பருவம்: முதற் பருவம் பாடக் குறியீட்டு எண்: **LT101T**

அலகு பாடங்கள்

1. அலகு – 1 **(மரபு கவிதைகள்)**
   1.1 வள்ளலார்
   1.2 பாரதியார்
   1.3 பாரதிதாசன்
   1.4 கவிமணி
   1.5 கண்ணதாசன்

2. அலகு – 2 **(புதுக்கவிதைகள்)**
   2.1 அப்துல் ரகுமான்
   2.2 மு. மேத்தா
   2.3 வைரமுத்து
   2.4 தமிழச்சி
   2.5 நாட்டுப்புறப்பாடல்கள்

3. அலகு – 3 **(இலக்கிய வரலாறு)**
   3.1 இருபதாம் நூற்றாண்டுக் கவிஞர்கள்
   3.2 புதுக்கவிதையின் தோற்றமும், வளர்ச்சியும்
   3.3 சிறுகதையின் தோற்றமும், வளர்ச்சியும்
   3.4 நாட்டுப்புற இலக்கியங்கள்

4. அலகு- 4 **(சிறுகதைகள்)** கதவு – கி.ரா
   4.1 கதவு
   4.2 குடும்பத்தில் ஒரு நபர்
   4.3 ஜெயில்
   4.4 மின்னல்
   4.5 எழுத மறந்த கதை

5. அலகு – 5 **(மொழித் திறன்)**
   5.1 வல்லொாற்று மிகுமிடம்
   5.2 வல்லொற்று மிகாமிடம்

SEMESTER – I   ENGLISH THROUGH LITERATURE – I   LE101S

UNIT - 1   **[15 HRS]**
RELATIONSHIPS
Freedom at Midnight – Larry Collins and Dominique Lapierre (Prose)
Night of the Scorpion – Nissim Ezekiel (Poem)
Driving Miss Daisy – Alfred Ubry (Play)

UNIT-2   **[15 HRS]**
SELF ENHANCEMENT
Ulysses – Alfred Lord Tennyson (Poem)
Our Urgent Need for Self-esteem – Nathaniel Brandon (Prose)
Emotional Intelligence – Daniel Goleman (Prose)

UNIT - 3   **[15 HRS]**
BASIC GRAMMAR

The Sentence

Parts of Speech

Nouns – Classes and Gender

Nouns – Number and Case

Adjectives

Comparison of Adjectives

UNIT- 4
BASIC LANGUAGE SKILLS   **[15 HRS]**

Dialogue Writing
Letter writing – [Formal, Informal]
Comprehension

Text
1. Elango, K. **Insights : A Course in English Literature and Language**. Hyderabad: Orient Black swan Private Limited, 2009.
2. Bhatnagar, R.P., and Bhargava, Rajul. **English for Competitive Examinations**. Chennai: Macmillan India Press, 2002.
3. David Green, **Contemporary English Grammar: Structures and Composition**. Chennai: Macmillan India Limited, 2004.

Reference
1. Prince, Donna. **Skills for Success**, New York: CUP 1998.
2. Wallace, Michael, J. **Study Skills in English**. Kottayam: CUP, 2004.

SEMESTER – I   PROPERTIES OF MATTER & ACOUSTICS   PH101

UNIT- I: ELASTICITY-I   **(24 Hours)**

Hooke's law – stress – strain diagram – Modulus of elasticity - Relation between elastic constants – Poisson's ratio-Expressions for Poisson's ration in terms of elastic constants – work done in stretching and twisting a wire – Twisting couple on a cylinder —— Torsional pendulum with and without masses– Rigidity modulus and moment of inertia – Rigidity modulus by static torsion - q, n and σ by Searle's method .

UNIT- II: BENDING OF BEAMS   **(24 Hours)**

Cantilever – Expression for bending moment – Expression for depression – Cantilever (static & dynamic methods)– Expression for time period and Experiment to determine Young's Modulus – Non-Uniform bending – Uniform bending – expressions - Experiment to determine Young's modulus using pin & microscope and optic lever – Experiment to determine Young's modulus by Koenig's method (Non-Uniform bending).

UNIT- III: FLUIDS   **(24 Hours)**

Surface Tension – Molecular Interpretation - dimensions of surface tension – Excess of pressure over curved surfaces – Application to spherical and cylindrical drops and bubbles – Variation of surface tension with temperature – Jaegar's method

Viscosity: Co-efficient of viscosity and its dimensions – Rate of flow of liquid in a capillary tube – Poiseuille's formula – Experiment to determine co-efficient of viscosity of a liquid – variation of viscosity of a liquid with temperature and pressure –Viscosity of a gas – Rankine's method Applications of viscosity.

UNIT-IV: WAVES AND OSCILLATIONS   **(24 Hours)**

Transverse and longitudinal waves – Equation of wave motion – Plane Progressive wave – velocity of transverse wave on a string - Superposition of waves – Interference, reflection and transmission of waves – Resonance - intensity and loudness of sound - sound level – Decibel –Beats - stationary waves – organ pipes – Doppler effect.

UNIT-V: ULTRASONICS & ACOUSTICS   **(24 Hours)**

Ultrasonic - Piezo electric effect - Piezo electric crystal generator – Magnetostriction effect – Magnetostriction generator – Applications – Acoustics of buildings – Reverberation and time of reverberation & measurement – Sabine's formula – Absorption co-efficient – Acoustic aspects of halls and auditorium.

TEXT BOOKS:-

1. Murugeshan .R, 2006., Properties of Matter and Acoustics, New Delhi, S. Chand & Co.
2. Mathur D.S., 2006, *Properties of matter*, New Delhi: S. Chand & Co.
3. Brij Lal & Subrahmanyam, *Text Book of Sound*, New Delhi: N. Vikas Publishing House.

REFERENCE BOOKS:-

1. Baldevraj, *Science & Technology of Ultrasonic*, Narosa.
2. Bajaj N.K.,Physics of Waves&Oscillations,Tata McGraw Hill.

SEMESTER – I   ALLIED MATHEMATICS – I   AMT101S

UNIT-I: THEORY OF EQUATIONS
Polynomial Equations with real Coefficients – Irrational roots – Complex roots – Symmetric functions of roots.

UNIT-II: THEORY OF EQUATIONS (CONTD)
Transformation of equation by increasing or decreasing roots by a constant – Reciprocal equations – Newton's method to find a root approximately (without proof) .

UNIT-III:MATRICES
Characteristic equation of a square matrix– Eigen roots and eigen vectors – Cayley – Hamilton theorem [without proof] – Verification and computation of inverse matrix-

UNIT-IV: DIFFERENTIAL CALCULUS
n-th derivatives – Leibnitz theorem [without proof] and applications – Jacobians– Curvature and radius of curvature in Cartesian co-ordinates and polar co-ordinates.

UNIT-V: APPLICATION OF INTEGRATION
Evaluation of double, triple integrals – Simple applications to area, volume and centroid.

TEXT BOOK:
P. Duraipandian and Dr. S. Udayabaskaran. 1997, "Allied Mathematics" , Vol I & II. Chennai: Muhil Publishers.
 Unit-I: Sec(3.1,3.1.1,3.1.2,3.2,3.2.1),
 Unit-II:Sec(3.2.2,3.3,3,3.4),
 Unit-III:Sec(1.1.1,1.1.2,1.2,1.4.3),
 Unit-IV:Sec(2.7,4.1,4.1.1,4.2),
 Unit-V: Chap:3(3.4,3.4.1,3.5,3.5.1,3.5.2,3.6),

REFERENCE BOOKS:
1. P. Balasubramanian and K. G. Subramanian. 1997, "Ancillary Mathematics", Vol I & II. New Delhi: Tata McGraw Hill.
2. S.P.Rajagopalan and R.Sattanathan(2005), "Allied Mathematics", Vol I & II. New Delhi: Vikas Publications.
3. P. R. Vittal (2003), "Allied Mathematics",Chennai: Marghan Publications.
     P.Kandhasamy, K. Thilagavathy (2003), "Allied Mathematics" Vol I & II. New

SEMESTER – I VALUE EDUCATION VE101

Unit I

Values-Definition- Concept -Sources of values-Characteristics of values-Classification of values-Importance of value education-Erosion of values-Political erosion-social erosion-economic erosion.

Unit II

Personal values-Importance- Self concept-Meaning-the existential self- the categorical self- self - image- Ideal self- Attitude-Meaning-Formations-Factors determining attitude-Need for positive attitude-Developing positive attitude-Consequences of negative attitude.

Unit III

Adjustment problems- Emotional and sexual adjustments-Significance of youth period- Autonomy versus dependence -Feeling of inferiority- Marriage and family-Identity of roles- Vocational problems - Social discrimination- stress coping skills.

Unit IV

Social values-Meaning-Importance-Types-Social sensitiveness-Altruism-Toleration-Social adjustment- Social loyalty-Social justice-Panchsheel of values-Other social values-Family values- Value of team work-Functions of family-Moral values-Importance of moral values.

Unit V

Cultural values-Meaning-Importance -Religious values-Characteristics of religious values- significance of religious education- Secular values-mutual understanding –Mutual cooperation- Tolerance- Appreciation of universal truths- Character-Humanitarianism.

Text Books;
1. RATCHAGAR .I (2010) mental health of rural youth.vijay Nicole imprints private limited, Chennai.
2. RATCHAGAR .I (2012) Value education, personality enrichment& soft skills. Vijay Nicole imprints private limited, Chennai.

References;
1. Beliefs Attitudes and Values by Milton Rokeach (1968)
2. The Nature of Human Values by Milton Rokeach (Aug 1973)
3. Understanding Human Values by Milton Rokeach (Jul 1, 2000)
4. The Three Christs of Ypsilanti (New York Review Books Classics) by Milton Rokeach and Rick Moody (Apr 19, 2011)
5. Understanding Human Values by Milton Rokeach (Jul 1, 2001)
6. Health And Human Values by Frank Harron, (1983)

SEMESTER – I   Practical – I   PHP101

(Any nine out of the given 12 experiments**)**

1.   Young's Modulus by Non-Uniform Bending – Pin and Microscope

2.   Young's Modulus by Non-Uniform Bending – Optic Lever.

3.   Rigidity modulus- Torsional Pendulum – n of a wire (without masses)

4.   Rigidity modulus -Torsional Pendulum – n (with masses)

5.   Sonometer – Determination of Frequency.

6.   Sonometer – Determination of Specific Gravity of Solid and Liquid.

7.   Surface tension by drop weight and Interfacial liquid

8.   Comparison of Viscosity of two liquids

9.   Focal Length and Refractive Index of Convex Lens (u-v method and conjugate foci methods for 'f' and Boyle's method for R).

10. Spectrometer – μ of Solid Prism or Liquid Prism

11. Potentiometer – Calibration of low range voltmeter.

12. Rigidity modulus by Static Torsion (mirror and telescope method).