IV Semester Skill Enhancement Courses

Mathematics Stream:

Theory of Equations / Electrical Circuits & Network Skills

Bio-Sciences Stream:

Apiculture / Food Adulteration

Arts Stream:

Legal Literacy / Office Management

Commerce Stream:

Practice of Life Insurance / Banking Technology
Theory of Equations

2 Credits

Unit I

Graphic representation of a polynomial-Maxima and minima values of polynomials-Theorems relating to the real roots of equations-Existence of a root in the general equation –Imaginary roots-Theorem determining the number of roots of an equation-Equal roots-Imaginary roots enter equations in pairs-Descartes’ rule of signs for positive roots- Descartes’ rule of signs for negative roots-

Unit II

Relations between the roots and coefficients-Theorem-Applications of the theorem-Depression of an equation when a relation exists between two of its roots-The cube roots of unity- Symmetric functions of the roots-examples.

Text:

1. W.S. Burnside and A.W. Panton. *The Theory of Equations*

References:

1. C. C. Mac Duffee, *Theory of Equations*
2. Hall and Knight, *Higher Algebra*
ELECTRICAL CIRCUITS AND NETWORK SKILLS

UNIT-I

**Basic Electricity Principles:** Voltage, Current, Resistance, and Power. Ohm’s law. Series, parallel, and series-parallel combinations. AC Electricity and DC Electricity. Familiarization with multimeter, voltmeter and ammeter.


UNIT-II

**Generators and Transformers:** DC Power sources. AC/DC generators. Inductance, capacitance, and impedance. Operation of transformers.

**Components with DC or AC sources:** Resistors, inductors and capacitors. Diode and rectifiers. Components in Series or in shunt. Response of inductors and capacitors with DC or AC sources


**Reference Books:**
2. A text book of Electrical Technology - A K Theraja
Apiculture

2 Credits

Unit- I  Biology of Bees & Rearing of bees

1.1  History, classifications and Biology of honey bees
1.2  Social organisation of Bee colony
1.3  Artificial Bee rearing (Apiary), Bee keeping equipments
1.4  Methods of extraction of honey (indigenous & modern)

Unit- II  Bee economy & Diseases and enemies of bees:

2.1  Products of Apiculture industry and its uses, pollen etc.
2.2  Bee keeping industry recent efforts, modern methods.
2.3  Bee diseases and enemies.
2.4  Control and preventive measures.

Suggested Readings:

Food Adulteration

Unit-I

Definition and introduction to food adulteration
Types of food adulteration
Common food adulterants
Causes of food adulteration
Analysis of food

Unit-II

Effects of food adulteration
Prevention of food adulteration
Detection of common food adulterants
Food Adulteration Act-1954

Suggested Readings:

3. Dr. Sheela.S. prevention of Food adulteration.
Unit - I

1. Introduction: Judiciary – Significance and functions.
2. Sources of Law, Concept of Rule of Law and Judicial Review.
3. Judicial System in India – Supreme Court, High Court and District Courts.
5. Arbitration, Tribunal Adjudication and Alternate Dispute Resolution – Administrative Tribunals, Ombudsman, Mediation, Conciliation, Lok Adalats, Lokpal and Lokayukta.
6. Right to information Act – 2005

Unit – II

3. Public Interest Litigation (PIL)
4. Rights of Senior Citizens, Disabled, Tribal’s and Depressed Classes.

References:

1. Jeroma Hall, Principles of Criminal Law
2. Ratan Lal & Dhiraj Law, Indian Penal Code
5. V.R.Krishna Iyer, The Dialectics and Dynamics of Human Right in India
6. S.K.Kapoor, Human Right under Int.Law & Indian Law
7. Dr. Hemath Kumar, Lok Adalat In India - Genesis Law Practice And Prospects
8. Dr. Mamta Rao, Public Interest Litigation (PIL) - Legal Aid and Lok Adalats
Office Management

2 Credits

Unit I: Introduction

1. Office Management: Nature, Scope and Importance
2. Basic Principles of Office Organization
3. Office Accommodation
4. Office Automation and paperless Office

Unit II: Office Organization and Management

1. Office Planning and Lay-out Office Environment
2. Forms: Management and Control
3. Office Filing System and Classification
4. Office Communication, Correspondence
Paper : (SEC-2) : PRACTICE OF LIFE INSURANCE

Paper: SEC-2
Max. Marks: 50 (40+10)
PPW: 2 Hrs
Exam Duration: Hrs
Credits : 2

Objectives:
a) To make the student understand Life Insurance Market in India. b) To discuss the issues related to risk management in view of life insurance.

UNIT-I: INTRODUCTION TO LIFE INSURANCE AND TYPES OF LIFE INSURANCE POLICIES AND PREMIUM CALCULATION:

UNIT-II: SETTLEMENT OF CLAIMS RISK & UNDERWRITINGS AND FINANCIAL PLANNING & TAX SAVING:

SUGGESTED READINGS:
1. Insurance Institute of India, Practice of Life Insurance, Mumbai.
7. Sadhak, Life Insurance in India, Respose Books: New Delhi