

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. 04/2024

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
1.	60/2024	Psychiatrist (BS-17) , Anti-Narcotics Force, Ministry of Narcotics Control.	i. MBBS or equivalent qualification recognized by PMDC. ii. Registration with PMDC. iii. Three (3) years post qualification experience in psychiatry field.	Objective Type Test (MCQ) Part-I English =20 marks Part-II Professional Test =80 marks	Part-I Vocabulary, Grammar Usage, Sentence Structuring Part-II <ul style="list-style-type: none"> ▪ Core courses of MBBS degree program. ▪ Diagnose and remedy in the following disorders: <ol style="list-style-type: none"> i. Mood disorders. ii. Anxiety disorders. iii. Schizophrenia.
2.	62/2024	Physical Training Instructor (Female) (BS-16) , Federal Government Educational Institutions (FGEI) (Cantts/ Garrisons), Ministry of Defence.	Second Class or Grade 'C' Master's Degree in Health & Physical Education or equivalent qualification from a University / Institution recognized by HEC. OR Second Class or Grade 'C' Bachelor's degree with Diploma in Physical Education or equivalent qualification from a University / Institution 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 (Masters Level) <ul style="list-style-type: none"> ▪ Curriculum Development in Physical Education, ▪ Rules of games (Hockey, Volley Ball) ▪ Basics of Human Anatomy ▪ Administrative and Management in Sports, ▪ Sports Nutrition, ▪ Trauma and Rehabilitation, ▪ Test, Measurement and Evaluation in Physical Education & Sports ▪ Athletic Injuries, ▪ Handicap Sports Organization
3.	66/2024	Secondary School Teacher (Male) (BS-17) , Federal Government Educational Institution (FGEI) Directorate, (Cantt / Garrison) Schools, Ministry of Defence.	Second Class or Grade 'C' Master's Degree with B.Ed. or equivalent qualification from a University recognized by HEC. OR M.A (Education) / M.A (EPM) 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 <ul style="list-style-type: none"> ▪ Perspectives of Education in Pakistan ▪ School Administration & Supervision ▪ Planning & Management in Education ▪ Educational Psychology ▪ Curriculum Development & Assessment ▪ Teaching Methodology ▪ Classroom Management ▪ Educational Measurement & Evaluation ▪ Research Techniques in Education ▪ Educational System in Pakistan ▪ Educational Guidance & Counselling

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
4.	67/2024	Assistant Garrison Engineer/ Sub-Divisional Officer (BS-16) , Military College Murree, Ministry of Defence.	i. B.Sc. (Civil Engineering) from a University recognized by HEC. ii. Registration with PEC. OR B.Tech. (Honor) (Civil) with one (1) years' post qualification experience of construction / maintenance in Govt. / Semi Govt. / Public Organization.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II Professional Test = 80 marks	Part-I Grammar Usage, Sentence Structuring Part-II <ul style="list-style-type: none"> ▪ Soil Mechanics & Foundation Engineering ▪ Surveying & Levelling ▪ Costing and Estimation ▪ Construction Management ▪ Building Material & Building Construction ▪ Structural Design Applications ▪ Concrete Technology & R.C.C Structure Design ▪ Preparation of PC-1 for Infrastructure Projects ▪ Project Management & Supervision. ▪ Basic IT/Computer Knowledge
5.	68/2024	Security Supervisor (BS-16) , Military College Murree, Ministry of Defence.	Ex Service Man (Retired) Subedar/ Naib Subedar / Havildar from Pakistan Army. OR Fifteen (15) years Regular / Commissioned Service in Army.	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 <ul style="list-style-type: none"> ▪ Basic Arithmetic <ul style="list-style-type: none"> ○ Algebra ○ Ratios ○ Percentages ○ Arithmetic Means ▪ Current Affairs. <ul style="list-style-type: none"> ○ Developments at National and International Levels in the last 5 years ▪ Pakistan Affairs & Islamic Studies <ul style="list-style-type: none"> ○ Basic Level knowledge ▪ Security Measures to Maintain Law & Order Note : (Equal weightage for each topic at Part-II)
6.	69/2024	Librarian (BS-16) , Military College Murree, Ministry of Defence.	Second Class or Grade 'C' Bachelor's degree in Library Science / Library and Information Science 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 Grammar Usage, Sentence Structuring Part-II <ul style="list-style-type: none"> ▪ Introduction to Library & Information Science ▪ Classification & Cataloguing : Theory and Practice ▪ Collection, maintenance and issuance of books. ▪ Library Automation/Information Storage & Retrieval ▪ IT based Library Management ▪ Research Methods & Techniques for Librarians ▪ Public Records, Rare Material & their Conservation ▪ Management of Serials Publications ▪ Rules & Procedure for Write off of library material

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
7.	72/2024	Lecturer / Instructor (BS-17), A. Biology B. Chemistry C. Computer Science D. English E. Islamic Studies F. Mathematics G. Pakistan Studies H. Physics I. Urdu Military College Murree, Ministry of Defence.	Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by HEC.	Objective Type Test (MCQ) Part-I English =20 marks Part-II Subject Test = 50 marks Part-III Professional Test=30 marks Note: <ul style="list-style-type: none"> ▪ In Language Subjects other than English (i.e Urdu), English part for 20 marks will not be included.. There will be 70 marks for subject Test and 30 marks for Professional Test. 	For (A) Biology Part-I Vocabulary, Grammar Usage, Sentence Structuring Part-II (Masters Level) <ul style="list-style-type: none"> ▪ Theories of Evolution, ▪ Nucleic Acids, ▪ Cell Division, ▪ Nutrition, ▪ Ecosystem, ▪ Mendelian laws of inheritance, ▪ Diagnostic Characteristics of all the phyla or invertebrates and chordates, ▪ Division of Plants Part-III <ul style="list-style-type: none"> ▪ Teaching Techniques and Methodology ▪ Classroom Management and Discipline ▪ Testing and Evaluation ▪ Knowledge of Bloom's Taxonomy For (B) Chemistry Part-I Vocabulary, Grammar Usage, Sentence Structuring Part-II (Masters Level) <ul style="list-style-type: none"> ▪ Nature, Properties & States of Matter, ▪ Electronic Structure, ▪ Chemical Kinetics & Radioactivity, ▪ Reaction Mechanism (electrophilic & nucleophilic substitution and addition reaction) ▪ Inorganic Chemistry, ▪ Thermodynamics, ▪ Chemical Equilibrium, ▪ Electrochemistry, Part-III <ul style="list-style-type: none"> ▪ Teaching Techniques and Methodology ▪ Classroom Management and Discipline ▪ Testing and Evaluation ▪ Knowledge of Bloom's Taxonomy

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
					<p data-bbox="1559 177 1890 209"><u>For (C) Computer Science</u></p> <p data-bbox="1559 240 1630 272"><u>Part-I</u> Vocabulary, Grammar Usage, Sentence Structuring</p> <p data-bbox="1559 328 1845 360"><u>Part-II (Masters Level)</u></p> <ul data-bbox="1574 392 2022 671" style="list-style-type: none"> ▪ Computer Hardware/Software, ▪ Data Communication & Networking, ▪ C/C++ Language, ▪ Visual Basic, ▪ Operating System Unix/Linux ▪ Windows 10/11, ▪ Oracle/PLSQL, ▪ System Analysis & Design. ▪ Web Programming, <p data-bbox="1559 695 1653 727"><u>Part-III</u></p> <ul data-bbox="1574 727 2074 855" style="list-style-type: none"> ▪ Teaching Techniques and Methodology, ▪ Classroom Management and Discipline, ▪ Testing and Evaluation, ▪ Knowledge of Bloom's Taxonomy <p data-bbox="1559 887 1756 919"><u>For (D) English</u></p> <p data-bbox="1559 951 1630 983"><u>Part-I</u> Vocabulary, Grammar Usage, Sentence Structuring</p> <p data-bbox="1559 1015 1845 1046"><u>Part-II (Masters Level)</u></p> <ul data-bbox="1574 1062 2051 1206" style="list-style-type: none"> ▪ English Literature 16th to 20th Century. ▪ Linguistics. ▪ English Language Teaching. ▪ Syntax. ▪ Diction. <p data-bbox="1559 1254 1653 1286"><u>Part-III</u></p> <ul data-bbox="1574 1302 2074 1430" style="list-style-type: none"> ▪ Teaching Techniques and Methodology ▪ Classroom Management and Discipline ▪ Testing and Evaluation ▪ Knowledge of Bloom's Taxonomy

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
					<p>For (E) Islamic Studies</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <p>☆ قرآن کا بنیادی موضوع / متن</p> <p>☆ سیرت النبی ﷺ</p> <p>☆ فقہ: جامعیت، اختلاف رائے اور عصر حاضر کے تناظر میں مذہب کی تشریح۔</p> <p>☆ تعارف اسلام</p> <p>☆ انسانی زندگی میں دین کی اہمیت</p> <p>☆ اسلام کے نمایاں پہلو</p> <p>☆ اسلامی عقائد کے انفرادی اور اجتماعی اثرات</p> <p>☆ انسانی حقوق۔ اسلام کی نظر میں</p> <p>☆ اسلام اور عصر حاضر کے چیلینجز</p> <p>☆ اسلامی نظام حکمرانی کا ڈھانچہ</p> <p>☆ سرکاری ملازمین کی ذمہ داریاں</p> <p>☆ اسلامی ضابطہء حیات</p> <p>Part-III</p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation • Knowledge of Bloom's Taxonomy <p>For (F) Mathematics</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Calculus/Differentiation, Integration, Limits of continuity • Discrete Structures/Discrete Mathematics, • Communication Skills for Mathematicians, • Computing Tools for Mathematicians, • Mathematical Statistics, • Mathematical Spaces (Sets, Vector Spaces, Metric Spaces, topological spaces Tensors, • Differential Equations.

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
					<p>Part-III</p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation • Knowledge of Bloom's Taxonomy <p>For (G) Pakistan Studies</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> ▪ Ideology of Pakistan in light of speeches and statements of Allama Iqbal and Quaid-e-Azam ▪ Pakistan Movement 1857-1947 ▪ Current Issues of Pakistan (challenges to National Security, Economic Challenges, Pakistan's War on Terror, ▪ Geography of Pakistan <ul style="list-style-type: none"> ✓ Land and People of Pakistan ✓ Pakistan and CPEC ✓ Natural Resources of Pakistan, ▪ Latest Constitutional Amendments, <p>Part-III</p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation • Knowledge of Bloom's Taxonomy <p>For (H) Physics</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Heat and Thermodynamics, • Waves and Optics, • Electrostatic, • Electricity and Magnetism, • Atomic and Modern Physics, • Basic Solid State Physics, • Electrodynamics, • Mechanics <p>Part-III</p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation • Knowledge of Bloom's Taxonomy

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
					<p>For (I) Urdu Part-I (Masters Level) (70 Marks)</p> <ul style="list-style-type: none"> • اردو ذہیرہ الفاظ • اردو جملے کا ڈھاپہ • اردو قواعد کا ایسہ عمال • لسانیات • عالییات • اہلیات • شعر • طنز و مزاح <p>Part-III (30 Marks)</p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation • Knowledge of Bloom's Taxonomy
8.	73/2024	<p>Demonstrator (BS-16), A. Biology, B. Chemistry C. Physics Military College Murree, Ministry of Defence.</p>	<p>Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by HEC. OR Second Class or Grade 'C' Bachelor's degree in the relevant subject from a University recognized by HEC with two (2) years post qualification experience in the relevant field.</p>	<p>Objective Type Test (MCQ) Part-I English =20 marks Part-II Subject Test = 50 marks Part-III Professional Test=30 marks</p>	<p>For (A) Biology</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II</p> <ul style="list-style-type: none"> ▪ Theories of Evolution, ▪ Nucleic Acids, ▪ Cell Division, ▪ Nutrition, ▪ Ecosystem, ▪ Mendelian laws of inheritance, ▪ Diagnostic Characteristics of all the phyla or invertebrates and chordates, ▪ Division of Plants <p>Part-III</p> <ul style="list-style-type: none"> ▪ Teaching Techniques and Methodology ▪ Classroom Management and Discipline ▪ Testing and Evaluation ▪ Knowledge of Bloom's Taxonomy

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
					<p>For (B) Chemistry</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II</p> <ul style="list-style-type: none"> ▪ Nature, Properties & States of Matter, ▪ Electronic Structure, ▪ Chemical Kinetics & Radioactivity, ▪ Reaction Mechanism (electrophilic & nucleophilic substitution and addition reaction) ▪ Inorganic Chemistry, ▪ Thermodynamics, ▪ Chemical Equilibrium, ▪ Electrochemistry, <p>Part-III</p> <ul style="list-style-type: none"> ▪ Teaching Techniques and Methodology ▪ Classroom Management and Discipline ▪ Testing and Evaluation ▪ Knowledge of Bloom's Taxonomy <p>For (C) Physics</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II</p> <ul style="list-style-type: none"> ▪ Heat and Thermodynamics, ▪ Waves and Optics, ▪ Electrostatic, ▪ Electricity and Magnetism, ▪ Atomic and Modern Physics, ▪ Basic Solid State Physics, ▪ Electrodynamics, ▪ Mechanics <p>Part-III</p> <ul style="list-style-type: none"> ▪ Teaching Techniques and Methodology ▪ Classroom Management and Discipline ▪ Testing and Evaluation ▪ Knowledge of Bloom's Taxonomy
9.	74/2024	Senior Scientific Assistant (BS-16) , Naval Headquarters, Ministry of Defence.	<p>i. Second Class or Grade "C" Bachelor's degree in Science with Chemistry / Chemical Technology.</p> <p>ii. Three (3) years (post qualification) experience in the field of prescribed qualification.</p>	<p>Objective Type Test (MCQ)</p> <p>Part-I English =20 marks</p> <p>Part-II Professional Test=80 marks</p>	<p>Part-I Grammar Usage, Sentence Structuring</p> <p>Part-II</p> <ul style="list-style-type: none"> ▪ Thermodynamics, ▪ Nature, Properties and States of Matter, ▪ Gases, Liquids & Solids, ▪ Organic Chemistry ▪ In-Organic Chemistry

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
10.	75/2024	Lady Doctor (CMP) (BS-17) , Naval Headquarters, Ministry of Defence.	MBBS or equivalent qualifications recognized by Pakistan Medical and Dental Council.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II Professional Test=80 marks	Part-I Vocabulary, Grammar Usage, Sentence Structuring Part-II <ul style="list-style-type: none"> ▪ Core courses of MBBS Degree Program. ▪ Health Policies of the Government of Pakistan. ▪ Care vs Cure for Health Management. ▪ Major Challenges being faced by Health Sector.
11.	76/2024	Lecturer (BS-17) , A. English B. Mathematics C. Urdu Naval Headquarters, Ministry of Defence.	Second Class or Grade 'C' Master's degree in relevant subject.	Objective Type Test (MCQ) Part-I English =20 marks Part-II Subject Test = 50 marks Part-III Professional Test=30 marks Note: <ul style="list-style-type: none"> ▪ In Language Subjects other than English (i.e Urdu), English part for 20 marks will not be included. There will be 70 marks for subject Test and 30 marks for Professional Test. 	For (A) English Part-I Vocabulary, Grammar Usage, Sentence Structuring Part-II (Masters Level) <ul style="list-style-type: none"> ▪ English Literature 16th to 20th Century. ▪ Linguistics. ▪ English Language Teaching. ▪ Syntax. ▪ Diction. Part-III <ul style="list-style-type: none"> ▪ Teaching Techniques and Methodology ▪ Classroom Management and Discipline ▪ Testing and Evaluation ▪ Knowledge of Bloom's Taxonomy For (B) Mathematics Part-I Vocabulary, Grammar Usage, Sentence Structuring Part-II (Masters Level) <ul style="list-style-type: none"> • Calculus/Differentiation, Integration, Limits of continuity • Discrete Structures/Discrete Mathematics, • Communication Skills for Mathematicians, • Computing Tools for Mathematicians, • Mathematical Statistics, • Mathematical Spaces (Sets, Vector Spaces, Metric Spaces, topological spaces Tensors, • Differential Equations. Part-III <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation • Knowledge of Bloom's Taxonomy

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
					<p>For (C) Urdu Part-I (Masters Level) (70 Marks)</p> <ul style="list-style-type: none"> • اردو، ذخیرہ الفاظ • اردو، حملے کا ڈھانچہ • اردو قواعد کا ایسے عمال • لسانیات • عالییات • اہلیات • سبھ • طنز و مزاح <p>Part-II (30 Marks)</p> <ul style="list-style-type: none"> ▪ Teaching Techniques and Methodology ▪ Classroom Management and Discipline ▪ Testing and Evaluation ▪ Knowledge of Bloom's Taxonomy
12.	77/2024	Senior Manager Personnel and 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

Schemes and Syllabi for Written Examination (Descriptive) for All Posts in BS-18 & BS-19 (other than Doctors) included in Consolidated Advertisement No. 04/2024

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 précisising 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.4-61/2024-R
Particulars of post	Deputy Director (Technical) (BS-18) , Akhtar Hameed Khan National Centre for Rural Development, Establishment Division.
Minimum Qualification & Experience:	(i) Second Class or grade "C" Master's or Bachelor's (16 years education) degree in Public Administration / Development Studies / Public Policy / Sociology / Environmental Sciences / Agriculture / Agricultural Engineering / Economics / Political Sciences / International Relations / Business Administration / Gender Studies / Rural Development and Social Work or equivalent qualification from a University recognized by HEC. (ii) Five (5) years post qualification experience in a responsible position in the field of Rural Development / Poverty Alleviation.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: 50 Marks (Descriptive)

(Related to required qualifications & experience)

- I. **Public Administration:** Nature and scope, Role of Public Administration in a modern Welfare State; Issues & Challenges of Public Administration in Pakistan;
- II. **Bureaucracy:** Concept of Bureaucracy, Bureaucracy of Pakistan as a Change Agent;
- III. **Planning:** Types of Plans, Planning Process; Principles of Planning, Planning Machinery in Pakistan, Atmospheric Pollution, Water Pollution, Land Pollution - Solid waste management and disposal. Role of Remote Sensing and GIS in Environmental Science, Population Planning.
- IV. PPRA Ordinance & Rules;
- V. Rural Development/Poverty Alleviation in Pakistan
- VI. Challenges in Pakistan's Agriculture
- VII. Best practices in social mobilization, particularly in the developing countries
- VIII. Political economy of rural development in Pakistan
- IX. Dynamics of the socio-economic structure/hierarchies in rural Pakistan and their impact on the development effort
- X. Issues in provision of civic amenities in the rural areas and ensuing the operational sustainability of these schemes

- XI. Possibility of re-modelling rural habitats for facilitating the provisions of civic amenities/ services

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.	Bureaucracy: Modern Society	Pebr, M.Blau.
3.	Public Administration for a Welfare State	Paul Ableby
4.	The Bureaucracy of Pakistan	Charles F. Kennedy
5.	Physical Geography-Science and Systems of the Human Environment 2009	Alan H. Strahler, Arthur N. Strallar.
6.	Basics of Environmental Science 2002	Michael Allaby
7.	Environmental Science: Systems and Solutions. 5th ed. 2013	Michael L. McKinney, Robert Schoch and Logan Yonavjak
8.	Environmental Science: A Global Concern 2012	William P. Cunningham, Barbara Woodworth Saigo
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**Max Marks: 100****Time Allowed: 3 Hours**

Case No.	F.4-63 (A)/2024-R
Particulars of post	Associate Professor (Biology) (Female) (BS-19) , Federal Government Educational Institutions (FGEI) (Cantts Garrisons), Colleges, Ministry of Defence.
Minimum Qualification & Experience:	Ph.D. Degree in the relevant subject with eight (8) years post qualification teaching and administrative experience at College / University level. OR M. Phil Degree in the relevant subject with ten (10) years post qualification teaching and administrative experience at College / University level. OR Second Class or Grade 'C' Master's degree in the relevant subject with twelve (12) years post qualification teaching and administrative experience at College University level.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: (Biology) (Subjective)**50 Marks****I. Anatomy and Embryology**

- Primary and secondary tissues. Meristems. Secondary growth in dicot stem. Anatomy of leaf, stem and root.
- Micro and mega sporogenesis, pollination mechanism, fertilization, development of Embryo and Endosperm, Seed dispersal.

II. Plant Physiology

- Plant water relations, Osmotic Quantities, component potentials of water and their role in transport, water absorption by roots, transpiration. Role of essential mineral elements and their uptake. Plant hormones. Photoperiodism, Vernalization. Dormancy and Seed germination. Enzymes.
- Photosynthesis: Plant pigments, Light reaction, CO₂ fixation, Mechanism of photophosphorylation.
- Respiration: Glycolysis, Krebs cycle, Mechanism of oxidative phosphorylation.

III. Genetics & Evolution

- Mendelian Genetics, Multiple Alleles, Polygenic inheritance, Gene interaction, Epistasis and pleiotropy, Sex-linked inheritance, Chromosomal aberrations, Mutations, DNA repair.
- Evolution of life, Convergent Evolution, Divergent Evolution, Parallel Evolution and Natural selection

IV. Molecular Biology

- Nucleic acids, DNA as hereditary material, DNA replication, Transcription, Genetic code, Protein synthesis, Genetic engineering and its application, Genetically Modified Organisms (GMO).

V. Animal Form and Function

- Protection, Support and Movement: Integumentary system of invertebrates and vertebrates; Animal muscles: the muscular system of invertebrates and vertebrates.

- Digestion and Nutrition: Feeding mechanism, Digestion, Organization and regional function of alimentary canal, Regulation of food intake, Nutritional requirements
- Internal Fluids and Respiration: Internal fluid environment, Composition of blood, Circulation and respiration mechanisms

Part-III (Professional) (Subjective) : 25 Marks

- I. **Development of Curriculum and Instructional Material**
 - Elements of Curriculum.
 - Curriculum Development Process: Need Assessment, Formulation of Aims and Objectives, Taxonomies of Educational Objectives, Selection of Content, Development of Curricular Materials.
- II. **Process of Teaching and Teaching Strategies**
 - Process of Classroom Communication
 - Factors affecting Classroom Communication
 - Barriers to Classroom Communications
 - Use of Instructional Materials and Media
- III. **Educational Assessment and Evaluation**
 - Concept of Classroom Assessment and Evaluation
 - Distinction between Assessment, Evaluation and Measurement
 - Approaches to Evaluation: Formative Evaluation; Summative Evaluation
 - Types of Test: Essay Type; Objective Type: Multiple Choice, True-False Items, Matching Type; Principles of Construction of these Test
 - Characteristics of a Good Test: Validity, Reliability, Objectivity, Usability
- IV. **Research Methods in Education**
 - Research Instruments: Questionnaire: Interview; Test; Observation; Rating Scale
 - Research Proposal and Report Writing.

SUGGESTED READINGS

S. No.	Title	Author
1.	Comparative Morphology of the Vascular Plants	Foster, A.S. and E.H. Gifford.
2.	Genetics: A Conceptual Approach.	Pierce, B. A.
3.	Molecular Cell Biology	Lodish, H., A. Berk, S.L. Zipursky, P. Matsudaira, D. Baltimore and J. Darnell
4.	Ilmi Biomolecules, Cell Biology and Genetics.	Cheema, T.A. and Cheema Z.T. 2009
5.	Growth and Differentiation in Plants	Phillips and Wareings
6.	Animal behavior:- An Evolutionary Approach	John Alcock
7.	Biology	Campbell, N.A.
8.	Research in Education	JW Best
9.	Integrating Education Technology into Teaching	Roblyer
10.	Curriculum Development	S. M. Shahid
11.	Educational Measurement and Evaluation	S. M. Shahid
12.	Educational Administration	S. M. Shahid

PAPER-II: PROFESSIONAL**Max Marks: 100****Time Allowed: 3 Hours**

Case No.	F.4-63(B)/2024-R
Particulars of post	Associate Professor (Computer Science) (Female) (BS-19) , Federal Government Educational Institutions (FGEI) (Cantts Garrisons), Colleges, Ministry of Defence.
Minimum Qualification & Experience:	Ph.D. Degree in the relevant subject with eight (8) years post qualification teaching and administrative experience at College / University level. OR M. Phil Degree in the relevant subject with ten (10) years post qualification teaching and administrative experience at College / University level. OR Second Class or Grade 'C' Master's degree in the relevant subject with twelve (12) years post qualification teaching and administrative experience at College University level.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: (Computer Science) (Subjective)**50 Marks****I. Computer Architecture**

Microprocessor Bus Structure (Address/Data/Control), Registers and Flags, Storage Hierarchy (Main/Virtual/Cache/Secondary memory), Peripheral communication, CPU, ALU, Principles of Instruction Set Design, Multiprocessors & Thread Level Parallelism.

II. Object Oriented Programming

Data types, control structures, functions, arrays, classes, methods, object and encapsulation; constructors and destructors, operator and function overloading, virtual functions, derived classes, inheritance and polymorphism, I/O and file processing.

III. Data Structure and Algorithms

Stack and Queue, Sequential Search, Binary Search, Bubble sort, Merge sort, Quick sort, Insertion sort, Selection Sort, Linked Lists, Infix to postfix conversions, Expression tree construction, Tree traversals, Graph representation and traversal, Minimum spanning tree.

IV. Database Management Systems

Entity Relationship modeling, Relational data model and algebra, Structured Query language, Database design, functional dependencies and normal forms, concurrency control and recovery techniques, Database security and authorization.

V. Computer Communications and Networks

Asynchronous and Synchronous transmission, LAN/WAN/MAN, Network layers, Transport layer protocols TCP/IP, UDP, Error Control, Flow Control, Multiplexing, Routing, Bridging, Network security issues.

VI. Operating Systems

Process and CPU management, Multithreading, Deadlocks, Memory management and virtual memory, External Fragmentation, Paging and Demand Paging, File management systems, Scheduling and dispatch, Introduction to concurrency.

Part-III (Professional) (Subjective) : 25 Marks**I. Development of Curriculum and Instructional Material**

- Elements of Curriculum.
- Curriculum Development Process: Need Assessment, Formulation of Aims and Objectives, Taxonomies of Educational Objectives, Selection of Content, Development of Curricular Materials.

II. Process of Teaching and Teaching Strategies

- Process of Classroom Communication
- Factors affecting Classroom Communication
- Barriers to Classroom Communications
- Use of Instructional Materials and Media

III. Educational Assessment and Evaluation

- Concept of Classroom Assessment and Evaluation
- Distinction between Assessment, Evaluation and Measurement
- Approaches to Evaluation: Formative Evaluation; Summative Evaluation
- Types of Test: Essay Type; Objective Type: Multiple Choice, True-False Items, Matching Type; Principles of Construction of these Test
- Characteristics of a Good Test: Validity, Reliability, Objectivity, Usability

IV. Research Methods in Education

- Research Instruments: Questionnaire; Interview; Test; Observation; Rating Scale
- Research Proposal and Report Writing.

Suggested Reading

S.No.	Title	Author
1.	Modern Operating Systems	Andrew S. Tanenbaum
2.	Operating System Concepts	Addison-Wesley
3.	Algorithms and Data Structures	N. Wirth
4.	Data structures	Aaron M. Tanenbaum,
5.	Database Systems: A Practical Approach to Design, Implementation and Management	R.Connolly and P.Begg
6.	Introduction to Computer Networks	A. S. Tanenbaum
7.	Computer Networks and Internets	Douglas E. Comer
8.	Computer Architecture: A Quantitative Approach	Hennessy & Patterson
9.	Research in Education	JW Best
10.	Integrating Education Technology into Teaching	Roblyer
11.	Curriculum Development	S.M. Shahid
12.	Educational Measurement and Evaluation	S.M. Shahid
13.	Educational Administration	S.M. Shahid

PAPER-II: PROFESSIONAL**Max Marks: 100****Time Allowed: 3 Hours**

Case No.	F.4-63(C)/2024-R
Particulars of post	Associate Professor (Economics) (Female) (BS-19) , Federal Government Educational Institutions (FGEI) (Cantts Garrisons), Colleges, Ministry of Defence.
Minimum Qualification & Experience:	<p>Ph.D. Degree in the relevant subject with eight (8) years post qualification teaching and administrative experience at College / University level.</p> <p style="text-align: center;">OR</p> <p>M. Phil Degree in the relevant subject with ten (10) years post qualification teaching and administrative experience at College / University level.</p> <p style="text-align: center;">OR</p> <p>Second Class or Grade 'C' Master's degree in the relevant subject with twelve (12) years post qualification teaching and administrative experience at College University level.</p>

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: (Economics) (Subjective)**50 Marks****I. Micro Economics**

Consumer behaviour, Determination of market demand and supply i.e. concept of elasticity of Demand & Supply, Static, Comparative Static Analysis, Distinction between partial and general equilibrium analysis (basic level) theory of the Firm, Producer's equilibrium, Pricing factors of production

II. Macro Economics

Basic Economic Concepts, National Income Accounting, Consumption Function, Multiplier, Accelerator, Component of Aggregate Demand, Labour Demand and Supply, Un-Employment, Determination of equilibrium level of income and output (at least with reference to two or three school of thought), Inflation.

III. Public Financing

Government expenditure, Sources of Government Revenue, Privatization, Taxes and non-taxes, Incidence of different taxes, Public Debt, Objectives, methods of repayment, Deficit financing, General Equilibrium Analysis, Welfare Economics, Fiscal Policy.

IV. Role of Foreign Trade and Aid in Economic Development

Trends in Pakistan's Balance of Payments, Terms of Trade, Changes in direction of trade, Trends in Pakistan's major exports and imports, Causes of significant changes in the trends, the role of migration and remittances in Pakistan's economy, costs and benefits of Foreign Aid, Role of Foreign Investment.

V. Major Issues in Pakistan Economy

Energy crisis, Corruption, Bad governance, External debt accumulation and dependency, Unemployment, Income inequality, Inflation, Fiscal and trade deficits, Balance of payment issues, Shortage of irrigation water.

Part-III (Professional) (Subjective) : 25 Marks**I. Development of Curriculum and Instructional Material**

- Elements of Curriculum.
- Curriculum Development Process: Need Assessment, Formulation of Aims and Objectives, Taxonomies of Educational Objectives, Selection of Content, Development of Curricular Materials.

II. Process of Teaching and Teaching Strategies

- Process of Classroom Communication
- Factors affecting Classroom Communication
- Barriers to Classroom Communications
- Use of Instructional Materials and Media

III. Educational Assessment and Evaluation

- Concept of Classroom Assessment and Evaluation
- Distinction between Assessment, Evaluation and Measurement
- Approaches to Evaluation: Formative Evaluation; Summative Evaluation
- Types of Test: Essay Type; Objective Type: Multiple Choice, True-False Items, Matching Type; Principles of Construction of these Test
- Characteristics of a Good Test: Validity, Reliability, Objectivity, Usability

IV. Research Methods in Education

- Research Instruments: Questionnaire: Interview; Test; Observation; Rating Scale
- Research Proposal and Report Writing.

SUGGESTED READINGS

S. No.	Title	Author
1.	A Text-book of Economics Theory	Stonier & Hague
2.	Government Finance—An Economic Analysis	Due John, F.
3.	Microeconomic	Ferguson, C.E. & Gould, J.P., Nicholson, Mankiw
4.	Macroeconomics	Rudigar Dorubush and Stanley Fisher Blanchard
5.	Foreign Aid Theory and Practice in Southern Asia	Wolf, Jr. DC
6.	History of International Trade	Findlay, R and O' Rourke, K
7.	Research in Education	JW Best
8.	Integrating Education Technology into Teaching	Roblyer
9.	Curriculum Development	S. M. Shahid
10.	Educational Measurement and Evaluation	S. M. Shahid
11.	Educational Administration	S. M. Shahid

PAPER-II: PROFESSIONAL

Max Marks: 100

Time Allowed: 3 Hours

Case No.	F.4-63(D)/2024-R
Particulars of post	Associate Professor (Urdu) (Female) (BS-19) , Federal Government Educational Institutions (FGEI) (Canttts Garrisons), Colleges, Ministry of Defence.
Minimum Qualification & Experience:	Ph.D. Degree in the relevant subject with eight (8) years post qualification teaching and administrative experience at College / University level. OR M. Phil Degree in the relevant subject with ten (10) years post qualification teaching and administrative experience at College / University level. OR Second Class or Grade 'C' Master's degree in the relevant subject with twelve (12) years post qualification teaching and administrative experience at College University level.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: (Urdu) (Subjective)**50 Marks**

- ۱۔ اردو ادب کا مطالعہ
- i۔ اردو زبان و ادب کی اسلامی شناخت
- ii۔ تیسویں صدی کی ادبی تحریکیں
- iii۔ پاکستانی ادب کی اصطلاح: تشکیل و روانت اور ارتقاء
- ۲۔ شعری ادب کا تنقیدی مطالعہ
- الف۔ پورقندے
- i۔ میر (غزل - انتخاب میر مولوی عبدالحق)
- ii۔ غالب (دیوان غالب)
- iii۔ حالی (مسدس)
- iv۔ اقبال (طلوع اسلام، حضرت راہ، مسجدِ قرطبہ)
- ب۔ دورِ جدید
- i۔ فیض (غزل - دستِ سپا)
- ii۔ راشد (نظم - ایران میں آبپنی)
- iii۔ مجید امجد (نظم - شبِ رفتہ)
- iv۔ ناصر کاظمی (غزل - برگِ نئے)
- ۳۔ نثری ادب کا تنقیدی مطالعہ
- الف۔ غیر افسانوی نثر
- i۔ شبلی (سیرت النبی ﷺ، جلد اول)
- ii۔ مولوی عبدالحق (خاکے، چند ہم عصر)
- ب۔ افسانوی نثر
- i۔ منٹو (افسانے، منٹو کے بیس افسانے، مرتب ڈاکٹر انوار احمد، ڈاکٹر اے بی اشرف)
- ii۔ احمد ندیم خاکی (افسانے، کپاس کے پھول)
- iii۔ مشتاق احمد یوسفی (طنز و مزاح، آبِ گم)

۳۔ مجموع۵۔ مضمون

Part-III (Professional) (Subjective) : 25 Marks

- I. **Development of Curriculum and Instructional Material**
- Elements of Curriculum.
 - Curriculum Development Process: Need Assessment, Formulation of Aims and Objectives, Taxonomies of Educational Objectives, Selection of Content, Development of Curricular Materials.
- II. **Process of Teaching and Teaching Strategies**
- Process of Classroom Communication
 - Factors affecting Classroom Communication
 - Barriers to Classroom Communications
 - Use of Instructional Materials and Media
- III. **Educational Assessment and Evaluation**
- Concept of Classroom Assessment and Evaluation
 - Distinction between Assessment, Evaluation and Measurement
 - Approaches to Evaluation: Formative Evaluation; Summative Evaluation
 - Types of Test: Essay Type; Objective Type: Multiple Choice, True-False Items, Matching Type; Principles of Construction of these Test
 - Characteristics of a Good Test: Validity, Reliability, Objectivity, Usability
- IV. **Research Methods in Education**
- Research Instruments: Questionnaire; Interview; Test; Observation; Rating Scale
 - Research Proposal and Report Writing.

SUGGESTED READINGS

ڈاکٹر وزیر آغا	۱۔ تنقید اور جدید اردو تنقید
ڈاکٹر انور سدید	۲۔ اردو ادب کی تحریکیں
شیخ محمد اکرام	۳۔ آب کوثر
شیخ محمد اکرام	۴۔ رو کوثر
شیخ محمد اکرام	۵۔ موج کوثر
ڈاکٹر روبینہ شہناز	۶۔ اردو تنقید میں پاکستانی تصورات
مرتبین: ڈاکٹر رفیع الدین ہاشمی، ڈاکٹر سہیل عمر، ڈاکٹر وحید عشرت.	۷۔ قابلیت کے سو سال
ترتیب نو: ڈاکٹر خواجہ محمد زکریا	۸۔ تاریخ ادبیات مسلمانان پاکستان وہند
مرتب: ڈاکٹر نواز علی	۹۔ اردو ادب کے پچاس سال

S.No.	Title	Author
10.	Research in Education	JW Best
11.	Integrating Education Technology into Teaching	Roblyer
12.	Curriculum Development	S. M. Shahid
13.	Educational Measurement and Evaluation	S. M. Shahid
14.	Educational Administration	S. M. Shahid

PAPER-II: PROFESSIONAL**Max Marks: 100****Time Allowed: 3 Hours**

Case No.	F.4-64/2024-R
Particulars of post	Deputy Conservator (Wildlife Inventory) (BS-18) , Ministry of Climate Change and Environmental Coordination.
Minimum Qualification & Experience:	(i) Second Class or Grade 'C' M.Sc. in Zoology. OR Honours degree or equivalent diploma in Forestry / Wildlife Management. (ii) Five (5) years (post qualification) experience in Wildlife Management / Forestry / Zoological Research.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II.

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

- I. **Wildlife:** Animal occurrence, protection, needs of animals, maintenance, and the habitat.
- II. **Techniques:** Ground and aerial tracking, GPS, radio telemetry, maps etc.
- III. **Wildlife Conservation:** Philosophy and significance, Biodiversity and sustainability of wildlife.
- IV. **Wildlife Agencies:** National and International agencies involved in conservation and management of wildlife. International conventions, agreements.
- V. **Wildlife of Pakistan:** identification, distribution, status, conservation and management (population estimate technology) of fishes, reptiles, birds and mammals of major importance in Pakistan.
- VI. **Wildlife rules and regulations in Pakistan:** Sanctuaries, Game Reserves and National Parks in Pakistan. Endangered species of Pakistan.
- VII. Forest, range lands and wild life importance and significance
- VIII. Forest management and utilization, wood based industries in Pakistan, silviculture
- IX. Range management and utilization
- X. National and international forest wealth statistics
- XI. Role of wildlife as value addition to forestry
- XII. Forest based wildlife reservations of Pakistan and their management, eco-tourism
- XIII. Forestry, agroforestry, social forestry and forest biometrics
- XIV. Socio-economic and ecological impact of manmade forests
- XV. Watershed Management and role of forests in prevailing climate change dilemma

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

XVII. Wildlife Ecology, Conservation and Management

XVIII. International Convention related to Wildlife and Biodiversity.

SUGGESTED READINGS

S.No.	Title	Author
1.	Paleontology, Zoogeography & Wildlife Management	Ali, S.S.
2.	The Birds of Pakistan	Roberts, T. J.
3.	Principles of Wild life Management	Bailey, J.A.
4.	Wildlife Ecology and Management	Robinson, W.L., Bolen, E.G.
5.	A Handbook of Birds of India & Pakistan	Ali S. & Ripley S. D.
6.	Forest Types of Pakistan	Champion, H.G., S.K. Seth and, G.M.Khattak
7.	Manual of Silviculture for Pakistan	Champion, H.G., S.K. Seth and G.M.Khattak
8.	Trees of Pakistan	M.I. Sheikh
9.	Range Management in Pakistan	M.A.A. Qureshi
10.	Comprehensive Forestry	B.A. Raza
11.	Farm Forestry in Pakistan,	M.A.A. Qureshi
12.	Forest Management	G.M. Khattak,
13.	Wildlife Ecology, Conservation and Management	A. R. E. Sinclair, J. M. Fryxell, G. Caughley
14.	Basics of Forestry & Allied Sciences	Dr. Masood A.A. Qureshi

PAPER-II: PROFESSIONAL**Max Marks: 100****Time Allowed: 3 Hours**

Case No.	F.4-65/2024-R
Particulars of post	Assistant Draftsman (BS-18) , Ministry of Law & Justice.
Minimum Qualification & Experience:	(i) Second Class or Grade 'C' Bachelor's degree in Law or equivalent qualification from a University recognized by HEC. (ii) Five (5) years post qualification experience of drafting legislative instruments or dealing with legal matters.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II.

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

- Philosophy of Law
- Constitutional Law
- Law of Contract, 1872
- The Code of Civil Procedure, 1908
- Pakistan Penal Code, 1860
- Qanun-e-Shahdat Order, 1984
- Criminal Procedure Code, 1898
- Important principles pertaining to the criminal justice system, propounded in decisions of Superior Courts
- Broad features of the criminal justice system in Pakistan and issues pertaining thereto

SUGGESTED READINGS

S. No.	Title	Author
1.	Pakistan Penal Code, 1860	M. Mahmood
2.	Criminal Procedure Code, 1898	Shaukat Mahmood
3.	Law of Evidence	Justice (R) Khalid ur Rahman Khan as adapted from Principles and Digest of the Law of Evidence by M. Monir
4.	Qanun-e-Shahadat Order, 1984	
5.	The Code of Civil Procedure, 1908	Aamir Raza A. Khan
6.	The Arbitration Laws in Pakistan	M. Mahmood
7.	Civil Courts Ordinance, 1962	Nisar Ahmad Nisar
8.	Constitution of 1973 with updated amendments	M. Mahmood
9.	Interpretation of Statutes	Benson Maxwell
10.	Jurisprudence	V.D Mahajan
11.	Comparative Constitutional Law	Hamid Khan & M W Rana
12.	Constitutional and Political History of Pakistan	Hamid Khan, Advocate
13.	Law of contract	V K Agarwal

PAPER-II: PROFESSIONAL**Max Marks: 100****Time Allowed: 3 Hours**

Case No.	F.4-70/2024-R
Particulars of post	Associate Professor (English) (BS-19) , Military College Murree, Ministry of Defence.
Minimum Qualification & Experience:	<p>Ph.D. degree in the relevant subject with eight (8) years post qualification teaching and administrative experience at College/ University level.</p> <p style="text-align: center;">OR</p> <p>M.Phil. degree in the relevant subject with ten (10) years post qualification teaching and administrative experience at College / University level.</p> <p style="text-align: center;">OR</p> <p>Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by HEC with twelve (12) years post qualification teaching and administrative experience at College / University level.</p>

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: (English) (Subjective)**50 Marks****I. Essays:**

- Bertrand Russell (The Conquest of Happiness)
- George Orwell (Politics and the English Language; The Prevention of Literature)
- Ralph Waldo Emerson (The Transcendentalist; Self-reliance)

II. Short Stories:

- Somerset Maugham (The Lotus-eater)
- G.K.Chesterton (A Somewhat Improbable Story)
- O'Henry (The Gift of the Magi)

III. Poetry:

- William Wordsworth (Resolution Independence; Tintern Abbey)
- John Keats (Ode to a Nightingale; Ode to Autumn)
- Lord Alfred Tennyson (Ulysses; The Lady of Shalott)
- Yeats (A Dialogue of Self and Soul; The Second Coming)
- Eliot (The Wasteland; Love Song of J. Alfred Prufrock)
- Philip Larkin (Maturity; Continuing to Live; The Trees)
- Wallace Stevens (A postcard from the volcano; Continual conversation with a silent man; Dry loaf) **OR** Walt Whitman (As I ponder'd in silence; Are you the new person drawn toward me?; This moment yearning and thoughtful)

IV. Drama:

- Shakespeare (Hamlet; King Lear, As you like it and Twelfth Night)
- William Congreve (The Way of the World)
- Shaw (Pygmalion; Heartbreak House)
- Harold Pinter (The Caretaker)
- Samuel Beckett (Waiting for Godot)
- Eugene O'Neill (*Long Day's Journey into Night*)

V. Novels:

- Thomas Hardy (Far from the Madding Crowd)
- D.H. Lawrence (Sons and Lovers)
- George Orwell (Nineteen Eighty-four)
- James Joyce (A Portrait of the Artist as a Young Man)
- Iris Murdoch (Under the Net)
- Nathaniel Hawthorne (The Scarlet Letter) or William Faulkner (The Sound and the Fury)

VI. Literacy Theory & Criticism

- Structuralism
- Marxism
- Deconstructionism
- Psychoanalytic criticism
- Feminist criticism
- Postcolonial Criticism

Part-III (Professional) (Subjective) : 25 Marks**I. Development of Curriculum and Instructional Material**

- Elements of Curriculum.
- Curriculum Development Process: Need Assessment, Formulation of Aims and Objectives, Taxonomies of Educational Objectives, Selection of Content, Development of Curricular Materials.

II. Process of Teaching and Teaching Strategies

- Process of Classroom Communication
- Factors affecting Classroom Communication
- Barriers to Classroom Communications
- Use of Instructional Materials and Media

III. Educational Assessment and Evaluation

- Concept of Classroom Assessment and Evaluation
- Distinction between Assessment, Evaluation and Measurement
- Approaches to Evaluation: Formative Evaluation; Summative Evaluation
- Types of Test: Essay Type; Objective Type: Multiple Choice, True-False Items, Matching Type; Principles of Construction of these Test
- Characteristics of a Good Test: Validity, Reliability, Objectivity, Usability

IV. Research Methods in Education

- Research Instruments: Questionnaire; Interview; Test; Observation; Rating Scale
- Research Proposal and Report Writing.

SUGGESTED READINGS

S.No.	Title	Author
1.	The basics Literary Theory.	Bertens, H.
2.	Literary Theory: An Introduction.	Eagleton, E.
3.	A New Handbook of Literary Terms.	Mikics, W.
4.	A Companion to Twentieth Century Poetry.	Roberts, N.
5.	A Reader's Guide to Contemporary Literary Theory (Fifth edition).	Selden, R., Widdowson, P., & Brooker, P.
6.	Twentieth Century British Drama.	Smart, J.
7.	Modern Critical Views & Interpretations,	Harold Bloom
8.	A Companion to 20 th Century Drama	Krasner David.
9.	Research in Education	JW Best
10.	Integrating Education Technology into Teaching	Roblyer
11.	Curriculum Development	S. M. Shahid
12.	Educational Measurement and Evaluation	S. M. Shahid
13.	Educational Administration	S. M. Shahid

PAPER-II: PROFESSIONAL**Max Marks: 100****Time Allowed: 3 Hours**

Case No.	F.4-71(A)/2024-R
Particulars of post	Assistant Professor (Mathematics) (BS-18) , Military College Murree, Ministry of Defence.
Minimum Qualification & Experience:	Ph.D. degree in the relevant subject and one (1) year post qualification teaching experience at College / University level. OR M.Phil. degree in the relevant subject with three (3) years post qualification teaching experience at College / University level. OR Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by HEC with five (5) years post qualification teaching experience at College / University level.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: (Mathematics) (Subjective)**50 Marks****I. Vector Calculus**

Vector algebra; scalar and vector products of vectors; gradient divergence and curl of a vector; line, surface and volume integrals; Green's, Stokes' and Gauss theorems.

II. Statics

Composition and resolution of forces; parallel forces and couples; equilibrium of a system of coplanar forces; centre of mass of a system of particles and rigid bodies; equilibrium of forces in three dimensions.

III. Dynamics

- Motion in a straight line with constant and variable acceleration; simple harmonic motion; conservative forces and principles of energy.
- Tangential, normal, radial and transverse components of velocity and acceleration; motion under central forces; planetary orbits; Kepler laws;

IV. Ordinary differential equations

- Equations of first order; separable equations, exact equations; first order linear equations; orthogonal trajectories; nonlinear equations reducible to linear equations, Bernoulli and Riccati equations.
- Equations with constant coefficients; homogeneous and inhomogeneous equations; Cauchy-Euler equations; variation of parameters.
- Ordinary and singular points of a differential equation; solution in series; Bessel and Legendre equations; properties of the Bessel functions and Legendre polynomials.

V. Fourier series and partial differential equations

- Trigonometric Fourier series; sine and cosine series; Bessel inequality; summation of infinite series; convergence of the Fourier series.
- Partial differential equations of first order; classification of partial differential equations of second order; boundary value problems; solution by the method of separation of variables; problems associated with Laplace equation, wave equation and the heat equation in Cartesian coordinates.

VI. Numerical Methods

- Solution of nonlinear equations by bisection, secant and Newton-Raphson methods; the fixed- point iterative method; order of convergence of a method.
- Solution of a system of linear equations; diagonally dominant systems; the Jacobi and Gauss-Seidel methods.
- Numerical solution of an ordinary differential equation; Euler and modified Euler methods; Runge- Kutta methods.

Part-III (Professional) (Subjective) : 25 Marks**I. Development of Curriculum and Instructional Material**

- Elements of Curriculum.
- Curriculum Development Process: Need Assessment, Formulation of Aims and Objectives, Taxonomies of Educational Objectives, Selection of Content, Development of Curricular Materials.

II. Process of Teaching and Teaching Strategies

- Process of Classroom Communication
- Factors affecting Classroom Communication
- Barriers to Classroom Communications
- Use of Instructional Materials and Media

III. Educational Assessment and Evaluation

- Concept of Classroom Assessment and Evaluation
- Distinction between Assessment, Evaluation and Measurement
- Approaches to Evaluation: Formative Evaluation; Summative Evaluation
- Types of Test: Essay Type; Objective Type: Multiple Choice, True-False Items, Matching Type; Principles of Construction of these Test
- Characteristics of a Good Test: Validity, Reliability, Objectivity, Usability

IV. Research Methods in Education

- Research Instruments: Questionnaire: Interview; Test; Observation; Rating Scale
- Research Proposal and Report Writing.

SUGGESTED READINGS

S. No.	Title	Author
1.	An Introduction to Vector Analysis	Khalid Latif,
2.	Introduction to Mechanics	Q.K. Ghori
3.	An Intermediate Course in Theoretical Mechanics	Khalid Latif,
4.	Differential Equations with Boundary Value Problems	D. G. Zill and M. R. Cullen
5.	Elementary Differential Equations	E.D. Rainville, P.E. Bedient and R.E. Bedient
6.	Elements of Numerical Analysis	F. Ahmad and M.A Rana
7.	Mathematical Methods	S. M. Yousaf, Abdul Majeed and Muhammad Amin
8.	Research in Education	JW Best
9.	Integrating Education Technology into Teaching	Roblyer
10.	Curriculum Development	S.M. Shahid
11.	Educational Measurement and Evaluation	S.M. Shahid
12.	Educational Administration	S.M. Shahid

PAPER-II: PROFESSIONAL

Max Marks: 100

Time Allowed: 3 Hours

Case No.	F.4-71(B)/2024-R
Particulars of post	Assistant Professor (Urdu) (BS-18) , Military College Murree, Ministry of Defence.
Minimum Qualification & Experience:	Ph.D. degree in the relevant subject and one (1) year post qualification teaching experience at College / University level. OR M.Phil. degree in the relevant subject with three (3) years post qualification teaching experience at College / University level. OR Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by HEC with five (5) years post qualification teaching experience at College / University level.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: (Urdu) (Subjective)**50 Marks**

- ۱۔ اردو ادب کا مطالعہ
- i۔ اردو زبان و ادب کی اسلامی شناخت
ii۔ بیسویں صدی کی ادبی تحریکیں
iii۔ پاکستانی ادب کی اصطلاح: تشکیل و روایت اور ارتقاء
- ۲۔ شعری ادب کا تنقیدی مطالعہ
- الف۔ دور قدیم
i۔ میر (غزل - انتخاب میر مولوی عبدالحق)
ii۔ غالب (دیوان غالب)
iii۔ حالی (مسدس)
iv۔ اقبال (طلوع اسلام، مختصر راہ، مسجد قرطبہ)
- ب۔ دور جدید
i۔ فیض (غزل - دست صبا)
ii۔ راشد (نظم - ایران میں انجمنی)
iii۔ مجید امجد (نظم - شب رفتہ)
iv۔ ناصر کاظمی (غزل - برگ نے)
- ۳۔ نثری ادب کا تنقیدی مطالعہ
- الف۔ غیر افسانوی نثر
i۔ شبلی (سیرت النبی ﷺ، جلد اول)
ii۔ مولوی عبدالحق (خاکے، چند ہم عصر)
- ب۔ افسانوی نثر
i۔ منٹو (افسانے منٹو کے ہیں افسانے: مرتب ڈاکٹر انوار احمد، ڈاکٹر اے بی اشرف)
ii۔ احمد ندیم قاسمی (افسانے، کپاس کے پھول)
iii۔ مشتاق احمد یوسفی (ظفر و مزاج، آب گم)

۴۔ تفہیم۵۔ مضمون

Part-III (Professional) (Subjective) : 25 Marks

- I. **Development of Curriculum and Instructional Material**
- Elements of Curriculum.
 - Curriculum Development Process: Need Assessment, Formulation of Aims and Objectives, Taxonomies of Educational Objectives, Selection of Content, Development of Curricular Materials.
- II. **Process of Teaching and Teaching Strategies**
- Process of Classroom Communication
 - Factors affecting Classroom Communication
 - Barriers to Classroom Communications
 - Use of Instructional Materials and Media
- III. **Educational Assessment and Evaluation**
- Concept of Classroom Assessment and Evaluation
 - Distinction between Assessment, Evaluation and Measurement
 - Approaches to Evaluation: Formative Evaluation; Summative Evaluation
 - Types of Test: Essay Type; Objective Type: Multiple Choice, True-False Items, Matching Type; Principles of Construction of these Test
 - Characteristics of a Good Test: Validity, Reliability, Objectivity, Usability
- IV. **Research Methods in Education**
- Research Instruments: Questionnaire; Interview; Test; Observation; Rating Scale
 - Research Proposal and Report Writing.

SUGGESTED READINGS

ڈاکٹر وزیر آغا	۱۔ تنقید اور جدید اردو تنقید
ڈاکٹر انور سدید	۲۔ اردو ادب کی تحریکیں
شیخ محمد اکرام	۳۔ آب کوثر
شیخ محمد اکرام	۴۔ رو کوثر
شیخ محمد اکرام	۵۔ موج کوثر
ڈاکٹر روبینہ شہناز	۶۔ اردو تنقید میں پاکستانی تصورات
مرتبین: ڈاکٹر رفیع الدین ہاشمی، ڈاکٹر سہیل عمر، ڈاکٹر وحید عشرت.	۷۔ قابلیت کے سو سال
ترتیب نو: ڈاکٹر خواجہ محمد ذکریا	۸۔ تاریخ ادبیات مسلمانان پاکستان وہند
مرتب: ڈاکٹر نواز علی	۹۔ اردو ادب کے پچاس سال

S.No.	Title	Author
10.	Research in Education	JW Best
11.	Integrating Education Technology into Teaching	Roblyer
12.	Curriculum Development	S. M. Shahid
13.	Educational Measurement and Evaluation	S. M. Shahid
14.	Educational Administration	S. M. Shahid

PAPER-II: PROFESSIONAL**Max Marks: 100****Time Allowed: 3 Hours**

Case No.	F.4-78/2024-R
Particulars of post	Director (BS-19) , Board of Investment, Prime Minister's Office
Minimum Qualification & Experience:	(i) Second Class or Grade 'C' Master's or Bachelor's (4 years duration) degree in Economics / Commerce / Business Administration / Public Administration / Public Policy / Governance & Public Policy / International Trade / International Relations / Political Economy / Corporate Law or equivalent qualification from a University recognized by the HEC. (ii) Twelve (12) years post qualification experience in BS-17 and above or equivalent in Industrial Production / Financial Economic Analysis or Investment proposals / Marketing Management Development / Economic Policy and Planning / Industrial Policy / Investment Promotion in Commercial / Industrial areas from a Government / Public / Private Sector Organization.

Part-I: 25 Marks (MCQ)

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

Part-II (Professional) (Subjective) : 50 Marks**I. Public Policy Formulation and Implementation**

- The Policy Making Process: How Policies are Made (Six stages including diagnosis and six stages with cautions to be exercise at each stage)
- Policy Implementation & Role of Bureaucracy (Training, Pervasive Inertia and how to break it, Lack of Decision Making, Culture of postponement and delays, Lack of resources, Political interference, Ability to say "No.")
- Policy Analysis, The Quest for Solutions (Lack of research in policy analysis, Lack of coordination among departments, secrecy, openness)
- Policy Evaluation: Assessing The Impact of Public Policy, Program Evaluation-Success and failure of Govt.

II. Act, Ordinance, Rules etc. Relating to Investment

- Special Economic Zones Act, 2012
- Special Economic Zones Rules, 2013
- Board of Investment Ordinance, 2001
- Foreign Private Investment (Promotion & Protection) Act, 2022
- Economic Indicators (Pakistan Economic Survey 2022-23)

Part-III: 25 Marks (Descriptive)

(Human Resource, Financial 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.	Titles	Author
1.	Human Resource Management	H.T. Graham & Roger Bennett
2.	Management	James A.F. Stoner, R. Eward Freeman, Daniel R. Gilbert Jr.
3.	Governance	Anne Mette Kjær
4.	Implementing Public Policy: Governance in Theory and in Practice.	Hill M. and Hupe P.
5.	Governance, Economic Policy and Reform in Pakistan	Abdus Samad
6.	Public Policy: Politics, Analysis, and Alternatives,	Kraft, Michael E., Scott R. Furlong
7.	Pakistan Economic Survey 2022-23	Finance Division