Sem	Course type	Course code	Course title	Credits	Total hrs /week	Total teaching periods	Total marks	
							CA	UA
VI	Discipline specific Course (DSC)	PHY 601	Quantum mechanics	3	3	45	40	60
		PHY602	Material Science	3	3	45	40	60
		PHY 603	Nuclear Physics	3	3	45	30	60
		PHY 604	Modern Physics	3	3	45	40	60
	Skill Enhancement course (SEC)	PHY 605	Basic Instrumentation Skills	3	3	45	40	60
	DSE Elective course (Any one)	PHY 606 (A) PHY 606 (B) PHY 606 (C) PHY 606 (D) PHY 606 (E)	Technical Electronics- I or Refrigeration and Air conditioning- II or Vacuum Technology-II or Microprocessor-I or Programming in C++ II	3	3	45	40	60
	DSC CORE Practicals	PHY 607	Physics Practical I	2	4 (per batch)	60	40	60
		PHY 608	Physics Practical II	2	4 (per batch)	60	40	60
		PHY 609	Physics Practical III or Project	2	4 (per batch)	60	40	60
	Non credit audit course (Any one)	AC 601(A)	Soft skill	No credit	2	30	100	
		AC 601(B)	Yoga					
		AC 601(C)	Practicing Cleanliness					
			Total credit	24				

Note: The industrial/study tour is compulsory for students of T. Y. B. Sc. (Physics).

Semester VI: (LAB): Physics paper VIII

PHY 609: Project II

(Credits: 02): (60 L, 100M (40 Internal + 60 External))

ASSESSMENT OF PROJECT- SECOND TERM:

Student should submit a Final Project Report on the work done by him/her during the First and Second Phase of the Project i.e. on the topics:

1. Experimental work. (remaining further work in continuation with the work in the first term)
2. Characterize the samples, if any.
3. Discussion of the results.
4. Conclusions.

Instructions:

1. The topic of project of the first term must be continued in the second term.
2. The project report of first term should be maintained and should be produced to examiner of second term.
3. The student will have to give a seminar on the project topic in the practical exam.
4. The student must perform his project presentation by PPT on LCD projector.

A
Project Report
On

'FT-IR Spectral Study of Heterocyclic Compounds'

For the partial fulfillment of Degree of

Bachelor of Science [Physics]
In the year 2022-2023

Submitted by
Miss. Shaikh Talea Akhtar Rafique Ahemad
(T.Y.B.Sc.-Sem-II)

Under the Guidance of
Dr. R.G. Bavane

Submitted to

Department of Physics
Dr. Annasaheb G.D. Bendale Mahila Mahavidyalaya, Jalgaon

Affiliated to
Kavayitri Bahinabai Chaudhari North Maharashtra Unuversity, Jalgaon

Leva Educational Union's

Dr. Annasaheb G.D. Bendale Mahila Mahavidyalaya, Jalgaon

Department of Physics

CERTIFICATE

This is to certify that **Miss. Shaikh Talea Akhtar Rafique Ahemad** have satisfactorily completed the project entitled **"FT-IR Spectral Study of Heterocyclic Compounds"**for the fulfillment of degree of **Bachelor of Science [Physics]**during the academic year 2022-2023.

Dr. R.G. Bavane
(Project Guide)

Dr. S.J. Baviskar
(Head of the department)

(Internal Examiner)

(External Examiner)

ACKNOWLWDGEMENTS

I would like to express my sense of gratitude to our Honorable Principal of the College **Prof. Dr. Gauri M. Rane** for the permission to use the facilities available in the Common Research Laboratory. I am very much thankful to my project guide **Dr. Ravindrakumar G. Bavane** for his valuable guidance and encouragement for the completion of this project work successfully at the various stages.

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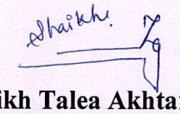
Further, I extends my sincere thanks to non-teaching members from the department of Physics and my fellow friends in our T.Y.B.Sc. Class for their help and motivation while performing the experimental work of this project.



Miss. Shaikh Talea Akhtar Rafique Ahemad
T.Y.B.Sc. (Physics)

Conclusion

The spectral values obtained from the FTIR spectra of the 5 samples of heterocyclic compounds, shows the stretching bands which are matches with the reported values of different functional groups in the backbone of the compound. This confirms the formation of the concern heterocyclic compounds.