FEDERAL PUBLIC SERVICE COMMISSION
(Curriculum & Research Wing)

Schemes and Syllabi for Screening/Professional Tests as well as Descriptive Examination Relating to Posts Advertised under Consolidated Advertisement No. 02/2023

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
1.	19/2023	**Medical Officer** (BS-17), Border Health Services-Pakistan, Ministry of National Health Services, Regulations & Coordination.	MBBS or equivalent qualification recognized by PMDC.	Objective Type Test (MCQ) **Part-I** English = 20 marks **Part-II** Professional Test=80 marks	**Part-I** Vocabulary, Grammar Usage, Sentence Structuring **Part-II** • **Core** courses of **MBBS** Degree Program. • Health Policies of the Government of Pakistan. • Care vs Cure for Health Management. • Major Challenges being faced by the Health Sector.
2.	20/2023	**Medical Officer** (BS-17), Federal Government Polyclinic, Ministry of National Health Services, Regulations & Coordination.	i. MBBS or equivalent qualification recognized by PM&DC. ii. One (1) year House Job.	Objective Type Test (MCQ) **Part-I** English = 20 marks **Part-II** Professional Test=80 marks	**Part-I** Vocabulary, Grammar usage, Sentence Structuring. **Part-II** • Core courses of **MBBS** Degree Program. • Health Policies of the Government of Pakistan. • Care vs Cure for Health Management. • Major Challenges being faced by the Health Sector in Pakistan.
3.	21/2023	**Instructor (English)** (BS-16), Staff Welfare Organization, Establishment Division.	i. Bachelor's degree from a recognized University. ii. Speed of 80 w.p.m. in Shorthand (English) and 40 w.p.m. in typing at 90% accuracy of actual test. iii. Two (2) years post qualification practical experience as English Stenographer.	• Typing Test with minimum Speed of 40 W.P.M **35 Marks** • Shorthand Test with minimum Speed of 80 W.P.M **35 Marks** • Computer Literacy Test: **i** Microsoft Word (Typing, Formatting) **10 Marks** **ii** Microsoft Excel (Typing, Graph, Calculations) **10 Marks** **iii** Microsoft Power Point (Typing, Formatting, Inserting Objects) **10 Marks**	
4.	22/2023	**Computer Operator** (BS-16), National Highways & Motorways Police, Ministry of Communications.	Second Class or Grade 'C' Bachelor's degree in Computer Science.	Objective Type Test (MCQ) **Part-I** English = 20 marks **Part-II** Professional Test=80 marks	**Part-I** Grammar usage, Sentence Structuring. **Part-II** • Program logic, • Visual Basic, C++, Java, Unix/Red Hat Linux Operating System, • Computer Networks and Internet, • Computer Graphics and Algorithms • Development of Basic Algorithms,

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
5.	26/2023	**Associate Fellow** (BS-17), National Institute of Population Studies, Ministry of National Health Services, Regulations & Coordination.	Second Class or Grade 'C' Master's Degree in Economics / Statistics/ Sociology/ Anthropology/ Demography from a University recognized by the HEC.	Objective Type Test (MCQ) **Part-I** English = 20 marks **Part-II** Professional Test=80 marks	**Part-I** Vocabulary, Grammar usage, Sentence Structuring. **Part-II** • Population pyramid and transition from high to low fertility rate • Main features of Population and housing census 2017 • Qualitative and Quantitative research difference • Challenges of field survey • Difference between gender equality and gender equity • Steps involved in standard research proposal • Concept of Mean, Median, Mode and Range • Cross-section vs longitudinal studies advantages and challenges • Use of research studies in decision making and implementation • Demographic dividend and economic growth in Pakistan • Digital Census
6.	29/2023	**Civilian Medical Practitioner (CMP)**, (Grade-III) (BS-17), Ordnance Corps, OS Directorate, GHQ, Ministry of Defence.	MBBS or equivalent qualification recognized by the PMDC.	Objective Type Test (MCQ) **Part-I** English = 20 marks **Part-II** Professional Test=80 marks	**Part-I** Vocabulary, Grammar usage, Sentence Structuring. **Part-II** • Core courses of **MBBS** Degree Program. • Health Policies of the Government of Pakistan. • Care vs Cure for Health Management. • Major Challenges being faced by the Health Sector in Pakistan.

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
7.	30/2023	**Senior Assistant Naval Store Officer (SANSO)** (BS-17), Naval Headquarters, Ministry of Defence.	Second Class or Grade 'C' Master's or Bachelor's (4 years education) degree in Business Administration (Supply Chain Management) or equivalent qualification from a University recognized by the HEC.	Objective Type Test (MCQ) **Part-I** English = 20 marks **Part-II** Professional Test=80 marks	**Part-I** Vocabulary, Grammar usage, Sentence Structuring. **Part-II** - Basic Arithmetic - Algebra - Ratios - Percentages - Arithmetic Means - Basic knowledge of I.T - Inventory Management Skills - Procedures of Receipt and Issue of Stores - Stores handling procedures with relation to following topics:- - Stock Taking - Care and Preservation of Store items - Ware House Management - Public Procurement Rules, 2004
8.	31/2023	**Senior Armament Supply Officer (SASO)** (BS-17), Naval Headquarters, Ministry of Defence.	Second Class or Grade 'C' Master's or Bachelor's (4 years education) degree in Chemistry/ Physics or equivalent qualification from a University recognized by the HEC.	Objective Type Test (MCQ) **Part-I** English = 20 marks **Part-II** Professional Test=80 marks	**Part-I** Vocabulary, Grammar usage, Sentence Structuring. **Part-II** - Examination of Armament Stores - Repair/Modification of Armament Stores - Repair/Modification of Deport Stocks - Maintenance of Depot Equipments. - Basic knowledge of I.T
9.	33/2023	**Junior Civilian Security Officer (JCSO)** (BS-16), OS Directorate, GHQ, Ministry of Defence.	Retired JCO or equivalent of the Armed Forces. **OR** i. Second Class or Grade 'C' Bachelor's degree or equivalent qualification from a University recognized by HEC. ii. Two (2) years post qualification experience as Security Supervisor.	Objective Type Test (MCQ) **Part-I** English = 20 marks **Part-II** General Intelligence/ Professional Test = 80 marks	**Part-I** Grammar usage, Sentence Structuring. **Part-II** - Basic Arithmetic - Algebra - Ratios - Percentages - Arithmetic Means - Current Affairs. - Developments at National and International Levels in the last 2 years - Terrorism, Radicalism and War on Terror - Modern Law Enforcement - Modern Crime Prevention System - Security Measures to Maintain Law & Order

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
10.	34/2023	**Senior Manager Personnel & Administration Department (SMPAD)** (BS-17), Naval Headquarters, Ministry of Defence.	Second Class or Grade 'C' Master's or Bachelor's (4 years education) degree in Business Administration/ Public Administration/ Human Resource Management or equivalent qualification from a University recognized by the HEC.	Objective Type Test (MCQ) **Part-I** English = 20 marks **Part-II** Professional Test=80 marks	**Part-I** Vocabulary, Grammar usage, Sentence Structuring. **Part-II** • Civil Servant Act 1973 and Rules made thereunder • Public Procurement Rules 2004 • Rules of Business, 1973 as amended • Secretariat Instructions and Office Procedures • System of Financial Control and Budgeting 2006 • Human Resource Management • Basic Computer Operation in MS Office
11.	35/2023	**Accountant** (BS-16), Local Government & Rural Development Department, G.B Secretariat, Ministry of Kashmir Affairs & Gilgit Baltistan.	Second Class or Grade 'C' Bachelor's degree in Business Administration (Finance/ Accounting)/ Commerce or equivalent qualification from a University recognized by HEC.	Objective Type Test (MCQ) **Part-I** English = 20 marks **Part-II** Professional Test=80 marks	**Part-I** Grammar usage, Sentence Structuring. **Part-II** • General Financial Rules • System of Financial Control and Budgeting, 2006 • Estacode-Financial Matters • Preparation and Maintenance of Accounts • Pre-Auditing • D.D.O. Handbook • TR Cash Handling • Report Writing • Public Procurement Rules, 2004

12.	37/2023	**Development Officer** (BS-16), Local Government & Rural Development Department, G.B Secretariat, Ministry of Kashmir Affairs & Gilgit Baltistan.	Second Class or Grade 'C' Master's degree in Social Sciences or equivalent qualification from a University recognized by HEC.
			OR
			Second Class or Grade 'C' Bachelor's degree or equivalent from any recognized University with two (2) years post qualification experience in Project Planning and Rural Development.
				Objective Type Test (MCQ)
				Part-I
				English = 20 marks
				Part-II
				General Intelligence/ Professional Test=80 marks
					Part-I
					Grammar usage, Sentence Structuring.
					Part-II
					• Basic Arithmetic
					  − Algebra
					  − Ratios
					  − Percentages
					  − Arithmetic Means
					• Current Affairs.
					  − Issues/Challenges at National and International Level during the last 2 years
					• Pakistan Affairs & Islamic Studies
					  − Basic Level knowledge
					• Cost benefit analysis
					• Urbanization
					• Rural Development
					• International Rate of Return (IRR) Rules
					• Basic IT knowledge.

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
13.	38/2023	**Assistant** (BS-16), Local Government & Rural Development Department, G.B Secretariat, Ministry of Kashmir Affairs & Gilgit Baltistan.	Second Class or Grade 'C' Bachelor's degree or equivalent qualification from a University recognized by HEC.	Objective Type Test (MCQ) **Part-I** English =20 marks **Part-II** General Intelligence Test =80 marks	**Part-I** Grammar Usage, Sentence Structuring. **Part-II** • Basic Arithmetic − Algebra − Ratios − Percentages − Arithmetic Means • Current Affairs. − Issues/Challenges at National and International Level during the last 2 years • Pakistan Affairs & Islamic Studies − Basic Level knowledge • Basic IT knowledge.
14.	39/2023	**Assistant Director** (BS-17), Local Government & Rural Development Department, G.B Secretariat, Ministry of Kashmir Affairs & Gilgit Baltistan.	Second Class or Grade 'C' Master's degree in Social Sciences or equivalent qualification from a University recognized by HEC.	Objective Type Test (MCQ) **Part-I** English = 20 marks **Part-II** Professional Test=80 marks	**Part-I** Vocabulary, Grammar Usage, Sentence Structuring **Part-II** • Basic Arithmetic − Algebra − Ratios − Percentages − Arithmetic Means • Current Affairs. − Issues/Challenges at National and International Level during the last 2 years • Pakistan Affairs & Islamic Studies − Basic Level knowledge • Social cohesion • Ethnicity • Basic IT knowledge.

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
15.	40/2023	**Assistant Executive Engineer (Civil)** (BS-17), Local Government & Rural Development Department, G.B, Ministry of Kashmir Affairs & Gilgit Baltistan.	B.Sc. (Civil Engineering) or equivalent qualification from a University recognized by the HEC/PEC.	Objective Type Test (MCQ) **Part-I** English = 20 marks **Part-II** Professional Test=80 marks	**Part-I** Vocabulary, Grammar usage, Sentence Structuring. **Part-II** • Building Material & Building Construction, • Surveying & Levelling, • Hydraulic & Hydrology, • Soil Mechanics & Foundation, • Concrete Technology & R.C.C Structure Design, , • Steel Structure & Highway, • Construction Management, • Structural Design Applications, • Dam Designing and Construction, • Sewerage and Sewage Treatment, • Engineering Materials, • Ground Improvement, • Earth and Rock Structure • Public Procurement Rules, 2004.

Schemes and Syllabi for Written Examination (Descriptive) for All Posts in BS-18 & BS-19 included in Consolidated Advertisement No. 02/2023

PAPER-I: ENGLISH

Max Marks: 100   Time Allowed: 3 Hours

(i) **English Essay-50 Marks:**   Candidates will be required to write an Essay in English comprising **1500 words** from a set of **six given topics.** Candidates are expected to reflect comprehensive and research based knowledge on a selected topic. Candidate's articulation, expression and technical approach to the style of English Essay writing will be examined.

(ii) **English (Composition and Précis)-50 Marks:**

The examination will test the candidate's abilities to handle Précis Writing, Reading Comprehension, Sentence Structuring, Translation, Grammar and Vocabulary, etc.

Précis Writing (10 marks): A selected passage with an orientation of generic understanding and enough flexibility for compression shall be given for précising and suggesting an appropriate title.

Reading Comprehension (10 marks): A selected passage that is rich in substance but not very technical or discipline-specific shall be given, followed by five questions, each carrying 2 marks.

Grammar and Vocabulary (10 marks): Correct usage of Tense, Articles, Prepositions, Conjunctions, Punctuation, Phrasal Verbs, Synonyms and Antonyms etc.

Sentence Correction (5 marks):   Ten sentences shall be given each having a clear structural flaw in terms of grammar or punctuation. The candidates shall be asked to rewrite them with really needed correction only, without marking unnecessary alterations. No two or more sentences should have exactly the same problem, and 2-3 sentences shall be based on correction of punctuation marks.

Grouping of Words (5 marks):   A random list of ten words of moderate standard (neither very easy nor utterly unfamiliar) shall be given, to be grouped by the candidates in pairs of those having similar or opposite meaning, as may be clearly directed in the question.

Pairs of Words (5 marks): Five pairs shall be given of seemingly similar words with different meanings, generally confused in communication, for bringing out the difference in meaning of any five of them by first explaining them in parenthesis and then using them in sentences.

Translation (5 marks): Ten short Urdu sentences involving structural composition, significant terms and figurative/idiomatic expressions shall be given, to be accurately translated in English.

SUGGESTED READINGS

Sr. No.	Title	Author
1.	English Grammar in Use	Raymond Murphy
2.	Practical English Usage	M. Swan
3.	Practical English Grammar and Composition	S.C. Gupta
4.	Improve your Punctuation & Grammar	Marion Field
5.	The Little, Brown Handbook	H. Ramsey Flower & Jane Aaron
6.	A University English Grammar	R. Quirk & S. Greenbaum
7.	Write Better, Speak Better	Readers Digest Association
8.	Modern English in Action	Henry Christ
9.	Exploring the World of English	Syed Saadat Ali Shah

PAPER-II: PROFESSIONAL

Max Marks: 100   Time Allowed: 3 Hours

Case No.	F.4-18/2023-R
Particulars of post	**Director (Research & Assessment)** (BS-19), Marine Fisheries Department, Ministry of Maritime Affairs.
Minimum Qualification & Experience:	i. Second Class or Grade 'C' Master's Degree in Zoology/ Fisheries/ Biology/ Chemistry/ Marine Biology/ Fresh Water Biology and Fisheries/ Industrial Fishing. ii. Twelve (12) years post qualification experience of Research and Assessment in Marine Fisheries/ Fisheries Product

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II.

Part-II (Professional) (Subjective)   : 75 Marks

I.   Animal Diversity-Chordata

- Hemichordates and Invertebrate Chordates: Evolutionary Perspective: Phylogenetic Relationships and considerations.

- Fishes: Structural and functional adaptations of fishes.

- Amphibian: Movement onto land and early evolution of terrestrial vertebrates.

- Reptiles: Characteristics of reptiles, adaptations in reptilians.

- Birds: Migration and navigation, adaptations.

- Mammal: Structural and functional adaptations of mammals.

II.   Principles of Animal Life

- The chemical basis of animal life: Brief introduction to bio-molecules; carbohydrates, lipids, proteins and nucleic acids.

- Tissues Types: epithelial, connective, muscle and nervous tissue; organs and organ systems.

- Ecological Concepts: Interactions, Concepts and components of ecosystem, Food chain, Food web, Biogeochemical cycles, Forest, Biomes, Wildlife conservation and management, Environmental pollution, Green house effect, Acid rain, Global warming.

- Evolution: Darwinian evolutionary theory based on natural selection and the evidence, Microevolution: Genetic variation and change within species, Macroevolution: Species and speciation (Allopatric, Parapatric and Sympatric speciation)

III. Animal Form and Function

- Digestion and Nutrition: Feeding mechanism, Digestion, Organization and regional function of alimentary canals, Regulation of food intake, Nutritional requirements

- Internal Fluids and Respiration: Internal fluid environment, Composition of blood, Circulation and respiration mechanisms

- Chemical Coordination: Endocrine System; Vertebrate endocrine glands and types of hormones, Mechanism of hormones action,
- Animal behavior: Learning, Habituation, Insight learning, latent learning, classical learning: Control of Behavior; social behaviour.

IV. Principles of Fish Biology

- **Fish morphology:** Head (size, shape, and orientation); Scales (types, arrangements, coloration, scale less fishes); Operculum; Fins, fin rays and fin spine (dorsal, pectoral, caudal, anal); Barbel (upper lip barbels, lower lip barbels); **Anatomy:** Skeleton (skull, backbone, spines); Brain and spinal cord; Gills (Number, size, arrangements); Vital organs (heart, liver, kidney); Viscera and mesenteries (swim bladder, stomach, spleen, pancreas, intestine, gonads).

- **Systematic:** Identification of fishes up to; Families; Order; Genus; Species; Feeding groups of fishes; Herbivore; Plankton eater; Larvivore; Carnivore; Voracious; **Ecology of fishes:** Freshwater; Brackish water ; Marine

SUGGESTED READINGS

S. No.	Title	Author
1.	Integrated Principles of Zoology.	Hickman, Jr. C.P., Keen, S. L, Larson, and Eisenhour, D.J.
2.	Zoology	Miller, S. A. and Harley, J. B.
3.	Biology	Campbell, N.A.
4.	Evolution. 2nd Edition	Douglas Futuyma
5.	Kestin Farmed Fish Quality, 2002	Kestin, S. C. and Warris, P.D.
6.	Aquaculture	Brenabe, G.
7.	Text book of Fish Culture: Breeding and Cultivation. 1973	Huet M.
8.	Animal behaviour: An Evolutionary Approach. 9th Edition	John Alcock

PAPER-II: PROFESSIONAL

Max Marks: 100   Time Allowed: 3 Hours

Case No.	F.4-23/2023-R
Particulars of post	**Deputy Director** (BS-18), Department of Libraries, Ministry of Interior.
Minimum Qualification & Experience:	i. Second Class or Grade 'C' Master's degree in Library Science or equivalent qualification from a University recognized by HEC. ii. Five (5) years post qualification experience in the relevant field.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II.

Part-II: 75 Marks (Descriptive)
(Library Science)

I.   Establishing Linkages with Academia, Research Organizations

Ensuring Online/Audio Books, Linkages with academia and research organizations and generation of Funds

II.   Information, Library and Society

Nature of information and knowledge. Library and Information Profession, Library and its role in Society. Information society. Communication and information management. Social information. Economic aspects of information. Information policy. Freedom of information. Information privacy. Intellectual property. Information ethics.

III.   Use of Emerging Technologies in Library

Information and other library technologies. Hardware. Software. Operating system. Telecommunications and networks. Internet and the WWW, barcode technology, wireless technology and virtual private network (VPN). Social networking. Email. Word processing. Spreadsheets. Presentation software. Desktop publishing. Databases. Library security systems. Tele-lifts. Digitization hardware and software. Reprographic technology.

IV.   Organization of Information

Historical development of the organization of information. Systems for organization of information: Environments, Storage and Retrieval tools, Encoding standards, Cataloguing Codes, Current systems. The information organization process: Surrogate/Metadata records: Description, Access; Authority control. Subject access: Analysis, Verbal subject approaches, Classification. Organization and administration: Arrangement, Management issues. Problems of information organization in Pakistan.

V.   Basic Reference Sources

Definition. Evaluation Criteria. Bibliographies-- General bibliographies, Basic guides to reference materials, Library catalogs; Serials guides; Indexes and abstracts; HEC NDL; Dictionaries and thesauri; Almanacs and fact books; Encyclopedias; Directories; Biographical sources; Geographical sources-- Maps, atlases & gazetteers; Reference Web sites; Internet Public Library (http://www.ipl.org/div/subject/browse/ref00.00.00). Evaluation

VI.   Management of Library and Information Services

Basic theories and principles of administration for effective management of public, academic, and special libraries and information centres, With emphasis on planning,

organizing, staffing, directing, coordinating, reporting, and budgeting. Administrative aspects of public and technical services, facilities, rules and regulations, evaluation, public relations, inter-agency cooperation, and change management. Library space management.

VII. Administrative/Management Skills

Elements of Administration (Planning, Organizing, Directing, Controlling), Management Techniques (Decision Making, Providing Training, Troubleshooting), Type of Management Styles, Assessment Methodologies.

VIII. Research Methodology

Definition. Types of research. Research methods. Research problem. Theory formulation. Literature review. Research questions / hypotheses. Sampling. Data collection. Data analysis and Interpretation. Report writing. Dissemination of results. Research proposal. Research ethics. Research in library & information science.

SUGGESTED READINGS

S. No.	Title	Author
1.	Practical research methods for librarians and information professionals.	Beck, S. E., & Manuel, K. (2007).
2.	Reference and information services: An introduction.	Bopp, R. E., & Smith, L. C. (2001).
3.	Future Librarians: dreams, Madness & reality.	Crawford, W and Gorman, Micheal(1995).
4.	Management basics for information professionals.	Evans, G. E., Layzell Ward, P., Rugaas, B., & Evans, G. E. (2007).
5.	Computers for librarians: An introduction to the electronic library.	Ferguson, S., & Hebels, R. (2003).
6.	Libraries in society.	Gerard, D. (1978).
7.	Organising knowledge in a global society: Principles and practice in libraries and information centres.	Harvey, D. R., Hider, P., & Harvey, D. R. (2004).
8.	Introduction to reference work: Vol. 1,	Katz, W. A. (2002).
9.	Paper to digital: Documents in the information age.	Liu, Z. (2008).
10.	The practical library manager.	Massis, B. E. (2003).
11.	Internet technologies and information services.	Miller, J. B. (2008).
12.	The electronic library.	Rowley, J. (2001).
13.	Organizing knowledge: An introduction to managing access to information.	Rowley, J. E., & Farrow, J. (2000).
14.	Library and information centre management.	Stueart, R. D. & Moran, B. B. (2007).
15.	The organization of Information.	Taylor, A. G., & Joudrey, D. N. (2008).
16.	The information age: Current controversies.	Torr, J. D. (2003).

PAPER-II: PROFESSIONAL

<u>Max Marks: 100</u>   <u>Time Allowed: 3 Hours</u>

Case No.	F.4-24/2023-R
Particulars of post	**Director** (BS-19), Directorate General of Special Education, Ministry of Human Rights.
Minimum Qualification & Experience:	i. Second Class or Grade 'C' Master's degree or equivalent qualifications in Special Education/ Education/ Social Work/ Sociology/ Anthropology/ Psychology. ii. Twelve (12) years post qualification experience of Planning/ Administrative/ Supervision or Teaching in the field of Special Education.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: 50 Marks (Descriptive)

(Public Administration, Office Management & Professional)

I.   Public Administration: Nature and scope, Role of Public Administration in a modern Welfare State; Issues & Challenges of Public Administration in Pakistan;

II.   Administrative Accountability: Internal and External Controls; Executive Control, Legislative Control, Judicial Control, Ombudsman, Public Opinion and Pressure Groups; Problems of Administrative Accountability in Pakistan;

III.   Planning: Types of Plans, Planning Process; Principles of Planning, Planning Machinery in Pakistan;

IV.   PPRA Ordinance 2002 and Rules 2004.

V.   Structuring and Re-Structuring the Education System: Early intervention for enrolment of out of school children inclusive of special children, Methodologies of teaching the special children, Regular schools Vs non formal school system, Distance Learning: Types of Distance Learning (Synchronous, Asynchronous, Hybrid), benefits of distance learning (Online Classes), Video recording, Video conferencing),

VI.   Training Teachers: Pre-and In-service Training on Special Education, Mainstreaming persons with disabilities

VII.   Quality of Learning for Children with Disabilities: Organizations of people with disabilities, Leadership development, Accessible learning and teaching materials, Assistive technology and devices, Enabling environment at home and in the community, Access to Early Childhood Development, Improving learning outcomes

VIII.   Professional Education for Special Children

Functionalized coaching in professional institutes: Trainings Skills, Importance of professional education, Formal, in-formal, non-formal education, Professional Educational qualifications for special children

IX.   Industrial Linkage

Imparting of special education according to the needs of industry; establishing linkages with industry to (i) assess their HR requirements; (ii) arranging trainings/internships for special children; (iii) job placement for trained children; and (iv) sensitizing them on the need for accommodating special people.

X. **Endowments**

Role of endowments in uplift of talent, Type of endowments particularly in the field of Education for special children.

Part-III: 25 Marks (Descriptive)
(Human Resource, Financial Management and Quality Management)

I. **Human Resource and Financial Management**

Definition, Significance and Scope of Human Resource Management; Organization—Types of Organization, Theory of Organization, Principles of Organization, Organization of the Federal and Provincial Governments, Public Sector Enterprises; Approaches to Human Resource Management. Personnel Administration—Tools of Personnel Management: Selection, Training, Promotion, Compensation, Discipline; Communication, Communication Channels and Principles of Public Relations; Human Behaviour and Organizations Administration.—Elements of Financial Administration, Performance Programmed Budgeting, Capital Budget, Principles of Budgeting, Auditing and Accounting.

II. **Basic Concept of Quality Management**

ISO-9000, ISO-13000, other certifications regarding quality measurement; management, management for Results, Setting Performance Goals and Targets; Job Analysis: Job Description, Job Specification, Performance Evaluation;

SUGGESTED READINGS

S. No.	Title	Author
1.	An Introduction to the Public Administration	E.N. Cladden
2.	Public Administration for a Welfare State	Paul Abbleby
3.	The Bureaucracy of Pakistan	Charles F. Kennedy
4.	Understanding the Learner and Classroom Management.	Mohan, G.A.
5.	Management: Building Competitive Advantage.	Batman, T.S and Snell, S.A.
6.	Human Resource Development in Schools.	Sharma, D.
7.	Management Skills in School	Jones, J.
8.	Improving School Administration	Ediger, Marlow
9.	Human Resource Management	H.T.Graham &Roger Bennett
10.	Management	James A.F.Stoner, R.Eward Freeman, Daniel R.Gilbert Jr.

PAPER-II: PROFESSIONAL

<u>Max Marks: 100</u>   <u>Time Allowed: 3 Hours</u>

Case No.	F.4-25/2023-R
Particulars of post	**Programmer** (BS-18), National Institute of Population Studies, Ministry of National Health Services, Regulations & Coordination.
Minimum Qualification & Experience:	i. Second Class or Grade 'C' Master's Degree in Computer Science / Information Technology or equivalent qualification from a University recognized by the HEC. ii. Five (5) years post qualification experience in the relevant field.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & Part-III.

Part-II: 25 Marks (Descriptive)
(Public Administration, Office Management)

I.   Public Administration: Nature and scope, Role of Public Administration in a modern Welfare State; Issues & Challenges of Public Administration in Pakistan;

II. Administrative Accountability: Internal and External Controls; Executive Control, Legislative Control, Judicial Control, Ombudsman, Public Opinion and Pressure Groups; Problems of Administrative Accountability in Pakistan;

III. Planning: Types of Plans, Planning Process; Principles of Planning, Planning Machinery in Pakistan;

IV. PPRA Ordinance 2002 and Rules 2004.

Part-III: 50 Marks (Descriptive)
(Computer Science/Information Technology)

I.   Introduction to Computing

Introduction to Information Technology and Computers, Computer System Components and Communication System, Input & Output devices and their types, Storage Media and their types, Types of Computer Hardware, Information Security/Privacy, Computer Crimes and Ethical Challenges, Trees (Binary Trees, Binary Search trees, AVL Trees, Encryption Algorithms (DES, RSA), Design Concepts, Architectural Design, Machine Instruction Characteristics, Instruction Processing, Processor Structure & Function, Control Unit Operation, Micro-programmed Control, Instruction-Level Parallelism And Superscalar Processors, Parallel Processing, Multi-Processor and Multi-core Systems.

II. Computer Communications & Networks

Basic Concepts and Classification of Networks, Circuit switching, Packet switching, Multiplexing (TDM, FDM), Layering: OSI and TCP/IP, Application Layer (Network application architectures, HTTP, FTP, Email, DNS, P2P applications), Transport Layer (Multiplexing in UDP and TCP, Connectionless Transport: UDP, Reliable data transfer and TCP, Congestion avoidance and control), Network Layer (The Internet Protocol, IPv4 Datagram, Internet Address Classes, Special IP Addresses ARP, IPv6, ICMP, Network Address Translation (NAT), Internet Routing Protocols and Algorithms, X.25, Frame relay and ATM, MPLS), Physical & Link Layer Functionalities (Error Detection & Control, ARQ,

Link layer addressing, LAN Technologies, Bridges and Hubs, Multiple Access), Special topics (Security, Overlay networks, naming, Content distribution networks, Peer to peer systems, DHTs, Network Attacks).

III.   Database Systems

Introduction to Database Systems, Relational Data Model & Relational Database Constraints, Relational Data Model, SQL, Relational Algebra & Calculus, ER Model, ER to Relational Mapping, PL/SQL Stored Procedures & Triggers, Functional Dependencies and Normalization, Storage & Indexing, Indexing Structure, XML documents & Web Services, Query Processing & Evaluation, Query Optimization, Transaction processing, Object-Oriented Databases, Distributed Databases, Database Security & Access Control

IV.   Operating Systems & Web

Roles of an Operating System, Operating-System Evolution, Memory Management, File Systems (UNIX and Windows Systems), Web applications Issues (Accessibility, testing, performance, operation, maintenance, security).

V.   Research Methods

Introduction to the nature of research, and types of Research; Types of design: which to use and how to use them; Surveys and sampling; Field experiments, Data collection; Data collection methods, Reports: getting respondents to talk about how things happen; Observation: watching what happens; Face-to -face interactions with respondents: the nuts and bolts of asking questions; Questionnaires: when to use, when not to use, which questions to ask, what format to use; Data analysis; Content analysis: what is said in a text, how it is said, and how often it's said; Discourse analysis: Statistics: describing things with numbers, and assessing the odds; Descriptive statistics: giving a systematic description of the numbers you've found; Measurement theory: types of measurement and their implications; Inferential statistics:

SUGGESTED READINGS

S. No.	Title	Author
1.	An Introduction to the Public Administration	E.N. Cladden
2.	Public Administration for a Welfare State	Paul Abbleby
3.	The Bureaucracy of Pakistan	Charles F. Kennedy
4.	Computer System Architecture	M. Morris Mano
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8.	Database Systems Concepts	Silberchatz, Abraham & Korth, Sudarshan
9.	Computer Networks	Andrew Tanenbaum
10.	Web Services: Principles and Technology	Michael Papazoglu
11.	A Gentle Guide to Research	Gordon Rugg & Marian Petre,
12.	Practical Research Methods	Catherine Dawson

PAPER-II: PROFESSIONAL

Max Marks: 100   Time Allowed: 3 Hours

Case No.	F.4-27/2023-R
Particulars of post	**Fellow** (BS-18), National Institute Of Population Studies, National Health Services, Regulations & Coordination.
Minimum Qualification & Experience:	(i) Second Class or Grade 'C' Master's degree in Economics/ Statistics/ Sociology/ Anthropology/ Demography from a University recognized by the HEC. (ii) Two international research publications. (iii) Five (5) years post qualification experience in the relevant field.

Part-I: 25 Marks (MCQ)
- 25 MCQ Questions on Part-II.

Part-II: 75 Marks (Descriptive)
(Professional related to Population & Demographic Principles)

I.   Population Welfare

Definition, meaning and explanation of Population Welfare, Importance of Population Welfare as a discipline, Historical perspective of Population Planning in Pakistan, Population Structure and Characteristics: Age and Sex, Gender and Marital Status, Educational Status, Ethnic and Religious Composition, Occupation/economic condition, Urban-rural, Religious Perspectives about Population Welfare, Policies of Population Welfare with Special Reference to Pakistan, Factors affecting Population welfare: Birth rate, Death rate, Growth rate, Fertility, Mortality, Migration, Natural and man-made calamities, Cultural patterns;

II.   Theories of Population:

   a. Malthus Theory
   b. Demographic Transition Theory

III. Over population and under-population as social problem

IV. Approaches to Population Control

V. Role of Professional Social Worker in Population Planning

VI. Population pyramid and transition from high to low fertility rate

VII. Main features of Population and housing census 2017

VIII. Qualitative and Quantitative research difference

IX. Challenges of field survey

X. Difference between gender equality and gender equity

XI. Steps involved in standard research proposal

XII. Concept of Mean, Median, Mode and Range

XIII. Cross-section vs longitudinal studies advantages and challenges

XIV. Use of research studies in decision making and implementation

XV. Demographic dividend and economic growth in Pakistan

SUGGESTED READINGS

S. No.	Title	Author
1.	Population Theories and their Economic Interpretation.	Coontz, S. (2013).
2.	The Population Welfare Programme in Pakistan.	Iqbal, M. A. K. (1985).
3.	Islam, the State and Population.	Jones, G. W. & Karim, M. S. (2005).
4.	Demography: The Study of Human Population.	Lundquist, J. H. Anderton, D. L. & Yaukey, D. (2014).
5.	Involvement of NGOs in Population Welfare Programme of Pakistan.	Rehman, A. (1994).
6.	Demography and Population Problems.	Sharma, R. K. (2004).
7.	Introduction to Social Work and Social Welfare: Empowering People.	Zastrow, C. (2009).

PAPER-II: PROFESSIONAL

<u>Max Marks: 100</u>   <u>Time Allowed: 3 Hours</u>

Case No.	F.4-28/2023-R
Particulars of post	**Deputy Inspector General (Forest) (**BS-19), Ministry of Climate Change.
Minimum Qualification & Experience:	i. Second Class or Grade 'C' B.Sc. (Hons.) Forestry/ M.Sc. (Forestry) ii. Twelve (12) years post qualification experience in the field of Forestry and Wildlife.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II.

Part-II: 75 Marks (Descriptive)
(Forestry & Wildlife)

I.   Forest, range lands and wild life importance and significance

II.   Forest management and utilization, wood based industries in Pakistan, silviculture

III.   Range management and utilization

IV.   National and international forest wealth statistics

V.   Role of wildlife as value addition to forestry

VI.   Forest based wildlife reservations of Pakistan and their management, eco-tourism

VII.   Forestry, agroforestry, social forestry and forest biometrics

VIII. Socio-economic and ecological impact of manmade forests

IX.   Watershed Management and role of forests in prevailing climate change dilemma

X.   National forest laws and policies at national level, biodiversity & environment

XI.   Wildlife Ecology, Conservation and Management

SUGGESTED READINGS

S.No.	Title	Author
1.	Forest Types of Pakistan	Champion, H.G., S.K. Seth and, G.M.Khattak
2.	Manual of Silviculture for Pakistan	Champion, H.G., S.K. Seth and G.M.Khattak
3.	Trees of Pakistan	M.I. Sheikh
4.	Range Management in Pakistan	M.A.A. Qureshi
5.	Comprehensive Forestry	B.A. Raza
6.	Farm Forestry in Pakistan,	M.A.A. Qureshi
7.	Forest Management	G.M. Khattak,
8.	Wildlife Ecology, Conservation and Management	A. R. E. Sinclair, J. M. Fryxell, G.Caughley
9.	Basics of Forestry & Allied Sciences	Dr. Masood A.A. Qureshi

PAPER-II: PROFESSIONAL

<u>Max Marks: 100</u>   <u>Time Allowed: 3 Hours</u>

Case No.	F.4-32/2023-R
Particulars of post	**Civilian Store Officer** (Grade-II) (BS-18), Corps of EME, Ministry of Defence.
Minimum Qualification & Experience:	M.Phil. in Engineering Management or equivalent qualification from a University recognized by the PEC with three (3) years post qualification experience relating to Store Supply and Logistics/ Management/ Accounts matters in a Government/ Semi-Government/ Autonomous/ Public/ Private Organization. OR Second Class or Grade 'C' Master's degree in Business Administration (Supply chain Management) or equivalent qualification from a University recognized by the HEC with five (5) years post qualification experience relating to Store Supply and Logistics/ Management/ Accounts matters in a Government/ Semi-Government/ Autonomous/ Public/ Private Organization. OR Colonel/ Lieutenant Colonel (Retired) from EME Corps with requisite qualification and experience of the post.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: 50 Marks (Descriptive)
(Public Administration, Office Management & Professional)

I. **Public Administration**: Nature and scope, Role of Public Administration in a modern Welfare State; Issues & Challenges of Public Administration in Pakistan;

II. **Administrative Accountability:** Internal and External Controls; Executive Control, Legislative Control, Judicial Control, Ombudsman, Public Opinion and Pressure Groups; Problems of Administrative Accountability in Pakistan;

III. **Planning:** Types of Plans, Planning Process; Principles of Planning, Planning Machinery in Pakistan;

IV. PPRA Ordinance 2002 and Rules 2004.

V. Procedures for Receipt and Issue of Stores

VI. Stores procedures with relation to following topics:-
  - Stock Taking
  - Care and Preservation of Military Stores

VII. Ware House Management

VIII. Inventory Management

Part-III: 25 Marks (Descriptive)
(Human Resource, Financial Management and Quality Management)

I. **Human Resource and Financial Management**

Definition, Significance and Scope of Human Resource Management; Organization—Types of Organization, Theory of Organization, Principles of Organization, Organization

of the Federal and Provincial Governments, Public Sector Enterprises; Approaches to Human Resource Management. Personnel Administration—Tools of Personnel Management: Selection, Training, Promotion, Compensation, Discipline; Communication, Communication Channels and Principles of Public Relations; Human Behaviour and Organizations Administration.—Elements of Financial Administration, Performance Programmed Budgeting, Capital Budget, Principles of Budgeting, Auditing and Accounting.

II. Basic Concept of Quality Management

ISO-9000, ISO-13000, other certifications regarding quality measurement; management, management for Results, Setting Performance Goals and Targets; Job Analysis: Job Description, Job Specification, Performance Evaluation;

SUGGESTED READINGS

S. No.	Title	Author
1.	An Introduction to the Public Administration	E.N. Cladden
2.	Public Administration for a Welfare State	Paul Abbleby
3.	Warehouse Distribution & Operation Handbook	Mulcahy, D.E.
4.	Inventory Control and Management	Walters, D.
5.	The Bureaucracy of Pakistan	Charles F. Kennedy
6.	Human Resource Management	H.T.Graham &Roger Bennett
7.	Management	James A.F.Stoner, R.Eward Freeman, Daniel R.Gilbert Jr.

PAPER-II: PROFESSIONAL

Max Marks: 100   Time Allowed: 3 Hours

Case No.	F.4-36/2023-R
Particulars of post	**Deputy Director (Database Administration)** (BS-18), Anti Narcotics Force, Ministry of Narcotics Control.
Minimum Qualification & Experience:	i. Second Class or Grade 'C' Master's degree in Computer Science/ IT or equivalent qualification recognized by HEC. ii. Five (5) years post qualification experience in Data Base Administration.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: 25 Marks (Descriptive)
(Public Administration, Office Management)

I.   Public Administration: Nature and scope, Role of Public Administration in a modern Welfare State; Issues & Challenges of Public Administration in Pakistan;

II.   Administrative Accountability: Internal and External Controls; Executive Control, Legislative Control, Judicial Control, Ombudsman, Public Opinion and Pressure Groups; Problems of Administrative Accountability in Pakistan;

III.   Planning: Types of Plans, Planning Process; Principles of Planning, Planning Machinery in Pakistan;

**IV.   PPRA Ordinance 2002 and Rules 2004.

Part-III: 50 Marks (Descriptive)
(Computer Science/Information Technology)

I.   Introduction to Computing

Introduction to Information Technology and Computers, Computer System Components and Communication System, Input & Output devices and their types, Storage Media and their types, Types of Computer Hardware, Information Security/Privacy, Computer Crimes and Ethical Challenges, Trees (Binary Trees, Binary Search trees, AVL Trees, Encryption Algorithms (DES, RSA), Design Concepts, Architectural Design, Machine Instruction Characteristics, Instruction Processing, Processor Structure & Function, Control Unit Operation, Micro-programmed Control, Instruction-Level Parallelism And Superscalar Processors, Parallel Processing, Multi-Processor and Multi-core Systems.

II.   Computer Communications & Networks

Basic Concepts and Classification of Networks, Circuit switching, Packet switching, Multiplexing (TDM, FDM), Layering: OSI and TCP/IP, Application Layer (Network application architectures, HTTP, FTP, Email, DNS, P2P applications), Transport Layer (Multiplexing in UDP and TCP, Connectionless Transport: UDP, Reliable data transfer and TCP, Congestion avoidance and control), Network Layer (The Internet Protocol, IPv4 Datagram, Internet Address Classes, Special IP Addresses ARP, IPv6, ICMP, Network Address Translation (NAT), Internet Routing Protocols and Algorithms, X.25, Frame relay and ATM, MPLS), Physical & Link Layer Functionalities (Error Detection & Control, ARQ,

Link layer addressing, LAN Technologies, Bridges and Hubs, Multiple Access), Special topics (Security, Overlay networks, naming, Content distribution networks, Peer to peer systems, DHTs, Network Attacks).

III.   Database Systems

Introduction to Database Systems, Relational Data Model & Relational Database Constraints, Relational Data Model, SQL, Relational Algebra & Calculus, ER Model, ER to Relational Mapping, PL/SQL Stored Procedures & Triggers, Functional Dependencies and Normalization, Storage & Indexing, Indexing Structure, XML documents & Web Services, Query Processing & Evaluation, Query Optimization, Transaction processing, Object-Oriented Databases, Distributed Databases, Database Security & Access Control

IV.   Operating Systems & Web

Roles of an Operating System, Operating-System Evolution, Memory Management, File Systems (UNIX and Windows Systems), Web applications Issues (Accessibility, testing, performance, operation, maintenance, security).

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1.	An Introduction to the Public Administration	E.N. Cladden
2.	Public Administration for a Welfare State	Paul Abbleby
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