

SYLLABUS, QUESTION PATTERN, FULL MARKS & DURATION OF EXAM**1. Accounts Officer (Group- B Category) :-****QUESTION & MARKS****1st Shift : (Duration of Examination – 3 hr./ Full Marks : 100)**

- | | |
|--------------------------------------|------------|
| i) 20 Short questions one mark each | - 20 Marks |
| ii) 10 questions of Three marks each | - 30 Marks |
| iii) 5 questions of Six marks each | - 30 Marks |
| iv) 2 questions of Ten marks each | - 20 Marks |

2nd Shift : (Duration of Examination – 30 Min./ Full Marks : 50)

Tally skill test : (Qualifying only)

N.B.- Minimum securing 30% of mark in Tally skill test only will qualify and their marks in written examination will be counted in merit list preparation.

Syllabus

a) **FINANCIAL ACCOUNTING** : Accounting as a financial information system; Impact of behavioral sciences. Accounting Standards e.g. Accounting for Depreciation, Inventories, Gratuity, Research and Development Costs, Construction Contracts, Revenue Recognition, Fixed Assets, Contingencies, Foreign Exchange Transactions, Investments and Government Grants, Problems of Company Accounts relating to Amalgamation, Absorption and Reconstruction of companies and Valuation of Shares and Goodwill.

b) COST ACCOUNTING :

Nature and Functions of Cost Accounting. Job Costing. Process Costing.

Marginal Costing; Technique of segregating semi- variable costs into fixed and variable costs.

Cost- volume- profit relationship ; Aid to decision making including pricing decisions, shutdown etc.

Techniques of Cost Control and Cost Reduction : Budgetary Control, Flexible Budgets, Standard Costing and Variance Analysis, Responsibility Accounting, investment, Profit and Cost Centers.

c) TAXATION :

Definitions, Basis of Charge, Incomes which do not form part of Total Income.

Simple problems of computation of income under various head, i.e. Salaries, Income from House Property, Profits and Gains from Business or Profession, Capital Gains, Income of other persons included in Assessee's Total Income.

Aggregation of income and set off/ Carry forward of Loss.

Deductions to be made in Computing Total Income.

d) AUDITING :

Audit of Cash Transactions, Expenses, Incomes, Purchases and Sales.

Valuation and Verification of Assets with special reference to Fixed Assets, Stocks and Debts.

Verification of Liabilities.

Audit of limited companies; Appointment, Removal, Powers, Duties and Liabilities of company Auditor, Significance of ' true and fair', MAOCARO report (Manufacturing and Other Companies Audit Report Orders).

Auditor's report and qualifications therein.

Special points in the audit of different organizations like Clubs, Hospitals, Colleges and Charitable Societies.

BUSINESS FINANCE AND FINANCIAL INSTITUTIONS:**e) Financial Analysis and Management of working capital .**

Finance Function – Nature, Scope and Objectives of Financial Management-Risk and Return relationship.

Financial Analysis as a Diagnostic Tool.

Management of Working Capital and its Components-Forecasting working capital needs, Inventory, Debtors, Cash and Credit Management.

f) Investment Decisions and Cost of Capital :

Investment Decisions- Nature and scope of Capital Budgeting- Various types of decisions including Make or Buy and lease or Buy, Technique of Appraisal and their applications.

Consideration of Risk and Uncertainty, Analysis of Non- Financial Aspects.

Rate of Return of Investments- Required Rate of Return-its measurement- cost of capital-weighted Average cost – different weights.

g) Capital structure and Valuation of Firms and Securities .

Capital structure- Leverages-Significance of Leverages- Theories of Capital Structure with special reference to Modigliani and Miller Approach. Planning the Capital Structure of a Company; EBIT- EPS Analysis, Cash- Flow ability to service debt, Capital Structure Ratios, Other Methods.

Concepts of valuation – valuation of firm's Fixed Income Securities and Common Stocks.

Dividend and Retention Policy- Residual Theory of Dividend Policy. Other Models- Actual Practices.

h) **Raising of Finance and Financial Markets :**

Raising finance – short term and long term. Bank finance – norms and conditions.

Financial Distress – Approaching BIFR under sick industrial undertakings Act : Concept of sickness, Potential sickness, Cash Loss, Erosion of Net Worth.

Money Markets – the purpose of money markets, money market in india- Organization and working of capital markets in India. Organization, Structure and Role of financial institutions in India. Banks and Investing Institutions- National and International Financial Institutions- their norms and types of financial assistance. Inter-bank lending- its regulation, supervision and control system of consortium Finance- Supervision and regulation of Banks.

Monetary and credit policy of Reserve Bank of India.

2. **District Manager (Group- B Category) :-**

QUESTION & MARKS

(Duration of Examination – 3 hr./ Full Marks : 100)

- | | |
|-------------------------------------|------------|
| a) 20 Short questions one mark each | - 20 Marks |
| b) 10 questions of Three marks each | - 30 Marks |
| c) 5 questions of Six marks each | - 30 Marks |
| d) 2 questions of Ten marks each | - 20 Marks |

Syllabus:

a) **Surveying :-**

Chain survey, compass survey, plain table survey, computation of area, leveling, contour survey, land leveling, earth work computation, land grading, land shaping, layout of fields. Irrigation and drainage systems planning.

b) Fluid mechanics and irrigation :

Hydraulics of flow, open channel flow, steady and unsteady, uniform and non uniform, laminar and turbulent, Reynolds number, Fraude number, critical depth, hydraulic jump, Chezy's and Manning's formula. Soil- water-plant relationship, soil moisture types and its measurement, movement of water in soil, evaporation, transpiration, evapotranspiration, water requirement of crops, field capacity, wilting point, available soil moisture, consumptive use-methods of estimation, irrigation efficiencies, irrigation scheduling, irrigation methods gravity and pressure irrigation systems and their adoptability, micro irrigation system, measurement of irrigation water, irrigation planning and farm water management, earthen channel, lined channel, lining materials, culverts, inverted siphons, underground pipe irrigation management, participatory irrigation management, irrigation pumps types and suitability, selection of pumps installation of pumps, care and maintenance of pumps.

c) Drainage :

Water logging problems in crops, drainage co-efficient, role of drainage in cropped area, drainage investigation and selection, open drains on farm, field surface drainage, sub-surface drainage interceptor drain, mole drain, tube-well drainage, bio-drainage, saturated hydraulic conductivity, salinity control and drainage water –utilization.

d) Groundwater and surface hydrology ; wells and pumps :

Hydrologic cycle measurement of rainfall, evaporation, infiltration, estimation of runoff, factors affecting runoff, computation of volume of runoff and peak flow, unit hydrograph. Occurrence of ground water and it's; movement, aquifer types, well screens, gravel packing, radius of influence, transmissibility, basin- wide ground water development, ground water recharge, artificial recharge, ground water investigation, well hydraulics, types of shallow and deep tube wells, their method of construction, design of tube wells and open wells, multiple well systems, boring and deepening of open wells, sealing of brackish and saline aquifer horizons, well development, draw down-yield relationship.

e) Soil conservation and Watershed Management :

Soil erosion, types, factors affecting different kinds of erosion, methods to control soil erosion- biological control measures, contour farming, strip cropping, mixed cropping, inter cropping, mulching, mechanical control measures- their suitability for different conditions- design of contour ditches, contour bunds, graded bunds, bench terraces, contour stone wall gully control structures vegetative control method- brush dams, loose rock dam, drop spillway, chute spillway and drop inlet spillway, universal soil loss equation, vegetated water ways-its design.

Watershed concept, land capacity classification, objectives of watershed management- selection of priority area, management of natural resources, water harvesting, farm pond, percolation pond, runoff, farming systems, catchment area treatments, watershed-based soil and water conservation, integrated watershed development, role of remote sensing and GIS in watershed planning, development and evaluation.

f) Farm structures :

Building Materials, bearing capacity of soil, factor of safety, types of masonry foundations, basement and superstructure, types of roofs, building plan and estimation, planning of farmstead and farm residence, farm fencing, farm gates, farm roads, dairy farm, poultry house and equipments, silo, feed storage structure, grain storage structure, storage structure for semi-perishables, threshing floor, drying floors, storage structure for fertilizer and seeds.

g) Farm Power and Machinery :

Agricultural mechanization and its scope. Sources of farm power. History of tractor development. Thermodynamic-cycles, Thermal efficiency, Classification , construction and working principles of internal combustion (IC) engines, fuels, ignition, lubrication, cooling, governing system of I.C. engines, Different types of tractors and power tillers, their manufacturers in India and their specification, power transmission, ground drive, power take off (PTO), differential and control systems, operation and maintenance of farm machinery,

farm tractor and engines. Traction theory, mechanics of farm tractor chassis, weight transfer, human factors design. Different methods of locating C.G. of tractor. Primary and secondary tillage equipments. Sowing planting, inter culture, spraying dusting, harvesting and threshing equipments. Mowers and combines. Earthmoving and land development machinery like scrapers, draglines, bulldozers and power buckets. Dynamometers their types and principles of prony brake dynamometer used for power measurement, cost estimation for hiring of tractors, Ergonomics of man- machine-system. Haulage of agricultural and forest produce, land clearing.

h) Energy :

Energy requirements in agricultural , different renewable energy sources, energy from the sun and wind, biomass gasification, producer gas and bio-gas for running I.C. engines and for electric power generation. Energy efficient cooking stoves and alternate cooking fuels, use of electricity for agriculture and agro industrial application.

i) Agricultural Process Engineering :

Post Harvest Technology of crops and its scope, unit operations in processing of cereals, oil seeds and pulses. Working principles of equipments for milling, mixing, cleaning, grading, drying and storage of cereals, pulses and oil seeds, moisture content determination, physical properties, psychometry, energy and material balance, solvent extraction, process flowchart, properties of fruits and vegetable, food texture and theology, process parameters and equipment for sorting, washing, handling, peeling, slicing, blanching, mixing and handling, chilling, packaging, transportation, storage and preservation technology, properties of diary and food products . Process flow chart for product manufacturing. Working principles of equipments for receiving, pasteurization, sterilization, homogenization, filling and packaging, butter manufacturing, evaporation, drying, freezing, juice extraction, filtration, thermal processing. Material handling equipments- belt and screw conveyors, bucket elevators, their capacity and power requirement. Application for computer techniques in design optimization. Waste and by-product utilization of rice husk, rice bran, plant residues and coir pith.

j) **Electronics and Instrumentation :**

Electronics devices and their characteristics, study of rectifiers, amplifiers, Oscillators, operational amplifiers, Multivibrators, Digital Circuit, sequential and combinational systems. Introduction to micro processor. Programming of micro processors and data acquisition and control of Agricultural Engineering processes. Generalized instrumentation system. Absolute and secondary measurement . Accuracy, precision, sensitivity and errors in measurements. Primary sensors and transducers, measuring instruments for current, voltage, electrical power flow, pressure, temperature, humidity, strain, force, torque and energy.

3. **MANAGER (Agro Input) (Group- B Category) :-**

QUESTION & MARKS

(Duration of Examination – 3 hr./ Full Marks : 100)

- | | |
|-------------------------------------|------------|
| a) 20 Short questions one mark each | - 20 Marks |
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| c) 5 questions of Six marks each | - 30 Marks |
| d) 2 questions of Ten marks each | - 20 Marks |

Syllabus

- ❖ Cropping pattern in different agro climatic zones of the country. Crop diversification, Impact of high-yielding and short-duration varieties on shifts in cropping pattern. Concepts of multiple cropping, multistory, relay and inter-cropping, and their importance in relation to food production. Package of practices of cereals, pulses, oil seeds, fibers, sugar, tuber and fodder crops grown during Kharif and Rabi seasons in different regions of the country. Organic Farming- Principles and practices.
- ❖ Weeds, their characteristics, dissemination and association with various crops; their multiplication; cultural, biological and chemical control of weeds.

- ❖ Soil-physical, chemical and biological properties.. Processes and factors of soil formation. Modern classification of Indian soil formation. Mineral and organic constituents of soils and their role in maintaining soil productivity. Essential plant nutrients and other beneficial elements in soils and plants. Principles of soil fertility and its evaluation for judicious fertilizer use. Integrated nutrient management. Losses of nitrogen in soil, nitrogen-use efficiency in submerged rice soils, nitrogen fixation in soils. Fixation of phosphorus and potassium in soils and the scope for their efficient use. Problem soils and their management.
- ❖ Soil conservation planning on watershed basis. Erosion and run-off management in hilly, foot hills and valley lands; process and factors affecting them. Dry land agriculture and its problems. Technology for stabilizing production in rain fed areas.
- ❖ Ecology and its relevance to man, Biodiversity – natural resources, their sustainable management and conservation. Physical and social environment as factors of crop distribution and production. Climatic elements as factors of crop growth. Impact of changing environment on cropping patterns as indicators of environments. Environmental pollution and associated hazards to crops, animals and humans.
- ❖ Seed technology, its importance. Different kinds of seeds. Seed production and processing techniques. Role of public and private sectors in seed production, processing and marketing in India.
- ❖ Climate requirement and cultivation of major fruits, vegetable crops and flower and ornamental plants. Dry land and High-tech horticulture. Handling and marketing problems of fruit and vegetables. Methods of preservation of important fruits and vegetable products, processing techniques and equipment. Role of fruits and vegetables in human nutrition. Land scaping- design and layout of lawns and gardens.
- ❖ Diseases and pests of field crops, vegetables, orchard and plantation crops of India. Causes and classification of plant pests and diseases. Principles of control of plant pests and diseases. Biological control of pests and diseases. Integrated pest and disease management. Epidemiology and forecasting of disease and pest. Pesticides, their formulations and mode of action. Compatibility with rhizobial inoculants.

Microbial toxins. Storage pests and diseases of cereals, oilseeds and pulses and their control. Commercial cultivation of mushroom and bee keeping.

- ❖ Food production and consumption trends in India. National and International food policies. Production, procurement, distribution and processing constraints,. Relation of food production to national dietary pattern. Protein- calorie malnutrition.

- ❖ **Inventory Management**

- o An Overview, Objectives, Evolution, Strategies, Functions, Profit Making potential, costs, Stages, Selective Inventory, Control Demand Forecasting, Lead-time, Safety stock, Fixed Quantity Reorder system, fixed period reorder system, fixed period reorder system, MRP and JIT systems, Multi-item inventory modelling: Deterministic and Probabilistic joint replacement policy, stock out model.

- o Procurement Process, types of materials, important aspects, quality, quantity, time price and source, standardization and codification, vendor selection and evaluation, vendor development, value analysis, make or buy decisions, negotiations, institutional, government and international buying, capital equipment purchases, warehousing and transportation, warehouse location, transportation, receiving, issuing and storekeeping. Concept of spare parts management, principles and guidelines for spare parts management.

- o Quality control in material management –quality characteristics, facets of quality, quality losses, quality Programme and its objectives, quality control: objectives of quality control, quality control methods.

- o Surplus, obsolete and waste management, why surplus and waste ? Surplus from obsolete or damaged stocks and equipment, management of obsolete, buying surplus material.

- ❖ **Supply Chain Management**

- o **Supply Chain Foundations:** Supply Chain as a network of entities: role and interactions between the entities. Value Chain Focus of Supply Chain. Impact of Supply Chain Management on Sales, cost, Profit, Profitability, Balance Sheet, Profit and Loss Account, and Customer Accounts Profitability. Centralized and Decentralized supply Chains: their coordination and aligning business activities.

- o **Customer Orientation** : Customer Satisfaction oriented Supply Chain Management strategy, Customer segmentation, Customer requirements analysis, Aligning supply chain to customer needs: Quick response logistics, Vendor Managed Inventory, Cross docking, Packaging Innovations, third Party Logistic and Service concepts and applications.
- o **Procurement Logistics**: Source Identification: Global Vs. Domestic Sourcing, Landed Cost Computation, Vendor Rating, contract Negotiation, Consolidation, Self Certified Vendor Management, Individual component Vs. Module Purchases. Vendor Development and Vendor Relationship Management, Vendor Performance Monitoring.
- o **Manufacturing Logistics management** : Lean and Agile Manufacturing, Virtual Manufacturing, Just in Time Manufacturing, lead time Components and their compression, Lot Streaming.
- o **Distribution Management** : Distribution Channels : Structure and Operation, Distribution Cost Components, Pipe line Inventory and Response Considerations, Hub and Spoke Models, Cross docking, Carrier Selection, Vendor Consolidation, Vehicle Loading and Vehicle Routing Methods.

4. **Manager (Admin) (Group- B Category) :-**

QUESTION & MARKS

(Duration of Examination – 3 hr./ Full Marks : 100)

- a) 20 Short questions one mark each - 20 Marks
- b) 10 questions of Three marks each - 30 Marks
- c) 5 questions of Six marks each - 30 Marks
- d) 2 questions of Ten marks each - 20 Marks

Syllabus:

- **Management Principles & Practices**
 - **Introduction to Principles of Management** : Concept, functions and levels of Management, Skills and roles of a Manager; School of Management thoughts – Pre-Scientific, Classical, Behavioural and Modern; Contributions in the field of management – by Peter F Druker, Michael Porter, C.K. Prahalad, Barnand, McGregor, Rensis Likert and McKinsey.
 - **Organization** : Formal and Informal, Line and Staff Relationship, Centralization Vs. Decentralization, Basic issues on Organizing, Work Specialization, Chain of Command, Delegation, Span of Management, Organization Structure for Departmentalization, Organizational Culture: Cultural Diversity, Multi Ethnic Workforce, Organizing Knowledge Resource.
 - **Planning** : nature & Elements of Planning, Planning types and Models, Planning in Learning Organizations, types, Steps, MBO, MBE, Planning Premises, Decision

Making; Risk and Uncertainty, Decision trees, Decision making process, Increasing participation in Decision making, Creativity in decision making.

- o **Controlling** : Process, Standards and Bench marking – co-ordination – Principles of co-ordination-Inter-Dependence, Change Management.

➤ **Organisational Behaviour**

- o **Fundamentals of OB** : Definition, scope of importance of OB, Relationship between OB and the individual, Evolution of OB, theoretical framework (cognitive), behavioristic and social cognitive), Limitations of OB, Models of OB.
- o **Attitude** : Importance of attitude in an organization, Right Attitude, components of attitude, Relationship between behaviour and attitude, Developing Emotional intelligence at the workplace, Job attitude, Barriers to changing attitudes.
- o **Personality and values**: Definition and importance of Personality for performance, The Myers-Briggs Type Indicator and The Big Five personality model, Significant personality traits suitable to the workplace (personality and job – fit theory), Personality Tests and their practical applications.
- o **Perception**: Meaning and concept of perception, Factors influencing perception, Selective perception, Attribution theory, Perceptual process, Social perception (stereotyping and halo effect).
- o **Motivation**: Definition & Concept of Motive & Motivation, The Content Theories of Motivation (Maslow's Need Hierarchy & Herzberg's Two Factor model theory), the Process theories (Vroom's expectancy theory & Porter Lawler model), contemporary theories – Equity Theory of Work Motivation.
- o **Foundations of Group Behaviour** : the Meaning of Group & Group behaviour & Group Dynamics, Types of Groups, The Give –Stage Model of Group Development.
- o **Managing Teams** : Why Work Teams, Work Teams in Organization, Developing Work Teams, Team Effectiveness & Team Building.
- o **Leadership** : concept of Leadership, Styles of Leadership, Trait Approach Contingency leadership Approach, Contemporary leadership, Meaning and

significance of contemporary leadership, concept of transformations leadership, contemporary theories of leadership, Success stories of today's Global and Indian leaders.

- **Organizational Change** : Meaning, Definition & Nature of Organizational Change, Types of Organizational Change, Forces that acts as stimulants to change.

- **Implementing Organizational Change** : How to overcome the Resistance to Change, Approaches to managing Organizational Change, Kurt Lewin's – Three step model, Seven Stage model of Change & Kotter's eight-Step plan for Implementing Change, Leading the Change Process, Facilitating Change, Dealing with Individual & Group Resistance, Intervention Strategies for Facilitating Organizational Change, Methods of Implementing Organizational Change, Developing a Learning Organization.

- **Corporate Social Responsibility**
 - **Contemporary Social Responsibility (CSR)** : concept, Dimensions of CSR, Models of CSR: Philanthropic, European and Indian; CSR initiatives by public and private sector organizations in India; Social audit; Social Return on Investment (SROI) – concept, steps to measure, Implications, community Welfare, Elevated Executives.

- **Human Resource Management**
 - **concept** : Definitions and Objectives of Human Resource Management (HRM) functions of HRM; Process of HRM; Evolution of HRM; Strategic HRM and its role in the organization; Human Resource Planning (HRP): Meaning and Process, Job analysis: Job description and Job specification; Recruitment: Meaning, Sources, Process and Yield; Selection: Meaning and Process, Tests and Interviews, Induction and Socialization.
 - **Performance Appraisal** : Meaning, Objective, Process and Methods; Potential Appraisal; Biases in performance appraisal; Methods of job evaluation; Meaning of

Compensation; Types of compensation; Types of wages and theories; Wage differentials; Pay structure, Wage law in India, Executive compensation.

- o **Concepts of Career** : Career planning process, Career Stages; Training & Development : Concept, Training need analysis and methods of training (on-the job and off-the-job training), Evaluation of Training effectiveness; Concepts of Promotion, Transfer and Separation.

- o **Industrial Relations (IR)** : Concept and Approaches to IR, John T. Dunlop's System Theory of IR, Positive and Negative IR, Role of Stage in IR; Trade Unions: Concept and registration; Structure and Functions of Trade Union, International HRM: Definitions and Approaches, concepts of Expatriate, Parent country National (PCN), Host Country National (HCN) and third Country National (TCN). Challenges of HRM in dynamic business environment; ethical issues in HRM HR Outsourcing; Employee Engagement; Organization Citizenship Behaviour (OCB), Talent Management, Competency Mapping.

- **Business Law**
 - o **Law of Contract** : Contract Act : Indian Contract Act, 1872, Agreement, contract, Essentials of Contract (Offer & Acceptance, Consideration, Capacity of Parties, Free Consent, and Legality of Object), Performance and Discharge of Contract, Remedies for breach of contract, Quasi-Contract and Contingent Contract.
 - o **Special Contract** : Contract of Agency : Mode of creating & revocation of Agency, Rights and Duties of Agents and Principals. Contract of Bailment (Right and duties of Bailor and Bailee). Contract of Sales of Goods: Sale and agreement to sell, Condition and Warranty, Transfer of properties, Finder of Goods, Performance of Contract of sale, Unpaid seller and his rights.
 - o **Economic Laws** : Consumer Protection Act, 1986 : Consumers, Rights of Consumers, Redressal Machinery under the Act, Procedure of Complaint, Relief available to the consumers, Procedure of filing appeal, Powers of Redressal agencies.

- o **Company Laws** : Indian companies Act 1956, Salient features and Classes of Company. Lifting of corporate veil, Procedure of Incorporation and Certificate of commencement of business, Memorandum and Articles of Association, Doctrine of ultra vires and Indoor management, Management of company: Qualification, Appointment, Legal position, Company Meetings, Resolutions, Winding-up of Companies and their modes.
- **Employment Related Laws**
 - o Labour and Employment Laws in India, Historical background, objectives, mechanism of dispute settlement, mediation and conciliation, investigation, employment inquiry, health, maternity benefit, Statutory Regulation of condition of service in certain establishments, voluntary retirement scheme and golden handshake, Overviews of labour laws in India.
 - o Minimum Wages Act, 1948; Payment of Wages Act, 1936, Employees' Provident Fund Act, 1952; Employees' State Insurance Act, 1972; Payment of Bonus Act, 1965.
 - o Factories Act, 1948; Employees' Compensation Act, 1923.
 - o Industrial Employment (Standing Order) Act, 1946; Industrial Dispute Act, 1947; Trade Union act, 1926.
- **Compensation Management**
 - o **conceptual Aspects of Compensation and reward Management** : Concept of compensation, the 3P compensation concept, system of compensation, compensation dimensions, organizational compensation policy, Methods of payment: TRS, PBR, MDW; New Trends in compensation Management. Concept of Reward: Money as a Motivator, Nonfinancial Rewards; Reward systems, Reward Management strategies. Rewards influencing behaviour Rewards and Employee satisfaction. Effect of globalization on compensation and reward management.
 - o **Theoretical dimensions of Wages, compensation and Reward systems** : Concept and Components of Wages, Theories of wages; Subsistence theory, Wage Fund theory, Marginal Productivity theory, Residual claimant theory, Surplus value theory, Bargaining theory, Employment theory, competitive theory. Criteria of wage fixation, Broad-banding, Executive compensation, emerging trends in compensation and Reward Management.

- o **Wage Determination and Wage Administration in India** : Principles of wage and salary administration, Job Evaluation : concept, Scope, Methods and techniques, merit based pay. Types of incentive plans, Wage differentials, Wage Policy in the 11th and 12th Five year plan periods in India, Socio-Economic objectives of Wage policy.
- o **Institutional Mechanism** : Institutional Mechanism for wage determination : Unilateral pay fixation, collective bargaining, pay commissions, Third party arbitration, Adjudication, Wage Boards: Structure, Scope and functions.

➤ **Industrial Relation**

- o **Industrial Relations** : Concept, Scope and Approaches to Industrial Relations – Unitary, Pluralistic, and Radical approach, Industrial Relations systems (IRS), Trade Unionism: Concept, structure and function, Union registration and Recognition, Theories on Trade Unionism – Selling Pearl Man, Sidney and Beatrice Webb, Karl Marx, Robert Hoxie and Mahatma Gandhi, White Collar Trade Unions.

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- o **Industrial Dispute** : Code of Discipline and Grievance Management, Dispute Resolution and Industrial Harmony, Collective Bargaining : Meaning, Concept and functions, Types of Bargaining, process of Bargaining, Emerging Trends in Collective Bargaining, Theories of Collective Bargaining by Chamberlain, Flenders, McKersie, and Sidney & Beatrice Webb.

- o **Tripartite and International Bodies** : Tripartism and IR, ILC & SLC, ILO – Structure and Functions, Conventions and Recommendations, Bipartism Link with Tripartism, Strengthening Tripartite Social Dialogue.

- o **Employee participation and Labour-Management Co-operation** : Workers Participation in Management: Concept, Scope, Levels and functions, Forms of Workers' Participation, Participation or Association with Management, Productive Bargaining.

➤ **Human Resource Development**

- o **Evolution & Concept of HRD**: Evolution of the concept of HRD, HRD Functions, Role of HRD Professional, HRD Climate & its elements, HRD Matrix, Role of Line Managers in HRD. Assessing HRD needs: Concept, process and Techniques.

- o Learning and HRD – Maximizing Learning, Learning Process, Learning Strategies and Styles. HRD Interventions – Strategy and types.
- o **training Methods and HRD Evaluation** : Introduction, Training Delivery Methods, On the Job (OJT) Training Methods – JIT, Simulation, Job Rotations, Coaching and mentoring Class room Training Approaches lecture Approach, Discussion Method, Experiential Methods, Computer Based Training Methods. Evaluation – Purpose of HRD Evaluation, Models and Framework Evaluation Kirkpatrick’s framework and Philips Models, Data Collection for Evaluation, research Design, Ethical Issues, and Assessment of the Impact of HRD Program.
- o **Organizational Development & HRD:** Organizational Development – Concepts and Theories (Change process theory and implementation theory). Organizational Culture – Workforce diversity and HRD. Managing workforce Diversity, Issues and challenges of HRD in cross – cultural Environment for Global Work Place.

5. Amin (Group- “C” Category)

QUESTION & MARKS

(Duration of Examination – 2 hr./ Full Marks : 100)

(Short question)

- | | |
|---------------------------------|-------------------|
| 1. a) <i>Geometry</i> | - 40 Marks |
| b) <i>Arithmetic</i> | - 20 Marks |
| c) <i>English Comprehension</i> | -20 Marks |
| d) <i>Computer Basics</i> | - 20 Marks |

It will be computer based multiple choice question of 100 marks of one mark each.

2. Computer skill test: - 50 marks – 1 hour test

Minimum securing 30% marks in skill test will qualify & their marks in written test will be counted in merit list preparation.

Syllabus:

Part-I

1. **A: Geometry**

a) **Coordinate Geometry**

- Cartesian System
- Plotting a Point in the Plane if its Coordinates
- Distance Formula
- Section Formula
- Area of a Triangle

b) **Introduction to Euclid's Geometry**

- Euclid's Definitions, Axioms and Postulates
- Equivalent Versions of Euclid's Fifth Postulate

c) **Lines And Angles**

- Basic Terms and Definitions
- Intersecting Lines and Non-intersecting Lines
- Pairs of Angles
- Parallel Lines and a Transversal
- Lines Parallel to the same Line
- Angle Sum Property of a Triangle

d) **Triangles**

- Congruence of Triangles
- Criteria for Congruence of Triangles
- Some Properties of a Triangle
- Some More Criteria for Congruence of Triangles
- Inequalities in a Triangle
- Similar Figures
- Similarity of Triangles
- Criteria for Similarity of Triangles
- Areas of Similar Triangles
- Pythagoras Theorem

e) **Quadrilaterals**

- Angle Sum Property of a Quadrilateral
- Types of Quadrilaterals
- Properties of a Parallelogram
- Another Condition for a Quadrilateral to be a Parallelogram
- The Mid-point Theorem

f) **Areas of Parallelograms and Triangles**

- Figures on the same Base and Between the same Parallels
- Parallelograms on the same Base and between the same Parallels
- Triangles on the same Base and between the same Parallels

g) **Circles**

- Circles and its Related Terms : A Review
- Angle Subtended by a Chord at a Point
- Perpendicular from the Centre to a Chord
- Circle through Three Points
- Equal Chords and their Distances from the Centre
- Angle Subtended by an Arc of a Circle
- Cyclic Quadrilaterals

- Tangent to a Circle
- Number of Tangents from a Point on a Circle
- Division of a Line Segment
- Construction of Tangents to a Circle
- Perimeter and Area of a Circle – A Review
- Areas of Sector and Segment of a Circle
- Areas of Combinations of Plane Figures

h) **Constructions**

- Basic Constructions
- Some Constructions of Triangles

i) **Heron's Formula**

- Area of Triangle – by Heron's Formula
- Application of Heron's Formula in finding Areas of Quadrilaterals

j) **Surface areas and volumes**

- Surface Area of a Cuboids and a Cube
- Surface Area of Right Circular Cylinder
- Surface Area of a Right Circular Cone
- Surface Area of a Sphere
- Volume of a Cuboids
- Volume of a Cylinder
- Volume of a Right Circular Cone
- Volume of a Sphere
- Surface Area of a Combination of Solids
- Volume of a Combination of Solids
- Conversion of Solid from One Shape to Another
- Frustum of a Cone

k) Introduction to Trigonometry

- Trigonometric Ratios
- Trigonometric Ratios of Some Specific Angles
- Trigonometric Ratios of Complementary Angles
- Trigonometric Identities

l) Some Applicants of Trigonometry

- Heights and Distances

B: Algebra**(a) Number Systems**

- Irrational Numbers
- Real Numbers and their Decimal Expansions
- Representing Real Numbers on the Number Line
- Operations on Real Numbers
- Laws of Exponents for Real Numbers
- Euclid's Division Lemma
- The Fundamental Theorem of Arithmetic
- Revisiting Irrational Numbers
- Revisiting Rational Numbers and Their Decimal Expansions

(b) Polynomials

- Polynomials in One Variable
- Zeroes of a Polynomial
- Remainder Theorem
- Factorization of Polynomials
- Algebraic Identities
- Geometrical Meaning of the Zeroes of a Polynomial
- Relationship between Zeroes and Coefficients of a Polynomial
- Division Algorithm for Polynomials

(c) Linear equations & Quadratic Equations

- Linear Equations
- Solution of a Linear Equation
- Graph of a Linear Equation in Two Variables

- Equations of Lines Parallel to x-axis and y-axis
- Quadratic Equations
- Solution of a Quadratic Equation by Factorisation
- Solution of a Quadratic Equation by Completing the Square
- Nature of Roots
- Pair of Linear Equations in Two Variables
- Graphical Method of Solution of a Pair of Linear Equations
- Algebraic Methods of Solving a Pair of Linear Equations
 - o Substitution Method
 - o Elimination Method
 - o Cross-Multiplication Method
 - o Equations Reducible to a Pair of Linear Equations in Two Variables

(d) **Statistics**

- Collection of Data
- Presentation of Data
- Graphical Representation of Data
- Measures of Central Tendency
- Mean of Grouped Data
- Mode of Grouped Data
- Median of Grouped Data
- Graphical Representation of Cumulative Frequency Distribution

(e) **Arithmetic Progressions & Geometric Progressions**

- Arithmetic Progressions
- n th Term of an AP
- Sum of First n Terms of an AP
- Geometric Progression
- n th term of GP

C: English Comprehension

English Comprehension will be of Class-X level covering Basic grammar, Comprehension,

Usage etc.

D: Computer Basics

Computer skill will be of the level of PGDCA covering basic questions on OS, Word, Excel & Power point.

2: Computer Skill test (Qualifying)

a) WINDOWS Operating system

Test on some of the following basic system operation on file/ folders

- o Create, rename, copy, cut, paste, delete
- o Using clipboard

b) MS WORD

A paragraph in MS Word incorporating some of the tools given bellow to be tested during the examination.

- Editing & formatting text and paragraph
- Page and paragraph set up.
- Inserting picture and word art.

c) MS POWER POINT

A power point presentation with 2/3 slides using some of the tools given below to be tested during the examination.

- Editing and formatting of slides

d) MS EXCEL

A problem in spreadsheet related to some of the tools given below to be tested during examination.

- Formatting cells and data
- Functions and formulae (relative absolute and mixed reference)

Other Conditions:

The outsourced candidate if any presently deployed in OAIC through Placement Agency they will be allowed 1% extra mark on the total marks of the career for each completed year of continuous service subject to maximum of 15 marks.

The list of candidates eligible for written test will be uploaded in the website of www.orissaagro.com prior to the date of written test. The candidates are required to download their admit card from website. No separate correspondence will be made on this score. The date / place of written test will be intimated through SMS & will be also mentioned in the admit card. The date / place of personality test will be intimated to the candidate separately in case of candidate applied for the post of Group-B categories only. The selection of the candidate for the post of Group-B categories will be made out of the merit list prepared on the basis of the combined written test and personality test. Selection of candidate for the post of Amin (Group-C) category will be made out of the merit list prepared on the basis of the written test after they get qualified in the skill test with minimum 30% marks.

10. Submission of application

- (i) On-line application form will be available from 29.5.2018 at 11:00 A.M. to 10.6.2018 by 11:59 P.M., and the last date of online form submission is 10.6.2018 by 11:59 P.M.
- (ii) The candidate must go through this advertisement available in the website in the www.orissaagro.com before filling up on-line application.
- (iii) The candidates are requested to upload the scanned image of latest passport size photograph in the on-line application form. Up-loaded photograph and specimen (full) signature must be clearly identifiable / visible. Similarly the certificates and mark sheets (documents) uploaded must be clearly visible, otherwise the application of the candidates is liable to be rejected by the OAIC Ltd. and no representation from the candidate will be entertained.

(iv) For any technical support please write to career.oaic@gmail.com or call at **0674- 2973271**.

(v) The written exam and skill test is tentatively scheduled within 15 days of last date of obtaining application.

11. Certificate / documents to be attached

- (i) H.S.C. or equivalent certificate in support of declaration of age issued by the concern Board / Council and the mark sheet of such examination.
- (ii) All the educational qualification certificates (General, Technical, Professional) and mark sheets (all xerox copies duly signed by the candidate) as per the job prescription.
- (iii) Recent passport size photographs which will be uploaded with on-line application.
- (iv) Caste certificate by birth in support of claim as SCs/STs/SEBCs, wherever applicable (xerox copy duly signed by the candidate).
 - (a) OBC certificate will not be accepted in lieu of SEBC certificate and candidates submitting such certificate will be treated as U.R. candidates.
 - (b) Candidates claiming to be belongs to SC/ST/SEBC category by birth are required to submit copy of the relevant cast certificate issued by the Competent Authority within one year from the date of advertisement.
 - (c) Women candidates belongs to SC/ST/SEBC are required to submit caste certificate by birth showing “daughter of”. Caste certificate by virtue of marriage (i.e. showing “wife of”) are not acceptable and candidates such certificate will be treated as belongs to U.R. category.

N.B.:- Competent Authority :- District Magistrate / Collector or Addl. District Magistrate or Sub-Divisional Magistrate / Sub-Collectors or Executive Magistrates or Revenue Officers, not below the rank of Tahasildar, Addl. Tahasildar of Government of Odisha.

- (v) Odia test pass certificate from the Board of Secondary Education or any other Board or Council of Secondary Education approved by Government of Odisha in support of passing of Odia language test equivalent to any School standard, if not

passed HSC or equivalent examination having Odia as one of the subject. In case of outsourcing candidate deployed through P.P.A. in OAIC Ltd., the appointment letter issued by P.P.A. in support of deployment in the Corporation (xerox copies duly signed by the candidate).

- (vi) Disability certificate (indicating percentage of disability) issued by the concern Medical Board, wherever applicable (xerox copies duly signed by the candidate).
- (vii) In case of ex-serviceman, copy of certificate / document in support of service rendered in defence service.

N.B.: There is no vacancy reserved for Ex-Serviceman. However, they can avail age relaxation. Similarly where no vacancy reserved for SC/ST/SEBC, they can avail age relaxation.

12. Condition of contractual service

- (a) **Tenure** - (i) In case of person appointed against the contractual basis in the Group-B category of post shall continue on contractual basis for a period of six years in compliance to G.A. Department Notification No.1147/Gen. dated 17.1.2014.
 - (ii) The person appointed against contractual basis in the post of Amin (Group-C) category shall continue on contractual basis for a period of six years in compliance to G.A. Department Notification No.32010/Gen. dated 12.11.2013
 - (iii) The period of six years shall be counted from the date of their (Group-B & Group-C category) contractual appointment / joining.
- (b) **Remuneration** (i) During the period of contractual appointment of Group-B post, they shall draw consolidated monthly remuneration of Rs.9,300/- + Rs.4,200/- (equal to the initial of the corresponding pay + Grade pay).
 - (ii) During the period of contractual appointment of Amin (Group-C post), they shall draw consolidated monthly remuneration of Rs.5,200/- + Rs.1,900/- (equal to the initial of the corresponding pay + Grade pay).
- (c) **Annual increase of remuneration** - Subject to satisfactory performance the consolidated remuneration shall be enhanced by 10% on completion of each year of service.
- (d) **Allowance** - They shall not be entitled to D.A., H.R.A., M.A. & other allowances during the period of contractual appointment.

- (e) **Leave** - They shall be entitled to leave under the provision of leave rule of Government at par with regular employees of OAIC Ltd.
- (f) **Conduct & discipline** - They shall abide by the conduct rules and classification, control and appeal rules as applicable to the regular employee of the OAIC ltd.

13. Condition of service on regular appointment

- (a) **Regular appointments** - On the date of satisfactory completion of six years of contractual service, they shall be deemed to have been regularly appointed. A formal order of regular appointment shall be issued by the Appointing Authority of OAIC Ltd.
- (b) **Pay & other benefits** - (i) On regular appointment of Group-B post, they shall be entitled to draw the times scale of pay + Grade pay i.e. Rs.9300-34800 + Rs.4200 (Grade Pay) with D.A. & other allowances as admissible in the said Pay Band to the regular employees of the OAIC Ltd.
- (ii) On regular appointment of Amin (Group-C), they shall be entitled to draw the times scale of pay + Grade pay i.e. Rs.5200-20200 + Rs.1900 (Grade Pay) with D.A. & other allowances as admissible in the said Pay Band to the regular employees of the OAIC Ltd.
- (c) **Other conditions of service** - The other condition of service shall be such as applicable to the regular employees of OAIC Ltd.