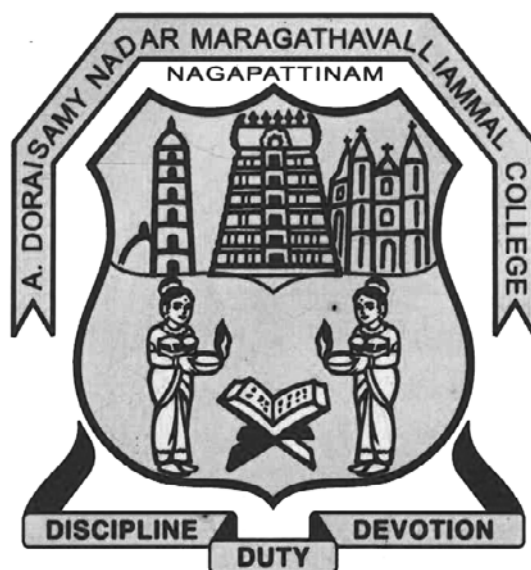


DEPARTMENT OF PHYSICS
U.G. PROGRAMME

SYLLABUS

2018 – 2021 BATCH

I SEMESTER



A. D. M. COLLEGE FOR WOMEN
NAGAPATTINAM

SEMESTER – I

பகுதி – I தமிழ்

இக்கால இலக்கியம்

அகமதிப்பீடு	- 25	பயிற்று மணிகள்
- 6		
புறமதிப்பீடு	- 75	தரப்புள்ளிகள் - 3
மொத்த மெதிப்பெண்கள்	-100	தேர்வு மணிகள் -3

நோக்கம் :

1. இக்காலத் தமிழ்க்கவிதை, சிறுகதை முதலானவற்றை அறிமுகப்படுத்துதல்.
2. புதுக்கவிதை, ஹைகூ கவிதை முதலான புதிய இலக்கிய வடிவங்களை அறிமுகப்படுத்துதல்.
3. தமிழ் இலக்கியத்தின் மீதான ஈர்ப்பை மிகுவித்தல்.

அலகு -1**பாரதியார்**

1. செந்தமிழ்நாடு
2. புதுமைப்பெண்

பாரதிதாசன்

1. அழகு
2. தமிழனுக்கு வீழ்ச்சியில்லை

கவிமணிதேசிகவிநாயகம் பிள்ளை

1. சுகாதாரக்கும்மி
2. தொழிலாளியின் முறையீடு

சுரதா

1. கலப்பை
2. போலி உடும்பு

அலகு -2**நாமக்கல் கவிஞர்**

1. தருணம் இதுவே

கவிகாழு ஷெரீப்

1. தமிழே !
2. நிலவேசொல்

கண்ணதாசன்

1. அனுபவம்
2. நட்பு

வாணிதாசன்

1. உயிர்வாட்டும் காலம்

அலகு - 3**நாட்டுப்புறப் பாடல்கள்**

1. தாலாட்டுப் பாடல்
2. தொழிற் பாடல்

புதுக்கவிதைகள்

1. அப்துல் ரகுமான் - வெற்றி
2. அரங்கமல்லிகா - அக்குளுக்கு அல்ல இடைத்துண்டு
3. அறிவுமதி - நட்புக்காலம்
4. ஆண்டாள் பிரியதர்ஷினி - நிலாச்சோறு
5. தாமரை - தீர்ப்பு
6. வைரமுத்து - ருசி

ஹைக்குகவிதைகள்

1. அரிமதி இளம்பரிதி
2. அரிமதிதென்னகன்
3. கார்முகில்
4. செந்தமிழன்
5. புதுவை இளவேனில்

அலகு - 4

சிறுகதை பிரமாதம் (தேர்ந்தெடுக்கப்பட்ட சிறுகதைகள்)
தொகுப்பாசிரியர் - முனைவர் தெ.வாசுகி
தமிழ்த்துறை வெளியீடு

அலகு - 5

தமிழ் இலக்கிய வரலாறு
1. மரபுக்கவிதை , புதுக்கவிதை மற்றும் ஹைக்குகவிதைகள்
2. சிறுகதை
3. நாவல்

பார்வை நூல்கள்:

தமிழ் இலக்கிய வரலாறு
முனைவர்.ச.சுபாஷ் சந்திரபோஸ்
முனைவர்.ச.ஆனந்தன்
முனைவர்.பாக்கிய மேரி
முனைவர்.வரதராஜா
முனைவர்.தெ.வாசுகி

**A.D.M. COLLEGE FOR WOMEN (AUTONOMOUS) NAGAPATTINAM
DEPARTMENT OF ENGLISH
SEMESTER-I CATEGORY - PART II ENGLISH
PAPER-I PROSE FOR EFFECTIVE COMMUNICATION
(For candidates admitted from the academic year 2016 – 17 onwards)**

SEMESTER I

ELC I – PROSE FOR EFFECTIVE COMMUNICATION

Objectives:

To make learners read, understand and appreciate texts from various genres of literature.

To help learners read and comprehend literary texts to communicate effectively.

To train learners to improve their comprehension.

Text prescribed:

I English Through Information and Comprehension

Edited by Prof.V.Sivakumaran & Prof.S.A.Sankaranarayanan

II Spoken Language Component – Identifying the speech sounds.

(Materials Prepared by the Department of English)

Unit – I

1. The Legend of Laurel
2. Why the Sea is Salt (From Great Legends)

Unit – II

3. Crossword
4. Cyber Virus (From Future World)

Unit – III

5. The Paper Story
6. The Puppet Show (From Master minds Library)

Unit - IV

7. Ego and Spirit (From “Ignited Minds” – APJ. Abdul Kalam)
8. The Tree Dream (From “The Tree Speaks” – C.Rajagopalachari)

Unit- V

9. Mount Etna
10. Dead Sea (From Discovering the Wonders of the World – readers’ digest publication)
11. Identifying the speech sounds (Pronunciation of Bilabial Plosives, Fricatives and Nasal Consonants)

Pattern of Evaluation

CIA – 25 Marks (Passing minimum of 40%)

Test (Written) – 10 Marks

Assignment & Group Discussion – 5 Marks

Written Quiz & Seminar - 5 Marks

Attendance - 5 Marks

SEMESTER – 75 Marks

Total Marks – 100 (Passing minimum of 40%)

Question Pattern:

Section A - 20 Marks

Short answer questions (10 x2 =20 Marks)

Section B -25 Marks

- (i) Answer all the Paragraph questions either or pattern (A question should be asked from each unit) 5x4=20 Marks
- (ii) Spoken English Component 10 x ½ =5 Marks

Section C – Essay Questions (3x10=30)

Answer any 3 Questions. (One Essay should be asked from each Unit.)

SEMESTER I
CORE COURSE I
PROPERTIES OF MATTER AND ACOUSTICS

Internal: 25

External : 75

Instruction Hours: 6

Exam Hours: 3

Credit: 6

Objective:

To identify the characteristics of matter in terms their properties and to know the basic principles of acoustics.

UNIT I Elasticity

18 Hrs

Hooke's law – Stress-Strain diagram – Factors affecting elasticity- Different moduli of elasticity - Relation between the elastic moduli – Poisson's ratio –Twisting couple on a cylinder – Determination of rigidity modulus by static torsion – Work done in twisting a wire - Torsional oscillations of a body-Torsion pendulum - Determination of rigidity modulus and moment of inertia.

UNIT II Bending of Beams

18 Hrs

Bending of beams-Expression for bending moment– Cantilever–Expression for depression of the loaded end of a cantilever — Young's modulus by measuring the tilt in a loaded cantilever – Oscillation of a cantilever – Non-uniform bending – Expression for depression- Uniform bending – Expression for elevation –Experimental determination of Young's modulus using pin and microscope method (Non-uniform bending – Uniform bending) - Determination of Young's modulus by Koenig's method.

UNIT III Surface Tension

18 Hrs

Definition – Molecular forces – Explanation of surface tension on kinetic theory – Surface energy – Work done on increasing the area of a surface -Angle of contact - Neumann's triangle- Excess pressure inside a liquid drop and soap bubble - Excess pressure inside a curved liquid surface - Force between two plates separated by a thin layer of a liquid - Experimental determination of surface tension - Jaegar's method - Drop- weight method - Capillary rise method - Variation of surface tension with temperature.

UNIT IV Viscosity**18 Hrs**

Newton's law of viscous flow – streamlined and turbulent motion – Reynold's number - Poiseuille's formula for the flow of a liquid through a horizontal capillary tube – Experimental determination of co-efficient of a liquid by Poiseuille's method - Ostwald's viscometer – Terminal velocity and Stokes' formula - Viscosity of gases – Meyer's formula - Rankine's method - Variation of viscosity with temperature and pressure - Lubrication. Equation of continuity of flow – Euler's equation for unidirectional flow - Bernoulli's theorem – Filter pump and Wings of aeroplane - Torricelli's theorem - Pitot tube.

UNIT V Acoustics**18 Hrs**

Newton's Formula for velocity of sound –Effect of Temperature, Pressure, Humidity, Density of medium and Wind - Musical Sound and Noise – Speech- Characteristics of Musical sound – Intensity of sound – Measurement of intensity of sound :Decibel and Phon-Bel.

Reverberation – Sabine's Reverberation formula – Factors Affecting the Acoustics of Buildings – Sound distribution in an Auditorium – Requisites for good acoustics – Ultrasonics – Production and detection – Medical applications of Ultrasonic waves – Acoustic Grating.

Books for Study:

1. R. Murugesan, *Properties of matter*, S. Chand & Co. Pvt. Ltd., Revised edition, 2012.
2. D.S. Mathur, *Elements of Properties of matter*, S. Chand & Co. Pvt.Ltd., Revised edition, 2010
3. Brijlal & N. Subramanyam, *Properties of matter*, Vikas Publishng. Pvt.Ltd, 2005.
4. Brijlal & N. Subramanyam, '*A Text Book of Sound*', Vikas Publishing. Pvt. Ltd, 2008.

Books for Reference:

1. Feynman, *Lectures on Physics*. Vol. I & II by Richard P. Feynman, The New Millennium Edition, 2012.
2. David Halliday and Robert Resnick, *Fundamentals of Physics* by Wiley Plus., 2013.
3. B.H. Flowers and E. Mendoza, *Properties of matter*, Wiley Plus, 1991.
4. H.R. Gulati, *Fundamentals of General properties of matter*, S. Chand & Co. Pvt. Ltd, 2012.
5. Chatterjee and Sen Gupta, *A treatise on general properties of matter*, New central Books agency (p) Ltd, Kolkata, 2001.
6. R.L. Saihgal, *A Text Book of Sound*, S. Chand & Co. Pvt. Ltd, New Delhi, 1979.

A.D.M. College for Woman (Autonomous), Nagapattinam
(Accredited with 'A' Grade by NAAC)
POST GRADUATE & RESEARCH DEPARTMENT OF MATHEMATICS
B.Sc., Mathematics (for those admitted from 2017 onwards)
CHOICE BASED CREDIT SYSTEM
ALLIED MATHEMATICS I

SEMESTER I
ALLIED COURSE I-
MATHEMATICS I
ALGEBRA, NUMERICAL ANALYSIS AND TRIGONOMETRY

(For Physics , Chemistry and Geology Major)

Internal : 25

External : 75

Instruction Hours : 4

Exam Hours : 3

Credit :4

Subject Code:UMA1

Unit 1:

Relation between the roots and coefficients – Transformation of equations – Diminishing, Increasing, Multiplying the roots – Descartes's rule of signs - Simple Problems.
(12 Hours)

Unit 2:

Eigen values and Eigen Vectors - Verifications of Cayley – Hamilton's Theorem – Finding inverse using Cayley – Hamilton's Theorem - Simple Problems. (12 Hours)

Unit 3:

Solution of Algebraic and transcendental equations – Bisection method – Iteration method – Newton – Raphson method – Simple Problems. (12 Hours)

Unit 4:

Interpolation – Newton's forward & backward difference interpolation formulae – Interpolation with unevenly spaced intervals – Lagrange's interpolating Polynomial – Divided differences – Newton's General Interpolating formula. (No Proof only simple applications of the above formula) (12 Hours)

Unit 5 :

Hyperbolic functions – Relations between hyperbolic functions and circular Trigonometry functions – Inverse hyperbolic functions – Simple problems. (12Hours)

Text Books:

1. For units I and II - "Algebra" by T.K. Manickavasagam Pillai and S. Narayanan , S.Viswanathan Printers and Publishers Pvt. Ltd., Chennai.
2. For units III and IV - "Introductory methods of Numerical Analysis (Third Edition)", by Sastry, S.S. , Prentice Hall of India, New Delhi, 1998.
3. For unit V- "Trigonometry" by T.K. Manickavasagam Pillai and S.Narayanan , S.Viswanathan Printers and Publishers Pvt. Ltd., Chennai.

Reference Books :

1. Numerical Analysis – M.K. Venkatraman
2. Trigonometry – S. Arumugam and others
3. Algebra - M.L. Kannaa

**I SEMESTER
VALUE EDUCATION**

Internal Marks : 25	Instruction Hrs : 2
External Marks : 75	Credit : 2
Total Marks : 100	Exam Hrs : 3

UNIT I: Philosophy of Life

Human life on Earth (Kural 629) – Purpose of Life (Kural 46) – Meaning and Philosophy of Life (Kural 131, 226) – The law of Nature (Kural 374) – Glorifying all form of Life in this Universe (Kural 322, 327) – Protecting nature/ Universe (Kural 16,20,1038)

6 Hrs.**UNIT II: Individual Qualities**

Basic Culture (Kural 72,431) – Thought Analysis (Kural 282,467,666) –Regulating Desire (Kural 327) – Guarding Against Anger (Kural 158,305,306,314) – To get rid of Anxiety (Kural 629) – Rewards of Blessing (Kural 3) – Benevolence of Friendship (Kural 786) – Love and Charity (Kural 76) Self - tranquility / peace (Kural 318)

6 Hrs.**UNIT III: Social Values (Individual Social Welfare)**

Family (Kural 45) Peace in family (Kural 1025) – Society (Kural 446) – The Law of Life (Kural 952) – Brotherhood (Kural 807) – the Pride of Womanhood (Kural 56) – Five Responsibilities / Duties of man: - a) to himself, b) to his family, c) to his environment, d) to his Society, e) to the universe in his lives (Kural 43,983) – Thriftiness (Thrift) / Economics (Kural 754) – Health (Kural 298) – Education (Kural 400) – Governance (Kural 691) – Peoples' Responsibility / Duties of the Community (Kural 37) – World Peace (Kural 572)

6 Hrs.**UNIT IV: Mind Culture**

Mind Culture (Kural 457) – Life and mind – Bio-Magnetism, Universal Magnetism(God – Realization and Self Realization) – Genetic Center – Thought Action – Short term Memory – Expansiveness – Thought – Waves, Channelizing the Mind, Stages – Meditation (Kural 261,266,270) – Spiritual Value (Kural 423)

6 Hrs.**UNIT V :Tending Personal Health**

Structure of the body, the three forces of the body, Life body relation, Nature Causes and Unnatural causes for Diseases (Kural 941) – Methods in curing diseases (Kural 948, 949) The control over the basic five needs of life through simple physical exercises.

6 Hrs.

Reference:

1. Thirukkural with English Translation of Rev. Dr.G.U.Pope, Uma Publication, 156, Serfoji nagar, Medical College Road, Thanjavur. 613 004 (for All Units)
2. Value Education, The World Community Service Center Vethathiri, Publications, 156, Gandhiji Road, Erode. 638001, ([www. Vethathiri.org](http://www.Vethathiri.org)) First Edition 2009.