

West Bengal Cooperative Service Commission

Syllabi for the Written Examination against Advt. No. 01/2021

Paper-I (COMMON PAPER FOR ALL POST CODES)

General English:

(1) Noun & Pronoun; (2) Verb; (3) Infinitive & Gerund; (4) Tense; (5) Mood & Voice; (6) Adverb & Conjunction; (7) Adjective & Degree (Positive, Comparative & Superlative); (8) Preposition; (9) Synonyms, (10) Antonyms; (11) Phrases & Idioms (12) Spelling Mistake detection; (13) Interrogative Sentence; (14) Spotting of Error in a Sentence.

General Awareness:

(1) Indian History, (2) Indian Geography, (3) Indian Economy (4) Public Administration in India [including Constitution & Democratic Federal Division of Governance]; (5) Agriculture & Allied Activities in West Bengal; (6) Science & Technology; and (7) Current Affairs.

Quantitative Aptitude (Arithmetic & Mensuration):

(1) Simple Interest Calculation; (2) Compound Interest Calculation; (3) Percentage; (4) Profit & Loss; (5) Ratio & Proportions; (6) Unitary Method; (7) Time & Distance; (8) Time & Work; (9) Simplification; (10) Square & Square Roots; (11) Highest Common Factor (HCF); (12) Lowest Common Multiple (LCM); (13) Average and Problem of Age; (14) Decimal Fractions; (15) Elementary Mensuration.

Test of Reasoning:

(1) Analogy; (2) Classification; (3) Series; (4) Missing Characters; (5) Blood Relations; (6) Number Sequence; (7) Ranking Sequence; (8) Time Sequence; (9) Coding-Decoding; (10) Problems based on Alphabets; (11) Venn Diagrams; (12) Cubes & Dice; (13) Analytical Reasoning; (14) Numerical Aptitudes; (15) Direction Test.

Paper II

Post Code	Name of subject (Paper II)	Total Marks
22001	Fundamentals of Accountancy & General Banking Awareness-II	100
22002	Administrative Management & General Banking Awareness	100
22003	Computer Science with emphasis on Networking & DBMS	100
22004	Administrative Management & General Banking Awareness	100
22005	Law	100
22006	Fundamentals of Accountancy & General Banking Awareness-II	100
22007	Electrical-cum Electronics Engineering & DBMS	100
22008	Fundamentals of Accountancy & General Banking Awareness-I	100
22009	Fundamentals of Accountancy & General Banking Awareness-I	100
22010	Fundamentals of Accountancy & General Banking Awareness-II	100
22011	English and Bengali Languages (Subjective type and qualifying in nature) 50+50	100

Computer Science with emphasis on Networking and DBMS

1. C Programming Basics,
2. 2 MS Office,
3. Windows OS and Programming,
4. DBMS, Data Communication and Networking,
5. Network Security,
6. Web Technologies,
7. Basic Programming concepts,
8. Basics of Hardware (Microprocessor, Timer, ALU etc.),
9. Software Engineering,
10. Operating System,
11. Computer Organization

Fundamentals of Accountancy & General Banking Awareness-I

FUNDAMENTALS OF ACCOUNTING & BOOK KEEPING

Question may be of any form/type to test the basic knowledge and understanding of the candidate of the following matters of financial accounting.

- 1) Principles of Book-keeping and Accountancy – its significance; rules of debit and credit; bases of accounting, concept of cost and revenue.
- 2) Accounting Concepts & Conventions.
- 3) Accounting Terminologies- understanding meanings of them.
- 4) Types of Book Keeping and rules thereof.
- 5) Names and Uses of various types of Vouchers, Challans, Invoices, and other records preserved in Financial Accounting.

Maintenance of different books of accounts

- 1) Books of Prime Entry and books of Final Entry; journal and Ledger.
- 2) Preparation of Cash Book- kinds of Cash Book, writing of Double Column Cash Book.
- 3) Assets & Liabilities; expenses and losses; profits and gains.
- 4) Valuation of Closing Stock.
- 5) Capital Expenditure and Revenue Expenditure, Capital Receipts and Revenue Receipts; Credit Sale/Credit Purchase, Sundry Creditors/Debtors Account/Bills Receivable/Bills Payable.
- 6) Preparation & maintenance of General Ledger.
- 7) Preparation of Day Books.
- 8) Preparation of Bank Reconciliation Statements (BRS).

Miscellaneous Accounting Practices & Procedures

- 1) Definitions for Bad Debts / Non-Performing Assets (NPA) and provisions for the same.
- 2) Methods of Depreciation Calculation in respect of different categories of assets.
- 3) Types of Reserves.
- 4) Testing the knowledge & ideas of handling TDS and Filing of Tax Returns.
- 5) Net Profit Fixation & Dividend Payments.

Accounting Standards adopted in India, especially in Banking Sector

- 1) Definition, application and utilities of the Accounting Standards.
- 2) GAAP.
- 3) Notable differences in Hand-written Formats & Computerised Formats in keeping Books of Accounts; Preparation of various Accounting Statements.
- 4) Reporting of various financial statements (converged IFRS by the ICAI).
- 5) Accounting for Non - profit making organizations/Cooperative Societies/Banks.

Preparation of Important Financial Statements

- 1) Types of errors and their rectification.
- 2) Preparation of Trial Balance; identification of items included in/excluded from Trial Balance.
- 3) Preparation of Trading, Profit and Loss & Profit & Loss Appropriation Account.
- 4) Preparation of Balance Sheet; marshalling of Balance Sheet.
- 5) Preparation of Post-Balance Sheet Statements, if required.

Analysis of Balance Sheet and calculation of important Ratios

Definition and calculation of:

- 1) Net Profit Ratio / Gross Profit Ratio;
- 2) Return on Equity;
- 3) Return per Share;

- 4) Return on Investment;
- 5) Debt Equity Ratio;
- 6) Current Ratio;
- 7) Quick Ratio;
- 8) Debt to total fund Ratio;
- 9) Capital Turnover Ratio;
- 10) Net Working Capital Turnover Ratio;
- 11) Fixed assets Turnover Ratio;
- 12) Stock Turnover Ratio;
- 13) Debt Service Coverage Ratio;
- 14) Capital Adequacy Ratio.

Audit

- 1) Definition of Audit and difference from Investigation and Enquiry.
- 2) Types of Audit and importance of each.
- 3) Difference between External and Internal Audit.
- 4) Preparation and Types of Audit Reports.
- 5) Reply of Audit Queries/Auditor's Comments/Follow up actions on Audit Reports.
- 6) Performance Audit of Consumers and Trading Cooperatives.
- 7) Treatment of Normal/Abnormal Loss/Insurance Coverage.

GENERAL BANKING AWARENESS

- 1) Government schemes and programmes for alleviation of poverty.
- 2) Basic Concepts of Modern-day Banking.
- 3) Services and products offered by Banks in India.
- 4) Role of Reserve Bank of India and NABARD in credit delivery mechanism.
- 5) Basic knowledge of important Banking laws especially the Banking Regulation Act, 1949 (As Applicable to Co-operative Societies).
- 6) Loans advanced by Banks including rural banks and recovery mechanism through various Acts & Rules.
- 7) Structure of District Administration & Public Administration.
- 8) Role of Panchayat Institutions and its interface with cooperative structure.
- 9) History of Cooperative Movement in India and West Bengal.
- 10) Role of cooperative societies in rural development.

Fundamentals of Accountancy & General Banking Awareness-II

Fundamentals of Accountancy

1. Company Accounts:
 - a) Issue of shares and debentures.
 - b) Conversion of fully paid shares into stock option.
 - c) Underwriting of shares and Debentures.
 - d) Preparation and presentation of company final accounts.
 - e) Redemption of preference shares; Redemption and conversion of Debentures.
 - f) Amalgamation, Absorption and Reconstruction of Companies.
2. Valuation of business; Valuation of Goodwill; Valuation of shares.
3. Consolidated Balance Sheet of Holding Companies.
4. Investment Accounts.
5. Cash Flow Statement.
6. Fund Flow Statement.
7. Accounting Ratios.
8. Accounting Standards.
9. Valuation of Mutual Fund.
10. Value Added Statement.

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ADMINISTRATIVE MANAGEMENT and GENERAL BANKING AWARENESS

Administrative Management

- Unit 1: Management – Concept, definition and nature or features. Different levels of Management. Distinction between administration and management – Qualities of a manager.
- Unit 2: (a) Planning: Concept, importance, types, stages, premises, barriers to effective planning and remedial measures; strategic planning – Concept; forecasting: Concept, techniques.
(b) Policy: Concept, importance, characteristics and application; Distinction between policies and procedures; Relation between planning and forecasting.
- Unit 3: Organising: Concept, importance, principles, different organisation models – Line and Staff, functional; departmentation- need, basis, principles; Delegation of authority- elements, stages and barriers; Centralization and decentralization of authority; span of management-Concept and determining factors.
- Unit 4: Motivation: Motivation and Morale at the workplace.
- Unit 5: The judicial approach to Discipline,
- Unit 6: Leadership: Concept, leadership styles.
- Unit 7: Communication: Nature, process, types and barriers.
- Unit 8: Control: Concept, Process, Tools and Techniques.
- Unit 9: Co-ordination: Meaning, Principles and Techniques.
- Unit 10: Trade Union – Concept and Role.

General Banking Awareness

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CIVIL ENGINEERING

I. THEORY AND DESIGN OF STRUCTURES

(a) Theory of structures and strength of materials: -

(i) Solid Mechanics – properties of material, Mohr's circle of stress-strain, plain stress & strain, combined stress, simple bending, shear, torsion of circular and rectangular sections, columns and struts, moving loads and influence lines for shear force and bending moment for simple and continuous beams and frames, thin cylinders under internal pressure stresses and volume changes, Deflection of beams. (ii) Structural Analysis – Analysis of determinate structures. Different methods of analysis of indeterminate structures – moment distribution, slope-deflection, strain energy method, three moment theorem, Muller Breslau Principle and application, etc, analysis of determinate and indeterminate arches, moving loads and influence line diagrams

(b) Steel Design – (Design of Steel Structures): -

Principle of working stress method, Design of all types of connection, Simple members, built up sections and frames, Design of Industrial structures and Multistoreyed frames, design of tubular structures, codal provisions for design of all those steel structures including foundation. Principle of ultimate load design; Plastic design of continuous frames and portals.

(c) Design of Reinforced Concrete and Masonry Structures: -

Limit state method of design, codal provisions for design, working stress method of design, concrete mix design & quality control, earthquake resistant ductile design, principles of prestressed concrete design, materials, methods of prestressing, losses in prestressing, anchorages.

II. FLUID MECHANICS AND HYDRAULICS

Fluid properties and definitions, flow kinematics, continuity momentum and energy equations applicable to fluid flow, Bernoulli's theorem, flow through conduits, flow through open channels, Hydraulic jump, flow through pipes and losses in pipe flows, siphons, pipe network, forces in pipe ends, hydraulic energy grade line, water hammer, viscosity, definition of ideal fluid.

III. SOIL MECHANICS AND FOUNDATION ENGINEERING

(i) Properties of soils, classifications and interrelationship, definitions of terms used, soil testing in laboratory and in-situ, compaction behaviour, methods of compaction and their choice; permeability and seepage, flow nets, flow under hydraulic structure, uplift and quicksand condition inverted filters, unconfined and direct shear stress, triaxial test, shearing resistance, earth pressure theories, stability of slopes, compressibility and consolidation, theories of consolidation, pressure distribution in soils, soil stabilization techniques, soil exploration and penetration tests, pore water pressure.

(ii) Types of foundation, selection criteria, bearing capacity, settlement, laboratory and field tests, codal provisions in all types of foundation including testing of piles etc. Types of piles and their design and layout, foundations on expansive soils, swelling and its prevention, reinforced earth technique and its use.

IV. SURVEYING

Classification of surveys, scales, accuracy; Measurement of distances-by direct and indirect methods, optical and electronic devices, Measurement of directions, Prismatic compass, local attractions; Theodolites-types, Measurement of elevations, trigonometric levelling, contours, Establishment of control by triangulations and traversing. Measurements and adjustment of observation, Computation of coordinates; Errors and their

corrections of measurement of length, bearing horizontal and vertical angles and levelling operation, Correction due to refraction and curvatures, Map preparation by plane tabling and photogrammetry; concept of global positioning system; Remote sensing concepts, map substitutes; Setting out directions and grades; types of curves, setting out of curves and excavation lines for building foundation.

V. CONSTRUCTION MATERIALS, PRACTICES, PLANNING AND MANAGEMENT

- (1) Building Materials specifications, tests, uses and code provisions, building construction.
- (2) Concrete technology – Cement and its properties, classification and specification – Provisions in I.S. code. Properties of coarse and fine aggregates – Provisions in I.S. code, concrete mix design, Laboratory concrete, Ready mixed concrete, field tests for quality control of concrete, concreting equipments.
- (3) Earth moving machineries and pile driving equipments.
- (4) Construction planning and management – Bar chart, linked bar chart, work break down structures, Activity-on arrow diagrams, critical path, probabilistic activity durations, Eventbased network, PERT Network, Time Cost study, crashing, Resource allocation, Rescheduling of construction programme.
- (5) Quantity surveying; Methods of valuation, pricing and measurement of works; Rudiments of legal and technical aspects of engineering contracts.

VI. HIGHWAY ENGINEERING INCLUDING TRAFFIC ENGINEERING

Planning of Highway systems, its classification, objects and principles, Geometric design of highway alignment, gradients, super-elevation, camber, sight distances, etc. Horizontal and Vertical curves, Transition curves, grade separations, Segregation of traffic and intersection design. Materials of highway construction its properties and tests. Sub-grade and pavement components, Types of pavements & Road drainage. Principles of highway financing, Design of pavements, evaluation of pavement failure and strengthening. Construction methods and quality control measures for highway embankment, sub-grade, pavement courses and bituminous surfacing. Elements of design and construction of highway – Bridges and culverts including their maintenance. Principles of transportation planning; forecasting techniques, origin and destination study; Highway capacity; Arterial routes; one-way roads and bye-pass roads; Ribbon development; Traffic control devices; Traffic study and parking surveys, speed, volume and delay studies; Accident characteristics; Traffic signal; Traffic projection factor.

VII. WATER RESOURCES ENGINEERING

- (1) **Hydrology** – Hydrologic cycle, Measurements, Computations and statistics; Run off and stream flow, Measuring techniques and computations; Hydrographs, Computations and interpretation; ground water, Estimation, Measurements, Characteristics.
- (2) **Irrigation Engineering** – Types of irrigation systems and their detail description, soilwater- crop relationship; Types of soils; water requirement of crops; Delta and duty. Classification of rivers; River Regime Theory; Effects of dams on river regime; River training works. Irrigation channels; Design principles of irrigation canals, Drainage channels and Navigation canals; canal linings; canal outlets. Water logging and salt efflorescence, land reclamation.
- (3) **Hydraulic structures** – Storage Reservoirs; Different types of dams and their design principles; Weirs, barrages and their design principles; spillways, Energy dissipation by hydraulic jump; different types of energy dissipation. Headworks; cross drainage works; Falls and Regulators.

VIII. ENVIRONMENTAL ENGINEERING

- (1) **Water Supply Engineering**: - Water uses, Quantity requirements, potable water quality, sources of water, ground water hydraulics, Development of surface source; Reservoir volume, Transmission of water. Treatment of water; Typical flow-sheets for surface and ground sources; sedimentation, coagulation and

flocculation, filtration, disinfection, hardness and chemical softening; Rudiments of Ion-exchange; Elements of rural water supply and removal of Iron, Arsenic and salinity from water. Principles and methods of design of distribution systems, service reservoirs, and Intakes for urban and rural water supply.

(2) Waster Water Engineering :- Sanitary Waster Water and Stormwater runoff : Quantity estimation, Sewerage systems and their design principles; Sewer construction materials; structural design of sewers; Sewer appurtenances; Characteristics of domestic sewage; Typical flow-sheets for primary and secondary treatment; Design principles of screen, grit removal, sedimentation, Bio-filter, Activated sludge process and Septic tank, Elements of industrial sewage and its treatment; Rural Sanitation its principles and practices.

(3) Environmental pollution and control: – Atmospheric pollution: Types of pollutants, Natural and man-made sources, Effects of air pollution, unit systems; Rudiments of control methods; Elements of noise pollution. Community solid wastes; Sources, Quantity and characteristics, Methods of disposal, Reuse and cycling. Water quality management; Quality criteria for major uses of water; Applied stream sanitation.

MARKETING MANAGEMENT- I **(Elementary Ideas)**

- **Marketing Management- Meaning and importance**
- **Functions of Marketing**
- **Difference between Selling and Marketing**
- **Marketing concept**
 1. Exchange Concept
 2. Production Concept
 3. Product Concept
 4. Selling Concept
- **Marketing Mix**
- **Segmentation**
 1. Requirement of Market Segmentation
 2. Benefits of Segmentation
 3. Aggregation and Segmentation
 4. Basic Segmenting Market
- **Targeting**
 1. Evaluation of Market Segments
 2. Selecting of Market Segments
- **Positioning**
- **Marketing Environments**
 1. Consumer Needs and Motivation
 2. Consumer Perception
 3. Group Dynamics
 4. Social surrounding and its impact on Marketing
 5. Consumer Behaviour- Importance and Application in Marketing
- **Advertising**
 1. How advertising budget is decided?
 2. Different Advertising Media
- **Personal Selling and its objectives**
- **Sales Promotion- important tools of Sales Promotion**
- **Relationship Marketing**
 1. Meaning of Relationship Marketing
 2. Relationship Marketing Vs. Marketing relationship
 3. Characteristics of Relationship Marketing
 4. Importance and principles of Relationship Marketing

Role of Reserve Bank of India and NABARD in credit delivery mechanism

Handloom and Textile Technology

FIBRE SCIENCE AND TECHNOLOGY:

Definition, Basic requirement of textile fibre, Various classifications of textile fibres, their origin and chemical nature, properties, manufacturing, staple fibre, filament, uses etc.

YARN MANUFACTURE:

Definition of yarn, Mixing, Blending and Opening, Blow Room, Carding, Draw frame, Combing, Speed frame, Ring frame, Modern Ring Frame, Doubling, Reeling, Bundling and Baling

FABRIC MANUFACTURE:

Warp Winding and Weft Winding, Warping and Sizing, Loom - Primary Motions, Loom - Secondary and Auxiliary Motions, Drawing-in, Denting & Calculations, Dobby & Jacquard mechanisms, Multiple box and Terry motions, Automatic weaving, Projectile, Rapier weaving, Jet and Multiphase weaving, etc.

TEXTILE WET PROCESSING:

Grey inspection, stitching, mending, cropping, singeing, desizing, scouring, bleaching, mercerization, dyeing, printing, finishing, textile processing chemicals and auxiliaries, different colour fastness properties, wet processing machines- jigger, winch, padding mangle, stented, Jet dyeing machine, etc.

TEXTILE TESTING:

Moisture relations in textiles, Moisture content, Moisture regain and standard regain, fibre testing -length Fibre fineness, Micronaire, Fibre maturity, Fibre strength, analysis of Trash content, Yarn count, Twist, yarn strength, Yarn evenness, Uster Evenness Tester and Uster classmate, Beesley Balance, thickness tester, crimp tester, Warp & weft cover factor - Fabric cover, crease recovery tester, Fabric handle, serviceability, abrasion and drape, Fabric Pilling Tensile Strength, tearing and bursting strength, Fabric Air Permeability and Fabric Air Resistance, statistical quality control, etc.

FABRIC,STRUCTURE:

Principles of design, draft and peg plan plain weave warp rib, weft rib, mat weaves, twill weaves, satin weave, sateen weave, herringbone twills, broken twills, transposed or re-arranged twills, elongated twills, combination of twill weaves, Knitted fabric Structure - face loop, back loop, needle loop, sinker loop, stitch length, texture, plain, 1 x 1 rib, 1 x 1 interlock structure, etc.

HANDLOOM TECHNOLOGY:

Various Parts of a handloom and their function, Type of handloom - Throw Shuttle handloom, Fly shuttle handloom - Pit loom & Frame loom, Motion of handloom- Definitions of primary, Secondary & Auxiliary Motion, Different type of shed formations - Centre Close shed, Bottom Closed shed, Top close shed, Open-shed and Semi - open Shed, Shedding mechanism of a handloom using treadles and Heald Reversing motions- Roller system, Pulley system and jack and lam- rod system, Picking mechanism of a handloom, Type of shuttles - Throw shuttle, Fly shuttle and Roller shuttle- Design and Suitability, Beating - Closed and crossed shed beating, Different type of reed- Bamboo reed, pith bound steel reed and all metal steel reed, Let of Motion Handlooms- Ratchet and Pawl, rope and weight, rope - lever and weight, Take up motion in handlooms - Poker rod and ratchet & pawl, etc.