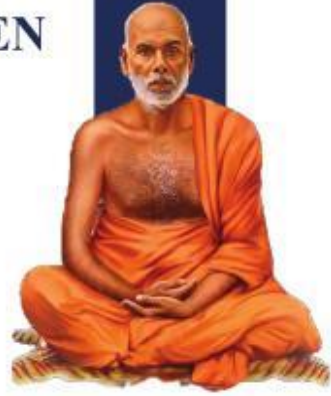




**SREE NARAYANA COLLEGE FOR WOMEN**  
KOLLAM, KERALA- 691 001



### 5.1.4 Guidance For Career Counselling

UGC-NET Coaching for PG Students



# DEPARTMENT OF ECONOMICS UGC-NET COACHING FOR PG STUDENTS

## BROCHURE:

**UGC NET  
COACHING CLASS**

BY DEPARTMENT OF ECONOMICS FACULTY

**15 SESSIONS**

**VENUE: SEMINAR  
HALL**

**DATES: 28.10.2023  
TO  
23.03.2024**

**SUBJECTS:**

1. MICROECONOMICS
2. MACROECONOMICS
3. INTERNATIONAL TRADE AND FINANCE
4. PUBLIC FINANCE
5. ECONOMIC DEVELOPMENT AND GROWTH
6. INDIAN ECONOMY

**SREE NARAYANA  
COLLEGE FOR WOMEN,  
KOLLAM**

**PG DEPARTMENT OF  
ECONOMICS**

ONE CASTE  
ONE RELIGION  
ONE GOD

## COURSE SYLLABUS:

### Microeconomics

- I. Introduction to Microeconomics
- II. Consumer Behavior: Theory and Applications
- III. Production and Cost: Theory and Applications
- IV. Market Structures: Perfect Competition, Monopoly, Monopolistic Competition, and Oligopoly
- V. General Equilibrium and Welfare Economics

### Macroeconomics

- I. Introduction to Macroeconomics
- II. National Income Accounting and Aggregate Demand
- III. Aggregate Supply and Equilibrium
- IV. Fiscal Policy and Multiplier
- V. Monetary Policy and Central Banking

### **International Trade and Finance**

- I. Introduction to International Trade
- II. Gains from Trade and Comparative Advantage
- III. Tariffs, Quotas, and Other Trade Barriers
- IV. Exchange Rates and Balance of Payments
- V. International Monetary System and Institutions

### **Public Finance**

- I. Introduction to Public Finance
- II. Public Expenditure: Theory and Applications
- III. Taxation: Theory and Applications
- IV. Public Debt and Deficit Financing
- V. Fiscal Federalism and Local Public Finance

### **Economic Development and Growth**

- I. Introduction to Economic Development
- II. Theories of Economic Growth and Development
- III. Poverty, Inequality, and Unemployment
- IV. Human Capital and Economic Development
- V. Sustainable Development and Environmental Economics

### **Indian Economy**

- I. Introduction to Indian Economy
- II. Indian Economy since Independence
- III. Planning and Economic Development in India
- IV. Indian Agriculture and Rural Development
- V. Indian Industry and Infrastructure Development

### **COURSE SCHEDULE WITH ASSIGNED FACULTIES:**

DATE	TOPIC	FACULTY ASSIGNED	SUB TOPIC
28/10/23	MICRO ECONOMICS	SINDHU PRATHAP	Introduction to Microeconomics Consumer Behavior: Theory and Applications
04/11/23	MACRO ECONOMICS	PRABHAVATHY.C	Introduction to Macroeconomics National Income Accounting and Aggregate Demand
18/11/23	INTERNATIONAL TRADE	APARNA .P	Introduction to International Trade Gains from Trade and Comparative Advantage
25/11/23	PUBLIC FINANCE	APARNA DAS	Introduction to Public Finance Public Expenditure: Theory and Applications
02/12/23	ECONOMIC DEVELOPMENT	PARVATHY A V	Introduction to Economic Development

			Theories of Economic Growth and Development Poverty, Inequality, and Unemployment
16/12/23	INDIAN ECONOMY	SINDHU PRATHAP	Introduction to Indian Economy Indian Economy since Independence Planning and Economic Development in India
06/01/24	MICRO ECONOMICS	PRABHAVATHY.C	Production and Cost: Theory and Applications Market Structures: Perfect Competition, Monopoly, Monopolistic Competition, and Oligopoly
20/01/24	MACRO ECONOMICS	APARNA .P	Aggregate Supply and Equilibrium Fiscal Policy and Multiplier
27/01/24	INTERNATIONAL TRADE	APARNA DAS	Tariffs, Quotas, and Other Trade Barriers Exchange Rates and Balance of Payments
03/02/24	PUBLIC FINANCE	PARVATHY A V	Taxation: Theory and Applications Public Debt and Deficit Financing Fiscal Federalism and Local Public Finance
17/02/24	ECONOMIC DEVELOPMENT	SINDHU PRATHAP	Human Capital and Economic Development Sustainable Development and Environmental Economics
24/02/24	INDIAN ECONOMY	PRABHAVATHY.C	Indian Agriculture and Rural Development Indian Industry and Infrastructure Development
02/03/24	MICRO ECONOMICS	APARNA .P	General Equilibrium and Welfare Economics
16/03/24	MACRO ECONOMICS	APARNA DAS	Monetary Policy and Central Banking
23/03/24	INTERNATIONAL TRADE	PARVATHY A V	International Monetary System and Institutions

**STUDENT DETAILS:**

SL NO	NAME	CANDIDATE CODE	CLASS
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1	ABHIRAMI A S	55122129001	S3 PG
2	AKHILA SASIDHARAN	55122129002	S3 PG
3	ANJU A	55122129003	S3 PG
4	ANU ANAND	55122129004	S3 PG
5	ARCHA S	55122129005	S3 PG
6	ARYA DEV	55122129006	S3 PG
7	ASIYAN	55122129007	S3 PG
8	ASWATHY B	55122129008	S3 PG
9	ASWATHY V	55122129009	S3 PG
10	ATHULYA ASHTAMAN	55122129010	S3 PG
11	BISHARA B	55122129011	S3 PG
12	BODHI PRIYA	55122129012	S3 PG
13	DEVIKA M	55122129013	S3 PG
14	DEVIKA R D	55122129014	S3 PG
15	FATHIMA S	55122129015	S3 PG
16	GANGA GIREESH	55122129016	S3 PG
17	GAYATHRI G P	55122129017	S3 PG
18	LAVANYA R	55122129018	S3 PG
19	MEERA M L	55122129019	S3 PG
20	NITHYA BAIJU M	55122129020	S3 PG
21	PUNNYA R S	55122129021	S3 PG
22	RENCY SUSAN REJI	55122129022	S3 PG
23	SARABI N	55122129023	S3 PG
24	SOJA S	55122129024	S3 PG

### **ACTIVITY REPORT:**

The SNCW economics department organized a set of 15 UGC-NET coaching classes from 28<sup>th</sup> of October 2023 to 23<sup>rd</sup> March 2024. The classes were organized for the benefit of IIYR PG Economics Students aspiring to crack the NET exam. The program was organized on Saturdays covering UGC NET syllabus and was co-ordinated by Dr. Prabhavathy C and the classes being handled by the Economics Department faculty.

The primary objective of the program was to inform students about structure and syllabus of the UGC NET exam. Topics include detailed coverage of Microeconomics, Macroeconomics, Public Finance, Developmental Economics, International Economics and Indian Economy.

Students actively participated, interacted with and cleared their queries during the sessions. The Interactive sessions designed to elevate and orient the students approach to UGC NET exams were handled with indepth theoretical and practical knowledge and was assisted by structured mock tests, discussions of previous years question papers and group discussions.



DEPARTMENT OF ENGLISH  
UGC-NET Coaching for PG Students

SREE NARAYANA COLLEGE FOR WOMEN, KOLLAM  
Post Graduate Department of English



# UGC NET

## COACHING COURSE

For Post Graduate Students

### TOPICS COVERED

- LITERARY CRITICISM
- LITERARY THEORY
- CULTURAL STUDIES
- RESEARCH  
METHODOLOGY

### DATE

- 06 January 2024 onwards

### TIME

- 10.00 am



Classes handled by the faculties of the Department of English

## COURSE SCHEDULE WITH ASSIGNED FACULTIES

Date	Topic	Name of faculty	Sub-topics
03 Jan 2024	Orientation		
06 Jan 2024	Literary Criticism	Dr.Arun Ravi	Greek critics, Roman critics, Middle-Age critics
13 Jan 2024	Literary Criticism	Remya C. R.	Critics from the Age of Enlightenment, Romantic age, Victorian Age
20 Jan 2024	Literary Theory	Dr. Priyanka M. C.	New Criticism, Formalism, Structuralism, Post-Structuralism and Deconstruction
27 Jan 2024	Literary Theory	Jayalekshmi S	Postmodernism, Reader-Response Theory, Feminism, Marxism
03 Feb 2024	Literary Theory	Vishnu Chandran	Psychoanalysis, New-Historicism, Postcolonialism
10 Feb 2024	Cultural Studies	Dr. Sruthi N	Major terms



			related to Cultural Studies, major theorists
17 Feb 2024	Research Methodology	Dr. Aparna Ajith	Introduction and types of Literary Research, Objectives, Methods, Materials and tools, Research ethics
24 Feb 2024	Doubt-Clearing and Discussion of PYQs	Aswathy S. M.	

# SYLLABUS

## **1. Literary Criticism**

Introduction to Literary Criticism, Greek Critics- Socrates, Plato, Aristotle. Roman critics- Horace, Longinus, Quintilian. Enlightenment Age critics and Thinkers, Critics of the Romantic Age; William Wordsworth, Samuel Taylor Coleridge, Victorian Age critics; George Eliot, Nietzsche, G.M Hopkins, Mathew Arnold, T.S Eliot.

## **2. Literary Theory**

Understanding Literary Theory, New Criticism, Formalism, Structuralism, Post-Structuralism and Deconstruction, Postmodernism, Reader-Response Theory, Psychoanalysis, Archetypal Criticism, Feminism, Marxism, New Historicism, Postcolonialism.

## **3. Cultural Studies**

Defining Culture, Elements of culture, Types of culture, Ideal vs. Real culture, Cultural Globalization, Media culture, Consumer culture, Terms associated with Cultural Studies, Major theorists.

## **4. Research Methodology**

Introduction to Literary Research, Types of Research, Aims and Objectives, Materials and Tools of Research, Methods of Research, Format of writing research articles, Research Ethics.

## **Activity Report on the Guidance Classes for UGC NET**

Organized by: Postgraduate Department of English

Target audience: First year and Second year PG students

Number of Sessions: 8

Coordinator: Ms. Remya C. R.

The Department of English conducted a series of 8 comprehensive guidance classes from 03 January 2024 to 24 February 2024 for UGC NET aspirants, catering to postgraduate students specializing in English Language and Literature. The initiative, spearheaded by the dedicated faculty of the department, aimed to strengthen students' conceptual understanding and problem-solving skills in line with the UGC NET syllabus. These sessions were meticulously planned to cover key topics, including Literary Criticism, Literary Theory, Cultural Studies and Research Methodologies, which not only ace their preparations for NET, but also cultivate academic research aptitude in them.

Interactive teaching methods, including problem-solving exercises, group discussions, and mock tests, were employed to enhance engagement and gauge students' preparedness. The classes received positive feedback from the students, who appreciated the structured approach and expert guidance, fostering their confidence and readiness for the UGC NET examination. This initiative reflects the department's commitment to academic excellence and student success.

The guidance classes for UGCNET were a successful initiative by the Department of English, providing valuable support to postgraduate students. The program not only improved their preparedness for the examination but also enhanced their overall academic skills.

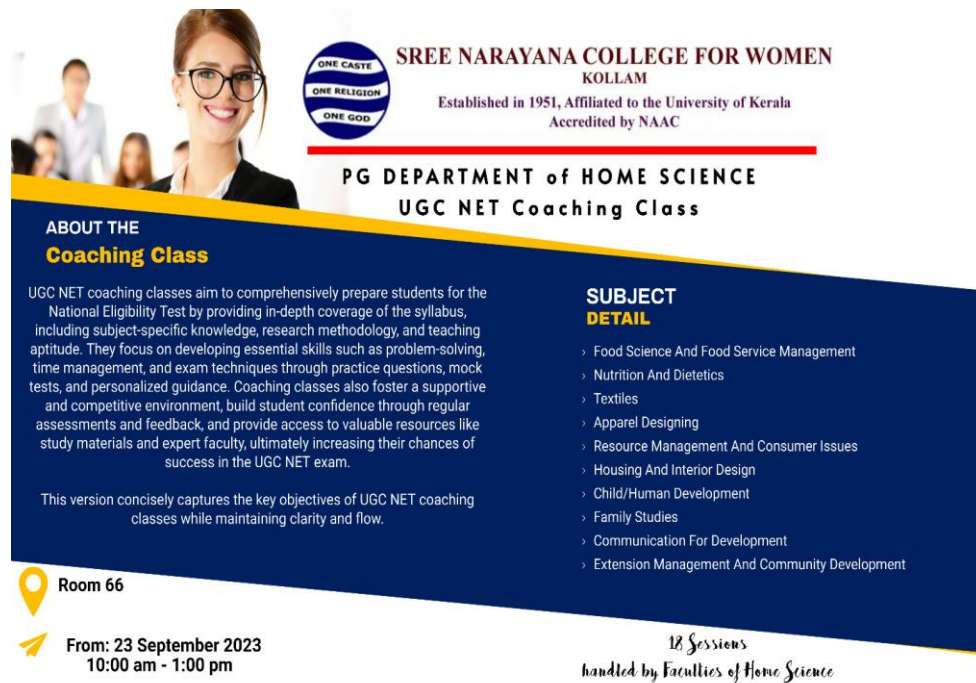
Continued efforts in this direction will ensure sustained success for future batches.

# DEPARTMENT OF HOME SCIENCE

## UGC NET Coaching for PG Students

### 2023-2024

## Brochure



**SREE NARAYANA COLLEGE FOR WOMEN**  
KOLLAM  
Established in 1951, Affiliated to the University of Kerala  
Accredited by NAAC

**PG DEPARTMENT of HOME SCIENCE**  
**UGC NET Coaching Class**

**ABOUT THE Coaching Class**

UGC NET coaching classes aim to comprehensively prepare students for the National Eligibility Test by providing in-depth coverage of the syllabus, including subject-specific knowledge, research methodology, and teaching aptitude. They focus on developing essential skills such as problem-solving, time management, and exam techniques through practice questions, mock tests, and personalized guidance. Coaching classes also foster a supportive and competitive environment, build student confidence through regular assessments and feedback, and provide access to valuable resources like study materials and expert faculty, ultimately increasing their chances of success in the UGC NET exam.

This version concisely captures the key objectives of UGC NET coaching classes while maintaining clarity and flow.

**SUBJECT DETAIL**

- › Food Science And Food Service Management
- › Nutrition And Dietetics
- › Textiles
- › Apparel Designing
- › Resource Management And Consumer Issues
- › Housing And Interior Design
- › Child/Human Development
- › Family Studies
- › Communication For Development
- › Extension Management And Community Development

**Room 66**

**From: 23 September 2023**  
10:00 am - 1:00 pm

*18 Sessions*  
*handled by Faculties of Home Science*

## COURSE SCHEDULE

<b>Se ssi on s</b>	<b>Date</b>	<b>Topic</b>	<b>Faculty Assigned</b>	<b>Subtopics</b>
<b>1</b>	<b>23.09.2023</b>	<b>Food Science And Food Service Managem ent</b>	<b>Dr Selsa S</b>	Food science and nutrition. Properties of food. Quality evaluation of foods. Effects of cooking and processing techniques on nutritional components and other physical parameters, food preservation and application. Food pigments and additives. Food standards, microbiological safety of food, HACCP, food packaging. Perspectives of food service. New product development. Food service management of institutional level. Research methods.
<b>2</b>	<b>30.09.2023</b>	<b>Nutrition And Dietetics</b>	<b>Indu Suresh</b>	Food groups – balanced diet, food pyramid, macro and micro nutrition. Nutrients. Public health nutrition Nutrition through life span. Community nutrition, sports nutrition, nutrition in emergencies and disasters.
<b>3</b>	<b>07.10.2023</b>	<b>Nutrition And Dietetics</b>	<b>Indu Suresh</b>	Nutritional assessment methods and techniques. Nutritional intervention-national nutrition policies and programmes, food and nutrition security. Clinical and therapeutic nutrition. Diet counseling and management. Research methods.
<b>4</b>	<b>21.10.2023</b>	<b>Textiles</b>	<b>Dr Rekha V V</b>	Textile terminologies. Manufacturing process of major natural and manmade fibres, properties and their end uses. Different methods of fabric construction. Textiles finishes. Dyeing and printing.
<b>5</b>	<b>28.10.2023</b>	<b>Textiles</b>	<b>Dr Rekha V V</b>	Traditional textiles of India. Identification on the basis of fibre content, technique, motif, colour and designed. Textile Testing and quality control. Textile and environment-banned dyes, eco-friendly textiles, contamination and effluent treatment, Eco-label and eco marks. Recent developments in textiles and apparels. Research methods.
<b>6</b>	<b>04.11.2023</b>	<b>Apparel Designing</b>	<b>Dr Aswathy Sugunan</b>	Body measurements-procedure, need, figure types and anthropometry. Equipment and tools used for manufacturing garments. Elements and principles of design and its application to apparel. Illustrations and parts of garments. Fashion Terminologies. Pattern making.

7	18.11.2023	Apparel Designing	Dr Aswathy Sugunan	Apparel manufacturing. Apparel Quality testing. Care and maintenance of clothing. Selection of clothing for different age groups. Selection of fabrics for different and uses. Research methods.
8	25.11.2023	Resource Management And Consumer Issues	Dr Sandhya Suresh	Management. Resources. Management of natural resources. Money management. Human resource management- functions, need, human resource development- challenges, functions, manpower planning, training need assessment, training methodologies, training evaluation.
9	02.12.2023	Resource Management And Consumer Issues	Dr Sandhya Suresh	Consumer. Consumer protection. Entrepreneurship. Research methods- sampling techniques, types of sampling, sampling procedures, probability and non probability sampling
10	16.12.2023	Housing And Interior Design	Dr Sandhya Suresh	Design fundamentals. Colour. Space planning and design. Building regulations. Housing and environment.
11	30.12.2023	Housing And Interior Design	Dr Sandhya Suresh	Energy as a resource. Product design. Ergonomics. Furniture and furnishing. Research methods.
12	06.01.2024	Child/Human Development	Dr Aswathy Sugunan	Principles of growth and development, care during pregnancy and pre-natal and neonatal development. Theories of human development and behavior. Early childhood care and education. Influence of family, peers, school, community and culture on personality development.
13	27.01.2024	Child/Human Development	Dr Aswathy Sugunan	Children and persons with special needs, care and support, special education, prevention of disabilities, rehabilitation. Children at risk- child labour, street children, children of destitute, orphans, child abuse and trafficking. Adolescence and youth. Adulthood. Aging. Research methods.
14	03.02.2024	Family Studies	Dr Rekha V V	Dynamics of marriage and family relationships. Family welfare- approaches, programmes and challenges. Domestic violence, marital disharmony, conflict, resolution of conflict. Parent education, positive parenting, community education. Family disorganization, single parent families. Family studies. Human rights. Guidance and counseling. Health and well being across life span development. Research methods.
15	17.02.2024	Communication For	Dr Seena Gopinath	Basics of communication. Communication systems and communication theories. Concept of development-

		<b>Development</b>	<b>han</b>	theories, models, measurement and indicators of development. Concept of development-communication models and approaches, diffusion and innovation, mass media, social marketing. Role of communication in development.
<b>16</b>	<b>24.02.2024</b>	<b>Communication For Development</b>	<b>Dr Seena Gopinathan</b>	Concerns of development communication. Advocacy and behavior change communication. Traditional, modern and new media for development. Organisation/agencies/institutes working for development communication-international/national/state and local. Research methods.
<b>17</b>	<b>02.03.2024</b>	<b>Extension Management And Community Development</b>	<b>Dr Seema Gopinathan</b>	Historical perspectives of extension–genesis of extension education and extension systems in India and other countries, objectives of extension education and extension service, philosophy and principles of extension programme development. Programme management. Extension methods and materials. Curriculum development and planning for extension education and development activities, Bloom’s taxonomy of educational objectives and learning.
<b>18</b>	<b>16.03.2024</b>	<b>Extension Management And Community Development</b>	<b>Dr Seema Gopinathan</b>	Non-Formal, adult and lifelong education. Training, skill development and capacity building for human resource development. Community development. People’s participation and stakeholders’ perspectives, Participatory Learning and Action-methods and techniques. Development programmes in India for urban, rural and tribal population groups. Research methods.

### Student Details

Sl.No:	Candidate Code	Name of student	Class
1.	65522129001	Farhana Ummer	S3 PG
2	65522129002	Fathima S	S3 PG
3	65522129003	Karthika A S	S3 PG
4	65522129004	Nikhila Ajith	S3 PG
5	65522129005	Rumana M	S3 PG



## **SYLLABUS**

### **UNIT-I : FOOD SCIENCE AND FOOD SERVICE MANAGEMENT**

1. Food science and nutrition.
2. Properties of food – physical and chemical properties
3. Quality evaluation of foods- objectives and subjective.
4. Effects of cooking and processing techniques on nutritional components and other physical parameters, food preservation and application.
5. Food pigments and additives.
6. Food standards, microbiological safety of food, HACCP, food packaging.
7. Perspectives of food service-menu planning, food cost analysis.
8. New product development - nano technology
9. Food service management of institutional level-hospital, educational institutions, social and special institutions
10. Research methods-fundamental issues, concept, need relevance, scope and ethics in research

### **UNIT-II : NUTRITION AND DIETETICS**

1. Food groups – balanced diet, food pyramid, macro and micro nutrition.
2. Nutrients-role of nutrients in the body, nutrient deficiencies and requirements for Indians.
3. Public health nutrition
4. Nutrition through life span-physiological changes, growth and development from conception to adolescence, nutritional needs and dietary guidelines for adequate nutrition through life cycle, nutrition concerns.
5. Community nutrition, sports nutrition, nutrition in emergencies and disasters.
6. Nutritional assessment-methods and techniques.
7. Nutritional intervention-national nutrition policies and programmes, food and nutrition security.
8. Clinical and therapeutic nutrition.
9. Diet counseling and management.
10. Research methods- research designs, principles and purpose of research

### **Unit-III : TEXTILES**

1. Textile terminologies- fibre, yarn, weave, fabric etc., classification of fibers, yarns and weaves, Identification of fibres and weaves.
2. Manufacturing process of major natural and manmade fibres, properties and their end uses.

3. Different methods of fabric construction-woven, knitted and non woven fabrics, their properties and end uses.
4. Textiles finishes-classification, processing and purposes of finishes.
5. Dyeing and printing-classification, method of block printing, tie and dye, batik, roller printing, screen printing, discharge, heat transfer printing and digitized printing.
6. Traditional textiles of India-embroidered textiles, printed textiles, woven textiles, dyed textiles of various regions in India. Identification on the basis of fibre content, technique, motif, colour and designed.
7. Textile Testing and quality control-need of testing, sampling method, techniques of testing fibres, yarn, fabrics and garments. Testing of colour-fastness, shrinkage, pilling and GSM of fabrics.
8. Textile and environment-banned dyes, eco-friendly textiles, contamination and effluent treatment, Eco-label and eco marks.
9. Recent developments in textiles and apparels- nano textiles, technical textiles, occupational clothing, zero waste designing, up cycling and recycling.
10. Research methods-types of research, descriptive, survey, historical, qualitative, quantitative, analytical and action research

#### **UNIT-IV : APPAREL DESIGNING**

1. Body measurements-procedure, need, figure types and anthropometry.
2. Equipments and tools used for manufacturing garments-advancements and attachments used for sewing machine. Types of machines used and their parts.
3. Elements and principles of design and its application to apparel. Illustrations and parts of garments.
4. Fashion-Terminologies, fashion cycle, fashion theories, fashion adoption, fashion forecasting and factors affecting fashion.
5. Pattern making-drafting, draping and flat pattern making techniques, pattern alteration and dart manipulation techniques.
6. Apparel manufacturing-terminology used, seams, techniques and machines used, process of fabric to apparel manufacture.
7. Apparel Quality testing-Quality standards and specification, Quality parameters and defects of fabrics and garments.
8. Care and maintenance of clothing-principles of washing, laundry agents, storage techniques case labels and symbols.
9. Selection of clothing for different age groups. Selection of fabrics for different and uses.
10. Research methods-hypothesis testing, types and scope

#### **UNIT-V : RESOURCE MANAGEMENT AND CONSUMER ISSUES**

1. Management-concept, approaches, management of time, energy, money, space, motivating factors, motivation theories, decision making.

2. Functions of management-planning, supervision, controlling, organizing, evaluation, family life cycle-stages, availability and use of resources.
3. Resources-classification, characteristics, factors affecting use, resource conservation, time management, work simplification techniques, classes of change, fatigue and its management.
4. Management of natural resources-land, forest, water, air, water harvesting, municipal solid waste management, concept of sustainable development, SDGs.
5. Money management-family income, types, supplementation, budgeting, household accounts, family savings and investment, tax implications.
6. Human resource management- functions, need, human resource development-challenges, functions, manpower planning, training need assessment, training methodologies, training evaluation.
7. Consumer-definition, role, rights and responsibilities, consumer behavior, consumer problems, education and empowerment.
8. Consumer protection- consumer organization, cooperatives, alternative redressal, standardization, standard marks, quality control, buying aids, consumer legislation.
9. Entrepreneurship-concept, process, barriers, entrepreneurial motivation, challenges, enterprise setting, project planning and appraisal, enterprise management.
10. Research methods-sampling techniques, types of sampling, sampling procedures, probability and non probability sampling

## **UNIT-VI : HOUSING AND INTERIOR DESIGN**

1. Design fundamentals – elements of art, principles of design, principles of composition.
2. Colour - dimensions of colour, psychological effects of colour, colour schemes, factors affecting use of colour.
3. Space planning and design-housing need and important, principles of planning spaces, types of house plans, economy in construction, planning for different income groups.
4. Building regulations-norms and standards, zoning, housing for special groups and areas, housing finance.
5. Housing and environment- building materials- impact on environment, green rating systems, energy efficiency in buildings, energy auditing, indices of indoor comfort.
6. Energy as a resource- conventional and non- conventional sources, renewable /non-renewable energy, energy management, national efforts on energy conservation.
7. Product design - design thinking process, diffusion and innovation, design communication, ergonomic considerations.
8. Ergonomics - significance, scope, anthropometry, man, machine, environment relationship, factors affecting physiological cost of work, body mechanics, functional design of work place, time and motion study, energy studies.
9. Furniture and furnishing - historical perspectives, architectural styles, contemporary trends, wall finishes, window and window treatments.
10. Research methods-selection and preparation of tools for data collection-questionnaire, interview, observation, measuring scales, ranking and measurement, reliability and validity of tools

## **UNIT-VII : CHILD/HUMAN DEVELOPMENT**

1. Principles of growth and development, care during pregnancy and pre-natal and neonatal development.
2. Theories of human development and behavior.
3. Early childhood care and education – activities to promote holistic development.
4. Influence of family, peers, school, community and culture on personality development.
5. Children and persons with special needs, care and support, special education, prevention of disabilities, rehabilitation.
6. Children at risk-child labour, street children, children of destitute, orphans, child abuse and trafficking.
7. Adolescence and youth: changes, challenges and programs to promote optimal development.
8. Adulthood, characteristics, changing roles and responsibilities in early and middle adulthood.
9. Aging-physical and psychological changes and care needs.
10. Research methods-types of variables and their selection.

## **UNIT-VIII : FAMILY STUDIES**

1. Dynamics of marriage and family relationships.
2. Family welfare-approaches, programmes and challenges, role in national development.
3. Domestic violence, marital disharmony, conflict, resolution of conflict.
4. Parent education, positive parenting, community education.
5. Family disorganization, single parent families.
6. Family studies-family in crisis, family therapy, initiatives for child development.
7. Human rights, rights of children, rights of women, status of women, gender roles.
8. Guidance and counseling- across life span and for care givers.
9. Health and well being across life span development.
10. Research methods- data collection and classification, coding, tabulation, inferential and descriptive statistics.

## **UNIT-IX : COMMUNICATION FOR DEVELOPMENT**

1. Basics of communication- nature, characteristics, functions, process, models, elements, principles, barriers, perception, persuasion and empathy, types of communication, levels (settings) of communication transactions, process of listening.
2. Communication systems and communication theories- human interaction theories, mass communication theories, message design theories, communication systems, culture and communication.
3. Concept of development- theories, models, measurement and indicators of development.
4. Concept of development- communication models and approaches, diffusion and innovation, mass media, social marketing.

5. Role of communication in development- need and importance, development journalism, writing for development-print, radio, television and internet.
6. Concerns of development communication- gender, health, environment, sustainability, human rights, population, literacy, rural and tribal development.
7. Advocacy and behavior change communication- concept, theories, models, approaches, application and challenges.
8. Traditional, modern and new media for development - folk forms of songs, art, dance, theatre, puppetry, advertisement, cinema, ICTs for development-community radio, participatory video, social media and mobile phones.
9. Organisation/agencies/institutes working for development communication- international/national/state and local.
10. Research methods-analysis of data through parametric and non parametric tests.

### **UNIT-X : EXTENSION MANAGEMENT AND COMMUNITY DEVELOPMENT**


1. Historical perspectives of extension–genesis of extension education and extension systems in India and other countries, objectives of extension education and extension service, philosophy and principles of extension programme development.
2. Programme management- need assessment, situation analysis, planning, organization, implementation, monitoring and evaluation.
3. Extension methods and materials- interpersonal, small and large group methods, audiovisual aids-need, importance, planning, classification, preparation and field testing, use and evaluation of audio-visual materials.
4. Curriculum development and planning for extension education and development activities, Bloom’s taxonomy of educational objectives and learning.
5. Non-Formal, adult and lifelong education-historical perspectives, concept, theories, approaches, scope, methods and materials used, challenges of implementation and evaluation, issues to be addressed.
6. Training, skill development and capacity building for human resource development- methods of training, entrepreneurship development.
7. Community development- perspectives, approaches, community organization, leadership, support structures for community development, Panchyati raj institutions, NGOs and community based organisations.
8. People’s participation and stakeholders’ perspectives, Participatory Learning and Action- methods and techniques.
9. Development programmes in India for urban, rural and tribal population groups- programmes for nutrition, health, education, wage and self employment, women’s development, skill development, sanitation and infrastructure.
10. Research methods-scientific report writing, presentation of data, interpretation and discussion.





**DEPARTMENT OF PHYSICS**  
**UGC NET Coaching for PG Students**

**Brochure**



SREE NARAYANA COLLEGE FOR WOMEN, KOLLAM  
PG & RESEARCH DEPARTMENT OF PHYSICS


CSIR NET COACHING CLASS


SUBJECTS


QUANTUM MECHANICS  
ELECTRONICS  
SOLID STATE PHYSICS  
ATOMIC & MOLECULAR PHYSICS  
MATHEMATICAL PHYSICS

*16 sessions*

*Classes handled by faculties of Physics*

 SEMINAR HALL

 OCTOBER 7, SATURDAY 2023

 10 : 00 AM



## COURSE SCHEDULE WITH ASSIGNED FACULTIES

<b>Date</b>	<b>Topic</b>	<b>Faculty Assigned</b>	<b>Subtopics</b>
<b>Oct 7, 2023</b>	<b>Quantum Mechanics</b>	<b>Resmi S</b>	Introduction to Quantum Mechanics, Schrodinger Equation, Operators and Wave Functions, Heisenberg Uncertainty Principle
<b>Oct 28, 2023</b>	<b>Mathematical Physics I</b>	<b>Dr.Smitha S</b>	Differential Equations (ODE and PDE), Series Solutions, Eigenvalue Problems, Boundary Conditions
<b>Nov 4, 2023</b>	<b>Electronics</b>	<b>Dr.Deepak Nand</b>	Basics of Electronic Components, DC/AC Circuits, Operational Amplifiers, Diode and Transistor Applications
<b>Nov 18, 2023</b>	<b>Solid State Physics</b>	<b>Sona G Krishnan</b>	Crystal Structure, Symmetry, X-ray Diffraction, Electronic Properties of Solids, Band Theory, Conductors, Semiconductors, Insulators
<b>Nov 25, 2023</b>	<b>Atomic Physics</b>	<b>Aswathy B R</b>	Atomic Models (Bohr, Sommerfeld, Quantum Models), Spectra of Hydrogen-like Atoms, Spin and Angular Momentum, Zeeman & Stark Effect
<b>Dec 2, 2023</b>	<b>Quantum Mechanics II</b>	<b>Resmi S</b>	Quantum Theory of Angular Momentum, Hydrogen Atom Solutions,
<b>Dec 16, 2023</b>	<b>Mathematical Physics II</b>	<b>Dr.Prabha Jyothi P S</b>	Fourier and Laplace Transforms, Green's Function, Special Functions, Integral Equations
<b>Dec 30, 2023</b>	<b>Solid State Physics &amp; Electronics</b>	<b>Priyadarsini G</b>	Superconductivity, Magnetism, Dielectric Properties, Semiconductor Devices (PN Junction, MOSFETs)
<b>Jan 6, 2024</b>	<b>Quantum Mechanics III</b>	<b>Krishna Sree R S</b>	Quantum Mechanics in Three Dimensions, Spin-Orbit Interaction, Approximation Methods (WKB, Variational) Approximation Methods, Identical Particles and Statistics

Jan 20, 2024	Electronics II	Dr.Deepak Nand	Communication Systems, Digital Electronics, Logic Circuits, Microcontrollers, Oscillators
Jan 27, 2024	Solid State Physics II	Sona G krishnan	Electrical Conductivity, Magnetism, Dielectrics, Magnetic Properties, Magnetic Susceptibility, Semiconductor Devices
Feb 3, 2024	Mathematical Physics III	Dr.Smitha S	Green's Function, Solution of PDEs, Integral Equations, Potential Theory, Fourier Series
Feb 17, 2024	Atomic Physics II	Aswathy B R	Fine Structure of Atomic Spectra, Hyperfine Structure, Quantum Electrodynamics, Interaction of Atoms with Electromagnetic Fields
Mar 2, 2024	Quantum Mechanics IV	Krishna Sree R S	Path Integral Formulation, Quantum Field Theory Basics, Quantum Entanglement, Bell's Theorem
Mar 16, 2024	Electronics III	Priyadarsini G	Advanced Topics in Electronics: Nanoelectronics, Quantum Devices, Optoelectronics, Microwave Devices
Mar 30, 2024	Solid State Physics III	Dr.Prabha Jyothi P S	Advanced Topics in Solid-State Physics, Low-Dimensional Systems, Nanomaterials, Quantum Hall Effect, Semiconductor Devices

## Student Details

Sl.No:	Candidate Code	Name of student	Class
1.	63023129005	Archana A L	S1 PG
2	63023129001	Abhirami B S	S1 PG
3	63023129004	Anusree S	S1 PG
4	63023129011	Poorva Ajay	S1 PG
5	63023129013	Revathy M	S1 PG
6	63023129006	Ashna N	S1 PG
7	63023129007	Chandana S S	S1 PG
8	63023129002	Aiswarya B J	S1 PG
9	63023129008	Devika P J	S1 PG
10	63023129012	Renju V	S1 PG
11	63023129010	Parvathi M R	S1 PG
12	63023129014	Revathy M	S1 PG
13	63023129003	Alka C B	S1 PG
14	63023129009	Fathima	S1 PG
15	63022129001	Arsha S S	S3 PG
16	63022129010	Anu A S	S3 PG
17	63022129008	Anju J S	S3 PG
18	63022129011	Arka T S	S3 PG

# SYLLABUS

## 1. Quantum Mechanics

Introduction to Quantum Mechanics, Schrodinger Equation, Operators and Wave Functions, Heisenberg Uncertainty Principle. Quantum Theory of Angular Momentum, Hydrogen Atom Solutions, Approximation Methods, Identical Particles and Statistics. Quantum Mechanics in Three Dimensions, Spin-Orbit Interaction, Approximation Methods (WKB, Variational). Path Integral Formulation, Quantum Field Theory Basics, Quantum Entanglement, Bell's Theorem

## 2. Mathematical Methods of Physics

Differential Equations (ODE and PDE), Series Solutions, Eigenvalue Problems, Boundary Conditions. Fourier and Laplace Transforms, Green's Function, Special Functions, Integral Equations. Green's Function, Solution of PDEs, Integral Equations, Potential Theory, Fourier Series

## 3. Solid State Physics

Crystal Structure, Symmetry, X-ray Diffraction, Electronic Properties of Solids, Band Theory, Conductors, Semiconductors, Insulators. Superconductivity, Magnetism, Dielectric Properties. Electrical Conductivity, Magnetism, Dielectrics, Magnetic Properties, Magnetic Susceptibility, Semiconductor Devices. Advanced Topics in Solid-State Physics, Low-Dimensional Systems, Nanomaterials, Quantum Hall Effect, Semiconductor Devices

## 4. Electronics

Basics of Electronic Components, DC/AC Circuits, Operational Amplifiers, Diode and Transistor Applications. Communication Systems, Digital Electronics, Logic Circuits, Microcontrollers, Oscillators, Semiconductor devices. Advanced Topics in Electronics: Nanoelectronics, Quantum Devices, Optoelectronics, Microwave Devices

## 5. Atomic & Molecular Physics

Atomic Models (Bohr, Sommerfeld, Quantum Models), Spectra of Hydrogen-like Atoms, Spin and Angular Momentum, Zeeman & Stark Effect. Fine Structure of Atomic Spectra, Hyperfine Structure, Quantum Electrodynamics, Interaction of Atoms with Electromagnetic Fields

## **Activity Report on the Guidance Classes for CSIR-NET**

**Organized by:** Physics Department

**Target Audience:** PG Physics Students

**Number of Sessions:** 16 Classes(Oct 2023-March 2024)

**Coordinator :** Krishna Sree R S, Assistant Professor of Physics

The Physics Department conducted a series of 16 comprehensive guidance classes(Oct,2023 -March,2024) for CSIR NET aspirants, catering to 18 postgraduate students specializing in Physics. The initiative, spearheaded by the dedicated faculty of the department, aimed to strengthen students' conceptual understanding and problem-solving skills in line with the CSIR NET syllabus. These sessions were meticulously planned to cover key topics, including Quantum Mechanics, Electronics,Solid State Physics,Atomic & Molecular Physics, and Mathematical Physics, ensuring a balanced approach to theoretical and applied aspects.

Interactive teaching methods, including problem-solving exercises, group discussions, and mock tests, were employed to enhance engagement and gauge students' preparedness. The classes received positive feedback from the students, who appreciated the structured approach and expert guidance, fostering their confidence and readiness for the CSIR NET examination. This initiative reflects the department's commitment to academic excellence and student success.

The guidance classes for CSIR-NET were a successful initiative by the Physics Department, providing valuable support to postgraduate students. The program not only improved their preparedness for the examination but also enhanced their overall academic skills. Continued efforts in this direction will ensure sustained success for future batches.



**SREE NARAYANA COLLEGE FOR WOMEN, KOLLAM**  
**(NAAC RE-ACCREDITED 'B+' Grade**  
**UGC/CSIR-NET Coaching Organized by Department of Chemistry**  
**2023-2024**

**INAUGURATION NOTICE**

<b>Date: 11.12.2023</b>	<b>Time: 10:00 am</b>	Venue: Seminar Hall
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- Prayer Song : Ms.Vidya V I Msc chemistry
- Welcome Speech : Dr Chithra P G, Dept of Chemistry
- Presidential Address : Dr.Aswathy Sugunan, Principal, Sree Narayana College For Women, Kollam
- Inaugural Address : Dr.Syamchand S S, Associate Professor, Department of Chemistry, University College Thiruvananthapuram
- Felicitations : Prof.Sekharan S, IQAC Coordinator Sree Narayana College For Women, Kollam
- Vote of Thanks : Prof.Chithra P G, HOD. Department of Chemistry, Sree Narayana College For Women, Kollam

**Co-ordinator : Ms Asha C L, Dept of Chemistry**

## UGC/CSIR-NET Coaching

Organized by Department of Chemistry,

Sree Narayana College For Women, Kollam

### Student Details

Participants : S2 and S4 MSc  
Chemistry

Sl No	Name	Candidate Code	College	Contact No.
1	AARCHA B J	63523129001	S N College for Women,Kollam	9778367795
2	AKHILA KRISHNAN M	63523129002	S N College for Women,Kollam	8848298631
3	DEVIKA.M	63523129003	S N College for Women,Kollam	9645546813
4	GAYATHRI DEVI M J	63523129004	S N College for Women,Kollam	9383445104
5	GOWRI GOPAN	63523129005	S N College for Women,Kollam	9496655678
6	GOWRI LEKSHMI A	63523129006	S N College for Women,Kollam	6282388164
7	LEKSHMI P L	63523129007	S N College for Women,Kollam	7594046533
8	LEKSHMI SHYLENDRAN	63523129008	S N College for Women,Kollam	9746269435
9	MEGHA S AJITH	63523129009	S N College for Women,Kollam	7025420477
10	MIDHYA S	63523129010	S N College for Women,Kollam	8943056905
11	PRIYA RAMAN S	63523129011	S N College for Women,Kollam	6238031700
12	SHAHNAMOL A	63523129012	S N College for Women,Kollam	9744893531
13	SNEHA A	63523129013	S N College for Women,Kollam	8921218264



14	SREEKUTTY S	63523129014	S N College for Women,Kollam	7558098346
15	AVANIRAJ	63522129001	S N College for Women,Kollam	9400453996
16	AKSHAYA ASOK	63522129002	S N College for Women,Kollam	9847998412
17	ANEESHA ANILKUMAR	63522129003	S N College for Women,Kollam	8075749479
18	ANU M MARIUM	63522129004	S N College for Women,Kollam	9188342161
19	ARDRA S	63522129005	S N College for Women,Kollam	7025610626
20	ARYA S MURALEEDHARAN	63522129006	S N College for Women,Kollam	8156977651
21	BHAGYA C R	63522129008	S N College for Women,Kollam	7510157472
22	BIJUSHA B K	63522129009	S N College for Women,Kollam	6282974434
23	LEKSHMI D KARUNAN S	63522129010	S N College for Women,Kollam	9400927408
24	MEENU KRISHNA B	63522129011	S N College for Women,Kollam	9497760695
25	NADIYA FATHIMA T	63522129012	S N College for Women,Kollam	8848906735
26	NIRANJANA UNNI V	63522129013	S N College for Women,Kollam	8590496205
27	NISHA S F	63522129014	S N College for Women,Kollam	8590637045
28	PRIYANKA J	63522129015	S N College for Women,Kollam	9544615273
29	SABARI UMESH	63522129016	S N College for Women,Kollam	8606812078
30	VIDHYA V	63522129017	S N College for Women,Kollam	7994891502

**UGC/CSIR NET Coaching Programme**  
**Organized by Department of Chemistry**  
**Sree Narayana College for Women, Kollam**  
**December 2022 to April 2024**

**COURSE SCHEDULE**

Sl.NO.	Date & Time	Name of the Resource Person/Faculty	Topic Covered
1	18/12/2023 10am-1.00pm & 2.00pm-4.00pm	Dr.Syamchand S S	Metal metal multiple bonding and metal carbonyl clusters - Structure and bonding General Paper
2	25/12/2023 10am-1.00pm & 2.00pm-4.00pm	Dr.Binil P Sasidharan	General paper ,Mossbauer spectroscopy,NMR introduction
3	02/12/2023 10am-1.00pm & 2.00pm-4.00pm	Mr.Arun Kumar	General paper,ESR spectroscopy
4	16/12/2023 10am-1.00pm & 2.00pm-4.00pm	Dr.Sarika S	General paper,Structure and Bonding in heteronuclear molecules,VSEPR Theory,Shape and Hybridisation,Cages and metal clusters,Huckel Theory Term symbols
5	06/01/2024 10am-1.00pm & 2.00pm-4.00pm	Dr.Sarika S	Aromaticity ,stereochemistry, General Paper
6	20/01/2024 10am-1.00pm & 2.00pm-4.00pm	Ms.Irfana B	Group theory,General paper,Thermodynamics
7	27/01/2024 10am-1.00pm & 2.00pm-4.00pm	Dr.Binil P Sasidharan	NMR Spectroscopy,Characterisation of inorganic compounds by IR, Raman, NMR, EPR, Mössbauer, UV-vis, NQR, MS, electron spectroscopy and microscopic techniques-
8	03/02/2024 10am-1.00pm & 2.00pm-4.00pm	Dr.Syamchand S S	Spin orbit coupling in lanthanides,Calculation of molecular term symbol,allowed and forbidden transition,IR Spectroscopy

9	24/02/2024 10am-1.00pm & 2.00pm-4.00pm	Dr.Poornima Vijayan P	Configurational and conformational isomerism in acyclic and cyclic compounds; stereogenicity, stereoselectivity, enantioselectivity, diastereoselectivity and asymmetric induction - Aromaticity: Benzenoid and non-benzenoid compounds
10	02/03/2024 10am-1.00pm & 2.00pm-4.00pm	Dr Renjini S	Determination of reaction pathways -Common named reactions and rearrangements – applications in organic synthesis - Organic transformations and reagents: Functional group interconversion including oxidations and reductions; common catalysts and reagents (organic, inorganic, organometallic and enzymatic).
11	16/03/2024 10am-1.00pm & 2.00pm-4.00pm	Dr Arunima S R	Concepts in organic synthesis: Retrosynthesis, disconnection, synthons, linear and convergent synthesis, umpolung of reactivity and protecting groups - Asymmetric synthesis: Chiral auxiliaries, methods of asymmetric induction – substrate, reagent and catalyst controlled reactions; deter
12	23/03/2024 10am-1.00pm & 2.00pm-4.00pm	Ms Pavitha P A	Principles and applications of photochemical reactions in organic chemistry -. Synthesis and reactivity of common heterocyclic compounds containing one or two heteroatoms (O, N, S)
13	30/03/2024 10am-1.00pm & 2.00pm-4.00pm	Ms Asha CL	Organic reactive intermediates: Generation, stability and reactivity of carbocations, carbanions, free radicals, carbenes, benzyne and nitrenes.Organic reaction mechanisms involving addition, elimination and substitution

			reactions with electrophilic, nucleophilic or radical species.
14	06/04/2024 10am-1.00pm & 2.00pm-4.00pm	Dr Vijayalekshmi V	Non-aqueous solvents. - Main group elements and their compounds: Allotropy, synthesis, structure and bonding, industrial importance of the compounds.- Transition elements and coordination compounds: structure, bonding theories, spectral and magnetic properties, reaction mechanisms.
15	08/04/2024 10am-1.00pm & 2.00pm-4.00pm	Dr Suma s	Electrochemistry: Nernst equation, redox systems, electrochemical cells; DebyeHuckel theory; electrolytic conductance – Kohlrausch’s law and its applications; ionic equilibria; conductometric and potentiometric titrations- Chemical kinetics: Empirical rate laws and temperature dependence; complex reactions;
16	10/04/2024 10am-1.00pm & 2.00pm-4.00pm	Dr Chithra P G	Chemical thermodynamics: Laws, state and path functions and their applications; thermodynamic description of various types of processes; Maxwell’s relations; spontaneity and equilibria; temperature and pressure dependence of thermodynamic quantities
17	11/04/2024 10am-1.00pm & 2.00pm-4.00pm	Dr asha Bhanu a V	Chemical kinetics: Empirical rate laws and temperature dependence; complex reactions; steady state approximation; determination of reaction mechanisms; collision and transition state theories of rate constants; unimolecular reactions; enzyme kinetics; salt effects; homogeneous catalysis; photochemical reactions-

**UGC/CSIR NET Coaching Programme**  
**Organized by Department of Chemistry**  
**Sree Narayana College for Women, Kollam**  
**December 2032 to April 2024**

**SYLLABUS**

**Inorganic Chemistry**

Chemical periodicity- Structure and bonding in homo- and heteronuclear molecules, including shapes of molecules (VSEPR Theory)-Concepts of acids and bases, Hard-Soft acid base concept, Non-aqueous solvents. - Main group elements and their compounds: Allotropy, synthesis, structure and bonding, industrial importance of the compounds.- Transition elements and coordination compounds: structure, bonding theories, spectral and magnetic properties, reaction mechanisms. - Inner transition elements: spectral and magnetic properties, redox chemistry, analytical applications. -Organometallic compounds: synthesis, bonding and structure, and reactivity. Organometallics in homogeneous catalysis. -Cages and metal clusters.-Analytical chemistry- separation, spectroscopic, electro- and thermoanalytical methods- Bioinorganic chemistry: photosystems, porphyrins, metalloenzymes, oxygen transport, electron- transfer reactions; nitrogen fixation, metal complexes in medicine. - Characterisation of inorganic compounds by IR, Raman, NMR, EPR, Mössbauer, UV-vis, NQR, MS, electron spectroscopy and microscopic techniques- Nuclear chemistry: nuclear reactions, fission and fusion, radio-analytical techniques and activation analysis.

**Physical Chemistry**

Basic principles of quantum mechanics: Postulates; operator algebra; exactly- solvable systems: particle-in-a-box, harmonic oscillator and the hydrogen atom, including shapes of atomic orbitals; orbital and spin angular momenta; tunneling- Approximate methods of quantum mechanics: Variational principle; perturbation theory up to second order in energy; applications-Atomic structure and spectroscopy; term symbols; many-electron systems and antisymmetry principle-Chemical bonding in diatomics; elementary concepts of MO and VB theories; Huckel theory for conjugated  $\pi$ -electron systems- Chemical applications of group theory; symmetry elements; point groups; character tables; selection rules-Molecular spectroscopy: Rotational and vibrational spectra of diatomic molecules; electronic spectra; IR

and Raman activities – selection rules; basic principles of magnetic resonance-Chemical thermodynamics: Laws, state and path functions and their applications; thermodynamic description of various types of processes; Maxwell's relations; spontaneity and equilibria; temperature and pressure dependence of thermodynamic quantities; Le Chatelier principle; elementary description of phase transitions; phase equilibria and phase rule; thermodynamics of ideal and non-ideal gases, and solutions- Statistical thermodynamics: Boltzmann distribution; kinetic theory of gases; partition functions and their relation to thermodynamic quantities – calculations for model systems- Electrochemistry: Nernst equation, redox systems, electrochemical cells; DebyeHuckel theory; electrolytic conductance – Kohlrausch's law and its applications; ionic equilibria; conductometric and potentiometric titrations- Chemical kinetics: Empirical rate laws and temperature dependence; complex reactions; steady state approximation; determination of reaction mechanisms; collision and transition state theories of rate constants; unimolecular reactions; enzyme kinetics; salt effects; homogeneous catalysis; photochemical reactions- Colloids and surfaces: Stability and properties of colloids; isotherms and surface area; heterogeneous catalysis-Solid state: Crystal structures; Bragg's law and applications; band structure of solids - Polymer chemistry: Molar masses; kinetics of polymerization. -Data analysis: Mean and standard deviation; absolute and relative errors; linear regression; covariance and correlation coefficient.

### **Organic Chemistry**

IUPAC nomenclature of organic molecules including regio- and stereoisomers - Principles of stereochemistry: Configurational and conformational isomerism in acyclic and cyclic compounds; stereogenicity, stereoselectivity, enantioselectivity, diastereoselectivity and asymmetric induction -Aromaticity: Benzenoid and non-benzenoid compounds – generation and reactions - Organic reactive intermediates: Generation, stability and reactivity of carbocations, carbanions, free radicals, carbenes, benzyne and nitrenes.Organic reaction mechanisms involving addition, elimination and substitution reactions with electrophilic, nucleophilic or radical species. Determination of reaction pathways -Common named reactions and rearrangements – applications in organic synthesis - Organic transformations and reagents: Functional group interconversion including oxidations and reductions; common catalysts and reagents (organic, inorganic, organometallic and enzymatic). Chemo, regio and stereoselective transformations - Concepts in organic synthesis: Retrosynthesis, disconnection, synthons, linear and convergent synthesis, umpolung of reactivity and protecting groups - Asymmetric synthesis: Chiral auxiliaries, methods of asymmetric induction – substrate, reagent and catalyst

controlled reactions; determination of enantiomeric and diastereomeric excess; enantio-discrimination. Resolution – optical and kinetic. - Pericyclic reactions – electrocycloaddition, cycloaddition, sigmatropic rearrangements and other related concerted reactions. Principles and applications of photochemical reactions in organic chemistry -. Synthesis and reactivity of common heterocyclic compounds containing one or two heteroatoms (O, N, S) - Chemistry of natural products: Carbohydrates, proteins and peptides, fatty acids, nucleic acids, terpenes, steroids and alkaloids. Biogenesis of terpenoids and alkaloids - Structure determination of organic compounds by IR, UV-Vis,  $^1\text{H}$  &  $^{13}\text{C}$  NMR and Mass spectroscopic techniques.

**UGC/CSIR-NET Coaching**

**Organized by Department of Chemistry,  
Sree Narayana College For Women, Kollam**

**Activity Report**

The Sree Narayana College for Women, Kollam has organized a UGC/CSIR-NET Coaching programme organized by the Dept of chemistry. The programme was **co-ordinated by Ms Asha C L, Asst Professor, Dept of Chemistry**. The programme was inaugurated on 11<sup>th</sup> December 2023. The programme started at 10.00 am with a prayer song followed by a welcome speech by Dr.Chithra P G, HOD, Department of chemistry Sree Narayana College For Women, Kollam. She explained the objectives of the coaching programme and welcomed the gathering. The meeting was inaugurated by Dr.Syam Chand S S Associate Professor, Department of Chemistry, University College Thiruvananthapuram ,who was also one of the Resource person for conducting the coaching classes. Dr.Aswathy Sugunan, Principal, Sree Narayana College For Women, Kollam delivered the presidential address and also explained the importance of the programme in our college for the students. Prof.Sekharan S, IQAC Coordinator Sree Narayana College For Women, Kollam felicitated the function and was concluded with a vote of thanks by Ms.Asha C L ,Assistant Professor, Department of Chemistry Sree Narayana College For Women, Kollam who is the coordinator of the UGC-NET coaching programme.

The classes were started from 11 December 2023. The first year, second-year PG students of Chemistry of Sree Narayana College for Women, Kollam were the participants for UGC-CSIR/NET coaching classes. Thirty students attended the classes .21 hours of classes on Saturdays and summer holidays covering almost all the topics of UGC/CSIR-NET syllabus including general paper were given to them. The topics include mainly Organo metallic Chemistry, Coordination Chemistry, Spectroscopy, Group Theory, Thermodynamics, Quantum Mechanics, Organic synthesis and Name reactions, aromaticity and pericyclic reactions. These classes were very useful to students for performing well in UGC /CSIR-NET Examinations. Previous question papers were worked out by students and the doubts were cleared by by the instructors. The coaching classes ended on 11<sup>th</sup> April 2023.





**UGC/CSIR-NET Coaching**  
**Organized by Department of Chemistry,**

# Sree Narayana College For Women, Kollam

## ATTENDANCE

S N College for Women, Kollam  
UGC NET Coaching 2022-2023

Attendance Class Timing : 10.00 am-1.00 pm

Sl No	Name of Student	Date and signature of student																
		18-12-2023	25-12-2023	02-12-2023	16-12-2023	06-01-2024	20-01-2024	27-01-2024	03-02-2024	24-02-2024	02-03-2024	16-03-2024	23-03-2024	30-03-2024	06-04-2024	08-04-2024	10-04-2024	11-04-2024
1	AARCHA B J																	
2	AKHILA KRISHNAN M																	
3	DEVIKAM																	
4	GAYATHRI DEVI M J																	
5	GOWRI GOPAN																	
6	GOWRI LEKSHMI A																	
7	LEKSHMI P L																	
8	LEKSHMI SHYLENDRAN																	
9	MEGHA S AJITH																	
10	MIDHYA S																	
11	PRIYA RAMAN S																	

Sl No	Name of Student	Date and signature of student																
		18-12-2023	25-12-2023	02-12-2023	16-12-2023	06-01-2024	20-01-2024	27-01-2024	03-02-2024	24-02-2024	02-03-2024	16-03-2024	23-03-2024	30-03-2024	06-04-2024	08-04-2024	10-04-2024	11-04-2024
12	SHAHNAMOL A																	
13	SNEHA A																	
14	SREEKUTTY S																	
15	AVANIRAJ																	
16	AKSHAYA ASOK																	
17	ANFESHA ANILKUMAR																	
18	ANU M MARIUM																	
19	ARDRA S																	
20	MURALEEDHARAN																	
21	BHAGYA C R																	
22	BIJUSHA B K																	
23	LEKSHMI D KARUNAN S																	
24	MEENU KRISHNA B																	
25	NADIYA FATHIMA T																	
26	NIRANJANA UNNI V																	
27	NISHA S F																	
28	PRIYANKA J																	
29	SABARI UMESH																	
30	VIDHYA V																	

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