Annai Hajira Women's College
Melapalayam, Tirunelveli – 05
(A Unit of As-Sathiq Educational Society)
(Affiliated to Manonmaniam Sundaranar University)

CURRICULAR PLAN

&

RECORD OF CLASSWORK

2018 - 2023

Annai Hajira Women's College

Melapalayam, Tirunelveli – 05

(A Unit of As-Sathiq Educational Society)

(Affiliated to Manonmaniam Sundaranar University)

CURRICULAR PLAN – I B. Sc Computer Science

2018 - 2019 (ODD SEMESTER)

Part III – Core PROGRAMMING IN C

Semester: I Hours: 5 Subject Code: SMCS11 Credits: 4

Staff - in – Charge - Ms. P. S. Anitha

Unit	Topic	Week	Mode of Teaching
	Bridge Course / Orientation	1	
I	**INTRODUCTION** C Declarations - Character Set – C tokens – Keywords and Identifiers – Identifiers – Constants – Variables – Data types – Declaration of Variables – Declaration of Storage Class – Assigning Values to Variables – Defining Symbolic Constants – Declaring Variable as Constant. Operators and Expressions:- Introduction – Arithmetic Operators – Relational Operators – Logical Operators – Assignment Operators – Increment and Decrement Operators – Conditional Operator – Bitwise Operators – Special Operators – Arithmetic Expressions – Evaluation of Expressions – Precedence of Arithmetic Expressions. Managing Input and Output Operations - getchar( ) – putchar( ) – scanf( ) – printf( ).	2 - 4	Lecturing
II	**CONTROL STRUCTURES** Decision Making and Branching:- Decision Making with IF Statement – Simple IF statement – The IF...Else Statement – Nesting of IF...Else Statements – The ELSE IF ladder – The Switch Statement – The ?: Operator – The GOTO statement. Decision Making and Looping:- The WHILE Statement – The DO Statement – The FOR statement.	5 - 7	Lecturing
III	**ARRAYS** One-dimensional arrays – Declaration of One-dimensional arrays – Initialization of One-dimensional arrays - Two-dimensional arrays – Initialization of Two-dimensional arrays – Multi-dimensional arrays. Character Arrays and Strings:- Declaring and Initializing String Variables – Reading Strings from Terminal – Writing Strings to Screen – String Handling Functions.	8 - 10	Lecturing
IV	**FUNCTIONS** User-Defined functions:- Need for User-defined functions – Definition of functions – Return Values and their Types – Function Calls – Function Declaration – Category of functions – No Arguments and No return values – Arguments but No return Values – Arguments with return values – No arguments but a return a value – Recursion – Passing Arrays to functions – Passing Strings to functions – The Scope, Visibility and lifetime of a variables. Structures and Unions:- Defining a Structure – Declaring Structure Variables – Accessing Structure Members – Structure Initialization – Arrays of structures –Unions.	11 - 13	Lecturing
V	**POINTERS AND FILES** Pointers:- Understanding pointers – Accessing the Address of a Variable – Declaring Pointer Variables – Accessing a variable through its pointer – Pointer Expressions –Pointers as function arguments. File Management in C:- Defining and Opening a file – Closing a File – Input/output Operations on files – Error Handling during I/O Operations.	14 - 17	Lecturing
	I Internal Test	6	
	II Internal Test	10	
	III Internal Test	13	
	Revision (Model)	17	

P. S. Anitha 18/6/18

Staff - in – Charge

P. S. Anitha 18/6/18

Head of the Department of Computer Science

Annai Hajira Women's College,

Melapalayam.

Rajal Oath 18/6/18

PRINCIPAL

ANNAI HAJIRA WOMEN'S COLLEGE

RECORD OF CLASS WORK

Name & Designation of the Staff: Mrs. P. S. ANITHA
Head, Dept of CS

Programme : B.Sc Computer Science
Course Title : Programming in C
Course Code : SMCS11

Semester : I
Academic Year : 2018-2019
Course Type : Theory

Sl. No.	Date	Period	Unit	Topics Covered	Initials
1.	25.6.18			Bridge course / Orientation course	
2.	25.6.18	2	I	Introduction - C Declarations	
3.	28.6.18	1	I	The C character set, C Tokens	
4.	29.6.18	1	I	Identifiers, keywords, constants, variables	
5.	2.7.18	3	I	Data types	
6.	4.7.18	2	I	Declaration of variables	
7.	11.7.18	2	I	Assigning values to variables	
8.	11.7.18	2	I	Declaring variable as constant	
9.	13.7.18	1	I	Declaration of storage class, Defining symbolic constants	
10.	13.7.18	1	I	Declaration of storage class.	
11.	17.7.18	1	I	Operators & Expressions - Introduction	
12.	17.7.18	1	I	Arithmetic operators, Relational operators	
13.	17.7.18	1	I	Logical operators, Assignment operators	
14.	17.7.18	1	I	Increment & Decrement operators	
15.	17.7.18	1	I	Conditional operators, Bitwise operators	
16.	18.7.18	4	I	Special operators, Arithmetic Expressions	
17.	18.7.18	4	I	Evaluation of expressions.	
18.	19.7.18	2	I	Precedence of arithmetic expression	
19.	19.7.18	2	I	Managing Input and Output Operations	
20.	19.7.18	2	I	getchar(), putchar(), scanf(), printf()	
21.	31.7.18	3	II	Decision making with if.	

Sl. No.	Date	Period	Unit	Topics Covered	Initials
22.	31.7.18	3	II	Simple if, if ... else statement	
23.	31.7.18	3	II	nesting of if ... else	
24.	31.7.18	3	II	else if ladder,	
25.	31.7.18	3	II	switch statement	
26.	2.8.18	4	II	? : operator	
27.	2.8.18	4	II	goto statement.	
28.	2.8.18	4	II	Decision making & looping - Intro	
29.	2.8.18	4	II	While do... while statement	
30.	2.8.18	4	II	for statement.	
31.	3.8.18	2	III	Arrays: Defining an array	
32.	3.8.18	2	III	1D array, declaration, initialization	
33	3.8.18	2	III	2D array, declaration, initialization	
34.	6.8.18	1	III	Multi dimensional arrays	
35.	6.8.18	1	III	Character Arrays & Strings	
36.	6.8.18	1	III	Declaration	
37.	7.8.18	3	III	Initializing String variable	
38.	7.8.18	3	III	Reading String with terminal	
39.	7.8.18	3	III	Writing strings to screen	
40.	7.8.18	3	III	String handling functions	
41.	9.8.18	4	IV	User defined functions : Introduction	
42	9.8.18	4	IV	Need for user - defined functions	
43.	9.8.18	4	IV	Definitions of functions	
44.	9.8.18	4	IV	Return values and their types	
45.	9.8.18	4	IV	Function calls, declarations	
46.	10.8.18	2	IV	Category of functions	

Sl. No.	Date	Period	Unit	Topics Covered	Initials
47.	10.8.18	2	IV	No arguments & no return values	
48.	10.8.18	2	IV	Arguments but no return values.	
49.	10.8.18	2	IV	Arguments with return values	
50.	10.8.18	2	IV	No argument but return values	
51.	10.8.18	2	IV	Recursion	
52.	20.8.18	2	IV	Passing arrays to function, Passing strings	
53.	20.8.18	2	IV	Scope, visibility & life time of variables	
54.	20.8.18	2	IV	Structures & unions : Definitions	
55.	20.8.18	2	IV	Declaring structure variables, Structure initialization	
56.	20.8.18	2	IV	Arrays of Structures, Unions	
58.	5.9.18	1	V	Pointers - Introduction	
59.	5.9.18	1	V	Understanding Pointers	
60.	5.9.18	1	V	Accessing address of a variable	
61.	5.9.18	1	V	Declaring pointer variables.	
62.	5.9.18	1	V	Accessing a variable thro' its pointer	
63.	17.9.18	2	V	Pointer Expressions	
64.	17.9.18	2	V	Pointers as function arguments	
65.	17.9.18	2	V	File Handling : Defining & opening a file	
66.	17.9.18	2	V	closing a file	
67.	17.9.18	2	V	I/O operations on files	
68.	17.9.18	2	V	Error handling during I/O operations	

P. S. 17/9/18
Course Faculty Signature

Rajaram 17/9/18
PRINCIPAL
ANNAI HAJIRA WOMEN'S COLLEGE
MELAPALAYAM - 627 005.

P. S. 31/10/18
HOD Signature

Annai Hajira Women's College

Melapalayam, Tirunelveli - 05

(A Unit of As-Sathiq Educational Society)

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CURRICULAR PLAN – III B. Sc Computer Science

2018 – 2019 (ODD SEMESTER)

Part III – Core SOFTWARE ENGINEERING AND TESTING Semester: V Hours: 4

Subject Code: JMCS51 Credits: 4 Staff - in – Charge - Ms. P. S. Anitha

Unit	Topic	Week	Mode of Teaching
I	**Introduction:**-Evolution – From an Art form on Engineering Discipline: Evolution of an Art into an Engineering Discipline. – Software Development of Projects: Program versus Product – Emergence of Software Engineering: Early Computer Programming – High Level Language Programming – Control Flow-based Design – Data Structure Oriented Design – Object Oriented Design. **Software Life Cycle Models:**-A few Basic Concepts – Waterfall Model and its Extension: Classical Waterfall Model – Iterative Waterfall Model – Prototyping Model – Evolutionary Model. – Rapid Application Development (RAD): Working of RAD. –Spiral Model.	1 - 3	Lecturing
II	**Software Project Management:**-Responsibilities of a Software Project Manager – Project Planning- Project Estimation Techniques-Risk Management. **Requirements Analysis and Specification:**-Requirements Gathering and Analysis – Software Requirements Specifications (SRS):Users of SRS Document – Characteristics of a Good SRS Document – Important Categories of Customer Requirements – Functional Requirements – How to Identify the Functional Requirements? – Organisation of the SRS Document.	4 - 6	Lecturing
III	**Software Design:**-Overview of the Design Process: Outcome of the Design Process – Classification of Design Activities. – How to Characterize a good Software Design? **Function-Oriented Software Design:**-Overview of SA/SD Methodology – Structured Analysis – Developing the DFD Model of a System: Context Diagram – Structured Design – Detailed Design.	7 - 9	Lecturing
IV	**User Interface Design:**-Characteristics of a good User Interface - Basic Concepts – Types of User Interfaces – Fundamentals of Components based GUI Development: Window System. **Coding and Testing:**-Coding – Software Documentation – Testing: Basic Concepts and Terminologies – Testing Activities. – Unit Testing – Black-box Testing: Equivalence Class Partitioning – Boundary Value Analysis. – White-box Testing.	10 - 12	Lecturing
V	**Software Reliability and Quality Management:**-Software Reliability: Hardware versus Software Reliability. – Software Quality – Software Quality Management System – ISO 9000: What is ISO 9000 Certification? – ISO 9000 for Software Industry – Shortcomings of ISO 9000 Certification. – SEI Capability Maturity Model: Level 1 to Level 5. **Software Maintenance:**-Characteristics of Software Maintenance: Characteristics of Software Evolution – Software Reverse Engineering.	12 - 15	Lecturing
	I Internal Test	6	
	II Internal Test	10	
	III Internal Test	13	
	Revision (Model)	17	

P. S. A. 18/6/18
Staff - in – Charge

P. S. A. 18/6/18
HOD Signature
Head of the Department of
Computer Science
Annai Hajira Women's College,

Principal Signature 18/6/18
PRINCIPAL
ANNAI HAJIRA WOMEN'S COLLEGE
MELAPALAYAM - 627 005.

RECORD OF CLASS WORK

Name & Designation of the Staff: Mrs. P. S. ANITHA
Head, Dept. of CS

Programme : B.Sc Computer Science
Course Title : Software Engineering & Testing
Course Code : 18MCS57

Semester : V
Academic Year : 2018 – 2019
Course Type : Theory

Sl. No.	Date	Period	Unit	Topics Covered	Initials
1.	26.6.18	5	I	Introduction - S/w engineering discipline	
2.	28.6.18	1	I	S/w Engineering discipline	
3.	29.6.18	3	I	S/w development Projects	
4.	29.6.18	3	I	Emergence of S/w engineering	
5.	4.7.18	5	I	S/w Life cycle model - Basic Concepts	
6.	5.7.18	1	I	Waterfall Model & its Extension	
7.	6.7.18	3	I	Classical Waterfall Model	
8.	13.7.18	3	I	Iterative Waterfall Model	
9.	13.7.18	3	I	Prototyping Model	
10.	13.7.18	3	I	Evolutionary Model	
11.	19.7.18	5	I	Rapid Application Development	
12.	19.7.18	5	I	Working of RAD	
13.	13.7.18	3	I	Spiral Model	
14.	20.7.18	1	II	Responsibilities of a S/w Project	
15.	20.7.18	1	II	Project Planning	
16.	20.7.18	1	II	Project Estimation Techniques	
17.	21.7.18	3	II	Requirements gathering and analysis	
18.	21.7.18	3	II	S/w Requirements Specification	
19.	23.7.18	4	II	S/w Requirements Specification	
20.	23.7.18	4	II	Uses of SRS document	
21.	23.7.18	4	II	Characteristics of good SRS document	

Sl. No.	Date	Period	Unit	Topics Covered	Initials
22.	30.7.18	3	II	Important Categories of customer requirements	
23.	30.7.18	3	II	Functional requirements	
24.	30.7.18	3	II	How to identify the functional requirements	
25.	30.7.18	3	II	Organization of SRS document.	
26.	31.7.18	4	III	Overview of the design process	
27.	31.7.18	4	III	Outcome of the design process	
28.	10.8.18	5	III	How to characterize a good sw design	
29.	10.8.18	5	III	Overview of SA/SD methodology	
30.	10.8.18	5	III	Structured Analysis	
31.	10.8.18	5	III	DFD, Context design	
32.	10.8.18	5	III	Structured design	
33.	10.8.18	5	III	Detailed design	
34.	13.8.18	1	III	Overview of object oriented concepts	
35.	13.8.18	1	III	UML, UML diagrams	
36.	14.8.18	3	III	Class diagrams	
37.	16.8.18	4	III	Interaction diagrams	
38.	20.8.18	5	III	Activity diagrams	
39.	20.8.18	5	III	State chart diagrams.	
40.	27.8.18	3	IV	characteristics of a good user interface.	
41.	27.8.18	3	IV	Basic Concepts	
42.	28.8.18	4	IV	Types of user interfaces	
43.	28.8.18	4	IV	Component based GUI development	
44.	1.9.18	1	IV	Coding, Testing	
45.	19.9.18	5	IV	SRS Documentation	
46.	1.9.18	1	IV	Testing Activities	

Sl. No.	Date	Period	Unit	Topics Covered	Initials
47.	11.9.18	3	IV	Unit Testing, Black box Testing	
48.	17.9.18	5	IV	White Box Testing	
49.	18.9.18	1	IV	Debugging	
50.	18.9.18	1	IV	Integration Testing	
51.	18.9.18	1	IV	System Testing	
52.	27.9.18	1	V	S/w Reliability	
53.	19.9.18	3	V	S/w Quality	
54.	19.9.18	3	V	S/w Quality Management	
55.	27.9.18	1	V	ISO 9000	
57.	27.9.18	1	V	SEI Capability Maturity Model	
57.	28.9.18	3	V	CASE Environment	
58.	28.9.18	3	V	CASE support in s/w life cycle	
59.	28.9.18	3	V	Characteristic of s/w maintenance	
60.	28.9.18	3	V	S/w Reverse Engineering.	

28/9/18
Course Faculty Signature

28/9/18
PRINCIPAL
ANNAI HAJIRA WOMEN'S COLLEGE
MELAPALAYAM -527 005.

31/10
HOD Signature

Annai Hajira Women's College

Melapalayam, Tirunelveli - 05

(A Unit of As-Sathiq Educational Society)

(Affiliated to Manonmaniam Sundaranar University)

CURRICULAR PLAN – III B. Sc Computer Science

2018 - 2019 (EVEN SEMESTER)

Part III – Core OPERATING SYSTEMS

Semester: VI Hours: 5 Subject Code: JMCS61 Credits: 4

Staff - in – Charge - Ms. P. S. Anitha

Unit	Topic	Week	Mode of Teaching
I	**Introduction:** What Operating systems do – Computer System Organization – Computer System Architecture – Operating System Structures- Operating System Operation.**System Structures:** Operating System Services – System Calls – System Programs – Operating System Design and Implementation-Operation System Generation- System Boot.	1 - 3	Lecturing
II	**Process Concept:** Process Concept- Process Scheduling –Operation on Processes- Inter Process Communication- Example of IPC System – Communication in Client – Server system. **Process Scheduling:** Basic concept-Scheduling criteria-Scheduling algorithm-Thread scheduling-Multiple Processor Scheduling-Real Time CPU Scheduling-Operating system example-Algorithm evaluation.	4 - 6	Lecturing
III	**Synchronization:** Background - The Critical section problem-Peterson's solution - Semaphores – Classic problems of Synchronization. **Deadlocks:** System models-Deadlock Characterization-Methods for handling deadlock - Deadlock Prevention-Deadlock Avoidance-Deadlock detection - Recovery from deadlock.	7 - 9	Lecturing
IV	**Memory Management:** Background – Swapping - Contiguous Memory allocation – Segmentation – paging. **Virtual Memory Management:** Background - Demand paging - Copy and Write-page replacement-Allocation of Frames - Thrashing.	10 - 12	Lecturing
V	**File System:** File Concept-Access Method-Directory and Structure--File Sharing-Protection. **Implementing File System:** File System Structure - File System implementation-Directory implementation-Allocation Methods - Free Space Management. **Mass Storage Structure:** Overview of Mass Storage Structure-Disk Structure - Disk Scheduling - Disk Management.	12 - 15	Lecturing
	I Internal Test	6	
	II Internal Test	10	
	III Internal Test	13	
	Revision (Model)	17	
	Revision (Model)	9	

P.S.A 5/12/18

Staff - in - Charge

P.S.A 5/12/18

HOD Signature

Head of the Department of Computer Science Annai Hajira Women's College, Melapalayam

Principal Signature 5/12/18

PRINCIPAL

ANNAI HAJIRA WOMEN'S COLLEGE MELAPALAYAM - 627 005.

RECORD OF CLASS WORK

Name & Designation of the Staff: Mrs. P.S. ANITHA
Head, Dept. of CS

Programme : B.Sc Computer Science
Course Title : Operating System
Course Code : SMCS61

Semester : VI
Academic Year : 2018-2019
Course Type : Theory

Sl. No.	Date	Period	Unit	Topics Covered	Initials
1.	17.12.18	5	I	Introduction - What Operating System do?	
2.	26.12.18	2	I	Computer System Organization	
3.	26.12.18	2	I	Computer System Architecture	
4.	19.12.18	4	I	Operating System Structures	
5.	19.12.18	4	I	Operating System Operation	
6.	19.12.18	4	I	System Structures	
7.	19.12.18	4	I	Operating System Services	
8.	26.12.18	2	I	System Calls	
9.	26.12.18	2	I	System Programs	
10.	5.1.19	2	I	OS Design & Implementation	
11.	5.1.19	2	I	OS Generation	
12.	26.12.18	2	I	System Boot	
13.	3.1.19	2	II	Process Concept	
14.	3.1.19	2	II	Process Scheduling	
15.	3.1.19	2	II	Operation on Process	
16.	3.1.19	2	II	Interprocess Communication	
17.	7.1.19	4	II	Example of IPC System	
18.	7.1.19	4	II	Communication in Client	
19.	7.1.19	4	II	Server System	
20.	4.1.19	5	II	Process Scheduling - Basic Concept	
21.	5.1.19	2	II	Scheduling Criteria.	

Sl. No.	Date	Period	Unit	Topics Covered	Initials
22.	7.1.19	4	II	Scheduling Algorithm	
23.	7.1.19	4	II	Thread Scheduling	
24.	7.1.19	4	II	Multiple Processor Scheduling	
25.	7.1.19	4	II	Real Time CPU Scheduling	
26.	7.1.19	4	II	OS Example	
27.	10.1.19	2	II	Algorithm Evaluation	
28.	10.1.19	2	III	Process Synchronization - Background	
29.	11.1.19	5	III	The Critical Section Problem	
30.	11.1.19	5	III	Peterson Solution.	
31.	11.1.19	5	III	Semaphores	
32.	11.1.19	5	III	Classical problems of synchronization	
33.	11.1.19	5	III	Deadlock - System Model	
34.	11.1.19	5	III	Deadlock characterization	
35.	11.1.19	5	III	Methods for handling deadlocks	
36.	22.1.19	2	III	Deadlock Prevention	
37.	22.1.19	2	III	Deadlock Avoidance	
38.	22.1.19	2	III	Deadlock Detection	
39.	22.1.19	2	III	Recovery from Deadlock	
40.	22.1.19	2	IV	Memory Management - Background	
41.	5.2.19	3	IV	Background	
42.	5.2.19	3	IV	Swapping	
43.	5.2.19	3	IV	Contiguous Memory Allocation	
44.	6.2.19	2	IV	Segmentation	
45.	5.2.19	3	IV	Paging	
46.	6.2.19	2	IV	Paging	

Sl. No.	Date	Period	Unit	Topics Covered	Initials
47.	11.2.19	4	IV	Virtual Memory Management - Background	
48.	11.2.19	4	IV	Demand Paging	
49.	11.2.19	4	IV	Copy and Write	
50.	11.2.19	4	IV	Page Replacement	
51.	13.2.19	3	IV	Allocation of Frames	
52.	13.2.19	3	IV	Thrashing	
53.	13.2.19	3	V	File System - File Concept	
54.	13.2.19	3	V	Access Methods	
55.	13.2.19	3	V	Directory & Structure	
56.	14.2.19	2	V	File Sharing	
57.	14.2.19	2	V	Protection	
58.	14.2.19	2	V	File System Structure	
59.	14.2.19	2	V	File System Implementation	
60.	14.2.19	2	V	Directory Implementation, Allocation Methods	
61.	14.2.19	2	V	Free space management	
62.	14.2.19	2	V	Mass Storage Structure - Overview	
63.	14.2.19	2	V	Disk Structure, Disk Scheduling	
64.	14.2.19	2	V	Disk Management	

P.S. 14/2/19
Course Faculty Signature

Rajan Nath 14/2/19
PRINCIPAL
ANNAI HAJIRA WOMEN'S COLLEGE
MELAPALAYAM - 627 005.

P.S. 16/4/19
HOD Signature

Annai Hajira Women's College, Melapalayam

DEPARTMENT OF CHEMISTRY

CURRICULAR PLAN 2019-2020

Part III - Core Paper V - ORGANIC CHEMISTRY II (For II B.Sc. Chemistry)

Semester : III
Hours/Week : 4
Subject Code : SMCH31
Credits : 4
Staff - in-Charge : Dr.R. Anuradha

Unit	Topic	Week	Mode of Teaching
I	**ALDEHYDES AND KETONES** Structure and reactivity of carbonyl group – relative reactivities of aldehydes and ketones – mechanism of nucleophilic addition reaction (HCN, $NaHSO_3$, and Grignard reagent) – mechanism of aldol condensation, crossed aldol condensation, Knoevenagal reaction. Study of the following reactions – Wolff-Kishner reduction, Wittig reaction, Meerwein Ponndorf Verley reduction. Preparation, properties and uses of chloral, acrolein, crotonaldehyde and succinaldehyde.	1 – 3	Lecturing
II	**CARBOXYLIC ACIDS & ACID DERIVATIVES** Structure of carboxylic acid and carboxylate anion – relative strengths of monocarboxylic acids – effect of substituents on acidity – Hell – Volhard – Zelinsky reaction- action of heat on hydroxy acids- preparation, properties and uses of lactic acid and citric acid– dicarboxylic acids: action of heat on dicarboxylic acids - preparation, properties and uses of oxalic acid and succinic acid Acid anhydrides – Amides –Preparation, properties and structure of urea –Esters- mechanism of esterification and ester hydrolysis.	4 – 6	Lecturing
III	**ORGANOMETALLIC COMPOUNDS AND ORGANO SULPHUR COMPOUNDS** Preparation, structure and synthetic uses of Grignard reagent-preparation and reactions of methyl lithium, diethyl zinc and tetraethyl lead-Reformatsky reaction. Preparation and properties of thioalcohols and thioethers – sulphonal-mustard gas and sulphones.	6 – 9	Lecturing & Seminar
IV	**REACTIVE METHYLENE COMPOUNDS & TAUTOMERISM** Reactivity of methylene groups – preparation and synthetic uses of diethyl malonate and ethyl acetoacetate. Tautomerism – definition – various types: keto–enol, amido–imido, nitro–acinitro and oxime–nitrosotautomerism.	10 – 12	Lecturing
V	**ALICYCLIC COMPOUNDS** Nomenclature –general methods of preparation – spectroscopic properties – chemical properties – relative stabilities of cyclo alkanes	13 – 15	Lecturing

	– Baeyer's strain theory –Sachse-Mohr theory – Coulson and Moffit's concept – conformations of cyclohexane and mono substituted cyclohexanes – large ring compounds – synthesis and structure of civetone and muscone (structure elucidation not necessary).		
	I INTERNAL EXAM	**6**	
	II INTERNAL EXAM	**10**	
	III INTERNAL EXAM	**13**	
	MODEL EXAM	**17**	

17/6/19

Signature of the Staff

17/6/19

Signature of the HoD

Head of the Department
CHEMISTRY
ANNAI HAJIRA WOMEN'S COLLEGE
MELAPALAYAM - 627 005.

RECORD OF CLASS WORK

Name & Designation of the Staff: Dr. R. Anuradha HOD & Assistant professor

Programme : B.Sc Chemistry

Semester : III

Course Title : Organic chemistry II

Academic Year: 2019 - 2020

Course Code : SMCH31

Course Type : Major

S.No.	Date	Period	Unit	Topics covered	Initials
1	18.6.19	B_3	I	Relative reactivities of aldehydes and ketones	
2	19.6.19	C_2		Mechanism of nucleophillic addition reaction - HCN, $NaHSO_3$)	
3	20.6.19	D_1		Grignard reagent	
4	22.6.19	F_4		Mechanism of aldol and crossed aldol Condensation	
5	25.6.19	B_3		knoevengal reaction, Reformatsky reaction	
6	26.6.19	C_2		wolf kishner, wittig, Meerwein ponderf verley reduction	
7	27.6.19	D_1		chloral - preparation, property and uses	
8	1.7.19	F_4		acrolein - preparation, property and uses	
9	3.7.19	B_3		Acronaldehyde - preparation, property and uses	
10	4.7.19	C_2		succinaldehyde - preparation, uses and property	
11	5.7.19	D_1	II	Structure of Carboxylic acid and Carboxylate anion, Strength	
12	8.7.19	F_4		Effect of Substituents on reactivity - Hell Volhard zelinsky rn	
13	10.7.19	B_3		Lactic acid - preparation, property and uses	
14	11.7.19	C_2		citric acid - preparation, property and uses	
15	12.7.19	D_1		oxalic acid - preparation, property and uses	
16	15.7.19	F_4		Succinic acid - preparation, property and uses	
17	18.7.19	B_3		Acid anhydrides and Amides	

S.No.	Date	Period	Unit	Topics covered	Initials
18	19.7.19	C_2		urea - preparation, property and uses	
19	20.7.19	D_1		Mechanism of Ester hydrolysis	
20	23.7.19	F_4		Revision for I internal test	
21	25.7.19	B_3		Question paper discussion	
22	26.7.19	C_2		Mechanism of Esterification	
23	29.7.19	D_1		I internal test - Basic Programming Design	
24	31.7.19	F_4		Answer sheet distribution and discussion	
25	2.8.19	B_3	III	Grignard Reagent - preparation, structure and synthetic uses	
26	3.8.19	C_1		Methyl lithium - preparation and rns	
27	5.8.19	D_1		diethyl zinc - preparation and rns	
28	7.8.19	F_4		Tetra ethyl Lead, Reformatsky rn	
29	9.8.19	B_3		Thioalcohols - preparation and property	
30	16.8.19	C_2		Thio ethers - preparation and property	
31	17.8.19	D_1		Sulphonal - preparation and property	
32	20.8.19	F_4		Mustard Gas - preparation and property	
33	22.8.19	B_3		Sulphones, preparation and property	
34	24.8.19	C_2	IV	Reactivity of methylene gps	
35	26.8.19	D_1		II internal test - English	
36	28.8.19	F_4		Question paper discussion	
37	30.8.19	B_3	IV	Diethyl malonate - preparation and synthetic uses	
38	31.8.19	C_2		Answer sheet distribution and discussion	

RECORD OF CLASS WORK

Name & Designation of the Staff: Dr. R. Anuradha HOD

Programme : B.Sc Chemistry

Course Title : Organic chemistry II

Semester : III

Course Code : SMCH31

Academic Year: 2019-2020

Course Type : Major

S.No.	Date	Period	Unit	Topics covered	Initials
39	3.9.19	D_1		Ethyl acetoacetate - preparation and synthetic uses	
40	5.9.19	F_4		Tautomerism - keto-enol	
41	7.9.19	B_3		Amido - Imido tautomerism	
42	9.9.19	C_2		Acinitro and oxime	
43	10.9.19	D_1		Nitroso tautomerism	
44	13.9.19	F_4	V	Alicyclic Compds - Nomenclature general methods of preparation	
45	17.9.19	B_3		Spectroscopic, chemical properties and relative stability of alkanes	
46	18.9.19	F_2		Bayer's Strain Theory	
47	19.9.19	D_1		Sachse Mohr Theory	
48	21.9.19	F_4	V	Coulson and Moffits Concept	
49	24.9.19	B_3		Question paper discussion	
50	25.9.19	C_2		Answersheet distribution and discussion	
51	26.9.19	D_1		III internal test - Allied Physics I	
52	30.9.19	F_4		Conformation of cyclohexanes	
53	3.10.19	B_3		Conformations of monosubstituted cyclohexanes	
54	4.10.19	C_2		Civet Cone - Synthesis and structure	

S.No.	Date	Period	Unit	Topics covered	Initials
56	10.10.19	F_4		Revision for Model Exam	
57	12.10.19	B_3		Revision	
58	14.10.19	C_2		Revision	
59	15.10.19	D_1		Model Exam - English	
60	17.10.19	F_4		Question Paper discussion	
61	19.10.19	B_3		Model Exam - Agro chemistry	
62	21.10.19	C_2		Model Exam - NME	
63	22.10.19	D_1		Model Exam - Allied physics I	
64	24.10.19	F_4		Model Answer Sheet distribution and discussion.	

Signature of the Course Faculty

Signature of the HoD

Head of the Department
CHEMISTRY
ANNAI HAJIRA WOMEN'S COLLEGE,
MELAPALAYAM - 627 005.

Annai Hajira Women's College, Melapalayam

DEPARTMENT OF CHEMISTRY

CURRICULAR PLAN 2019-2020

Part IV

Common Paper - VALUE BASED EDUCATION

(For I B.Sc. Chemistry & I B.A. English)

Semester : II Hours/Week : 2

Subject Code : SVEBE21 Credits : 2

Staff - in – Charge : Ms.S. Pandimadevi @ Lishavi & Dr.R. Anuradha

Unit	Topic	Week	Mode of Teaching
I	**SOCIAL JUSTICE** Definition – need – parameters of social justice – factors responsible for social injustice – caste and gender – contributions of social reformers.	1 – 2	Lecturing
II	**HUMAN RIGHTS AND MARGINALIZED PEOPLE** Concept of Human Rights – Principles of human rights – human rights and Indian constitution – Rights of Women and children – violence against women – Rights of marginalized People – like women, children, dalits, minorities, physically challenged etc.	3 – 5	Lecturing
III	**SOCIAL ISSUES AND COMMUNAL HARMONY** Social issues – causes and magnitude - alcoholism, drug addiction, poverty, unemployment etc – communal harmony –concept – religion and its place in public in public domain – separation of religion from politics –secularism role of civil society.	6 – 8	Lecturing
IV	**MEDIA EDUCATION AND GLOBALISED WORLD SCENARIO** Mass media –functions –characteristics –need and purpose of media literacy – effects and influence - - youth and children – media power – socio cultural and political consequences mass mediated culture - - consumeristic culture – Globalization – new media- prospects and challenges.	9 - 12	Lecturing And Seminar
V	**VALUES AND ETHICS** Personal values – family values – social values – cultural values – Professional values – and overall ethics – duties and responsibilities.	13 - 16	Lecturing And Seminar
	I INTERNAL EXAM	6	
	II INTERNAL EXAM	10	
	III INTERNAL EXAM	13	
	MODEL EXAM	17	

4/12/2019
Signature of the Staff

4/12/19
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04/12/2019
Head of the Department
CHEMISTRY
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ANNAI HAJIRA WOMEN'S COLLEGE,
MELAPALAYAM - 627 005.

RECORD OF CLASS WORK

Name & Designation of the Staff: Ms. S. Pandimadevi (a) Lishavi & Dr. R. Anuradha (Asst. Prof) (Asst Prof & HOD)

Programme : I B.A English **Semester** : II

Course Title : Value Based Education **Academic Year:** 2019 - 2020

Course Code : SVBE21 **Course Type** :

S.No.	Date	Period	Unit	Topics covered	Initials
1	4/12/19	5	1	Definition & Need of Social Justice	
2	9/12/19	5	1	Parameters of Social Justice	
3	11/12/19	5	1	Factors Responsible for Social Injustice	
4	17/12/19	5	1	Caste & Gender Inequality	
5	19/12/19	5	1	Contributions of Social Reformers	
6	4/1/2020	5	2	Concept of Human Rights	
7	7/1/2020	5	2	Principles of Human Rights	
8	11/1/2020	5	2	Human Rights & Indian Constitution	
9	14/1/2020	5	2	Rights of Women & children	
10	23/1/2020	5	2	Violences Against Women	
11	25/1/2020	5	2	Rights of Dalits, Minorities, Physically challenged people	
12	30/1/2020	5	3	Social Issues : An Introduction	
13	1/2/2020	5	3	Alcoholism	
14	7/2/2020	5	3	Drug Addiction	
15	10/2/2020	5	3	Poverty & Unemployment	
16	14/2/2020	5	3	Concept of Communal Harmony	
17	17/2/2020	5	3	Religion & Its place in public domain	

S.No.	Date	Period	Unit	Topics covered	Initials
18	21/2/2020	5	3	Seperation of religion from politics, Secularism, Role of civil Society	
19	25/2/2020	5	4	Mass media: Functions & characteristics, Need & Purpose of Media Literacy	
20	29/2/2020	5	4	Effects and Influences of Mass media on Youth & children	
21	5/3/2020	5	4	Media power: Sociocultural & Political consequences	
22	10/3/2020	5	4	Consumeristic Culture, Globalization.	
23	12/3/2020	5	4	New media : Prospects & challenges	
	Due to Corona			Quarantine, remaining portions taken	
		through		online	

Signature of the Course Faculty

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MELAPALAYAM - 627 005.

Signature of the Student

Head of the Department
CHEMISTRY
ANNAI HAJIRA WOMEN'S COLLEGE,
MELAPALAYAM - 627 005.

Annai Hajira Women's College

Melapalayam, Tirunelveli – 05

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CURRICULAR PLAN – II B. Sc Physics

2020-2021 (EVEN SEMESTER) Part III – Skill Based – Maintenance of Electronic Appliances

Semester: IV Hours: 4 Subject Code: SSPH4A Credits: 4

Staff - in – Charge – Mrs.P.Malathi

Unit	Topic	Week	Mode of Teaching
I	**Electronic components** Study of Electronic components - Resistors - types - characteristics - colour coding – wattage rating-potential divider arrangement-capacitors - type - characteristics —working voltage-star and delta connection of resistors and capacitors - Soldering and desoldering techniques-Groove board,bread board and printed circuit board	1 - 2	Lecturing
II	**Measuring Instruments** Practical use of Multimeter (analog and digital) - CRO - Block Diagram -measurement of voltage, frequency and phase - waveforms and Lissajoue's figures. Digital Storage Oscilloscopes-LCD display for instruments -A/F and R/F oscillators.	3 - 5	Lecturing
III	**Transducers** Classification of transducers, Basic requirement/characteristics of transducers, Active and Passive transducers, Resistive (Potentiometer -Theory, temperature compensation &applications), Capacitive (variable air gap type), Inductive (LVDT) &piezoelectric transducers. Measurement of temperature (RTD, semiconductor IC sensors), Light transducers (photo resistors &photovoltaic cells).	6-8	Lecturing
IV	**Communication Devices** Basic concepts of radio transmitter and receiver - TV antennas: Resonance antennas and their characteristics - Dipole antenna - Folded dipole - Yagi antenna - Yagi antenna design – Dish antenna - DTH system - Mobile communication system - MODEM. Telephone systems-cellular Telephone systems-mobile phone principle of operation-integrated services=digital networks(ISDN)	9-12	Lecturing
V	**Photography** Introduction to cameras-parts of camera and accessories—lens shutter-aperture-flash photography-filters-battery-tele and wide angle lens Digital formats-data transfer to computer-ISO speed-resolution, revision	13-17	Lecturing
	I Internal Test	6	
	II Internal test	10	
	III Internal test	13	
	Model examination	17	

P. Malathi
Staff - in – Charge

PRINCIPAL
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MELAPALAYAM - 627 005.

RECORD OF CLASS WORK

Name & Designation of the Staff: Malathi - P

Programme : B.Sc Physics **Semester** : IV

Course Title : Maintenance of Electronic Equipments **Academic Year:** 2020 - 2021

Course Code : SSPH4A **Course Type** : Skill

S.No.	Date	Period	Unit	Topics covered	Initials
1	28/12/20	A5	I	Study of Electronic components, resistor types - Characteristics	BM
2	29/12/20	B5		Colour Coding, wattage rating	BM
3	31/12/20	D4		Potential Divider arrangement	BM
4	4/1/21	A5		Capacitors types - characteristics	BM
5	5/1/21	B5		star and Delta connection of resistors	BM
6	7/1/21	D4		Soldering techniques	BM
	0	F		Desoldering techniques	BM
7	9/1/21	F2		Groove board, bread board	BM
8	11/1/21	A5		Printed circuit board	BM
9	12/1/21	B5	II	Practical uses of multimeter	BM
10	18/1/21	A5		Analog and Digital multimeter	BM
11	19/1/21	B5		CRT	BM
12	21/1/21	D4		CRO block diagram	BM
13	23/1/21	F2		Measurement of Voltage	BM
				frequency and phase waveforms	BM
14	25/1/21	A1		Lissajoue's figures	BM
15	30/1/21	F1		Digital Storage Oscilloscopes	BM

S.No.	Date	Period	Unit	Topics covered	Initials
16	1/2/21	A5		LCD display	
17	2/2/21	B5		A/F and R/F oscillators	
18	4/2/21	D4	III	classification of transducers basic requirements / characteristics	
19	6/2/21	F2		active and passive transducers	
20	8/2/21	A5		Inductive Transducer LVDT	
21	9/2/21	B5		Piezoelectric transducers	
22	11/2/21	D4		Capacitive transducer (Variable air-gap type)	
23	13/2/21	F2		Resistive Transducer Potentiometric type	
24	15/2/21	A5		Wheatstone bridge type	
25	16/2/21	B5		Temperature Compensation	
				Semiconductor IC temperature Sensors	
26	18/2/21	D4		Thermistors	
27	20/2/21	F2		Photovoltaic cell, Photo resistors	
28	22/2/21	A5		Measurement of temperature using RTD	
29	23/2/21	B5	IV	Basic concepts of radio transmitter and receiver	
30	25/2/21	D4		TV antennas working	
31	27/2/21	F2		resonance antennas and their characteristics	
32	1/3/21	A5		Dipole antenna	
33				Folded dipole	
34	2/3/21	B5		The Yagi-uda antenna	
35				Yagi antenna design	

S.No.	Date	Period	Unit	Topics covered	Initials
36	6/3/21	F2		Dish antenna – DTH System	
37	8/3/21	A5		Mobile communication System	
38	9/3/21	B5		Modem	
39	11/3/21	D4		Telephone Systems	
40				Cellular Telephone Systems	
41	18/3/21	D4		Mobile phone - Principle of operation	
42	22/3/21	A5		Integrated Services	
43	23/3/21	B5		Digital networks (ISDN)	
44	25/3/21	D4	V	Introduction to Cameras	
				Parts of Camera	
45	27/3/21	F2		Accessories	
46	29/3/21	A5		Lens shutter	
				aperature	
47	1/4/21	D4		flash photography	
48	8/4/21	D4		filters	
49	10/4/21	F4		battery	
50	12/4/21	A5		tele and wide angle lens	
51	15/4/21	D4		Digital formats	
				Data transfer to computer	
52	19/4/21	A4		Iso speed	
53	22/4/21	D4		resolution	

P. Malathi

Signature of the Course Faculty

Signature of the HoD

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CURRICULAR PLAN – III B. Sc Physics

2020-2021 (EVEN SEMESTER) Part III – Core Quantum Mechanics Semester: VI Hours: 5

Subject Code: SMPH62 Credits: 4 Staff - in – Charge – Dr.N.Ammakutti @ Sridevi

Unit	Topic	Week	Mode of Teaching
I	**DEVELOPMENT OF QUANTUM MECHANICS** Inadequacy of classical mechanics-Black body radiation – Theoretical laws of Black body radiation (Wein's displacement law –Wein's Radiation formula – Rayleigh Jeans law) – Planck's Quantum hypothesis – photoelectric effect-Einstein's explanation for photoelectric effect-Compton effect – Einstein's quantum theory of specific heat-Quantum states of energy .	1 - 2	Lecturing
II	**WAVE PROPERTIES OF MATTER** Wave particle duality-Phase and Group Velocity – Analytical expression for a Group of waves – Wave packets formed by Superposition of Number of Plane waves – De Broglie Hypothesis – Derivation of De Broglie relation – Phase velocity of De Broglie Waves – Relation between De Broglie wave and Phase velocity – Davision and Germer's experiment on electron diffraction-Diffraction of Atoms and Molecules	3 - 5	Lecturing
III	**HEISENBERG UNCERTAINTY PRINCIPLE** Uncertainty Principle - Elementary Proof of Heisenberg's Uncertainty Relation and its Physical significance – Elementary Proof of the Heisenberg's Uncertainty Relation between energy and Time-Illustration of uncertainty relation by Thought experiments-consequences of uncertainty relation	6-8	Lecturing
IV	**SCHRODINGER'S WAVE EQUATION:** Basic postulates of Quantum mechanics –Schrodinger's equation – 1D and 3D wave equation into the Time-dependent and Time-independent part – Physical Interpretation of the Wave Function ψ – Operators in quantum Mechanics, Eigen Function, Eigen value and Eigen Value equation – Expectation values – Orthogonality of Energy Eigen function - Schrodinger's Wave equation for the Complex Conjugate Wave function $\psi^*(x, y, z, t)$ – Probability current Density – Ehrenfest's Theorem – Momentum wave function for free particle – Momentum Eigen function – Exact statement and proof of Uncertainty Principle for One Dimensional wave packet	9-12	Lecturing
V	**APPLICATIONS OF QUANTUM MECHANICS** Free particle – Potential step – Rectangular Potential barrier- Tunnel effect – emission of α particles from Radioactive element - Square well potential-free states-Particle in 1D box – Particle in 3D box – simple harmonic oscillator – 1D simple harmonic oscillator in quantum mechanics – Particle in 1 D square well potential of finite Depth. Revision	13-17	Lecturing
	I Internal Test	6	
	II Internal test	10	
	III Internal test	13	
	Model examination	17	

PRINCIPAL
ANNAI HAJIRA WOMEN'S COLLEGE
MELAPALAYAM - 627 005.

Staff - in – Charge

RECORD OF CLASS WORK

Name & Designation of the Staff: Dr. N. Ammakutti @ Sridevi

Programme : III B.Sc., Physics **Semester** : VI

Course Title : Quantum Mechanics **Academic Year:** 2020-21

Course Code : SMPH62 **Course Type** : Major Core

S.No.	Date	Period	Unit	Topics covered	Initials
1	28.12.20	Mon 4	I	Development of Quantum Mechanics Syllabus	NMK
2	29.12.20	Tue 5	I	Introduction, Inadequacy of	NMK
3	30.12.20	Wed 4	I	classical mechanics	NMK
4	31.12.20	Thu 5	I	Black body radiation	NMK
5	4.1.21	Mon 4	I	Theoretical laws of black	NMK
			I	body radiation (Wein's displacement	
6	5.1.21	Tue 5	I	law, Wein's radiation formula	NMK
7	6.1.21	Wed 4	I	Rayleigh Jean's law)	NMK
8	7.1.21	Thu 5	I	Planck's quantum hypothesis	NMK
9	8.1.21	Fri 1	I	Photoelectric effect.	NMK
10	11.1.21	Mon 4	I	Einstein's explanation for	NMK
11	12.1.21	Tue 5		photoelectric effect.	NMK
12	13.1.21	Wed 4	I	Compton effect	NMK
13	18.1.21	Mon 4		Theory and derivation	NMK
14	19.1.21	Tue 5	I	Einstein's quantum theory	NMK
15	20.1.21	Wed 4		of specific heat	NMK
16	21.1.21	Thu 5	I	Quantum states of energy.	NMK

S.No.	Date	Period	Unit	Topics covered	Initials
17	22.1.21	Fri 1	II	Wave properties of matter.	
18	25.1.21	Mon 4	II	Introduction, Wave particle duality.	
19	27.1.21	Wed 4	II	Phase and group velocity	
20	1.2.21	Mon 4	II	Analytical expression for a	
21	2.2.21	Tue 5	II	group of waves.	
			II	"	
22	3.2.21	Wed 4	II	Wave packets formed by	
				Superposition of numbr of plane	
				waves.	
23	4.2.21	Thu 5	II	De Broglie hypothesis, Derivation	
24	5.2.21	Fri 1	II	of de broglie relation.	
25	8.2.21	Mon 4	II	Phase velocity of de Broglie wave	
26	9.2.21	Tue 5	II	Relation between de Broglie wave	
27	10.2.21	Wed 4	II	and phase velocity.	
28	11.2.21	Thu 5	II	Davisson and Germer's	
29	12.2.21	Fri 1	II	experiment on electron diffraction	
30	15.2.21	Mon 4	II	Diffraction of atoms and molecules.	
			III	Heisenberg's Uncertainty Principle.	
31	16.2.21	Tue 5	III	Introduction Uncertainty Principle	
32	17.2.21	Wed 4	III	Elementary Proof of Heisenberg's	

S.No.	Date	Period	Unit	Topics covered	Initials
33	18.2.21	Thu 5	III	Uncertainty relation and Physical significance	
34	19.2.21	Fri 1	III	Elementary Proof of the Heisenberg's	
35	22.2.21	Mon 4	III	Uncertainty relation between energy & time	
36	23.2.21	Tue 5	III	Illustration of Uncertainty relation	
37	24.2.21	Wed 4	III	by Thought experiment: Diffraction of Slit	
38	25.2.21	Thu 5	III	Gramma ray microscope	
39	26.2.21	Fri 1	III	Consequences of Uncertainty relation	
40	1.3.21	Mon 4	IV	Schrödinger's Wave equation	
41	2.3.21	Tue 5	—	Introduction, Basic postulates	
42	3.3.21	Wed 4	IV	1Θ,3Θ Time dependent Wave eqn	
43	5.3.21	Fri 1	IV	1Θ, 3Θ Time independent Wave eqn.	
44	8.3.21	Mon 4	IV	Physical interpretation of Wave function ψ.	
45	9.3.21	Tue 5	IV	Operators in Quantum Mechanics	
46	10.3.21	Wed 4	IV	Eigen function, Eigen value	
47	11.3.21	Thu 5	IV	Eigen Value equation.	
48	12.3.21	Fri 1	IV	Expectation values	
49	15.3.21	Mon 4	IV	Orthogonality of energy eigen function	
50	16.3.21	Tue 5	IV	Schrödinger's Wave equation for	
51	17.3.21	Wed 4	IV	Complex Conjugate function. ψ^*	
52	18.3.21	Thu 5	IV	Probability Current density	
53	19.3.21	Fri 1	IV	Ehrenfest theorem	

S.No.	Date	Period	Unit	Topics covered	Initials
54	22.3.21	Mon	IV	Momentum eigen function	MM
55	23.3.21	Tue	IV	Momentum Wave function for free particle	MM
56	24.3.21	Wed	IV	Exact proof and Statement	MM
57	25.3.21	Thu	IV	of Uncertainty Principle for 1D Wave Packet	MM
58	26.3.21	Fri	V	Applications of QM Introduction	MM
59	29.3.21	Mon	V	Free particle, potential step	MM
60	30.3.21	Tue	V	Rectangular potential barrier	MM
61	31.3.21	Wed	V	"	MM
62	1.4.21	Thu	V	Tunnel effect, Emission of	MM
63	5.4.21	Mon	V	α particles from radioactive element	MM
64	7.4.21	Wed	V	Square well potential	MM
65	8.4.21	Thu	V	"	MM
66	9.4.21	Fri	V	free states, Particle in 1D box	MM
67	12.4.21	Mon	V	Particle in 3D box	MM
68	15.4.21	Thu	V	Simple harmonic Oscillator	MM
69	16.4.21	Fri	V	1D Simple harmonic oscillator	MM
70	19.4.21	Mon	V	in quantum mechanics.	MM
71	20.4.21	Tue	V	Particle in 1D Square well	MM
72	21.4.21	Wed	V	potential of finite depth.	MM

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CURRICULAR PLAN – III B. Sc Physics

2020-2021 (EVEN SEMESTER) Part III – Core - Nuclear Physics Semester: VI Hours: 4

Subject Code: SMPH63 Credits: 4 Staff - in – Charge – Mrs.A.Aysha Nilobar

Unit	Topic	Week	Mode of Teaching
I	**ATOMIC NUCLEUS** General properties of the nucleus- binding energy –mass defect -packing fraction— BE/A curve and its significance -proton electron hypothesis-proton neutron hypothesis -Nuclear forces –characteristics –Meson theory of nuclear forces –Nuclear models – Liquid drop model –Binding Energy formulae– Shell Model –magic numbers	1 - 2	Lecturing
II	**RADIO ACTIVITY** Natural radio activity –alpha,beta and gamma rays-properties- radioactive series-laws of radioactive disintegration-half life period –mean life period – Radio carbon dating-law of successive disintegration– range of α particle – Geiger Nuttal law- α decay- theory-β- decay –neutrino theory of β decay-neutrino and its properties-electron capture. Y decay- nuclear isomers-Mossabauer effect - applications-radio isotopes - uses.	3 - 5	Lecturing
III	**NUCLEAR REACTIONS** Kinematics of nuclear reaction-conservation of momentum - Q value of nuclear reaction-compound nucleus - nuclear energy level-Nuclear fission – energy released in fission-. Nuclear reactor-uses - Nuclear fusion –Thermo nuclear reactions-controlled thermo nuclear reaction-Principle and action of atom bomb - hydrogen bomb-fusion reactor –plasma confinement	6-8	Lecturing
IV	**NUCLEAR DETECTORSAND PARTICLE ACCELERATORS** Detectors- G.M. Counter-scintillation counter-bubble chamber-Wilson cloud chamber-Accelerators-cyclotron-synchrocyclotron-betatron-synchrotrons	9-12	Lecturing
V	**COSMIC RAYS AND ELEMENTARY PARTICLES** Cosmic rays-introduction-discovery-lattitude, altitude and azimuth effects-longitudinal effect-north –south effect-seasonal and diurnal changes-primary and secondary cosmic rays-nature of cosmic rays- cosmic ray showers-Van Allen belt- origin of cosmic radiation. Elementary particles-introduction-particles and antiparticles-antimatter-the fundamental interaction-elementary particle quantum numbers-conservation laws and symmetry-the quark model, revision	13-17	Lecturing/ Seminar
	I Internal Test	6	
	II Internal test	10	
	III Internal test	13	
	Model examination	17	

Staff - in – Charge

PRINCIPAL
ANNAI HAJIRA WOMEN'S COLLEGE
MELAPALAYAM - 627 005.

Name & Designation of the Staff: A. Aysha Nilofar

Programme : B.Sc. Physics

Semester : (Even) VI

Course Title : Nuclear Physics

Academic Year: 2020 – 2021

Course Code : 1522

Course Type :

S.No.	Date	Period	Unit	Topics covered	Initials
	28.12.20	A2	I	Atomic Nucleus – General Properties of nuclei	
	30.12.20	C5		Binding Energy	
	31.12.20	D1		Mass defect - packing fraction	
	4.1.21	A2		BE/A curve and it's significance	
	6.1.21	C5		Proton-electron hypothesis	
	7.1.21	D1		Proton-Neutron hypothesis	
	9.1.21	F4		Nuclear forces & characteristics	
	11.1.21	A2		Meson theory of nuclear forces	
	13.1.21	C5		Nuclear Model	
	18.1.21	A2		Liquid drop model	
	20.1.21	C5		Binding Energy formula	
	21.1.21	D1		Shell Model & Magic Numbers	
	23.1.21	F4	II	Radioactivity – natural Radio activity.	
	25.1.21	A2		α, β and γ rays & properties	
	27.1.21	C5		Radioactive Series	
	30.1.21	F4		Laws of radioactive disintegration	
	1.2.21	A2		half life period - mean life period.	

	3.2.21	C5		Radio Coorbon dating	
	4.2.21	D1		Law of successive disintegeration	
	6.2.21	E4		Range of α particle - Greiger Nutlal Law	
	8.2.21	A2		α-decay Theory	
	10.2.21	C5		β-decay - neutrino theory of β decay	
	11.2.21	D1		neutrino and it's properties electron capture	
	13.2.21	F4		γ-decay - nuclear isomers	
	15.2.21	A2		Mossbauer effect & it's applications	
	17.2.21	C5		Radioisotopes and it's uses	
III	18.2.21	D1		Nuclear Reactions	
	19.2.21	D1		Kinematics of nuclear reactions conservation of momentum	
	20.2.21	F4		Q-value of nuclear reaction	
	22.2.21	A2		Compound Nucleus	
	24.2.21	C5		Nuclear Energy level	
	25.2.21	D1		Nuclear fission & Energy released in fission.	
	27.2.21	F4		Nuclear reactor & Uses	
	1.3.21	A1		Nuclear fusion - Thermonuclear reaction	
	3.3.21	C5		controlled thermonuclear reaction	
	6.3.21	F4		Principle and action of atom bomb hydrogen Bomb.	
	8.3.21	A2		Fusion reactor and plasma confinement	
IV	10.3.21	C5		Nuclear Reactors and particle accelerators	

				Detectors - G-M. Counter	
	9.3.21	C5		Scintillation Counter	
	11.3.21	D1		Bubble Chamber.	
	13.3.21	F4		Wilson Cloud Chamber	
	15.3.21	A2		Accelerators	
	17.3.21	C5		cyclotron	
	18.3.21	D1		Synchrocyclotron	
	20.3.21	F4		betatron	
	22.3.21	A2		Synchrotrons	
	24.3.21	C5	V	Cosmic rays & elementary particles	
	25.3.21	D1		cosmic rays - introduction	
	27.3.21	F4		discovery - Latitude - altitude and azimuth effect	
	29.3.21	A2		longitudinal effect	
	31.3.21	C5		north-south effect	
	1.4.21	D1		Seasonal and diurnal effect	
	5.4.21	A2		Primary and secondary cosmic rays	
	7.4.21	C5		Nature of cosmic rays	
	8.4.21	D1		cosmic ray showers	
	10.4.21	F4		Van-Alen Belts	
	12.4.21	A2		Origin of cosmic rays	
	15.4.21	D1		Elementary particle - Introduction	
	17.4.21	F4			

S.No.	Date	Period	Unit	Topics covered	Initials
	17.4.21	F4		Particle & Antiparticle	
	19.4.21	A2		Antimatter	
	19.4.21	A2		The fundamental interactions	
	21.4.21	C5		Elementary particle quantum numbers	
	21.4.21	C5		Conservation laws and symmetry	
	22.4.21	D1		The quark Model.	

Signature of the Course Faculty

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CURRICULAR PLAN – IIIB. Sc Physics

2021-2022 (ODD SEMESTER) Part III – Core -Atomic Physics Semester: V Hours: 4

Subject Code: SMPH53 Credits: 4 Staff - in – Charge – Mrs.A.Aysha Nilobar

Unit	Topic	Week	Mode of Teaching
I	**BAND THEORY OF SOLIDS** The free electron theory of metals – expressions for electrical conductivity – thermal conductivity – Wiedman-Franz's law-Hall effect-magnetoresistance-determination of electronic charge – Millikan' s oil drop method – electron microscope – Band theory of solids – classification of solids on the basis of band theory.	1 - 2	Lecturing
II	**POSITIVE RAYS:** Discovery-properties- analysis – Thomson's parabola method – Aston's mass spectrograph – Bainbridge's mass spectrograph – Dempster's mass spectrograph – Dunnington's method of determining e/m.	3 - 4	Lecturing
III	ATOMIC STRUCTURE-I Early atomic spectra-Thomson model-Alpha particle scattering-Rutherford 's nuclear model-drawbacks-Bohr atom model –Bohr's interpretation of the Hydrogen spectrum-correction for nuclear motion-evidences in favour of Bohr's theory-Ritz combination principle-correspondence principle-Sommerfield's relativistic atom model-drawbacks- the vector atom model – Quantum numbers associated with the vector atom model — the Pauli's exclusion principle – periodic classification of elements	7-8	Lecturing
IV	ATOMIC STRUCTURE-II Coupling schemes-L-S Coupling-j-j Coupling-Hund rules- magnetic dipole moment due to orbital motion of the electron-due to spin of the electron -Stern and Gerlach experiment-spin-orbit coupling-optical spectra-spectral terms-spectral notation-selection rules-intensity rules-interval rule-fine structure of sodium D line-hyperfine structure-Normal Zeeman effect-theory and experiment- quantum mechanical explanation -Larmor's theorem- Anomalous Zeeman effect-Paschen –Bach effect-Stark effect.	10-14	Lecturing
V	**X-Rays:** Production of X-rays – properties-absorption of X-rays – X-ray absorption edges- Bragg's law – Bragg's X-ray spectrometer –the powder crystal method –Laue's method – Rotating crystal method – X-ray spectra- continuous spectra- characteristic spectra-Moseley's law -importance–width of spectral lines-Doppler broadening-collision broadening-X-ray Detectors-scintillation detector-semiconductor detectors	16-17	Lecturing
	I Internal Test	6	
	II Internal test	9	
	III internal test	15	
	Model exam	17	

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V sem

RECORD OF CLASS WORK

Programme: II B.Sc. Physics. Course: ATOMIC PHYSICS

Sl. No.	Date	Period	Unit No.	Topics Covered	Initials
	9.8.21	A2		Introduction	
	10.8.21	B1	I	Band theory of solids	
	11.8.21	C4		Free electron theory of Metals	
	12.8.21	D1,2		Electrical & Thermal conductivity	
	13.8.21	E4		Wiedman-Franz's law	
	4.8.21	F3,4		Hall effect	
	16.8.21	A2		Magnetoresistance	
	18.8.21	C4		Millikan's oil drop method	
	19.8.21	D2,3		Electron Microscope	
	23.8.21	A5		Band theory of solids - Classification of Solids	
	25.8.21	C4	II	Positive Rays	
	26.8.21	D1		Discovery	
	27.8.21	E1		Properties & Analysis	
	1.9.21	C4		Thomson's parabola method	
	2.9.21	D1		Aston's mass spectrograph	
	4.9.21	F5		Bainbridge's mass spectrograph	
	6.9.21	A5		Dempster's mass "	
	8.9.21	C4		Dunnington's method of determining e/m	
	9.9.21	D1	III	Atomic Structure - I	
	13.9.21	A4,5		Early atomic spectra	
	15.9.21	C4		Thomson Model	
	16.9.21	D1		I Internal Exam	
	18.9.21	F5		Alpha particle scattering	
	20.9.21	A5		Rutherford's nuclear model	
	22.9.21	C4		Bohr Atom model & H_2 Spectrum 2 drawbacks	
	22.9.21	D1		I Internal Exam	
	25.9.21	F5		Correction for nuclear motion	
	27.9.21	A5		Evidences for Bohr's theory	
	29.9.21	C4		Ritz Combination & Correspondence Principle	
	30.9.21	D1		Sommerfeld's relativistic model	
	4.10.21	A5		Vector atom Model	
	7.10.21	D1		II Internal Exam	

V sem

RECORD OF CLASS WORK

Programme: III B.Sc Physics Course: Atomic Physics

Sl. No.	Date	Period	Unit No.	Topics Covered	Initials
	11.10.21	A5		Quantum Numbers	
	20.10.21	C4		Pauli's Exclusion Principle & periodic table	
	21.10.21	D1		II Internal	
	22.10.21	F5		Periodic classification	
	25.10.21	A5	IV	Atomic structure - II coupling schemes	
	27.10.21	C4		LS & jj coupling - Hund's rules	
	28.10.21	D1		Mag. Dipole moment due to spin orbital motion	
	30.10.21	F5		Stern-Gerlach expt.	
	1.11.21	A5		spin orbit coupling - Spectral terms & its notation	
	3.11.21	C4		Selection, Intensity & Interval rules.	
	8.11.21	A5		III Internal	
	10.11.21	C4		Fine structure of Na D lines & hyperfine structure	
	11.11.21	D1		Normal Zeeman Effect & its Explanation	
	13.11.21	F5		Larmor's theorem, Anomalous ZE	
	15.11.21	A5		Paschen Back & Stark effect	
	17.11.21	C4	V	X-rays.	
	18.11.21	D1		Production of X-rays, properties	
	20.11.21	F5		absorption of x-rays & absorption coefficient	
	22.11.21	A5		Bragg's X-ray spectrometer	
	24.11.21	C4		Powder crystal method, Laue's method	
	25.11.21	D1		Rotating crystal method, continuous & characteristic X-ray spectra	
	1.12.21	C4		Moseley's law & Doppler & Compton Broadening	
	2.12.21	D1		Model Exam	
	4.12.21	F5		X-ray detectors	
	13.12.21	A5		Revision	
	15.12.21	C4		" "	
	16.12.21	D1		" "	
	20.12.21	A5		" "	
	29.12.21	C4		" "	
	30.12.21	D1		" "	

Head of the Department
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CURRICULAR PLAN – II B. Sc Physics

2021-2022(ODD SEMESTER) Part III – CoreElectricity Semester: III Hours: 4

Subject Code: AMPH31 Credits: 4 Staff - in – Charge–Dr.N.Ammakutti @ Sridevi

Unit	Topic	Week	Mode of Teaching
I	**Electric field and potential** Introduction Electric charge, Coulomb's law Electric field, Lines of force Electric flux, Gauss law Applications, Coulomb's law from Gauss law Electric field at a point due to point charge Line charge, spherically symmetric charge distribution Sheet of charge, electric potential Relation connecting electric field and potential Equipotential lines and surfaces Potential at a point due to point charge, collection of charges, Dipole and charged spherical shell, Electric potential energy, Problems	1 - 2	Lecturing
II	**Thermoelectricity** Introduction Seebeck effect Laws of thermo emf Measurement of thermoemf using potentiometer Peltier effect demonstration, Thomson effect demonstration Thermodynamics of thermocouple Thermoelectric power diagram Uses and applications, Thermopile Boys radiomicrometre, thermomilli ammeter Problems	3 - 5	Lecturing
III	**Chemical effect of Electric current** Introduction Faraday's laws of electrolysis Electrical conductivity of an electrolyte, Specific conductivity, Kohlrausch's bridge method of determining the specific conductivity of an electrolyte Arrhenius theory of dissociation Mobility of ions Secondary cells Gibbs- Helmholtz equation for a reversible cell Problems	7-9	Lecturing
IV	**Steady current and transient current** Introduction Current and current density Ohm's law in vector form Conversion of galvanometer into voltmeter and ammeter Kirchoff's law, application to Wheatstone's bridge Growth and decay of current in a circuit containing L and R with dc voltages Growth and decay of charge in a capacitance, resistance circuit Determination of high resistance by leakage Growth and decay of charge in LCR circuit Condition for the discharge to be oscillatory, frequency of oscillation Problems	11-14	Lecturing
V	**Alternating current** Introduction Alternating current j- operator method, AC through an inductance and resistance in series Capacitance and resistance in series LCR series resonance circuit Sharpness of resonance Parallel resonance circuit Power in an AC circuit, Power factor Problems Revision	16-17	Lecturing
	I Internal Test	6	
	II Internal test	10	
	III internal test	15	
	Model exam	17	

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RECORD OF CLASS WORK

III Sem

Programme: I B Sc Physics Course: Electricity

Sl. No.	Date	Period	Unit No.	Topics Covered	Initials
1	10.8.21	1	1	Introduction	NM
2	11.8.21	2	1	Unit-I Electric field and Potential Electric charge	NM
3	12.8.21	1	1	Coulomb's law Electric field lines of force	NM
4	13.8.21	4	1	Electric flux, Gauss law applications	NM
5	14.8.21	1	1	Coulomb's law from Gauss law, EF due to Point charge	NM
6	14.8.21	4	1	Line charge, Spherically Symmetric charge distribution	NM
7	17.8.21	1	1	Sheet of charge Electric potential	NM
8	18.8.21	2	1	Relation connecting Electric field and potential	NM
9	19.8.21	2	1	Equipotential lines and Surfaces Pot. at a pt. due to pt. charge	NM
10	24.8.21	1	1	Collection of charges dipole	NM
11	25.8.21	2	1	Charged Spherical Shell Electric Pot. energy	NM
12	26.8.21	2	2	Unit-II Thermoelectricity Introduction	NM
13	31.8.21	1	2	Seebeck effect, Laws of thermo emf	NM
14	1.9.21	2	2	Measurement of thermo emf using potentiometer	NM
15	2.9.21	2	2	Peltier effect demo	NM

RECORD OF CLASS WORK

III Sem

Programme: I B Sc Physics Course: Electricity

Sl. No.	Date	Period	Unit No.	Topics Covered	Initials
16	3.9.21	1	2	Thomson effect demo	NM
17	7.9.21	1	2	Thermodynamics of thermocouple	NM
18	8.9.21	2	2	Thermoelectric power diagram Uses	NM
19	9.9.21	2	2	Applications of thermo electric effect ③	NM
20	14.9.21	1	2	Boy's radiomicrometer	NM
21	18.9.21	1	3	Chemical effect of electric current Introduction	NM
22	21.9.21	1	3	Faraday's laws of electrolysis	NM
23	22.9.21	2	3	Electrical Conductivity of electrolyte	NM
24	23.9.21	2	3	Specific Conductivity Kohlrausch's Bridge	NM
25	25.9.21	1	3	method to determine Specific Conductivity	NM
26	28.9.21	1	3	Arrhenius Theory of dissociation	NM
27	29.9.21	2	3	Mobility of ions Secondary cell	NM
28	30.9.21	2	3	Ni-Cadmium, Lead acid accumulator	NM
29	5.10.21	1	3	Gibbs Helmholtz equation	NM
30	7.10.21	2			

RECORD OF CLASS WORK

III Sem

Programme: I B.Sc Physics Course: Electricity

Sl. No	Date	Period	Unit No	Topics Covered	Initials
31	11.10.21	1	4	Steady Current and Transient Current Introduction	
32	12.10.21	1	4	Current, Current density Ohm's Law in Vector form	
33	13.10.21	2	4	Comparison of galvanometer with voltmeter & ammeter	
34	20.10.21	2	4	Kirchoff's law and applications to Wheatstone bridge	
35	21.10.21	2	4	Growth and decay of current in L-R Circuit	
36	23.10.21	1	4	Growth and decay of charge in C-R circuit	
37	26.10.21	1	4	Differentiation of high resistance by leakage	
38	27.10.21	2		Cancer Awareness program	
39	28.10.21	2	4	Growth of charge in L-C-R Circuit	
40	30.10.21	1	4	Growth of charge in L-C-R Circuit	
41	2.11.21	1	4	Decay of charge in L-C-R circuit	
42	3.11.21	2	4	Decay of charge in L-C-R circuit (Logarithmic)	
43	8.11.21	2	5	Unit - V Introduction	
44	10.11.21	2	5	AC - Operation method AC through L-R in series	
45	17.11.21	2	5	AC through C-R in series	

RECORD OF CLASS WORK

III Sem

Programme: I B.Sc. Physics Course: Electricity

Sl. No	Date	Period	Unit No	Topics Covered	Initials
45	23.11.21	1	5	L-C-R Series resonance	
46	24.11.21	2	5	"	
47	25.11.21	2	5	Sharpness of resonance Parallel resonance	
48	30.11.21	2	5	Power in an AC circuit Power factor	

RECORD OF CLASS WORK

II year

Programme: I B.Sc. Physics Course: Electricity

Sl. No	Date	Period	Unit No	Topics Covered	Initials
45	23.11.21	2	5	L-C-R Series resonance	

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CURRICULAR PLAN – I B. Sc Mathematics

2021-2022 (ODDSEMESTER)Part III – Allied Physics I

Semester: I Hours: 4Subject Code: CAPH11 Credits: 4

Staff - in – Charge–Dr.R.Lavanya

Unit	Topic	Week	Mode of Teaching
	Bridge Course/ Orientation	1	
I	**Elasticity and bending moment** Hooke's law – Elastic moduli – Relation between elastic constants – Work done in stretching a wire – Expression for bending moment - uniform bending- Experiment to determine Young's modulus using pin and microscope-Twisting couple of a wire – Expression for couple per unit twist – Work done in twisting – Experimental determination of rigidity modulus of a wire using Torsion pendulum with theory	2-3	Lecturing
II	**Surface tension and Viscosity** Surface tension – Definition – Examples – Molecular interpretation – Expression for excess of pressure inside a synclastic and anticlastic surface-Application to spherical and cylindrical drops and bubbles Viscosity: Coefficient of viscosity – Rate of flow of liquid in a capillary tube (Poisueuille's formula) – Analogy between liquid flow and current flow – Stokes' formula for highly viscous liquids (Dimension method) – Experimental determination of viscosity of highly viscous liquid (stokes' method)	5-6	Lecturing
III	**Sound** Simple harmonic motion – Free, damped ,forced vibrations and resonance – Composition of two SHMs along a straight line and in perpendicular direction – Melde's string experiment – Determination of frequency of tuning fork(both longitudinal and transverse mode)	7-8	Lecturing
IV	**Thermal Physics:** Mean free path- Expression for mean free path (Zero order approximation) – Transport phenomena – Expression for viscosity and thermal conductivity – Conduction in solids – coefficient of thermal conductivity – Lee's disc method to determine thermal conductivity of a bad conductor – Wiedmann – Franz's law – Convection : Newton's law of cooling – Experimental verification – Radiation : Black body radiation – Distribution of energy in black body spectrum – Important features.	9-13	Lecturing
V	**Optics** Interference: Condition for interference-Air wedge-determination of thickness of a thin wire by air wedge Diffraction: Fresnel &Fraunhofer diffraction-Plane diffraction grating- theory and experiment to determine wavelength (normal incidence) Polarization: Double refraction- half wave and quarter wave plate – Production and detection of plane, elliptically and circularly polarized light. **Revision**	15-17	Lecturing
	I Internal Test	4	
	II Internal test	10	
	III internal test	14	
	Model exam	17	

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Semester - I

RECORD OF CLASS WORK

Programme : B. Sc. Mathematics   Course : Allied Physics - I

Sl. No.	Date	Period	Unit No.	Topics Covered	Initials
1	20.09.21	A_3	I	Hook's law, Elastic moduli	Rly
2	21.09.21	E_4	I	Relation between elastic constants	Rly
3	22.09.21	C_4	I	Workdone in stretching a wire	Rly
4	24.09.21	E_3	I	Expression for bending moment	Rly
5	25.09.21	F_1	I	Uniform Bending Experiment using pin & microscope	Rly
6					
6	27.09.21	A_3	I	Twisting couple of a wire	Rly
7	29.09.21	C_4	I	Expression for couple per unit Twist	Rly
8	30.09.21	D_4	I	Workdone in twisting a wire	Rly
9	01.10.21	E_3	I	Experimental determination of rigidity modulus Torsional Pendulum Experiment	Rly
10	04.10.21	A_3	II	Surface Tension, Definition Examples	Rly
11	08.10.21	E_3	II	Molecular Interpretation	Rly
12	11.10.21	A_3	II	Expression for excess of pressure in synclastic & anticlastic surface	Rly
13	13.10.21	C_4	II	Application to drops and bubbles	Rly
14	20.10.21	C_4	II	Viscosity. Coefficient of viscosity	Rly
15	22.10.21	E_3	II	Poiseuille's formula	Rly
16	23.10.21	F_1	II	Analogy between liquid & current flow	Rly
17	25.10.21	A_3	II	Stokes formula for highly viscous fluid	Rly
18	27.10.21	C_4	II	fluid (Dimension method)	Rly
19	29.10.21	E_2	II	Stokes method experiment	Rly
20	30.10.21	F_1	III	Introduction to sound, Simple Harmonic motion (SHM)	Rly
21	01.11.21	A_3	III	Characteristics of free SHM	Rly
22	03.11.21	C_4	III	Damped Harmonic motion with examples	Rly
23	08.11.21	A_3	III	Three types of damping	Rly
24	10.11.21	C_4	III	Resonance & Condition for resonance Applications of resonance	Rly
25	12.11.21	E_3	III	Composition of SHM along straight line	Rly
26	13.11.21	F_1	III	Composition of SHM in perpendicular direction	Rly

Semester - I

RECORD OF CLASS WORK

Programme : B. Sc. Mathematics   Course : Allied Physics - I

Sl. No.	Date	Period	Unit No.	Topics Covered	Initials
27	15.11.21	A_3	III	Melde's string experiment	Rly
28	17.11.21	C_4	III	Determination of frequency of tuning fork	Rly
29	19.11.21	E_3	IV	Intro to Kinetic Hypothesis Mean free path	Rly
30	20.11.21	F_1	IV	Expression for mean free path	Rly
31	22.11.21	A_3	IV	Transport phenomena and expression for viscosity	Rly
32	24.11.21	C_4	IV	Expression for thermal conductivity	Rly
33	01.12.21	C_4	IV	Conduction. Coefficient of thermal conductivity	Rly
34	03.12.21	E_3	IV	Lee's Disc method	Rly
35	04.12.21	F_1	IV	Wiedemann - Franz law, Correction	Rly
36	06.12.21	A_3	IV	Newton's law of cooling and experimental verification	Rly
37	08.12.21	C_4	IV	Blackbody Radiation Distribution of energy & features	Rly
38			IV		
38	10.12.21	E_3	V	Introduction to optics, Interference	Rly
39	11.12.21	F_1	V	Condition for interference	Rly
40	13.12.21	A_3	V	Airwedge theory & experiment	Rly
41	15.12.21	C_4	V	Diffraction. Fresnel & Fraunhofer diffraction	Rly
42	17.12.21	E_3	V	Diffraction grating theory and experiment (normal incidence)	Rly
43	18.12.21	F_1	V	Polarization Introduction, Double refraction concept with example	Rly
44	20.12.21	A_3	V	Quarter wave plate & Half wave Plate	Rly
45	22.12.21	A_3	V	Production & detection of plane polarized light	Rly
46	24.12.21	C_4	V	Production, detection of circularly, elliptically polarized light	Rly
47	27.12.21	F_1	V	Circularly, elliptically polarized light Production Detection continued	Rly
48	29.12.21	C_4	I	Unit I Revision	Rly
49	31.12.21	E_3	II, III	Revision of unit II, III	Rly
50	03.01.22	A_3	IV	Unit IV Revision	Rly
51	04.01.22	C_4	V	Unit V Revision	Rly

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DEPARTMENT OF CHEMISTRY

CURRICULAR PLAN 2022- 2023 (ODD SEMESTER)

Part III - Core Paper I - INORGANIC CHEMISTRY I (For I B.Sc. Chemistry)

Semester : I

Hours/Week : 4

Subject Code : CMCH11

Credits : 4

Staff in–Charge: **Dr.R.Anuradha**

Unit	Topic	Week	Mode of Teaching
	Bridge Course/Orientation	1	
I	**ATOMIC STRUCTUREAND WAVE MECHANICS** Atom models-Rutherford's atom model - Black body radiation-Planck's quantum hypothesis-Photoelectric effect-Bohr's theory of atom- Calculation of Bohr's radius and energy of electron - Explanation of atomic spectra- Sommerfield theory – Dual nature of matter-deBroglie equation (verification not required)-Heisenberg's uncertainty principle-Schrodinger wave equation (derivation not required) – Wave function – Significance of ψ & ψ^2 – Operators – Eigen function and Eigen value - Quantum numbers and their significance- Shapes of s, p & d orbitals - Principles governing the occupancy of electrons in various quantum levels: Pauli's exclusion principle - Hund's rule - Aufbau principle- Electronic configuration of atoms - Stability of half-filled and fully filled orbitals.	5–7	Lecturing, Problem Solving & Question-Answer Session
II	**PERIODICTABLE AND PERIODIC PROPERTIES** Modern periodic law - Long form of periodic table-classification of elements into s, p, d and f- blocks – Periodic properties- Size of atoms and ions: Covalent radii, vander Waals radius and ionic radius - Variation of atomic and ionic	2–4	Lecturing& Question-Answer Session

	radii along the period and groups, ionization energy, factors affecting ionization energy - Electron affinity and electronegativity and their variation along the periods and groups – Determination of electronegativity using Pauling's and Mullikan's approach-Factors influencing the ofelectronegativity.		
III	**CHEMICAL BONDING** **Ionic bond:** Factors favouring the formation of ionic bond - Lattice Energy-define-Born-Lande equation(derivation not required) -Solvation enthalpy and solubility of ionic compounds -Factors affecting lattice energy - Born-Haber cycle and its applications – Properties of ionic compound-Polarization of ions-Fajan'srule and its applications. **Covalent bond:** Valency Bond Theory- Sigma and pi bonds – Hybridization –Types of hybridization –VSEPR Theory- Shapes of simple inorganic molecules-Polarity of covalent bond – Percentage of ionic character in covalent bond – Dipole moment: structure of CO_2, NH_3, H2O. Molecular Orbital Theory–LCAO–Bonding and antibonding MOs and its significance– Bond order - MO diagrams for homonuclear and hetero nuclear diatomic molecules: O2, F2, HF& NO - Comparison of bond length, magnetic behavior and bond energy of O_2^+, O_2^{2-}, $O_2^-$and O_2^{2-}-Comparison of VBT and MOT.	**11–13**	**Lecturing**
IV	**CHEMISTRY OF s AND p BLOCK ELEMENTS** Periodicity in s and p block elements with respect to electronic configuration, atomic and ionic size, ionization energy and electronegativity – Inert pair effect. Diagonal relationship of Li& Mg, and Be & Al - Complexes of alkali and alkaline earth metals with poly dentate ligands –Intercalation compounds of alkali metals-Allotrops of carbon, sulphur and phosphorous.Chemistry of the following compounds: Portland cement ,Glass, silicates (structure only), Zeolites.	**14–16**	**Lecturing & Question - Answer Session**
V	**PRINCIPLES OF QUALITATIVE AND QUANTITAVE ANALYSIS** Qualitative Analysis: Dry test, Flame test, Wet confirmatory test for acid radicals, interfering acid radicals and elimination of these radicals. Solubility product, common ion effect, complexation, oxidation-reduction reactions involved in identifications of anions and cations. Principle of inter group	**8–10**	**Lecturing & Demonstration in Lab**

	separation of cations. Quantitative Analysis: Volumetric Analysis: Molecular mass, mole concept, molar volume, oxidation-reduction, oxidation number and valency - Various concentration units – Primary and secondary standards – Preparation of standard solutions – Acid-base titrations – pH indicators – Redox titrations - Redox indicators – Complexometric titrations–Metal ion indicators. Gravimetric analysis: Principle- Precipitation from homogeneous solution _Mechanism of precipitation – Precipitating reagents – Conditions of precipitation – Co-precipitation and post precipitations – Washing of precipitate – Drying and Ignition of precipitate – Minimization of error.		
	I INTERNAL EXAM	**6**	
	II INTERNAL EXAM	**10**	
	III INTERNAL EXAM	**13**	
	MODEL EXAM	**17**	

02/08/2022

Signature of the Staff

02/08/2022

Signature of the HoD

Head of the Department
CHEMISTRY
ANNAI HAJIRA WOMEN'S COLLEGE,
MELAPALAYAM - 627 005.

Name and Designation of the Course Faculty : Dr. R. Anuradha, Asst Prof. & Head

Department : Department of Chemistry

Semester : From August 2022 to December 2022

Programme : U.G. : B.Sc. Chemistry

Course Code & Title : CMCH 11 INORGANIC CHEMISTRY - I

Course Type (✓) : Project / Practicals / Theroy - Core / Major Elective / Supportive / Allied/ Non - Major Elective / Language / Part - IV / V / Extra Credit

Sl. No	Internal Assessment Report	1	2	3
1	Assessment Date	27.09.2022	29.10.2022	24.11.2022
2	Report Due on	30.09.2022	30.10.2022	25.11.2022
3	Initial of the Course Faculty with date	28/09/2022	30/10/2022	28/11/2022
4	Initial of the HoD	28/09/2022	30/10/2022	28/11/2022

To be Signed at the end of the Semester :

Signature with Date	12/12/2022	12/12/2022
	Course Faculty	Head of the Department

Head of the Department
CHEMISTRY
ANNAI HAJIRA WOMEN'S COLLEGE,
MELAPALAYAM - 627 005.

PRINCIPAL 12/12/22
ANNAI HAJIRA WOMEN'S COLLEGE
MELAPALAYAM - 627 005.

RECORD OF CLASS WORK

CMCH11

Programme : B.Sc. Chemistry Course : Inorganic Chemistry I

Sl. No.	Date	Period	Unit No.	Topics Covered	Initials
Hours 1 tab	5.8.2022 to 16.8.2022			ORIENTATION & BRIDGE COURSE	
1.	17.8.2022	2	2	General Intro on Inorganic Chemistry [Course Introduction]	
2.	20.8.22	1+	"	Mendeleev's, Newlands Octaves & Dobereiner's Triads Periodic Table	S M
3.	23.8.22	1	"	Long form of Periodic Table; Merits, Demerits Modern Periodic Table	
4.	24.8.22	2	"	Classification into s,p,d and f block elements & Periodic Properties	
5.	26.8.22	4	"	Size of atoms, covalent, van der waals and ionic radius	S.M
6.	30.8.22	1	"	variation of at. & ionic radii, ionisation energy & factors affecting IE	
7.	02.09.22	4	"	Electronegativity, Electron affinity – Factors Affecting	
8.	03.09.22	4	"	Determination of E⁻negativity by Pauling & Mullikan & Allred – Rochow scale	
9.	6.9.22	1	1	Atom Models – PPT (Powerpoint Presentation)	
10.	7.9.22	2	1	Black body radration & Planck's Hypothesis	
11.	9.9.22	4	–	ONAM CELEBRATIONS	
12.	13.9.22	1	1	SEMINAR – Electronic Configuration of Atoms	
13.	14.9.22	2	1	SEMINAR – Hund's Rule & Aufbau Principle	
14.	16.9.22	4	–	Celebration of World Ozone Day 2022	
15.	20.9.22	1	1	Photoelectric effect, Bohr's theory – Radius & energy of e⁻ calculation	
16.	21.9.22	2	"	Sommerfield's theory & de Broglie eqn.	
17.	23.9.22	4	"	Heisenberg's uncertainity principle & Schrodinger wave eqn.	
18.	24.9.22	4	"	ψ and ψ^2 – Eigen value and Eigen function	
19.	27.9.22	1	–	I Internal Assessment – Inorganic Chemistry I	
20.	28.9.22	2	–	Discussion about the question paper and I Assessment answer sheets distribution	
21.	30.9.22	4	1	Quantum No. and s,p,d orbitals	
22.	7.10.22	4	5	MIND MAPPING & PRESENTATION – TITRIMETRY	
23.	8.10.22	4	"	Molecular Mass, mole concept and molar volume	
24.	4.10.22	1	"	oxidation, Reduction, & Valency, Conc^n units	
25.	12.10.22	4	"	Quantitative analysis – Preliminary tests, interfering radicals	
26.	14.10.22	4	–	World Students' Day 2022 Celebration	
27.	15.10.22	4	5	Solubility Product, common ion effect	
28.	18.10.22	1	"	Complexation, Group separation of cations	
29.	19.10.22	4	"	Gravimetric Analysis – Principle, Precipitation	
30.	21.10.22	4	"	Co precipitation, Post precipitation, washing	
31.	26.10.22	4	"	Drying & ignition of ppt and minimisation of errors	
32.	27.10.22	3,4	3	STAFF & STUDENTS EXCHANGE PROGRAMME WITH SRI SARADA COLLEGE FOR WOMEN	

RECORD OF CLASS WORK

CMCH 11

Programme : B.Sc. Chemistry

Course : Inorganic Chemistry I

Sl. No.	Date	Period	Unit No.	Topics Covered	Initials
33	28.10.22	4	3	Lattice energy, Enthalpy & solubility Factors	
34	29.10.22	4	5	PEER GROUP TEACHING BY 3rd YEARS - Gravimetric Analysis continued on 31.10.2022	
35	01.11.22	1	–	II Internal Assessment - Algebra & Differential Equations	
36	02.11.22	4	3	Born Haber cycle, Fajan's rule, Polarization	
37	04.11.22	4	"	VBT, Hybridisation, VSEPR Theory	
38	08.11.22	1	"	Shapes of molecules, Dipole moment, structure of CO_2, NH_3 & H_2O	
39	09.11.22	5	4	SEMINAR - Periodicity in S & P-Block elements	
40	11.11.22	4	"	Inert pair effect, Diagonal relationship - Li & Mg & Be and Al	
41	12.11.22	4	"	Intercalation of alkalimetals, Allotropes of C	
42	15.11.22	1	"	Allotropes of S & P and Portland Cement	
43	16.11.22	4	"	Zeolite, Glass and Silicates	
44	18.11.22	4	"	Recap of all the 5 units for Model Exam	
45	22.11.22	1	–	Model Exam - Communicative English I	
46	23.11.22	4	–	Model Exam - Professional English for physical Sciences I	
47	25.11.22	4	–	Model Exam - Environmental Studies	
48	26.11.22	4	–	Model Exam - Algebra & Differential Equations	
49	29.11.22	1	–	Remedial Test	
50	30.11.22	4	1	Revision of Unit 1 with univ questions	
51	2.12.22	4	2.	Unit-2 Revision with univ question papers	
52	3.12.22	4	3	Unit-3 Revision and Group Discussion	
53	6.12.22	1	4.	Unit-4 - Revision Cum Q & A session	
54	7.12.22	4	5.	Quiz in Unit-5	
55	9.12.22	4	–	Multiple choice Questions Discussion NEET IIT JEE Question Papers	
56	10.12.22	4	–	(Continuation) " "	

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12/12/2022

Head of the Department

CHEMISTRY

ANNAI HAJIRA WOMEN'S COLLEGE

MELAPALAYAM - 627 005.

PRINCIPAL 12/12/22

ANNAI HAJIRA WOMEN'S COLLEGE

MELAPALAYAM - 627 005.

Annai Hajira Women's College

Melapalayam, Tirunelveli-627005

(Affiliated to Manonmaniam Sundaranar University)

DEPARTMENT OF CHEMISTRY

CURRICULAR PLAN 2022- 2023 (ODD SEMESTER)

Part IV - Skill Based Common - Personality Development (For III B.Sc. Chemistry)

Semester : V Hours/Week : 2

Subject Code : **ACSB51** Credits : 2

Staff - in-Charge : **Dr.M. Anuratha**

Unit	Topic	Week	Mode of Teaching
I	**PERSONALITY** Definition – Determinants – Personality Traits –Theories of Personality – Importance of Personality Development. SELF AWARENESS – Meaning – Benefits of Self – Awareness – Developing Self – Awareness. SWOT – Meaning – Importance- Application – Components. GOAL SETTING Meaning- Importance – Effective goal setting – Principles of goal setting – Goal setting at the Right level.	1 – 3	Lecturing
II	**SELF MONITORING** Meaning – High self – monitor versus low self monitor – Advantages and Disadvantages self monitor- Self –monitoring and job performance. PERCEPTION- Definition- Factor influencing perception- Perception process –Errors in perception – Avoiding perceptual errors. ATTITUDE – Meaning- Formation of attitude – Types of attitude - Measurement of Attitudes – Barriers to attitude change – Methods to attitude change. ASSERTIVENESS - Meaning – Assertiveness in Communication – Assertiveness Techniques – Benefits of being Assertive – Improving Assertiveness.	4 – 6	Lecturing & PPT
III	**TEAM BUILDING** Meaning – Types of teams – Importance of Team building-	6 – 9	Lecturing &

	Creating Effective Team. LEADERSHIP – Definition – Leadership style- Theories of leadership – Qualities of an Effect leader. NEGOTIATION SKILLS – Meaning – Principles of Negotiation – Types of Negotiation – The Negotiation Process – Common mistakes in Negotiation process. CONFLICT MANAGEMENT – Definition- Types of Conflict- Levels of Conflict – Conflict Resolution – Conflict management		PPT
IV	**COMMUNICATION** Definition – Importance of communication – Process of communication - Communication Symbols – Communication network – Barriers in communication – Overcoming Communication Barriers. TRANSACTIONAL ANALYSIS – Meaning – EGO States – Types of Transactions – Johari Window- Life Positions. EMOTIONAL INTELLIGENCE- Meaning – Components of Emotional Intelligence- Significance of managing Emotional intelligence – How to develop Emotional Quotient. STRESS MANAGEMENT – Meaning – Sources of Stress – Symptoms of Stress – Consequences of Stress – Managing Stress	10 – 12	Lecturing & Group Discussion
V	**SOCIAL GRACES** Meaning – Social Grace at Work – Acquiring Social Graces. TABLE MANNERS – Meaning – Table Etiquettes in Multicultural Environment- Do's and Don'ts of Table Etiquettes. DRESS CODE – Meaning- Dress Code for selected Occasions – Dress Code for an Interview. GROUP DISCUSSION – Meaning – Personality traits required for Group Discussion- Process of Group Discussion- Group Discussion Topics. INTERVIEW – Definition- Types of skills – Employer Expectations –Planning for the Interview – Interview Questions- Critical Interview Questions	13 – 15	Lecturing
	I INTERNAL EXAM	6	
	II INTERNAL EXAM	10	
	III INTERNAL EXAM	13	
	MODEL EXAM	17	

25/7/22

Signature of the Staff

02/08/2022

Signature of the HoD
Head of the Department
CHEMISTRY
ANNAI HAJIRA WOMEN'S COLLEGE,
MELAPALAYAM - 627 005.

Name and Designation of the Course Faculty : Dr. M. Anuratha, Asst Prof

Department : Chemistry

Semester : From July 2022 to Nov 2022

Programme : U.G. : B.Sc., Chemistry

Course Code & Title : ACSB51 - Personality Development

Course Type (✓) : Project / Practicals / Theroy - Core / Major Elective / Supportive / Allied/

Non - Major Elective / Language / Part - IV / V / Extra Credit

Sl. No	Internal Assessment Report	1	2	3
1	Assessment Date	24.8.22	27.9.22	31.10.22
2	Report Due on	26.8.22	30.9.22	4/11/22
3	Initial of the Course Faculty with date	26/8/22	30/9/23	4/11/22
4	Initial of the HoD	26/8/22	30/09/2022	04/11/2022

To be Signed at the end of the Semester :

Signature with Date	Anuratha 26/11/22	30/11/2022
	Course Faculty	Head of the Department

Head of the Department
CHEMISTRY
ANNAI HAJIRA WOMEN'S COLLEGE,
MELAPALAYAM - 627 005.

PRINCIPAL 30/11/22
ANNAI HAJIRA WOMEN'S COLLEGE
MELAPALAYAM - 627 005.

2022 - 2023 Odd Semester

RECORD OF CLASS WORK

Programme: B.Sc Chemistry V Sem Course: Personality Devt

Sl. No.	Date	Period	Unit No.	Topics Covered	Initials
1	29.7.22	V	I	UNIT-I PERSONALITY Defn & Introduction to Personality Development - Determinants	
2	30.7.22	I		Personality Traits, Theories, Importance of Personality Devt	
3	6.8.22	V		Self awareness - Meaning, Benefits of Awareness SWOT - Meaning, Importance	
4	6.8.22	I		Goal Setting - Effective goal setting principles - Goal Setting at right level	
5	12.8.22	V	II	UNIT-II SELF MONITORING - Meaning High self monitor Vs Low self monitor, Adv, disadv	
6	13.8.22	I		Perception - Defn - Factors affecting Perception process, errors, Avoiding perceptual	
7	20.8.22	I		Attitude - Meaning, formation, Types, Measurement, Barriers,	
8	26.8.22	V		Distribution of I Internal Test answer sheets & discussion about the answers	
9	2.9.22	V		Assertiveness - Meaning, techniques, Benefits, Improving it, Assertiveness in communication	
10	3.9.22	II	III	UNIT-III TEAM BUILDING - Meaning Types of Teams, Imp. of Team building Creating Effective team	
11	9.9.22	V		Onam Celebration	
12	16.9.22	V		Mahindra Pride Classrooms Certificate Course	
13	17.9.22	I		MPC - Certificate Course	
14	23.9.22	V		Leadership - Defn, Leadership Style, Theories, Qualities of an Effective Leader	
15	24.9.22	I		II Internal Assessment (Polymer Chemistry)	
16	30.9.22	V		Distribution of II Internal test papers - Seminar by Amutha (III chem) on 'Negotiation'	
17	7.10.22	V		Conducted Quiz. Negotiation skills - principles, Types Skills - PPT	
18	8.10.22	I		Negotiation process, mistakes in negotiation	
19	14.10.22	V		International Students' day Celebration	
20	15.10.22	I		Students attended a meeting Conducted by IIC	
21	21.10.22	V		Conflict management - Defn, Types, Levels Conflict resolution	
22	28.10.22	V	IV	UNIT IV Communication - Defn, Imp, Process, Symbols, network, barriers, Overcoming	
23	29.10.22	I		Transactional analysis - Johari window Emotional Intelligence	SM
24	4.11.22	V		Distribution of III internal test Papers	SM
25	11.11.22	V		Stress Management - Meaning, Source of stress, Symptoms, Consequences, Managing stress	
26	12.11.22	I	V	UNIT V Social Graces - Meaning, Acquiring it - Table Manners	
27	18.11.22	V		Dress Code - Group discussion	
28	25.11.22	V		Interview - Defn - Types of Skills, Planning for an interview, Critical interview	SM
29	26.11.22	I		Model Theory Exam (Personality Devt) LAST WORKING DAY 30/11/2022	

Head of the Department
CHEMISTRY
ANNAI HAJIRA WOMEN'S COLLEGE,
MELAPALAYAM - 627 005.

30.11.22
PRINCIPAL
ANNAI HAJIRA WOMEN'S COLLEGE
MELAPALAYAM - 627 005.

Annai Hajira Women's College

Melapalayam, Tirunelveli-627005

(Affiliated to Manonmaniam Sundaranar University)

DEPARTMENT OF CHEMISTRY

CURRICULAR PLAN 2022- 2023 (EVEN SEMESTER)

Part III *Major Elective -II- NANOCHEMISTRY (For III B.Sc. Chemistry)*

Semester : VI

Hours/Week : 4

Subject Code : AECH62

Credits :4

Staff in–Charge : Dr.S.Mangala Nagasundari

Unit	Topic	Week	Mode of Teaching
I	**INTRODUCTION TO NANO CHEMISTRY** Definition: Nanoscience – Nanotechnology – Nanochemistry – significance of nanoscale - factors responsible for special properties of nanomaterials. Nanomaterials: Different types of nanomaterials and structures- quantum wells – quantum wires – quantum dots – nanoclusters – nanocrystals – nanowires and nanotubes. Feynman's Prophecy– manufacturing of nanomateris - top-down and bottom-up approaches.	1–4	PPT & Lecturing
II	**SYNTHESIS OF NANO PARTICLES** Introduction – orientation of nanoparticles – synthesis of nanoparticles. Physical methods: laser ablation, physical vapour deposition (PVD) and solvated metal atom dispersion (SMAD). Chemical methods: thermolysis, sonochemical method, reduction methods, phase-transfer processes and biosynthesis of nanoparticles. Synthesis of nanosized semiconductors: precipitation methods and thermal decomposition of complex precursors. Synthesis of ceramics: physical methods, gas condensation method, laser method, chemical methods and sol-gel synthesis.	5–10	Lecturing & Question Answer Session
III	**NANOCATALYST AND CARBON BASED NANOMATERIALS** Introduction – fundamentals of catalysis – adsorption of a molecule on a catalyst surface, adsorption theory- Langmuir adsorption isotherm. Surface reactions – synthesis – synthesis requirements, example of a conventional synthetic technique, non traditional methods for preparing nanocatalyst. Characterization of nanocatalyst: overview - bulk characterization technique and surface characterization technique Carbon nanomaterials : structure and properties of graphite, diamond and fullerenes	15–16	Lecturing & Question Answer Session

IV	**NANOCOMPOSITES AND FIBERS** Introduction - Background - types of composite materials - The nano perspective. Physical and chemical properties of materials – mechanical properties, thermal properties, electronic properties and chemical properties. Natural nanocomposities - Skin of the sea cucumber and hard natural nanocomposites. Carbon fibers and nanotubes – Types of fibers, Whiskers and nanotubes – synthesis of fibers and nanotubes - chemical modification and applications of carbon nanotube. Metal and Ceramic nanocomposites - Metal nanocomposites, inorganic nanofibers and concrete. Clay nanocomposite materials - polypropylene clay nanocomposite ,montmorillonite clay nanocomposite and halloysite nanotube claycomposites.	14–15	Lecturing & Question Answer Session
V	**CHARACTERIZATION AND APPLICATIONS OF NANOMATERIALS** Types of characterization methods – Electron probe method-Scanning electron microscopy – Transmission electron microscopy, Spectroscopyic Methods, - UV – Visible adsorption and emission spectroscopy, Infra Red and Raman spectroscopy and X-ray diffraction methods. Current applications: sunscreens and cosmetics – nano medicine, drug delivery and cancer drugs – food and drinks, textiles, chemical industry and electronic devices. Short term applications - paints – fuel cells – displays – batteries – fuel additives and catalysts. Long term applications- composites – lubricants – magnetic materials – medical implants – machinable ceramics – water purification and military battle suits.	11–13	Lecturing
	I INTERNAL EXAM	6	
	II INTERNAL EXAM	10	
	III INTERNAL EXAM	13	
	MODEL EXAM	17	

S. Mangala Nagarani 15/12/22
Signature of the Staff

15/12/2022
Signature of the HoD
Head of the Department
CHEMISTRY
ANNAI HAJIRA WOMEN'S COLLEGE,
MELAPALAYAM - 627 005.

15/12/22
PRINCIPAL
ANNAI HAJIRA WOMEN'S COLLEGE
MELAPALAYAM - 627 005.

Name and Designation of the Course Faculty Dr. S. MANGALA NAGASUNDARI ASST PROFESSOR

Department : CHEMISTRY

Semester : From 19.12.2022 to 2023

Programme U.G : B.Sc Chemistry

Course Code & Title : AECH62 - Nano Chemistry

Course Type (✓) : Project / Practicals / Theroy - Core / Major Elective ✓ / Supportive / Allied/

Non - Major Elective / Language / Part - IV / V / Extra Credit

Sl. No	Internal Assessment Report	1	2	3
1	Assessment Date	9.2.2023	21.3.2023	11.4.2023
2	Report Due on	11.2.2023	27.3.2023	17.4.2023
3	Initial of the Course Faculty with date	S.M 11/2/23	S.M 27/3/23	S.M 17/4/23
4	Initial of the HoD	13/2/23	27/3/23	17/4/23

To be Signed at the end of the Semester :

Signature with Date	S. Mangala Nagasundari 10/5/23	10/5/2023
	Course Faculty	Head of the Department

Head of the Department
CHEMISTRY
ANNAI HAJIRA WOMEN'S COLLEGE
MELAPALAYAM - 627 005.

PRINCIPAL 10/05/23
ANNAI HAJIRA WOMEN'S COLLEGE
MELAPALAYAM - 627 005.

EVEN SEMESTER (VI) 2022-2023

RECORD OF CLASS WORK

Programme: B.Sc chemistry Course: Nano chemistry

Sl. No.	Date	Period	Unit No.	Topics Covered	Initials
1	19.12.22			Introduction about the syllabus	S.M
2.	20.12.22		I	Definition - Nanoscience, Nanotechnology	S.M
3.	22.12.22			Christmas celebration	S.M
4	23.12.22	II	I	Significance of nanomaterials - PPt	S.M
5	27.12.22	III	I	Types of Nanomaterials - PPt	S.M
6	29.12.22	V	I	Quantum wells, dots, nanocrystals, clusters	S.M
7	30.12.22	II		Nano chemistry, Nanomaterials Revision	
8	3.1.23	III	I	Feynman's Prophecy, Nanowires, Types	S.M
9.	5.1.23	V		Nanoscience, nanotechnology - Revision	
10	6.1.23	II		Significance of Nanomaterials - Revision	
11	7.1.23	I		Nanocrystal, Nanoclusters - Revision	
12	10.1.23	III	I	Top down and bottom up approach	S.M
13.	12.1.23	V		youth day celebration - Time Management	S.M
14	13.1.23	II	II	Introduction, orientation of nanoparticles	S.M
15	19.1.23	V	II	Laser ablation, PVD	S.M
16	20.1.23	II	II	CVD, SMAD	S.M
17	21.1.23	I	II	Thermolysis, sonochemical redn method	S.M
18	24.1.23	III	II	Phase processes and biosynthesis of NPs	
19.	27.1.23	I	II	Synthesis of nanosized semiconductors	S.M
20.	31.1.23	III		Top down approach - Revision	
21.	2.2.23	V	II	Synthesis of Ceramics - Physical method	S.M
22.	3.2.23	III	II	Gas condensation, Laser method	S.M
23.	7.2.23	III		Eulers day celebration in Mathematics dept.	S.M
24	9.2.23	V		I internal Question Paper discussion	S.M
25	10.2.23	II		Industrial visit to IISER in Trivandrum	S.M
26.	11.2.23	I		I internal Paper distribution and discussion	S.M
27.	14.2.23	III		Health care program Conducted by EYE	S.M
28	16.2.23	V	II	Sol-gel, Hydrothermal method	S.M
29	17.2.23	II		PVD - Revision	S.M
30	21.2.23	III	II	Biogenic Synthesis	S.M
31	23.2.23	V	II	Laser ablation, Gas Condensation	S.M
32	24.2.23	II		Fine Arts competitions	S.M

RECORD OF CLASS WORK

Programme : B.Sc Chemistry Course : Nano Chemistry

Sl. No.	Date	Period	Unit No.	Topics Covered	Initials
33	25.2.23	I		Fine Arts competitions	S.M
34	28.2.23	III		Attended one day workshop on design & Critical thinking conducted by ESSCAN	S.M
35	2.3.23	V		sports day - Teacher's event conducted	S.M
36	3.3.23	II		sports day & BIS inauguration	S.M
37	7.3.23	III	V	Microscopic method - SEM, EMPA	S.M
38	9.3.23	V		women's day celebration	P
39	10.3.23	II		SEM - Revision	P
40	11.3.23	I	V	spectroscopic Method - UV-vis, IR	S.M
41	14.3.23	III	V	spectroscopic Method - XRD, Raman	S.M
42	16.3.23	V	V	Sunscreen, Cosmetics, dentistry	S.M
43	17.3.23	II	V	Application in ophthalmology, Drug deli very	S.M
44	23.3.23	V	V	Food and drinks, Textiles, Electronic devi ces	S.M
45	23.3.23	V	V	short and long term applications of nanomaterials	S.M
46	24.3.23	II		Attended seminar in Pettai M.D.T. College	S.M
47	25.3.23	I	III	Catalysis and its types. characteristics	S.M
48	28.3.23	IV		one day industrial Training Programme	S.M
49	30.3.23	V	IV	Adsorption Theory	S.M
50	31.3.23	IV	III	Conventional and Non-conventional methods	S.M
51	1.4.23	I	III	Bulk characterization Techniques, Surface	S.M
52	6.4.23	V	III	Carbon nanomaterials	S.M
53	8.4.23	I	IV	Nanocomposites - Types, Natural, Carbon NTS	S.M
54	11.4.23	III	IV	Applications of Carbon Nanotubes, Metal nanocomposites	S.M
55	13.4.23	V		Model practical - Physical chemistry Experiments	S.M
56	16.4.23	I	IV	Clay Nanocomposites	S.M
57	18.4.23	III		Medical camp at Tharuvai	S.M
58	20.4.23	V		Model Exam Question Paper discussion	S.M
59	25.4.23	III		Model Exam - Physical chemistry III	S.M
60	27.4.23	V		University Practical Exam	S.M
61	28.4.23	II		University Project Exam	S.M
62	29.4.23	I		Went to SIC college for Interview conducted by TRB	S.M
63	2.5.23			Revision & Model paper distribution	S.M
64	4.5.23	V		unit V Revision	S.M

RECORD OF CLASS WORK

Programme : B.Sc Chemistry Course : Nano Chemistry

Sl. No.	Date	Period	Unit No.	Topics Covered	Initial
65	5.5.23	II		Revision	
66	6.5.23	I		Revision	S.M
67	9.5.23	V		Revision	S.M
68	10.5.23			Last working day	S.M

10/5/2023

Head of the Department
CHEMISTRY
ANNAI HAJIRA WOMEN'S CC
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