# State Life Insurance Corporation of Pakistan (SLIC-PAK) (548)

### SYLLABUS FOR APPOINTMENT OF RED OFFICERS

### **CIVIL ENGINEERS**

#### **GENERAL**

English (Reading & writing skills)

Mathematics

Analytical Skills (Problem Solving)

### **SUBJECT**

**Geotechnical Engineering** (Classification of soil, particle distribution, SPT, Field Density Test, Permeability, Settlement etc)

**Engineering Mechanics**( Conditions of equilibrium, types of support reactions, friction, velocity, acceleration, linear and angular motion, momentum etc)

**Surveying** (Methods of surveying, levelling, Traversing, Tachometry, GIS, Remote Sensing, GPS, calculation of area, volume etc)

**Structural Engineering** (Types of structures, Design philosophy & codes, methods of design, design concepts for Beams, Columns, Slab, footing etc.)

**Construction Management** (Planning, ability to read & interpret drawings, specifications, define methodologies, quality control, time management etc)

**Other Subjects** (Building materials, Concrete, Bill of Quantities, Environment, water resources engg etc)

# MECHANICAL ENGINEERS

### **GENERAL**

English (Reading & writing skills)

Mathematics

Analytical Skills (Problem Solving)

#### **SUBJECT**

**Introduction to HVAC** (Concepts of Air conditioning systems, Principles, Refrigerant cycle, Chilling system

Cooling, Heating, Humidification/

Dehumidification Methods, Filtration, Psychometric chart, Properties of Air (DBT, %RH, WBT, , DPT, ENTHALPY, Refrigerant etc)

Elevators & escalators (Fundamentals of design of elevators and escalators, parameters, standards, certifications and safeties etc)

Fire fighting & Plumbing (Fire detection and suppression, fire alarm, types of fire systems including plumbing / pipe networks, devices etc)

**Measurement & instrumentation** (Basic principles for measurement of temperature, pressure, mass flow rate, volume flow rate, length and motion, Instruments and gauges, Calibration, accuracy, repeatability and error analysis )

**Mechanics of Materials** (Mechanical properties of materials, Stress & Strain: Hooke's law, stress strain relationship, thermal stresses, plane stress and strain, principal stresses and strains etc)

Other Subjects (Machine Design, Energy Resources and Utilization, CAD-CAM and Automation, CONTROL ENGINEERING etc)

# SYLLABUS FOR APPOINTMENT OF RED OFFICERS

### **ELECTRICAL ENGINEERS**

### GENERAL

English (Reading & writing skills)

Mathematics

Analytical Skills (Problem Solving)

# SUBJECT

**Electric Circuits** (Electrostatics, Electrodynamics, Electrical circuit elements, DC and AC electric circuits, Magnetic circuits, Fundamental Circuit Laws, Circuit theorems, etc)

**Electronics** (Semiconductor, Semiconductor devices, Biasing circuits, Rectifiers, Power supplies, Applications of transistors as switches and amplifiers, Transducers, Lasers basics etc)

**Electric Power** (Single-Phase and Poly-Phase circuits, Star delta transformation, Power triangle and power factor corrections, Phasor diagrams, Voltage regulation, Transformers, DC and AC machines)

Instrumentation and Measurement Systems (Precision Measurements Terminologies: resolution, sensitivity, accuracy, uncertainty, Engineering units and standards, Principles of different measurement techniques, Instruments for Measurement of Electrical Properties: pressure, temperature, position, velocity, flow rates, Modern instrumentation techniques etc)

### ARCHITECTURE ENGINEERS

### GENERAL

English (Reading & writing skills)

Mathematics

Analytical Skills (Problem Solving)

### **SUBJECT**

### **Materials & Methods of Construction (Art,**

architecture, structure, materials, construction. evolution of building materials by chronological approach, Properties of Building Materials)

**Design Fundamentals**(Comparison between designed and non-designed objects.

Appreciation of design criteria; Design as a process. Visual Perception; Light and

Contrast- value, hue, intensity, two-dimensional forms, three-dimensional composition etc)

### Architectural Graphics(Lines, lettering and

dimensioning, reduction and enlargement of drawings on different scales, Simple

Geometrical Constructions, Orthographic Projections, architectural plans, elevations and sections etc)

Climatology (Global climate factors, elements of climate, classification of climatic zones, desirable conditions, principals of thermal conditions, sun path, sun angles, SAP, sunshine hours, solar noon, declination,

extraterrestrial radiation, solar constant, radiation etc)

### TELECOMMUNICATION ENGINEERING

(Telecommunication Systems, Digital subscriber line, ISDN networks, GSM systems and applications, WiMAX, Cellular networks. Propagation models in mobile radio systems, Telecommunications Switching, Circuit switched networks etc)

**Other Subjects** (Controls Engg, Project Management, Testing, Building Management system etc)

**Evolution of Architecture** (Prehistoric Settlements & Megalithic Constructions,

Ancient Mesopotamia, Egypt, Mesoamerica, Indus Valley Civilization, Vedic Village,

Stupa Architecture, Rock-Cut Architecture etc)

Other Subjects (CAD designing, Proejct Management, Model making, Land forms & Survey etc)

### SYLLABUS FOR APPOINTMENT OF RED OFFICERS

### **MARKETING OFFICERS**

### **GENERAL**

English (Reading & writing skills)

Communication skills

Analytical Skills (Problem Solving)

#### **SUBJECT**

### PRINCIPLES OF MANAGEMENT (Nature of

Management, Importance of Management, Functions of Management, Administration and Management, Management Science or Art, Functional Areas of Management, Evolution of Management etc)

**BUSINESS LAW** ( Rights, Duties and Liabilities, Legal Personality, Law and Fact, Cases and Legislation Mercantile Law and commercial Law etc)

BUSINESS COMMUNICATION (Objectives and Principles of Communication, Communication Media, Types of Communication Process, Interpersonal and Business Communication, Characteristics, Verbal and Non-Verbal ommunications, Barriers to Communication.

BUSINESS ECONOMICS (Definition and Concept of Economics, Nature of Economic Laws, Methods of Economic Enquiry, Meaning of Micro and Macro Economics, Fundamental Concepts, Wants, Utility, Value, Wealth, Welfare etc.

**FINANCIAL MANAGEMENT** (Nature of Financial Management, Finance Function, Meaning and Objectives of Financial Management, Scope of Financial Management, Functions of Financial Management etc.

ELEMENTS OF MARKETING (Definition and functions of Marketing, Market, Types of Market, Importance of Marketing, Marketing in Developed and Developing Countries, Buyer's Market, Seller's Market, Marketing and Selling, Marketing Concept, Selling Concept, Consumer Orientation, Modern Marketing Concept, Marketing Mix etc.

#### **LAW OFFICERS**

### GENERAL

English (Reading & writing skills)

Communication skills

Analytical Skills (Problem Solving)

#### **SUBJECT**

LAW OF PROPERTY (basic principles of property law with particular reference to land, both with the urban and rural property, meaning of ownership of land, sale and purchase of immovable property, mutation of property/ownership, co-ownership, tenancy and preemption laws, acquisition of land, transfer, leases and various kinds of mortgages.

**CORPORATE LAW** (formation of corporate bodies and their functioning, company law as practiced in Pakistan, principles of company law, their incorporation, kinds, the doctrine of ultra vires, resolutions and their legal status, liabilities and winding up, business partnerships (Firms) and relevant provisions of the Security and Exchange Commission of Pakistan.

LAW OF CONTRACT (law of Bailments, Agency and Sale of Goods, mutual obligations of a principal and agent, formation of contract of sale, passing of property, rules of delivery and the rights and obligations of the sellers and buyers.

**CIVIL PROCEDURE** ( jurisdiction of civil courts, their functioning, 34 rules of institution of civil suits, orders, decree and judgments; execution of decrees, and appeal, review and revision, provisions of the Code of Civil Procedure, 1908.

**CRIMINAL PROCEDURE** ( provisions of the Criminal Procedure Code, 1898.

**Other Subjects** (LEGAL DRAFTING, EQUITY AND SPECIFIC RELIEF, ADMINISTRATIVE LAW, INTERPRETATION OF STATUTES etc.)