha's

ABASAHEB MARATHE ART'S & NEW COMMERCE, SCIENCE COLLEGE, RAJAPUR

Department of Chemistry

SYLLABUS COMPLETION REPORT

Academic Year- 2023-2024

In the academic year, 2023-24 and for the Semester II, IV and VI the following syllabus of F.Y, S.Y. and T .Y. B.Sc. theory and practicals respectively have been completed by the faculty.

Name of faculty:

Sr. No.	Semester	Class	Paper /Unit Taught
1	II	F.Y.B.Sc	chemistry -I Inorganic chemistry
	II	F.Y.B.Sc	chemistry -II Inorganic chemistry
2	IV	S.Y.B.Sc	chemistry paper I - Inorganic chemistry
	IV	S.Y.B.Sc	chemistry paper II - Inorganic chemistry
			Practicals Paper - I
3	VI	T.Y.B.Sc	Inorganic chemistry Paper II
	VI	T.Y.B.Sc	Inorganic chemistry Practicals.

The above syllabus is 100% completed.

Signature of faculty

HEAD

Department of chemistry
A.M.A. & N.C.S.College, Rajapur



Rayat Shikshan Sanstha's


Abasaheb Marathe Arts and New Commerce, Science College, Rajapur,
Dist-Ratnagiri, 416 702 (MH)

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DEPARTMENT OF CHEMISTRY

Sr. No	College Name	Class & Subject	Comp. Eng	Optional Paper No	Total Appeared Student	Total Passed Student	Result of college (in %)	Result of University (%)	Remark
1	Abasaheb Marathe Arts & New Commence College Rajapur	B.Sc III Chemistry	--	I	10	10	100%	36	
				II	10	10			
				III	10	10			
				IV	10	10			
				Practical I	10	10			
				Practical II	10	10			


HEAD
Department of chemistry
A.M.A. & N.C.S.College, Rajapur

FYBSC PHYSICAL CHEMISTRY Que Bank SEM 2 April 2024
PAPER 1

1. State and explain
 - i) Boyles Law
 - ii) Charle's law
 - iii) Avagadros law
2. Calculate the volume of 10 moles of a gas at $1.013 \times 10^7 \text{ N / m}^2$ pressure and 237K, if its compressibility factor is 0.783. (Given $R = 8.314 \text{ J/K.mol}$)
3. Explain the term –
 - i) Conductance
 - ii) Specific conductance
 - iii) Equivalent conductance
 - iv) Molar conductance
 - v) Cell constant
4. Derive Nernst equation for the emf of galvanic cell.
5. What are reversible and irreversible reaction? Explain with suitable example.
6. Give the applications of Le- Chatelier Principle in the manufacturing process.
7. Explain the term Compressibility Factor. Why is it introduced ? What are its significance ?
8. Explain the cause of the deviation of gas laws from its ideal behavior
9. Derive Nerst equation for single electrode potential.
10. Distinguish between Reversible and Irreversible cell.
11. State Le- Chatelier Principle. How does it affect the temperature and pressure on the state of equilibrium.
12. State the gas laws and explain the type of deviations produce by real gases.
13. Write a note on - Entropy

MCQ

- 1) The law that deals with rate of escape of a gas from an orifices is _____
 - a) Charles law
 - b) Daltons law
 - c) Graham's law
- 2) An ideal gas _____
 - a) Nitrogen
 - b) He
 - c) None of the above
- 3) The unit of specific conductance are _____
 - a) S/m
 - b) S.m
 - c) 1/Sm
- 4) When a salts dissolves in water, entropy _____
 - a) Increases
 - b) Decreases
 - c) Remains constant
- 5) The compressibility factor is defined for _____
 - a) real gas only
 - b) Ideal gas only
 - c) Both ideal and real gas
- 6) _____ states that, 'at constant T, the volume of given amount of gas varies inversely with its pressure.'
 - a) Charle's law
 - b) Avagadro's law
 - c) Boyle's law
- 7) The second law of thermodynamics introduces the concept of _____
 - a) Entropy
 - b) Enthalpy
 - c) concentration
- 8) The reciprocal of resistance is called as _____
 - a) conductance
 - b) Resistivity
 - c) Molar conductance

PAPER 2

1. What are Strong and weak electrolytes? Illustrate with examples.
2. Define a Buffer solution. Explain – i) Buffer Action ii) Buffer capacity
3. Prove that $\text{pH} + \text{pOH} = 14$.
4. How is the quantum yield determined experimentally?
5. Explain with suitable examples of the following –
 - i) Photosynthesis
 - ii) Fluorescence
 - iii) Phosphorescence
 - iv) Chemiluminescence
 - v) Photochemical chain reaction
6. The wavelength is 400 nm. calculate i) frequency ii) wave number iii) Energy of light.
7. Differentiate between Strong and weak electrolytes. (min 5 points)
8. Define the terms –
 - i) pH
 - ii) pOHHow are they related?
9. Define the term 'Degree of ionization'. What are the factors that affect the degree of ionization?
10. With the help of diagram explain instrumentation and working of Actinometer.
11. Explain the term – i) wavelength
 - ii) Frequency
 - iii) Wave number. How are they inter-related?
12. State and explain – i) Beer's law
 - ii) Lambert's law
 - iii) Beer- Lambert law

MCQ

- 1) Compound which are good conductors of electricity are called as _____ electrolytes.
 - a) Strong
 - b) Weak
 - c) Non
- 2) The ability of buffer solution to maintain its pH constant is called as _____.
 - a) Buffer action
 - b) Buffer capacity
 - c) Acidity
- 3) The reaction which are caused by heat in the absence of light is called as _____ reaction.
 - a) Photochemical
 - b) Dark
 - c) Reversible
- 4) The frequency of the electromagnetic radiation is _____ proportional to the energy of the radiation.
 - a) inversely
 - b) directly
 - c) same
- 5) A photochemical reaction takes place by the _____ of visible and UV light.
 - a) Absorption
 - b) Refraction
 - c) Scattering
- 6) Ammonia and Ammonium chloride is an example of _____ buffer.
 - a) Acidic
 - b) Basic
 - c) Neutral
- 7) The electromagnetic radiation with maximum frequency is _____.
 - a) X – ray
 - b) UV
 - c) IR
- 8) Wavelength of electromagnetic radiation is _____ proportional to energy.
 - a) directly
 - b) inversely
 - c) non

S.Y.B.Sc Question bank

Sem 4 2023-24

Paper 1 Physical chemistry

- 1) Define the following terms- i) Standard potential
ii) Phase iii) Component iv) Liquid junction potential
v) Degree of Freedom vi) Reversible cell vii) Irreversible cell
- 2) Give the Merits and demerits of quinhydrone electrode
- 3) Distinguish between reversible cell and irreversible cell.
- 4) What are the functions of salt bridge? What kind of electrolytes should be used in salt bridge?
- 5) What do you understand by eutectic point? Explain the phase diagram of Water system.
- 6) Derive Clapeyron – Clausius equation..
- 7) Distinguish between Galvanic cell and Electrolytic cell. (Any 5 points)
- 8) Derive and explain the terms in the Nernst equation.
- 9) What do you understand by eutectic point? Explain the phase diagram of Lead – Silver system

MCQ

- 1) The Eutectic point of two components system is -----
a) Bivariant b) invariant c) trivariant
- 2) Saturated solution of NaCl in water has degree of freedom is -----
a) One b) two c) three
- 3) The no. of degree freedom of in aqueous solution of sugar is -----
a) 1 b) 2 c) 3
- 4) A triple point is -----
a) Bivariant b) Trivariant c) Invariant
- 5) ----- is used in salt bridge as saturated solution.
a) KCl b) NaBr c) CaCl₂
- 6) Liquid junction potential is denoted by -----
a) E_l b) E_j c) e.m.f.
- 7) Galvanic cell convert ----- energy to electrical energy.
a) Potential b) chemical c) kinetic
- 8) For the reverse cell potential is slightly ----- than emf of cell.
a) Greater b) smaller c) equal
- 9) The number of degree of freedom in aqueous solution of sugar is
a) 1 b) 2 c) 3
- 10) Number of phase(s) for gaseous system is -----
a) One b) Two c) Three
- 11) A saturated solution of sodium chloride is ----- phase system.
a) 3 b) 2 c) 1

Sem I
Internal Examination 2023-24

Program: B.Sc.
Class: F.Y.B.Sc.

Course: Chemistry (P- II)
Date: 27/10/2023

N.B. 1) All questions are compulsory.
2) Figures to the right indicate full

(10)

Q.1 Fill in the blanks

1. Li- Mg is _____ pair
2. Diamond and graphite are the allotropes of _____.
3. Sodium bicarbonate is also known as _____.
4. Carboxyhaemoglobin formula is _____.
5. For pseudomolecular reaction, order is _____ and molecularity is _____.
6. The rate constant of first order reaction is given by expression _____.
7. Liquid has _____ volume but its shape is _____.
8. Surface tension of liquid _____ with rise in temperature.
9. _____ refers to the ability of a molecule to rotate the plane of polarised light.
10. PAN is the full form of _____.

Q.2 Match the following

(05)

- | | |
|----------------------------|-------------------------|
| 1. Bucky ball | a. Ostwald's viscometer |
| 2. P ₄ molecule | b. Refractometer |
| 3. Viscosity | c. fullerenes |
| 4. Refractive Index | d. B-Si |
| 5. Diagonal pair | e. White phosphorus |

Q.3 Define the following

1. Order and Molecularity of reaction
2. Surface Tension of liquid
3. Enantiomer
4. Stereoisomer
5. Define allotropy with example
6. electronegativity

CLASS & SUBJECT WISE TEACHING / PRACTICAL PROGRAMME

Synopsis / Lesson Notes

Day Monday	Class	Subject/Practical	Period No. 02
Date 26.6.23	T.Y. BSc		

- * Introduction to syllabus - physical chemistry paper - I. sem I
- previous year question paper discussion.

Day Monday	Class	Subject/Practical	Period No. 06
Date 26.6.23	S.Y. BSc	Theory	


- * Introduction to syllabus. - physical chemistry p-I & II. Analytical chemistry - P. III

Day Tuesday	Class	Subject/Practical	Period No. 07
Date 27.6.23	T.Y. BSc	Theory. paper - I.	

- * Molecular spectroscopy - p-I. unit I.
- Introduction of spectroscopy. -
 - atomic & molecular spectroscopy.
 - electromagnetic spectrum.
 - molecular energy levels.



Signature of the Teacher



Signature of the Head

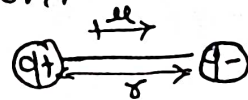
CLASS & SUBJECT WISE TEACHING / PRACTICAL PROGRAMME
Synopsis / Lesson Notes

Day Wed. Date 28.6.23	Class T.Y. BSC	Subject/Practical Theory	Period No. 01
--------------------------	-------------------	-----------------------------	---------------

* Dipole moment -

- Introduction, definition & calculation.

$$\mu = q \times r$$



- unit of dipole moment

* Bond moment - defn & calcn of o, m. & p. Substituted compound.

Day Wed. Date 28.6.23	Class S.Y. BSC	Subject/Practical Theory	Period No. 01
--------------------------	-------------------	-----------------------------	---------------

P-I-U-1 - Chemical Thermodynamics II

• Introduction

• free energy functions

• Helmholtz equation

Day Thursday Date 29.6.23	Class T.Y. BSC	Subject/Practical Theory	Period No. 01
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* Dipole moment & molecular structure →

- 1) Structure of water molecule
- 2) Structure of CO₂ (linear) & SO₂ (angular)
- 3) Structure of BF₃ (planar) & NH₃ (pyramidal)
- 4) Structure of CH₄ (Tetrahedral)
- 5) Identification of cis & trans isomers
- 6) Identification of ortho, meta, para isomers


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CLASS & SUBJECT WISE TEACHING / PRACTICAL PROGRAMME

Synopsis / Lesson Notes

Day/Wed.	Class	Subject/Practical	Period No.
Date 5.7.23	T.Y. BSC	Theory	17
<ul style="list-style-type: none"> • Energy of rotating molecules → $E_{rot} = \frac{h^2}{8\pi^2 I} J(J+1)$ <ul style="list-style-type: none"> • frequency of rotational lines → $\bar{\nu}_{ab} = B \times 2J_2 \quad \text{where } B = \text{Bjerrum's constant}$ $= \frac{h}{8\pi^2 I c}$ <ul style="list-style-type: none"> • rotational spectra. 			

Day/Wed.	Class	Subject/Practical	Period No.
Date 5.7.23	S.Y. BSC	Theory	18
<ul style="list-style-type: none"> • Gibbs - Duhem equation → $\sum n_i d\mu_i = 0$ <ul style="list-style-type: none"> • concept of fugacity, activity, activity coefficient & relationship with chemical potential → • Van't Hoff's reaction isotherm → • Numericals solved. 			

Day/Thursday	Class	Subject/Practical	Period No.
Date 6.7.23	T.Y. BSC	Theory	19
<ul style="list-style-type: none"> • Selection rule for rotational spectroscopy → $\Delta J = \pm 1$ • Nature of rotational spectrum • Limitations of rotational spectra * Numericals solved based on rotational spectroscopy. • Isotopic shift in rotational spectra - $\frac{B}{B'} = \frac{I'}{I} = \frac{\mu'}{\mu} = \frac{\Delta \bar{\nu}'}{\Delta \bar{\nu}}$ 			

[Signature]

Signature of the Teacher

[Signature]

Signature of the Head



साहसे श्री: प्रतिवसति ।

I.D.No.PU/AN/ABC/018/1974, HSC/1178/July 1978 Dt. 1.7.78 H.S.C.No.J-12.01.001

Akole Taluka Education Society's

AGASTI ARTS, COMMERCE &

DADASAHEB RUPWATE SCIENCE COLLEGE, AKOLE

A/p. Tal. Akole, Dist. Ahmednagar, Pin - 422 601 (Maharashtra)

AIS,HE.Code : C-41748

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NAAC Accredited 'A' Grade

Dr. Bhaskar Shelke

M.A. M.Phil., Ph.D., D.Litt.
Mob. 9890088521 Ph 02424 - 221248
E-mail: sholke_bhaskar@yahoo.com

Principal

Ref. No. Ac / Sr. / PG Chemistry / 855 / 2024

Date: 14/03/2024

To,

Dr. Hemant Akolkar,
Department of Chemistry,
A. M. A. & N. C. S. College,
Rajapur, Dist.- Ratnagiri 416702

Subject: Invitation letter for a guest lecture...

Dear Sir,

We are happy to invite you for a guest lecture on the 'Preparation of the topic Stereochemistry for NET/ SET/ GATE' arranged for M. Sc. Organic Chemistry students.

Our students will be benefited by your mastery over the subject and your guidance will inspire them to achieve excellence. Your lecture is scheduled on 18th March 2024 at 11:00 am.

Please accept our invitation.

Thanking You,

(Dr. Bhaskar Shelke)

PRINCIPAL

**AGASTI ARTS, COMM. & DADASAHEB
RUPWATE SCIENCE COLLEGE, AKOLE
TALAKOLE, DIST AHMEDNAGAR - 422 601**



Rayat Shikshan Sanstha's
Abasaheb Marathe Arts and New Commerce, Science College, Rajapur,
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DEPARTMENT OF CHEMISTRY

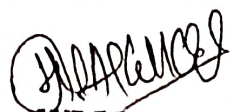
Students Seminars

Class: T.Y.B.Sc.

Subject: Physical Chemistry

Sr.No.	Roll No.	Name of student	Name of Topic	Signature
1	2023951	Yatnik Vishal Benkar	polymer chemistry	Y.V. Benkar
2	2023952	Asmita Shankar Hiremath	Mass spectroscopy	Aliremedh
3	2023953	Kiran Sunil kajave	NMR spectroscopy	Kiranj
4	2023954	Sail Sandip Kambli	Electrochemical cell	S.K.
5	2023955	Paresh Prakash Karambelkar	ESR spectroscopy	Paresh
6	2023956	Sanket Shantaram Masurkar	Electrolytic cell.	Sanket
7	2023957	Afifa Siraj Naik	Solar cell.	Afifa
8	2023958	Safa Sameer Naik	Hyperfine splitting	Safa
9	2023959	Darshana Avinash Shivalkar	polymers & Types	D.A. Shivalkar
10	2023960	Lahu Balu Yedage	Renewable energy	Lahu


Ms. Kamble S.G.
Name & Sign of Subject teacher


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Abasaheb Marathe Arts and New Commerce, Science College, Rajapur,
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DEPARTMENT OF CHEMISTRY

Students Seminars

Class: T.Y.B.Sc.

Subject: Inorganic Chemistry

Sr.No.	Roll No.	Name of student	Name of Topic	Signature
1	2023951	Yatnik Vishal Benkar	Electro refining of Cu	Y.U. Benkar
2	2023952	Asmita Shankar Hiremath	Historical prospectives	Ahiremath
3	2023953	Kiran Sunil kajave	Distortion from octahedral Complex	Kiranj
4	2023954	Sail Sandip Kambli	Conventional Superconductors	S.Kambli
5	2023955	Paresh Prakash Karambelkar	Catalysis	Paresh K
6	2023956	Sanket Shantaram Masurkar	Spectrochemical Series	Sanket
7	2023957	Afifa Siraj Naik	Limitations of Valence Bond Theory	Afifa
8	2023958	Safa Sameer Naik	Type of metallurgies	Safa
9	2023959	Darshana Avinash Shivalkar	metallocenes	D.A. Shivalkar
10	2023960	Lahu Balu Yedage	Catalyst	Lahu Yedage

(Dr. K.R. Mahanwar)
Name & Sign of Subject teacher

HEAD

Department of chemistry
A.M.A. & N.C.S. College, Rajapur



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Abasaheb Marathe Arts and New Commerce, Science College, Rajapur,
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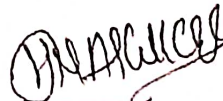
DEPARTMENT OF CHEMISTRY
Students Seminars

Class: T.Y.B.Sc.

Subject: Organic chemistry

Sr.No.	Roll No.	Name of student	Name of Topic	Signature
1	2023951	Yatnik Vishal Benkar	Condensation of polymerisation.	M.V. Benkar
2	2023952	Asmita Shankar Hiremath	Addition polymers	A Hiremath
3	2023953	Kiran Sunil kajave	stereoisomers of monosaccharides	K. Kajave
4	2023954	Sail Sandip Kambli	Amino acid & Proteins	S. Kambli
5	2023955	Pareesh Prakash Karambelkar	open chain structure of monosaccharides	P. Karambelkar
6	2023956	Sanket Shantaram Masurkar	Catalysts for hydrogenation	S. Masurkar
7	2023957	Afifa Siraj Naik	Spectroscopy - II	A. Naik
8	2023958	Safa Sameer Naik	Catalysts	S. Naik
9	2023959	Darshana Avinash Shivalkar	Nucleic Acids	D.A. Shivalkar
10	2023960	Lahu Balu Yedage	Reagents	L. Yedage

Name & Sign of Subject teacher


HEAD
Department of chemistry
A.M.A & N.C.S. College, Rajapur

Rayat Shikshan Sanstha's
Abasaheb Marathe Arts and New Commerce, Science College, Rajapur, Dist-
Ratnagiri, 416 702 (MH)

Affiliated to University of Mumbai, Mumbai
Reaccredited with B+ grade by NAAC/ Best College Award by University of Mumbai, Mumbai

DEPARTMENT OF CHEMISTRY


Sem IV

Bsc-III

Student Seminae

Analytical Chemistry

Sr.No	Exam Seat No.	Name of the student	Signature
1.	1013994	Yatnik Vishal Benkar.	
2.	1013895	Asmita Shankar Hiremath.	Hiremath
3.	1013896	Kiran Sunil kajave.	Kiran
4.	1013897	Sail Sandip Kambli.	S.Kambli
5.	1013898	Paresh Prakash Karambelkar.	Paresh
6.	1013899	Sanket Shantaram Masurkar.	Sanket
7.	1013900	Afifa Siraj Naik	Afifa
8.	1013901	Safa Sameer Naik.	Safa
9.	1013902	Darshana Avinash Shivalkar.	D.A. Shivalkar
10.	1013903	Lahu Balu Yedage.	Lahu


Dr. Sagar

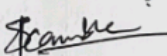

HEAD
Department of chemistry
A.M.A. & N.C.S. College, Rajapur

Rayat Shikshan Sanstha's
Abasaheb Marathe Arts & New Commerce, Science College, Rajapur


DEPARTMENT OF PHYSICS

Annual Departmental Planning, 2023-2024

Month	Activities to be Proposed
June, 2023	Counseling of XII pass students for admission in College.
	Admission process.
July, 2023	Staff Meeting - planning of Departmental Activities.
	Syllabus distribution & Annual Teaching Plan.
	Starting of F. Y. and S. Y. B. Sc. Classes
August, 2023	Starting Practicals of S. Y. B. Sc. Students.
	Unit test for S.Y. B. Sc. Students.
September, 2023	To conduct Seminar activity for S. Y. B. Sc. Students.
	Avishkar Competition Participation, etc.
	Starting Practicals of F. Y. B. Sc. Students
October, 2023	University Practical Examination conduction of S. Y. B. Sc. Students.
	Assessment of Practicals S. Y. B. Sc. Students.
November, 2023	To conduct Internal Assessment Exam for SY B.Sc. Sem. III students
	Semester End Theory Examination S. Y. B. Sc. Students.
	Submission of First Term syllabus completion reports to Principal.
	Opening of S. Y. B. Sc. Term-II: Lectures and Practical
	Poster Presentation for Avishkar Competition
	University Practical Examination conduction of F. Y. B. Sc. Students.
December, 2023	Semester End Theory Examination F. Y. B. Sc. Students.
	To conduct Internal Assessment Exam for FY B.Sc. Sem I students
	Collection of Articles from Students for Rayatganga.
	Submission of First Term syllabus completion reports to Principal.
Jan, 2024	Departmental Unit Test for S.Y. students.
	Unit test and Home assignment for Slow & Advanced Learner Students
February, 2024	Science Exhibition on Science Day.
	Departmental Unit Test for F.Y. & S.Y.
March, 2024	To conduct Internal Assessment Exam for FY B.Sc. Sem. II students
	To conduct Internal Assessment Exam for SY B.Sc. Sem. IV students
	Certification of Journals of F. Y. B. Sc. & S. Y. B. Sc. Students.
April, 2024	University Practical Examination of F. Y. & S. Y. B. Sc. Students.
	Semester End Theory Examinations.
	Submission of Second term syllabus completion report to Principal.
	Annual committee and departmental report submission
	Assessment of F. Y. & S. Y. B. Sc. Students.


Head
Department of Physics
A.M.A. & N.C.S. College, Rajapur




Principal
A.M.A & N.C.S. College
Rajapur, Dist. Ratnagiri



Rayat Shikshan Sanstha's

Abasaheb Marathe Arts & New Commerce, Science College, Rajapur

Department of Physics

Departmental Time Table


Academic Year 2023-24


(W.e.f. 01/07/2023)



Period No.	DAY → TIME ↓	MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SATURDAY	
		FY	SY	FY	SY	FY	SY	FY	SY	FY	SY	FY	SY
01	09.20 to 10.10		↑ PRACTICAL ↓		↑ PRACTICAL ↓		↑ PRACTICAL ↓		↑ PRACTICAL ↓		↑ PRACTICAL ↓		
02	10.10 to 11.00												
03	11.00 to 11.50												
	11.50 to 12.00	--- LUNCH BREAK ---											
04	12.00 to 12.50				PHYSICS		PHYSICS		PHYSICS		PHYSICS		PHYSICS
05	12.50 to 01.40		PHYSICS										PHYSICS
06	01.40 to 02.30	PHYSICS			PHYSICS		PHYSICS		PHYSICS		PHYSICS		PHYSICS
07	02.30 to 03.20		PHYSICS										

Name of Faculty with Qualification: Mr. Kamble S. M. (M.Sc. Physics; NET)
 Workload / Week: FY B.Sc. = 12 Lectures, SY B.Sc. = 18 Lectures,
 Total Workload / Week = 30.


 HEAD
 Department of Physics
 A.M.A. & N.C.S. College, Rajapur


 Principal
 A.M.A. & N.C.S. College
 Rajapur, Dist. Ratnagiri



Rayat Shikshan Sanstha's

Abasaheb Marathe Arts & New Commerce Science, College Rajapur

Department of Physics



Individual Time Table (w.e.f. 01/07/2023)
Academic Year 2023-24

Name of Faculty with Qualification: Mr. Kamble S. M. (M.Sc. Physics; NET)
Designation:- Assistant Professor

Period No.	DAY →		MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SATURDAY	
	TIME ↓		FY	SY	FY	SY	FY	SY	FY	SY	FY	SY	FY	SY
01	09.20 to 10.10			↑ PRACTICAL (SMK)		↑ PRACTICAL (SMK)		↑ PRACTICAL (SMK)		↑ PRACTICAL (SMK)		↑ PRACTICAL (SMK)		
02	10.10 to 11.00													
03	11.00 to 11.50			↑ PRACTICAL (SMK)		↑ PRACTICAL (SMK)		↑ PRACTICAL (SMK)		↑ PRACTICAL (SMK)		↑ PRACTICAL (SMK)		
	11.50 to 12.00													
---- LUNCH BREAK ----														
04	12.00 to 12.50					TH (SMK)		TH (SMK)		TH (SMK)		TH (SMK)		TH (SMK)
05	12.50 to 01.40												TH (SMK)	TH (SMK)
06	01.40 to 02.30			TH (SMK)				TH (SMK)		TH (SMK)		TH (SMK)		TH (SMK)
07	02.30 to 03.20													

Workload / Week: FY B.Sc. = 12 Lectures, SY B.Sc. = 18 Lectures,
Total Workload / Week = 30.

S. Kamble
Subject Teacher

S. Kamble
HEAD
Department of Physics
A.M.A. & N.C.S. College, Rajapur

S. Kamble
Principal
A.M.A & N.C.S. College
Rajapur, Dist. Ratnagiri



Syllabus Completion Report

(Academic Year 2023-24- First Term)

Mr. Kamble S. M.
(Assistant Professor)
Department of Physics,
A.M.A. & N.C.S. College, Rajapur.

Date:- Dec. 01st; 2023

To,
The Principal,
Abasaheb Marathe Arts & New Commerce, Science College,
Rajapur.

Sub.:- Syllabus Completion Report

Respected Sir,

With reference to above subject, I have completed 100% syllabus of the B.Sc. First Year (Semester- I) Physics class and 100% syllabus of B.Sc. Second Year (Semester- III) Physics class during the first term in the Academic Year 2023-24. The details of the same are as follows-

Sr. No.	CLASS	PAPER No. & NAME OF THE PAPER	UNITS/ TOPICS COMPLETED
1	B.Sc. First Year (Sem- I)	Paper I (USPH101) Classical Physics	Newton's Laws of Motion, Friction, Work & Energy, Elasticity, Viscosity, Fluid Mechanics, Behaviour of Real Gases, Laws of Thermodynamics, Heat Engine.
		Paper II (USPH102) Modern Physics	Basic Properties of Nuclei, Radioactivity, Radiation Detectors, Nuclear Reactions, Origin of Quantum Theory (with review), Matter Waves, X-Rays, Compton Effect
		Practical Course-I (USPHI1)	Regular Experiments (Gr. A & B) & Skill Experiments
2	B.Sc. Second Year (Sem- III)	Paper I (USPH301) Thermodynamics & Temperature Transducers	Thermodynamics – I: Heat Engines, Carnot's Engines and refrigerator, IInd Law of Thermodynamics, Carnot's Theorem, Maxwell's Thermodynamics relations and applications, Concept of Entropy, etc, III rd Law of Thermodynamics, Steam Engines, Heat death of the Universe, Low Temperature Physics, Temperature Transducers.
		Paper II (USPH302) Electronics	Analog Electronics- Transistor Biasing, General Amplifier Characteristics, etc.; Oscillators, Operational Amplifiers, Digital Electronics- Flip Flops, Registers, Counters
		Paper II (USPH303) Mathematical Methods & Applied Physics- I	Differential Equations, Second order non homogeneous DE, Partial DE, & Applications. Acoustics of Building, Reverberation, Sabine's formula. Basics of Communication, Noise concept, Amplitude modulation, Receivers, Frequency Modulation, Concept of ASK, PSK, FSK, PAM, PWM, PPM, PCM.
		Practical Course- 3 (USPHIII)	Group A, B, C and Skill Experiments

(Kamble S.M.)
Name & Sign of the Teacher

Head,
Department of Physics
A.M.A. & N.C.S. College Rajapur

Principal
A.M.A & N.C.S. College
Rajapur, Dist. Ratnagiri



Syllabus Completion Report
(Academic Year 2023-24- Second Term)

Mr. Kamble S. M.
(Assistant Professor)
Department of Physics,
A.M.A. & N.C.S. College, Rajapur.

Date:- April, 25th; 2024

To,
The Principal,
Abasaheb Marathe Arts & New Commerce, Science College,
Rajapur.

Sub.:- Syllabus Completion Report

Respected Sir,

With reference to above subject, I have completed 100% syllabus of the B.Sc. First Year (Semester- II) Physics class and 100% syllabus of B.Sc. Second Year (Semester- IV) Physics class during the Second term in the Academic Year 2023-24. The details of the same are as follows-

Sr. No.	CLASS	PAPER No. & NAME OF THE PAPER	UNITS/ TOPICS COMPLETED
1	B.Sc. First Year (Sem- II)	Paper I (USPH201) Optics- I	Lenses and Lens Maker's Equation, Magnification by a lens and power of lens, Introduction to Aberration in lenses, Optical Instruments and Eyepieces, Interference in Thin Films, An Introduction to LASERS, An Introduction to Optical Fiber
		Paper II (USPH202) Electricity & Electronics	Alternating current theory, AC bridges, Circuit Theorems, DC Power Supply, Transistor dc Biasing, Applications of transistor, Number Systems, Derived Gates, Boolean Algebra
		Practical Course-II (USPHPII)	Regular Experiments (Gr. A & B) & Skill Experiments
2	B.Sc. Second Year (Sem- IV)	Paper I (USPH401) Optics and Applied Physics- II	Diffraction & Polarization: Introduction, Huygen's - Fresnel theory, Fresnel's Diffraction, Fraunhofer Diffraction, Introduction of Polarization, Interference of polarized light. Interferometers & Resolving power, Building concepts of Microprocessors, 8085 microprocessor, 8085 Instruction set, etc
		Paper II (USPH402) Electrodynamics	Electrodynamics and Vector Calculus- Line, Surface, Volume Integrals, fundamental theorems of gradient, Electromagnetism, Coulomb's law, Poisson's & Laplace's equation, Magnetostatics- Magnetization, Ampere's law, Bound currents, Susceptibility & permeability.
		Paper III (USPH403) Quantum Physics	The Schrodinger wave equation, Applications of Schrodinger steady state equation -I Applications of Schrodinger steady state equation -II
		(USPHP4) Practical Course- 4	Group A, B, C and Demo Experiments

(Kamble S.M.)
Name & Sign of the Teacher

Head,
Department of Physics
A.M.A. & N.C.S. College Rajapur

Principal
A.M.A & N.C.S. College
Rajapur, Dist. Ratnagiri



Rayat Shikshan Sanstha,
Abasaheb Marathe Arts & New Commerce, Science College, Rajapur


Department of Physics

RESULT ANALYSIS


Academic Year 2023-24

(Second Half Winter Exam: October/ November- 2023)

CLASS	SEM	STUDENTS					STUDENT OBTAINING MARKS							PERCENTAGE OF RESULT (%)		REMARK Semwise %
		TOTAL	PRESENT	ABSENT	PASS	FAIL	O	A	B	C	D	E	F	COLLEGE	UNI	
							90-100	80-89	70-79	60-69	50-59	40-49	00-39			
B.Sc.-I (Paper -I)	I	9	7	2	7	0	2	0	1	2	0	0	0	100.00		100
B.Sc.-I (Paper -II)		9	7	2	7	0	0	4	0	3	0	0	0	100.00		
B.Sc.-II (Paper-I)	III	5	5	0	5	0	0	3	2	0	0	0	0	100.00		100
B.Sc.-II (Paper-II)		5	5	0	5	0	0	1	2	2	0	0	0	100.00		
B.Sc.-II (Paper-III)		5	5	0	5	0	1	2	0	2	0	0	0	100.00		


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Principal
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Rajapur, Dist. Ratnagiri



Rayat Shikshan Sanstha,s

Abasaheb Marathe Arts & New Commerce, Science College, Rajapur

Department of Physics

RESULT ANALYSIS

Academic Year 2023-24

(First Half Summer Exam: March / April- 2024)

CLASS	SEM	STUDENTS				STUDENT OBTAINING MARKS							PERCENTAGE OF RESULT (%)		REMARK Semwise %	
		TOTAL	PRESENT	ABSENT	PASS	FAIL	O	A	B	C	D	E	F	COLLEGE		UNI
B.Sc.-I (Paper -I)	II	9	7	2	7	0	3	2	0	2	0	0	0	100.00		100
B.Sc.-I (Paper -II)		9	7	2	7	0	2	5	0	0	0	0	0	100.00		
B.Sc.-II (Paper-I)	IV	5	5	0	5	0	0	2	3	0	0	0	0	100.00		100
B.Sc.-II (Paper-II)		5	5	0	5	0	0	0	4	1	0	0	0	100.00		
B.Sc.-II (Paper-III)		5	5	0	5	0	0	1	3	1	0	0	0	100.00		



Spam
HEAD

Department of Physics
A.M.A. & N.C.S. College, Rajapur

Principal
Principal
A.M.A & N.C.S. College
Rajapur, Dist. Ratnagiri

Rayat Shikshan Sanstha's
Abasaheb Marathe Arts and New Commerce, Science College, Rajapur

Department of Physics

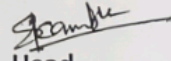
Question Bank

AY 2023-24

The dept. of physics maintained many of the previous year question papers. Also, based on the syllabus prescribed by the University, the subject teacher prepares the Question Bank and asks the students to solve it. Here is the list of the subjects/papers of which the question banks are available in the department.

Sr. No.	Class	Semester	Paper No.	Name of the Paper	Remarks
1	B.Sc. I	I	I	Classical Physics	
2			II	Modern Physics	
3		II	I	Mathematical Physics / Optics	
4			II	Electricity and Electronics	
5	B.Sc. II	III	I	Mechanics and thermodynamics	
6			II	Vector calculus, Analog Electronics	
7			II	Applied Physics -I	
8		IV	I	Optics and Digital Electronics	
9			II	Quantum Mechanics	
10			III	Applied Physics-II	

Sr. No.	Class	Sem	Paper No.	Name of the Paper	Remarks
1	B.Sc. II	III	I	Thermodynamics and Temperature Transducers	Syllabus Revised from AY 2023- 24
2			II	Electronics	
3			II	Mathematical Methods & Applied Physics -I	
4		IV	I	Optics & Applied Physics -II	
5			II	Electrodynamics	
6			III	Quantum Mechanics	


 Head,
 Department of Physics
 A.M.A. & N.C.S. College, Rajapur



Rayat Shikshan Sanstha's
Abasaheb Marathe Arts and New Commerce, Science College Rajapur
Department of Physics

Academic Year 2023-24

Class: F.Y. B.Sc.

Semester:-I

Date:-22/08/2023

NOTICE

All the F.Y. B.Sc. Semester I Physics students are hereby informed that, their seminars are arranged on Thursday, **07/09/2023**. In order to deliver your seminars, you have to choose any topic/ short point from the syllabus of Physics **Paper I, Paper II** (any one topic/ short point from any one paper of any semester). You have to present the same for minimum 15 minutes. At the time of seminar, you need to submit a well draft of seminar article to the examiner along with a list of references used. It is mandatory to all the students to participate. So, you have to inform about your selected seminar topic/ article/ short point to Prof. Kamble S.M. before Thursday, 31/08/2023.

Head

Department of Physics
A.M.A. & N.C.S. College, Rajapur

Notice to:-

Sr. No.	Roll No.	Name of Candidate	Sign
1	2023271	Gundy Ansh Rajan	
2	2023272	Gurav Sanvi Sanjay	
3	2023273	Lanjekar Yash Naresh	Y.N. LANJEKAR
4	2023274	Shinde Mandar Sakharam	
5	2023275	Zhapdekar Salina Samir	
6	2023276	Narvekar Siddharth Deepak	
7	2023277	Agare Yash Ekanath	
8	2023279	Mapari Saad M.Hanif	
9	2023280	Amare Satish Vijay	



Rayat Shikshan Sanstha's
Abasaheb Marathe Arts and New Commerce, Science College Rajapur
Department of Physics

Class: F.Y. B.Sc. Semester:-I

A.Y. 2023-24

Student's Seminar

Topic Chosen and Seminar Schedule

Date:- 01/09/2023

All the F.Y. B.Sc. students are hereby informed that, their seminar schedule is displayed in the notice board of Physics department as shown below. It is mandatory to all students to deliver their seminars on the prescribed date & time. At the time of seminar, you have to submit synopsis of seminar.

Roll No.	Name of the Student	Topic of Seminar	Sign	Date of Seminar
2023271	Gundye Ansh Rajan	Newton's Laws of Motion		Thursday 07/09/2023 (09.20 am to 10.30 am)
2023272	Gurav Sanvi Sanjay	Introduction to Aberration in Lenses		
2023273	Lanjekar Yash Naresh	An Introduction to Lens	Y.N.LANJEKAR	
2023274	Shinde Mandar Sakharam	Number Systems		
2023275	Zhapdekar Salina Samir	Applications of Optical Fibre		
2023276	Narvekar Siddharth Deepak	Mass Defect and Binding Energy		
2023277	Agare Yash Ekanath	Rectifier Circuits		
2023279	Mapari Saad M.Hanif	Applications of Bernoulli's Equation		
2023280	Amare Satish Vijay	Heat Engine		



Head
Department of Physics
A.M.A. & N.C.S. College, Rajapur



Rayat Shikshan Sanstha's
Abasaheb Marathe Arts and New Commerce, Science College Rajapur
Department of Physics

Class: F.Y. B.Sc. Semester:-I

Academic Year 2023-24

Student's Seminar Activity

Date:-07/09/2023

Attendance Sheet

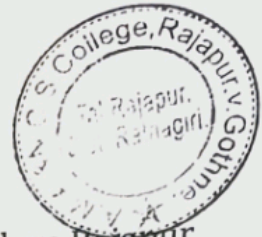
The following students were present for the Student's Seminar Activity. The activity was arranged by the faculty, Mr. S. M. Kamble of department of Physics, for F.Y. B.Sc. Semester- I students on Thursday, 09th September; 2023 at regular practical class time, (i.e., at 09.20 am to 10.30 am) in department of Physics.

The Student's Seminar Activity was made on the topics that were selected by students themselves on their own interest.

Roll No.	Name of the Student	Topic of Seminar	Sign
2023271	Gundy Ansh Rajan	Newton's Laws of Motion	
2023272	Gurav Sanvi Sanjay	Introduction to Aberration in Lenses	
2023273	Lanjeekar Yash Naresh	An Introduction to Lens	Y.N.LANJEKAR
2023274	Shinde Mandar Sakharam	Number Systems	
2023275	Zhapdekar Salina Samir	Applications of Optical Fibre	
2023276	Narvekar Siddharth Deepak	Mass Defect and Binding Energy	Absent
2023277	Agare Yash Ekanath	Rectifier Circuits	
2023279	Mapari Saad M.Hanif	Applications of Bernoulli's Equation	
2023280	Amare Satish Vijay	Heat Engine	



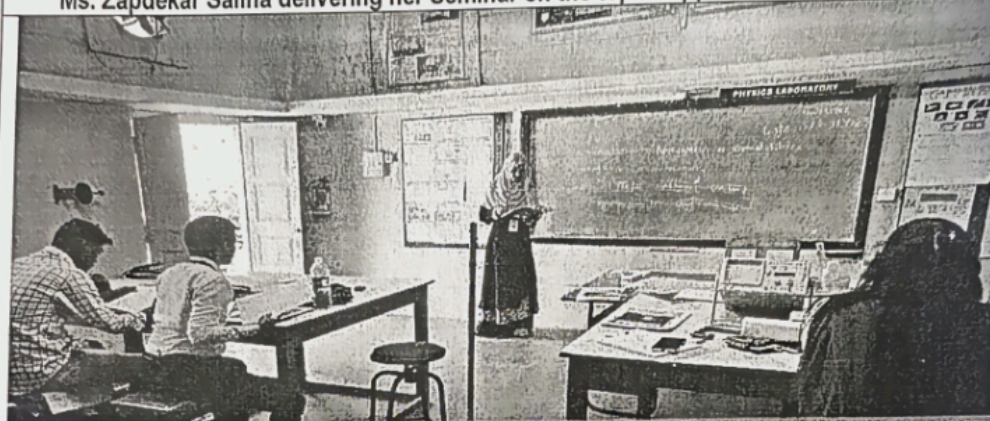
Head
Department of Physics
A.M.A. & N.C.S. College, Rajapur



Rayat Shikshan Sanstha's
 Abasaheb Marathe Arts and New Commerce, Science College Rajapur
 Department of Physics
 Class: F.Y. B.Sc. Semester:-I
 Academic Year 2023-24
Student's Seminar Activity

Date:-07/09/2023

Ms. Zapdekar Salina delivering her Seminar on the topic 'Applications of Optical Fibre'



JGCR+G5, Hativale, Maharashtra 416702, India

	Decimal	DMS
Latitude	16.622173	16°37'19" N
Longitude	73.541192	73°32'28" E

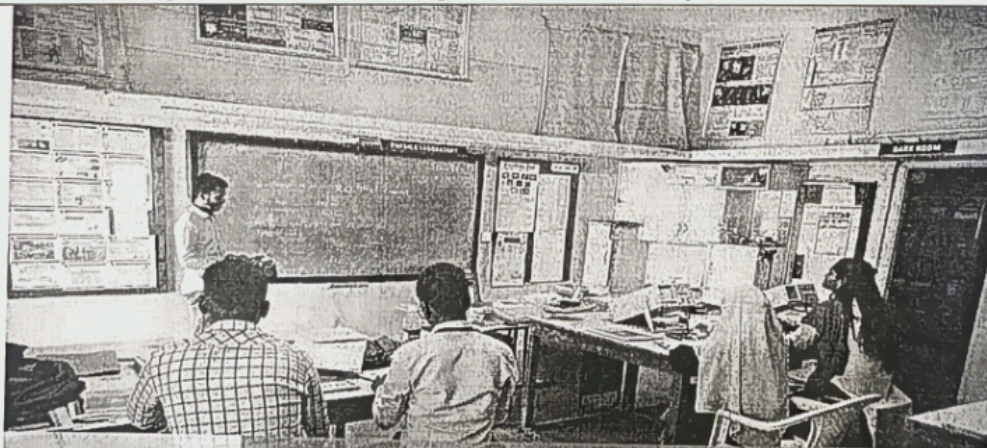


34°C

93°F

2023-09-07(Thu) 10:12(AM)

Mr. Agre Yash Eknath delivering his Seminar on the topic 'Rectifier Circuits'



JGCR+G5, Hativale, Maharashtra 416702, India

	Decimal	DMS
Latitude	16.622173	16°37'19" N
Longitude	73.541192	73°32'28" E



34°C

93°F

2023-09-07(Thu) 10:07(AM)



Rayat Shikshan Sanstha's
Abasaheb Marathe Arts and New Commerce, Science College, Rajapur
Department of Physics
2023-24

Counseling Session

(Career Counseling)

Class: S.Y. B.Sc.

Semester:- IV

NOTICE

Date: - 16/03/2024

All the students studying in the B.Sc. IInd Year (Sem IV) PHYSICS class are hereby informed that, they should remain present for the Counseling Session (Career Counseling), organized by Mr. S. M. Kamble of Department of Physics on Monday, 18th March 2024 in S. Y. B. Sc. lecture hall at 9.30 am. The counseling session will be on the topic - "Physics- Scope & Opportunities".

Head

Department of Physics
A.M.A. & N.C.S. College, Rajapur



Notice to Students:-

Sr. No.	Roll No.	Name of the Student	Student's Signature
1	2023609	Khadape Ajay Suryakant	A.S. Khadpe
2	2023612	Tawade Pranay Babaji	Bawade
3	2023613	Kazi Umar Mohinuddin	Qushtari
4	2023614	Kanekar Varun Sanjay	Kanekar
5	2023615	Karshingkar Shubham Satyawan	Karshingkar



Rayat Shikshan Sanstha's
Abasaheb Marathe Arts and New Commerce, Science College, Rajapur

Department of Physics
2023-24

Counseling Session (Career Counseling)

Attendance Sheet

Monday, 18th March 2024

The following students were present for the Counseling Session about student's career, organized by the faculty, Mr. S. M. Kamble of department of Physics, for S.Y. B.Sc. students on 18th March 2024 in S. Y. B. Sc. lecture hall at 9.30 am to 10.30 am. The career counseling was made on the topic- "Physics- Scope & Opportunities".

Sr. No.	Roll No.	Name of the Student	Class	Student's Signature
1	2023609	Khadape Ajay Suryakant	BSc S.Y	A.S. Khadpe
2	2023612	Tawade Pranay Babaji	Bsc II	Bawde
3	2023613	Kazi Umar Mohinuddin	BSc-II	Qazkari
4	2023614	Kanekar Varun Sanjay	BSC-II	Ice
5	2023615	Karshingkar Shubham Satyawan	SY BSC	Karshingkar

Head

Department of Physics
A.M.A. & N.C.S. College, Rajapur



Experiential Learning

Thursday, August 3rd; 2023 (09.20 am to 11.50 am Practical Class)

Activity-1) Use of Model, Scientific Equipments

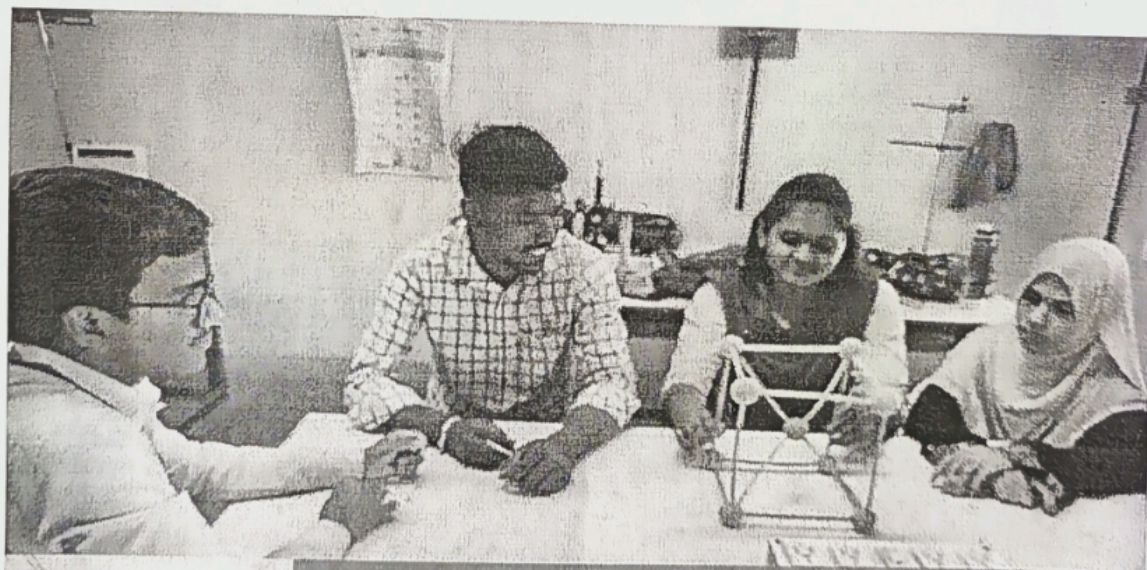
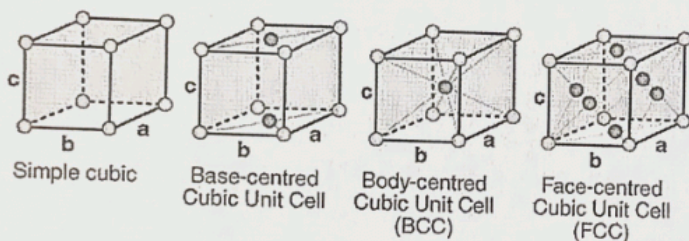
a) "Learning the theme of 'Body-Centered Cubic' unit cell structure and 'Base-Centered Cubic' unit cell structure using the models available...."

What are the three types of centered unit cell?

Unit cells exist in many types. The cubic crystal structure, for example, consists of three distinct unit cell types : (1) plain cubic, (2) face-centered cubic, and (3) body-centered cubic.

What is a body-centered cubic unit cell?

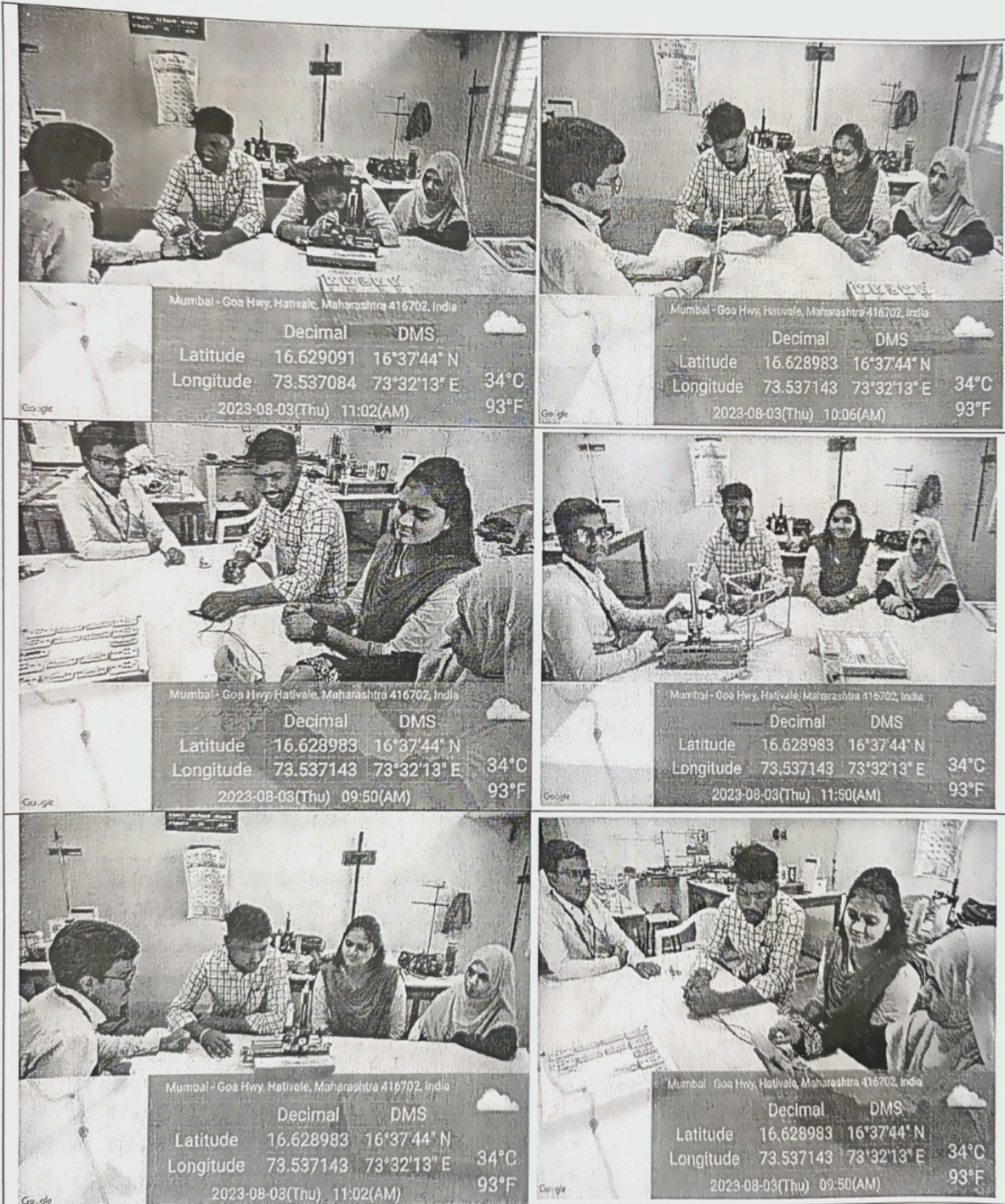
Body-centered Cubic (BCC) unit cells indicate where the lattice points appear not only at the corners but in the center of the unit cell well. The atoms touch one another along the cube's diagonal crossing, but the atoms don't touch the edge of the cube. All atoms are identical.



Mumbai - Goa Hwy, Hativale, Maharashtra 416702, India

	Decimal	DMS	
Latitude	16.628983	16°37'44" N	
Longitude	73.537143	73°32'13" E	34°C
	2023-08-03(Thu) 11:49(AM)		93°F

b) "Learning/ understanding the use of scientific instruments, like, Vernier Calliper, Travelling Microscope, Digital Multimeter, etc.

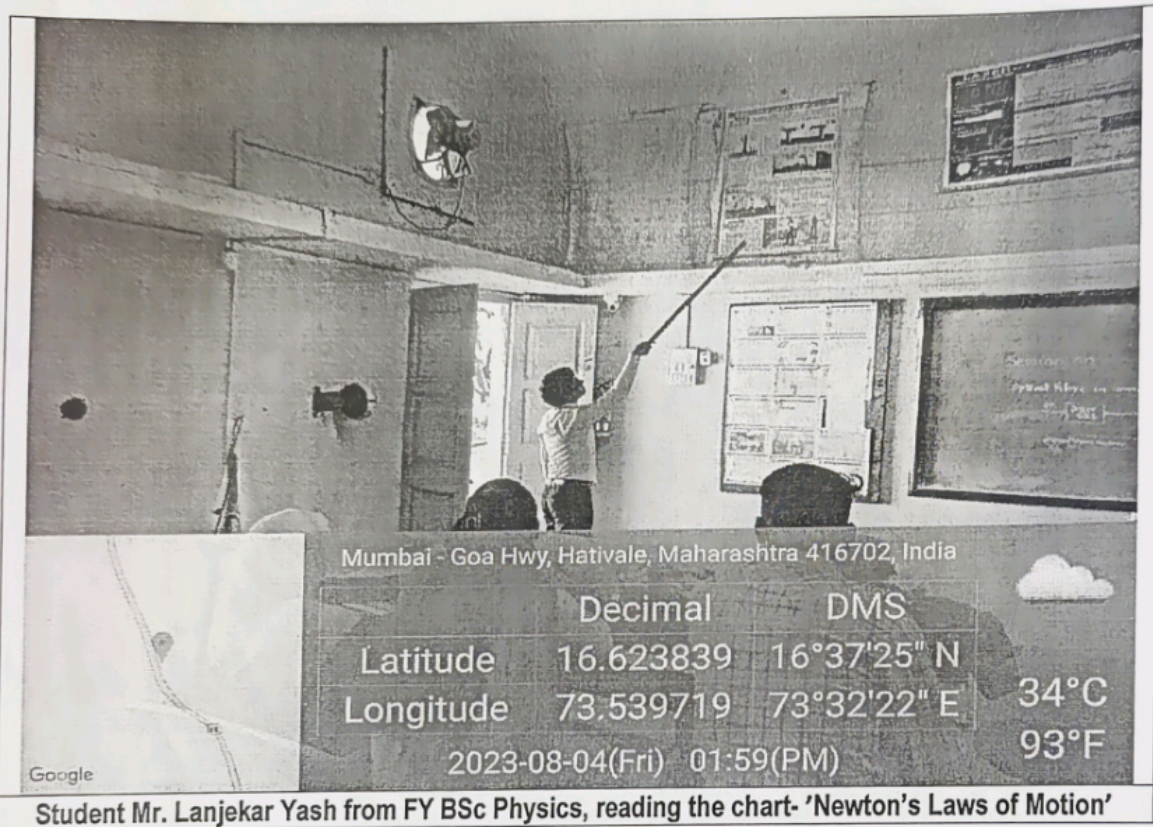




(Activity- 2) - Charts Reading

Friday, August 4th; 2023 (01.40 pm to 02.30 pm Theory Class)

In our department of Physics there are number of charts available. The students ge benefits by reading them regularly.



List of Charts available-

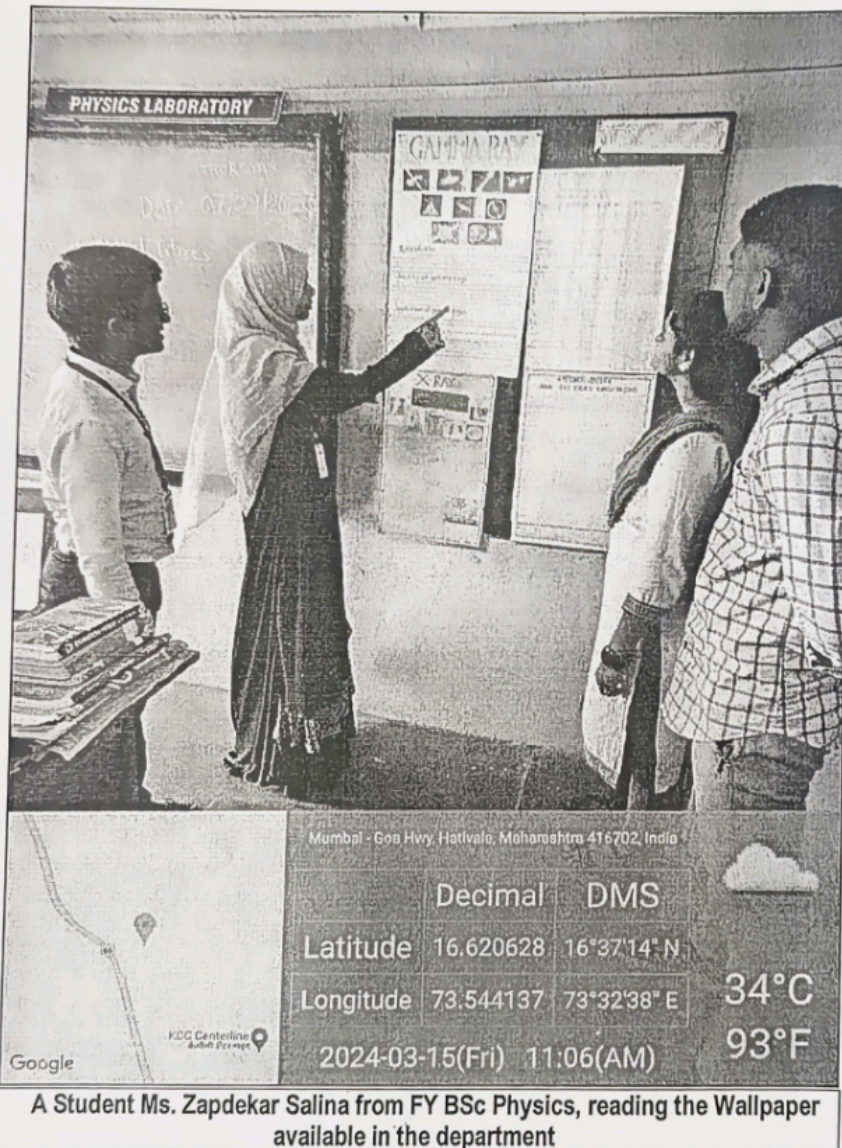
1. Refraction of Light through Lenses
2. Polarisation
3. X-rays and Applications
4. Newton's Laws of Motion (1)
5. Electromagnetism
6. Generators
7. Ohm's Law
8. Transistor Characteristics
9. Filters
10. Cathode Ray Oscilloscope
11. Electronic Symbols
12. LASER
13. Newton's Laws of Motion (2)



(Activity- 3)- Wallpaper Reading

Friday, March 15th; 2024 (09.20 am to 11.50 am Practical Class)

In our department of Physics there are number of *student made* wallpapers are also available. The students take benefits by reading them.



List of Wallpapers available-

1. Gamma Ray
2. Electromagnetic Spectrum
3. X- Rays
4. ISRO- (Information)