

**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. 04/2023**

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
1.	63/2023	Inspector Customs/ Intelligence Officer (BS-16), Revenue Division, Federal Board of Revenue. NOTE: At first stage MCQs Screening Test shall be held, then on the basis of its result top merit position holders @ ten candidates per vacancy from respective quotas would be called for Descriptive Test.	(i) Second Class or Grade 'C' Bachelor's degree from a recognized University with Economics, Commerce, Statistics, Accounting, Computer Science, Law, Pharmacy, Chemistry or Physics as one of the subjects or B.Sc. Engineering in any specialty. (ii) Computer literacy up to the level of MS Word, MS Power Point and MS Excel.	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 5 years – Basic Economic facts related to Pakistan. • Pakistan Affairs & Islamic Studies – Basic Level knowledge • Basic Computer Operation in MS Office Note: For Pre-selected candidate, syllabus for Descriptive Test is at Page-32 below
2.	64/2023	Preventive Officer (BS-16), Revenue Division, Federal Board of Revenue. NOTE: At first stage MCQs Screening Test shall be held, then on the basis of its result top merit position holders @ ten candidates per vacancy from respective quota would be called for Descriptive Test.	(i) Second Class or Grade 'C' Bachelor's degree from a recognized University with Economics, Commerce, Statistics, Accounting, Computer Science, Law, Pharmacy, Chemistry or Physics as one of the subjects or B.Sc. Engineering in any specialty. (ii) Computer literacy up to the level of MS Word, MS Power Point and MS Excel.	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 5 years – Basic Economic facts related to Pakistan. • Pakistan Affairs & Islamic Studies – Basic Level knowledge • Basic Computer Operation in MS Office • Note: For Pre-selected candidate, syllabus for Descriptive Test is at Page-32 below

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3.	66/2023	General Staff Officer Grade-III (Picture Archiving and Communication System (PACS) Administrator) (BS-17), Armed Forces Institute of Radiology and Imaging, Ministry of Defence.	(i) Second Class or Grade 'C' Master's/ Bachelor's (4 years duration) degree in Computer Science / IT / Computer System Engineering / Computer Engineering / Software Engineering or equivalent qualification from a University recognized by HEC. (ii) International certification related to information security (CEH, CHFI or ECSA etc.).	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"> • Software research and development, • Coding, Writing, Testing and debugging of software applications, • Program logic, • Visual Basic, C++, Java, Unix/Red Hat Linux Operating System, • Computer Networks and Internet, • Computer Graphics and Algorithms • Development of basic algorithms,
4.	69/2023	Secondary School Teacher (Male) (BS-17), (A) Computer Science (B) Physics Federal Directorate of Education, Ministry of Federal Education & Professional Training.	Second Class or Grade 'C' Master's degree/ Bachelor's degree (4 years duration) in relevant subject with 2 nd Class or Grade 'C' M.Ed./B.Ed./ B.Ed. (Hons.)/ Associate Diploma in Education or equivalent qualification 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	For (A) Computer Science Part-I Vocabulary, Grammar Usage, Sentence Structuring Part-II (Masters Level) <ul style="list-style-type: none"> • Computer Hardware/Software, • Data Communication & Networking, • C/C++ Language, • Visual Basic, • Operating System Unix/Linux • Windows 8.1, 10, 11 • Oracle/PLSQL, • System Analysis & Design. • Web Programming, 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) Physics Part-I Vocabulary, Grammar Usage, Sentence Structuring Part-II (Masters Level) <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

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					<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
5.	70/2023	Registrar (BS-17), Banking Courts, Ministry of Law and Justice.	<p>(i) Second Class or Grade 'C' Bachelor's degree in Law or equivalent qualification from a University recognized by HEC.</p> <p>(ii) Two (2) years post qualification experience in legal matters.</p>	<p>Objective Type Test (MCQ)</p> <p>Part-I</p> <p>English = 20 marks</p> <p>Part-II</p> <p>Professional Test=80 marks</p>	<p>Part-I</p> <p>Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II</p> <ul style="list-style-type: none"> • Core courses of LL.B. Degree Programme • Role of Lawyer/Prosecutor in Defending/ Pleading the Court Cases • Steps involved in Processing of Legal Cases. • Important principles established in case law.
6.	71/2023	Assistant Director (BS-17), National Library of Pakistan, National Heritage & Culture Division.	<p>(i) Second Class or Grade 'C' Master's degree in Library Science or Library and Information Science or equivalent qualification from a University recognized by HEC.</p> <p>(ii) Two (2) years post qualification experience in the relevant field.</p>	<p>Objective Type Test (MCQ)</p> <p>Part-I</p> <p>English = 20 marks</p> <p>Part-II</p> <p>Professional Test=80 marks</p>	<p>Part-I</p> <p>Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II</p> <ul style="list-style-type: none"> • Information Sources and Services • Cataloguing: Theory and Practice • Procurement and Maintenance of Library Books • Library Automation/Information Storage & Retrieval • Research Methods & Techniques for Librarians • Public Records, Rare Material & their Conservation • Management of Serials Publications • Rules & Procedure regarding Write Off the Library Losses

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
7.	74/2023	<p>Lecturer (Male) (BS-17),</p> <p>(A) Botany (B) Chemistry (C) Computer Science (D) Economics (E) Education (F) English (G) Geography (H) Islamiyat (I) Mathematics (J) Pak. Studies (K) Physics (L) Political Science (M) Sociology (N) Urdu (O) Zoology</p> <p>Education Department, GB Colleges, Ministry of Kashmir Affairs & Gilgit Baltistan.</p>	<p>Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by the HEC.</p>	<p>Objective Type Test (MCQ)</p> <p>Part-I English = 20 marks</p> <p>Part-II Subject Test = 50 marks</p> <p>Part-III Professional Test = 30 marks</p> <p>Note:</p> <ul style="list-style-type: none"> ▪ In Language Subjects (i.e Urdu), English part will be of 10 marks. There will be 60 marks for subject Test and 30 marks for Professional Test. ▪ For the subject of Education, there should be two parts, part-I is English Test (20 Marks) and part-II is Professional Test (80 Marks). 	<p>A. For Botany</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Algae, • Fungi, • Bryophytes • Gymnosperms, • Angiosperms, • Plant Physiology, • Ecology, • Cytology, • Genetics, <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 <hr/> <p>B. For Chemistry</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Nature, Properties & States of Matter, • Electronic Structure, • Bonding, • Chemical Kinetics & Radioactivity, • Synthetic Chemistry • Polymers, • Reaction Mechanism (electrophilic & nucleophilic substitution and addition reaction) • Inorganic Chemistry, • Thermodynamics, • Chemical Equilibrium, • Electrochemistry, • Solutions and Colloidal State. <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

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					<p>C. For Computer Science</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Computer Hardware/Software, • Data Communication & Networking, • C/C++ Language, • Visual Basic, • Operating System Unix/Linux • Windows 8.1, 10, 11 • Oracle/PLSQL, • System Analysis & Design. • Web Programming, <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 <hr/> <p>D. For Economics</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Micro Economics: Meaning, Scarcity and Opportunity Cost. • Goals of Microeconomics Policy: Efficiency & equity • Macro Economics: Basic Economic Concepts • The theory of Factor Pricing • Monetary Theory & Public Finance, • Industrial Development in Pakistan • Interest Free Banking in Pakistan • Basic Statistics on Economy of Pakistan <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>E. For Education</p> <p>Part-I (20 Marks) Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (80 Marks)</p> <ul style="list-style-type: none"> • Development of Education in Pakistan, • Educational Reforms in Pakistan, • Education Policy 2009, its Targets and Achievements • Educational Psychology, • Educational Guidance & Counselling, • Educational Planning & Management, • Educational Administration and Supervision, • Classroom/Institutional Management and Discipline • Curriculum Development & Instructional Technology • Teaching Techniques & Methodology, • Testing & Evaluation. • Knowledge of Bloom's Taxonomy <p>F. For English</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Linguistics. • Syntax. • Diction. • Drama: Shakespeare (Hamlet; King Lear; 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) <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

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					<p>G. For Geography</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Physical Geography • Landform development, climate, oceans & seas, factor of climate and environmental change • Geography of Pakistan, • Human Geography (Geographic pattern of culture, Ethnicities and Nationalities, Economic Indicators, Social Indicators, Health Indicators, Renewable Resources, Recycling Resources, Sustainable resources. The Demographic Transition) • Political Geography (State, National and the Nation-State Geopolitics of uneven development) • Statistical Geography, • Climatology/Metrology, • Environmental Geography, • GIS Techniques, <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>H. For Islamiyat</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 چیلنجز</p> <p>☆ اسلامی نظام حکمرانی کا ڈھانچہ</p> <p>☆ سرکاری ملازمین کی ذمہ داریاں</p> <p>☆ اسلامی ضابطہ حیات</p>

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					<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>I. For 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 • General Theorems (Rolle's Theorem, Mean Value Theorem) • Areas and Volumes, centre of Mass • Computing Tools for Mathematicians, • Mathematical Statistics, • Mathematical Spaces (Sets, Vector Spaces, Metric Spaces, topological spaces Tensors, • Differential Equations. <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>J. For 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

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					<p>K. For 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, • Nuclear Physics, • Basic Solid State Physics, • Basic Electronics, • 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 <hr/> <p>L. For Political Science</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Western Political Thought (Plato, Aristotle, Machiavelli, Montesquieu, Hobbes, Locke, Rousseau, Marx, Lenin, Frances Fukuyama) • Muslim Political Thought (Al-Farabi, Al-Mawardi, Imam Ghazali, Ibn Khaldun, Shah Waliullah, Allama Muhammad Iqbal) • State System: Nature and Emergence, Islamic Concept • Political Institutions and Role of Government • Basic concepts of Political Ideologies (Capitalism, Marxism, Communism/Socialism, Fascims, Nationalism, Islamic Political Ideology) • Government and Politics in Pakistan: Analysis of 1956, 1962, 1973 Constitutions and Constitutional Amendments • Comparative Study of Political System (Turkey, India, Malaysia and China)

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					<p><u>Part-III</u></p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation • Knowledge of Bloom's Taxonomy <p><u>M. For Sociology</u></p> <p><u>Part-I</u></p> <p>Vocabulary, Grammar Usage, Sentence Structuring</p> <p><u>Part-II (Masters Level)</u></p> <ul style="list-style-type: none"> • Meaning and Elements of Culture • Society: Meaning and Characteristics • Social Contract Theory & Organismic Theory • Sociological Theories (Ibn-i-Khaldun, Spencer, Max Weber, Karl Marx) • Methods of Sociological Research, • Social Institutions: Nature, Genesis & Function • Mechanism of Social Control: Formal & Informal • Social and Cultural Change & Social Policy: Processes & Effects • Social Problems in Pakistan <p><u>Part-III</u></p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology, • Classroom Management and Discipline, • Testing and Evaluation, • Knowledge of Bloom's Taxonomy

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					<p>N. For Urdu</p> <p>Part-I (10 Marks) Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level) (60 Marks)</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>☆ اردو ذخیرہ الفاظ ☆</p> <p>☆ اردو جملے کا ڈھانچہ ☆</p> <p>☆ اردو قواعد کا استعمال ☆</p> <p>☆ غالبیات ☆</p> <p>☆ اقبالیات ☆</p> <p>☆ مسدس حافی ☆</p> <p>☆ میر تقی میر کی شاعری ☆</p> <p>☆ طنز و مزاح: مشتاق احمد یوسفی کی نظر میں ☆</p> </div> <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 <p>O. For Zoology</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Eco System, • Classification of Fish, Reptiles, Mammals, • Classification of Mollusks, Edinodermata, • Theories of Evolution, • Mammalian Hormonal System, • Membrane System, • Mammalian Gametogenesis and Fertilization, • Multiple Alleles. • Mendelian laws of inheritance, • Reproduction and Development, <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

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8.	75/2023	<p>Lecturer (Female) (BS-17), (A) Botany (B) Chemistry (C) Economics (D) Education (E) English (F) Islamiat (G) Mathematics (H) Physics (I) Political Science (J) Sociology (K) Urdu (L) Zoology Education Department, GB Colleges, Ministry of Kashmir Affairs & Gilgit Baltistan.</p>	<p>Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by the HEC.</p>	<p>Type Test (MCQ) Part-I English = 20 marks Part-II Subject Test = 50 marks Part-III Professional Test = 30 marks Note:</p> <ul style="list-style-type: none"> ▪ In Language Subjects (i.e Urdu), English part will be of 10 marks. There will be 60 marks for subject Test and 30 marks for Professional Test. ▪ For the subject of Education, there should be two parts, part-I is English Test (20 Marks) and part-II is Professional Test (80 Marks). 	<p>A. For Botany Part-I Vocabulary, Grammar Usage, Sentence Structuring. Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Algae, • Fungi, • Bryophytes • Gymnosperms, • Angiosperms, • Plant Physiology, • Ecology, • Cytology, • Genetics, <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>B. For Chemistry Part-I Vocabulary, Grammar Usage, Sentence Structuring Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Nature, Properties & States of Matter, • Electronic Structure, • Bonding, • Chemical Kinetics & Radioactivity, • Synthetic Chemistry • Polymers, • Reaction Mechanism (electrophilic & nucleophilic substitution and addition reaction) • Inorganic Chemistry, • Thermodynamics, • Chemical Equilibrium, • Electrochemistry, • Solutions and Colloidal State. <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

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					<p>C. For Economics</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Micro Economics: Meaning, Scarcity and Opportunity Cost. • Goals of Microeconomics Policy: Efficiency & equity • Macro Economics: Basic Economic Concepts • The theory of Factor Pricing • Monetary Theory & Public Finance, • Industrial Development in Pakistan • Interest Free Banking in Pakistan • Basic Statistics on Economy of Pakistan <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>D. For Education</p> <p>Part-I (20 Marks) Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (80 Marks)</p> <ul style="list-style-type: none"> • Development of Education in Pakistan, • Educational Reforms in Pakistan, • Education Policy 2009, its Targets and Achievements • Educational Psychology, • Educational Guidance & Counselling, • Educational Planning & Management, • Educational Administration and Supervision, • Classroom/Institutional Management and Discipline • Curriculum Development & Instructional Technology • Teaching Techniques & Methodology, • Testing & Evaluation. • Knowledge of Bloom's Taxonomy

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					<p>E. For English</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Linguistics. • Syntax. • Diction. • Drama: Shakespeare (Hamlet; King Lear; 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) <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>F. For Islamiat</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 چیلنجز</p> <p>☆ اسلامی نظام حکمرانی کا ڈھانچہ</p> <p>☆ سرکاری ملازمین کی ذمہ داریاں</p> <p>☆ اسلامی ضابطہ 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

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					<p>G. For 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 • General Theorems (Rolle's Theorem, Mean Value Theorem) • Areas and Volumes, centre of Mass • Computing Tools for Mathematicians, • Mathematical Statistics, • Mathematical Spaces (Sets, Vector Spaces, Metric Spaces, topological spaces Tensors, • Differential Equations. <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>H. For 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, • Nuclear Physics, • Basic Solid State Physics, • Basic Electronics, • 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>I. For Political Science</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Western Political Thought (Plato, Aristotle, Machiavelli, Montesquieu, Hobbes, Locke, Rousseau, Marx, Lenin, Frances Fukuyama) • Muslim Political Thought (Al-Farabi, Al-Mawardi, Imam Ghazali, Ibn Khaldun, Shah Waliullah, Allama Muhammad Iqbal) • State System: Nature and Emergence, Islamic Concept • Political Institutions and Role of Government • Basic concepts of Political Ideologies (Capitalism, Marxism, Communism/Socialism, Fascims, Nationalism, Islamic Political Ideology) • Government and Politics in Pakistan: Analysis of 1956, 1962, 1973 Constitutions and Constitutional Amendments • Comparative Study of Political System (Turkey, India, Malaysia and China) <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>J. For Sociology</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Meaning and Elements of Culture • Society: Meaning and Characteristics • Social Contract Theory & Organismic Theory • Sociological Theories (Ibn-i-Khaldun, Spencer, Max Weber, Karl Marx) • Methods of Sociological Research, • Social Institutions: Nature, Genesis & Function • Mechanism of Social Control: Formal & Informal • Social and Cultural Change & Social Policy: Processes & Effects • Social Problems in Pakistan

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>K. For Urdu</p> <p>Part-I (10 Marks)</p> <p>Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level) (60 Marks)</p> <table border="1"> <tr> <td>☆</td> <td>اردو ذخیرہ الفاظ</td> </tr> <tr> <td>☆</td> <td>اردو جملے کا ڈھانچہ</td> </tr> <tr> <td>☆</td> <td>اردو قواعد کا استعمال</td> </tr> <tr> <td>☆</td> <td>غالبیات</td> </tr> <tr> <td>☆</td> <td>اقبالیات</td> </tr> <tr> <td>☆</td> <td>مسدس حافی</td> </tr> <tr> <td>☆</td> <td>میر تقی میر کی شاعری</td> </tr> <tr> <td>☆</td> <td>طنز و مزاح: مشتاق احمد یونسی کی نظر میں</td> </tr> </table> <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 	☆	اردو ذخیرہ الفاظ	☆	اردو جملے کا ڈھانچہ	☆	اردو قواعد کا استعمال	☆	غالبیات	☆	اقبالیات	☆	مسدس حافی	☆	میر تقی میر کی شاعری	☆	طنز و مزاح: مشتاق احمد یونسی کی نظر میں
☆	اردو ذخیرہ الفاظ																				
☆	اردو جملے کا ڈھانچہ																				
☆	اردو قواعد کا استعمال																				
☆	غالبیات																				
☆	اقبالیات																				
☆	مسدس حافی																				
☆	میر تقی میر کی شاعری																				
☆	طنز و مزاح: مشتاق احمد یونسی کی نظر میں																				

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
					<p>L. For Zoology</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Eco System, • Classification of Fish, Reptiles, Mammals, • Classification of Mollusks, Edinodermata, • Theories of Evolution, • Mammalian Hormonal System, • Membrane System, • Mammalian Gametogenesis and Fertilization, • Multiple Alleles. • Mendelian laws of inheritance, • Reproduction and Development, <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.	76/2023	<p>Communication Security Officer (BS-17), Department of Communications Security, Cabinet Division.</p>	<p>Second Class or Grade 'C' Master's degree in Computer Science/ Information Security/ Information Technology/ Mathematics/ Statistics/ Physics/ Electronics or equivalent from a University recognized by the HEC.</p> <p style="text-align: center;">OR</p> <p>Second Class or Grade 'C' Bachelor's degree in Electrical / Electronics / Telecom / Software / Computer Engineering or equivalent from University recognized by the HEC.</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 Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II</p> <ul style="list-style-type: none"> • Operating System & System Software • Object Oriented Programming Languages • Database management • Digital Electronics • Data Communication • Algorithm Structure • Number Theory, Modular Maths and Finite Fields • Probability & Random Variables • Key Management • Boolean Algebra • Cryptographic Techniques

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
10.	77/2023	Procurement Officer (BS-17), Pakistan Mint, Lahore, (Internal Finance Wing), Finance Division.	(i) Second Class or Grade 'C' Master's degree from a University recognized by the HEC. (ii) Two (2) years post qualification experience in the field of purchase/ procurement.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II General Intelligence & Professional Test=80 marks	Part-I Vocabulary, 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"> – Issues/Challenges at National and International Level during the last 5 years – Basic Economic facts related to Pakistan. • Pakistan Affairs & Islamic Studies <ul style="list-style-type: none"> – Basic Level knowledge • Basic Computer Operation in MS Office • Public Procurement Rules, 2004 Note : (Equal weightage for each topic at Part-II)
11.	78/2023	Junior Scientific Officer (JSO) (BS-16), Ordnance Corps, GHQ, Ministry of Defence.	Second Class or Grade 'C' B. Tech (Textile/ Mechanical) or equivalent qualification from a University recognized by the HEC.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II Subject Test = 80 marks Note: Separate papers for candidates of Mechanical and Textile as there is no commonality in these disciplines.	Part-I Grammar Usage, Sentence Structuring, Part-II (For B. Tech. Textile candidates) <ul style="list-style-type: none"> • General textile technology, • Spinning, Weaving, • Dyeing and finishing, • Testing and quality control, • Fabric design and structure, • Business management and industrial economics, • Industrial management and human relations. Part-II (For B. Tech. Mechanical candidates) <ul style="list-style-type: none"> • Heat Transfer • Thermodynamics • Industrial Materials • Machine Design and Drawing • Mechanics of Machines • Workshop Technology • Hydraulic Machines

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
12.	79/2023	Junior Scientific Officer (Grade-IV) (BS-16), Corps of EME, Ministry of Defence.	Bachelor's degree from a University recognized by the PEC in any one of the following disciplines: (a) Metallurgical Engineering. (b) Drawing & Design Engineering. (c) Mechanical Engineering. (d) Automobile Engineering. (e) Electrical Engineering. (f) Electronics Engineering. (g) Communication Engineering. (h) Aeronautical Engineering. (i) Chemical Engineering.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II Professional Test=80 marks	Part-I Grammar Usage, Sentence Structuring. Part-II <u>Syllabus under process with the Commission and will be uploaded later on.</u>
13.	80/2023	Lecturer (Male) (BS-17), (A) Arabic (B) Biology (C) Botany (D) Business Administration (E) Chemistry (F) Civics (G) Computer Science (H) Economics (I) English (J) History (K) Health & Physical Education (L) International Relations (M) Islamic Studies (N) Mathematics (O) Pak Studies (P) Persian (Q) Physics (R) Political Science (S) Psychology (T) Sociology (U) Statistics (V) Urdu (W) Zoology Federal Government Educational Institutions (FGEI) Directorate, (Cantts/ Garrisons), Colleges, Ministry of Defence.	Second Class or Grade 'C' Master's Degree or equivalent qualification in the relevant subject.	Type Test (MCQ) Part-I English = 20 marks Part-II Subject Test = 50 marks Part-III Professional Test = 30 marks Note: ▪ In Language Subjects (i.e Arabic, Persian and Urdu), English part will be of 10 marks. There will be 60 marks for subject Test and 30 marks for Professional Test.	A. For Arabic Part-I (10 Marks) Vocabulary, Grammar Usage, Sentence Structuring Part-II (Master's Level) (60 Marks) • History of Arabic literature • Arabic Poetry at the Dawn of Islam • Arabic Syntax • Arabic Vocabulary, • Arabic Grammar usage, • Arabic Sentence Structure Part-III (30 Marks) • 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>B. <u>For Biology</u></p> <p><u>Part-I</u> Vocabulary, Grammar Usage, Sentence Structuring.</p> <p><u>Part-II (Masters Level)</u></p> <ul style="list-style-type: none"> • Theories of Evolution, • Multiple Alleles, • Nucleic Acids, • Cell Division, • Nutrition, • Ecosystem, • Mendelian laws of inheritance, • Diagnostic Characteristics of all the phyla or invertebrates and chordates, • Division of Plants <p><u>Part-III</u></p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation • Knowledge of Bloom's Taxonomy <hr/> <p>C. <u>For Botany</u></p> <p><u>Part-I</u> Vocabulary, Grammar Usage, Sentence Structuring</p> <p><u>Part-II (Masters Level)</u></p> <ul style="list-style-type: none"> • Algae, • Fungi, • Bryophytes • Gymnosperms, • Angiosperms, • Plant Physiology, • Ecology, • Cytology, • Genetics, <p><u>Part-III</u></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><u>D. For Business Administration</u></p> <p><u>Part-I</u> Vocabulary, Grammar Usage, Sentence Structuring</p> <p><u>Part-II (Masters Level)</u></p> <ul style="list-style-type: none"> • Business Finance • Principles of Management • Business Law • Business Research Methods • Financial Management • Marketing Management • Production/Operation Management • Management Information System <p><u>Part-III</u></p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology, • Classroom Management and Discipline, • Testing and Evaluation, • Knowledge of Bloom's Taxonomy <p><u>E. For Chemistry</u></p> <p><u>Part-I</u> Vocabulary, Grammar Usage, Sentence Structuring.</p> <p><u>Part-II (Masters Level)</u></p> <ul style="list-style-type: none"> • Nature, Properties & States of Matter, • Electronic Structure, • Bonding, • Chemical Kinetics & Radioactivity, • Synthetic Chemistry • Polymers, • Reaction Mechanism (electrophilic & nucleophilic substitution and addition reaction) • Inorganic Chemistry, • Thermodynamics, • Chemical Equilibrium, • Electrochemistry, • Solutions and Colloidal State. <p><u>Part-III</u></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>F. For Civics</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II</p> <ul style="list-style-type: none"> • Significance and Utility of Civics • Basic Concerns of Civics • Origin and Elements of State • Islamic concept of Sovereignty • Organs of Government • Qualities of Good Citizen • Political Dynamics of Pakistan • Constitutional Developments of Pakistan • Social Services in Pakistan • Social Order in Pakistan • National Integration and Cohesion • Social indicators of Pakistan VS SAARC. • Human Development with Pakistan Perspective. <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>G. For Computer Science</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Computer Hardware/Software, • Data Communication & Networking, • C/C++ Language, • Visual Basic, • Operating System Unix/Linux • Windows 8.1, 10, 11 • Oracle/PLSQL, • System Analysis & Design. • Web Programming, <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>H. For Economics</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Micro Economics: Meaning, Scarcity and Opportunity Cost. • Goals of Microeconomics Policy: Efficiency & equity • Macro Economics: Basic Economic Concepts • The theory of Factor Pricing • Monetary Theory & Public Finance, • Industrial Development in Pakistan • Interest Free Banking in Pakistan • Basic Statistics on Economy of Pakistan <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>I. For English</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Linguistics. • Syntax. • Diction. • Drama: Shakespeare (Hamlet; King Lear; 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) <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>J. For History</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • The Prophetic Age (570-632) • The Pious Caliphate (632-660) • Political System of Islam under the Prophet (PBUH) and the Pious Caliphate (Nature of Islamic State, Form of Govt, Function of Islamic State, Caliphate Shura or the Consultative body and its role) • Institutional Development of the Muslim Civilisation (Umayyad, Abbasid, Crusade) • Muslim Freedom Movement in India (1857-1947) • Ideology of Pakistan • The Kashmir Issue • Pakistan and Neighbouring Countries • Research Methodology & Philosophy of History <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>K. For Health & Physical Education</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Philosophy of Physical Education, • Psychology of Physical Education, • Rules of games • Basics of Human Anatomy • Administrative and Management in Sports, • Sports Nutrition, • Trauma and Rehabilitation, • Research Methodology in Physical Education • Test, Measurement and Evaluation in Physical Education & Sports • Sports Injuries, • Sports with physical disabilities <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>L. For International Relations</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • The Definition and Scope of International Relations. • Theories and Approaches in International Relations • Terrorism, Globalization, Revival of Multipolarity • International Financial Institution (IMF, World Bank, ADB, IDB) • India and Pakistan Relations • Kashmir Issue, • CPEC-Pakistan China Relationship • FATF- Impacts on Pakistan Economy • Nuclear: Role of IAEA, NPT, CTBT in Nuclear proliferation • International Regional Organizations: EU, ASEAN, SAARC. <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>M. For 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 چیلنجز</p> <p>☆ اسلامی نظام حکمرانی کا ڈھانچہ</p> <p>☆ سرکاری ملازمین کی ذمہ داریاں</p> <p>☆ اسلامی ضابطہ حیات</p>

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>N. For 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 • General Theorems (Rolle's Theorem, Mean Value Theorem) • Areas and Volumes, centre of Mass • Computing Tools for Mathematicians, • Mathematical Statistics, • Mathematical Spaces (Sets, Vector Spaces, Metric Spaces, topological spaces Tensors, • Differential Equations. <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>O. For 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

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
					<p>P. <u>For Persian</u></p> <p><u>Part-I (10 Marks)</u></p> <p>Vocabulary, Grammar Usage, Sentence Structuring</p> <p><u>Part-II (Master's Level) (60 Marks)</u></p> <ul style="list-style-type: none"> • Classical Persian Prose and Poetry • Modern Persian Literature, • History of Persian Language and Literature, • Study of Iranian History and Culture, • Iqbal's Persian Poetry and Thoughts. <p><u>Part-III (30 Marks)</u></p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation • Knowledge of Bloom's Taxonomy <p>Q. <u>For Physics</u></p> <p><u>Part-I</u></p> <p>Vocabulary, Grammar Usage, Sentence Structuring.</p> <p><u>Part-II (Masters Level)</u></p> <ul style="list-style-type: none"> • Heat and Thermodynamics, • Waves and Optics, • Electrostatic, • Electricity and Magnetism, • Atomic and Modern Physics, • Nuclear Physics, • Basic Solid State Physics, • Basic Electronics, • Electrodynamics, • Mechanics <p><u>Part-III</u></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>R. For Political Science</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Western Political Thought (Plato, Aristotle, Machiavelli, Montesquieu, Hobbes, Locke, Rousseau, Marx, Lenin, Frances Fukuyama) • Muslim Political Thought (Al-Farabi, Al-Mawardi, Imam Ghazali, Ibn Khaldun, Shah Waliullah, Allama Muhammad Iqbal) • State System: Nature and Emergence, Islamic Concept • Political Institutions and Role of Government • Basic concepts of Political Ideologies (Capitalism, Marxism, Communism/Socialism, Fascims, Nationalism, Islamic Political Ideology) • Government and Politics in Pakistan: Analysis of 1956, 1962, 1973 Constitutions and Constitutional Amendments • Comparative Study of Political System (Turkey, India, Malaysia and China) <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>S. For Psychology</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Nature and Scope of Psychology • Developmental Psychology • Social Psychology • Educational Psychology • Counselling Psychology • Abnormal and Clinical Psychology • Organizational/Industrial Psychology • Forensic Psychology • Psychological Testing and Assessment • Research Methodology

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>T. For Sociology</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Society: Meaning and Characteristics • Social Contract Theory & Organismic Theory • Sociological Theories (Ibn-i-Khaldun, Spencer, Max Weber, Karl Marx) • Methods of Sociological Research, • Social Institutions: Nature, Genesis & Function • Mechanism of Social Control: Formal & Informal • Social and Cultural Change & Social Policy: Processes & Effects • Social Problems in Pakistan <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>U. For Statistics</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Measures of Central Tendency, • Measures of Dispersion or Variation, • Regression and Correlation, • Index Numbers, • Probability Theory, • Probability Distributions, • Presentation of Data • Time Series Analysis, • Statistical Inference, • Sampling Theory and Techniques, • Analysis of Variance, • Experimental Design

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>V. For Urdu</p> <p>Part-I (10 Marks) Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level) (60 Marks)</p> <div data-bbox="1653 483 2063 762" style="border: 1px solid black; padding: 5px; text-align: center;"> <p>☆ اردو ڈیڑھ الفاظ</p> <p>☆ اردو جملے کا ڈھانچہ</p> <p>☆ اردو قواعد کا استعمال</p> <p>☆ غالبیات</p> <p>☆ اقبالیات</p> <p>☆ سدرس حافی</p> <p>☆ میر تقی میر کی شاعری</p> <p>☆ طنز و مزاح: مشتاق احمد یوسفی کی نظریں</p> </div> <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
					<p>W. For Zoology</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Eco System, • Classification of Fish, Reptiles, Mammals, • Classification of Mollusks, Edinodermata, • Theories of Evolution, • Mammalian Hormonal System, • Membrane System, • Mammalian Gametogenesis and Fertilization, • Multiple Alleles. • Mendelian laws of inheritance, • Reproduction and Development, <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

Syllabus for Descriptive Test of

**F.4-63/2023 (Inspector Customs/ Intelligence Officer) &
F.4-64/2023-R (Preventive Officer)**

Max Marks: 100

Qualifying Standard 40%

Time Allowed: 3 Hours

Part-I (English Essay): 40 Marks

Candidates will be required to write an Essay in English comprising **1000 words** from a set of **four given topics**. Candidates are expected to reflect comprehensive knowledge on a selected topic. Candidate's articulation, expression and technical approach to the style of English Essay writing will be examined.

Part-II (Current Affairs): 30 Marks

Candidates will be expected to demonstrate knowledge on current affairs related to the following:

- CPEC and Pakistan,
- Kashmir Issue,
- Pak US relations
- Afghanistan Crisis
- Basic Economic facts related to Pakistan

Part-III (Islamic Studies/Pakistan Studies): 30 Marks

I. Islamic Studies

Introduction to Islam, Seerah of the Prophet Muhammad (PBUH) as Role Model, Status of Woman in Islam, Articles of Faith, Islamic Code of Life, Islamic Concept of Human Rights

II. Pakistan Studies

Parliamentary democracy in Pakistan under 1973 Constitution, Salient features of the Constitution of Pakistan 1973, Economic Challenges for Pakistan, Major social problems of Pakistan.

SUGGESTED READINGS

S. No.	Title	Author
1.	Pakistan and World Affairs	Shamshad Ahmad (Edition-2015)
2.	Constitution of Pakistan 1973	
3.	Kashmir in Conflict: India, Pakistan and the Unending War.	Schofield, Victoria. New York: I.B.Tauria, 2003.
4.	Modern South Asia: History, Culture, Political Economy.	Jalal, Aisha and Bose, Sugata. New York: Routledge, 1998.
5.	Federalism and Ethnic Conflict Regulation in India and Pakistan.	Adeney, Katharine. , New York: Palgrave Macmillan, 2007.
6.	Issues in Pakistan's Economy	S. Akbar Zaidi
7.	Economic Survey of Pakistan	Government Publication
For Islamic Studies		
8.	Introduction to Islam	Dr. Hamidullah
9.	Islam: its meaning and Message	Khurshid Ahmad
10.	Insan e Kamil	Dr Khalid Alvi
11.	Islami Tehzeeb Kay Chund Darakhshan Pehloo	Mustafa Sabali

Schemes and Syllabi for Written Examination (Descriptive) for All Posts in BS-18 & BS-19 included in Consolidated Advertisement No. 04/2023

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.4-65 (A)/2023-R
Particulars of post	Assistant Professor (Chemistry) (BS-18), Naval Headquarters, Ministry of Defence
Minimum Qualification & Experience:	(i) Second Class or Grade 'C' Master's Degree in relevant subject. (ii) Five (5) years post qualification teaching experience at College level in the relevant subject. OR M. Phil. with three (3) years post qualification teaching experience at College level in the relevant subject. OR Ph.D. in the relevant subject.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: (Chemistry)**50 Marks (Descriptive)**

- I. Atomic structure.—Quantum theory, Schrodinger equation, Particle in box, hydrogen atom. Hydrogen molecule ion, hydrogen molecule. Theories of hydrogen and metallic bonding.
- II. Electrochemistry.—Ionic equilibria, theory of strong electrolytes; Debye-Huckel theory of activity coefficients, galvanic cells, membrane equilibria and fuel cells. Theories of Acids and Bases, glass electrode, measurement of pH. Electrolysis, overvoltage and corrosion.
- III. Thermodynamics.—First law of thermodynamics, internal energy, enthalpy functions. Thermochemistry, Entropy and second law of Thermodynamics, Free energy and chemical equilibrium.
- IV. Chemistry of Following Elements.—Oxygen, Carbon, Chlorine, Silicon, Nitrogen, Phosphorus.
- V. Inorganic Chemical Industries.—Sulphuric Acid, Fixation of Nitrogen, Chemical Fertilizers, Semi-conductivity devices. Cement, Glass and Ceramics.
- VI. Chemical Kinetics.—Rate law and its determination Order of reaction. Experimental methods. Temperature Dependence of rate constants. Study of mechanism of a few selected reactions (1st and 2nd under reaction only).
- VII. Surface Chemistry and Catalysis.—Physical adsorption and chemisorption. Surface area determination. Homogeneous and Heterogeneous Catalysis. Acid-base and Enzyme Catalysis.
- VIII. Physical Organic Chemistry.—Elements of Organic reaction mechanism. Optical and Geometric Isomerism. Conformational analysis. Resonance. H—Bond and its effects on the properties of Organic Compounds.
- IX. Aromatic Chemistry.—Structure of Benzene with particular reference to Mechanism of Electrophilic Substitution Reactions.
- X. Chemistry of Natural Products.—Elementary study of Carbohydrates. Oils and Fats. Alkaloids and Vitamins.
- XI. Industrial Organic Chemistry.—Organic Polymers. Fermentation processes including preparation of Anti-Biotics. Petro-Chemical Industry.

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

- 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.	Advanced Inorganic Chemistry 3 rd Ed.	Cotton. F.A. and Wilkinson Groffrey
2.	Inorganic Chemistry, 3 rd Ed. 1983	Hukeavy, James E.
3.	Physical Chemistry 5 th Ed.	Moore, Walter J.
4.	Mechanism & Structure in Organic Chemistry	Gould, Edwards
5.	Organic Chemistry 2 nd Ed.	Morrison, Robert Thornton & Boyd R.N.
6.	Research in Education	JW Best
7.	Integrating Education Technology into Teaching	Roblyer
8.	Curriculum Development	S. M. Shahid
9.	Educational Measurement and Evaluation	S. M. Shahid
10.	Educational Administration	S. M. Shahid

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

Case No.	F.4-65 (B)/2023-R
Particulars of post	Assistant Professor (English) (BS-18), Naval Headquarters, Ministry of Defence
Minimum Qualification & Experience:	(i) Second Class or Grade 'C' Master's Degree in relevant subject. (ii) Five (5) years post qualification teaching experience at College level in the relevant subject. OR M. Phil. with three (3) years post qualification teaching experience at College level in the relevant subject. OR Ph.D. in the relevant subject.

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. Routledge.	Bertens, H. (2008).
2.	Literary Theory: An Introduction.	Eagleton, E. (2008).
3.	A New Handbook of Literary Terms.	Mikics, W. (2007).
4.	A Companion to Twentieth Century Poetry.	Roberts, N. (2003).
5.	A Reader's Guide to Contemporary Literary Theory	Selden, R., Widdowson, P., & Brooker, P. (2005)
6.	Twentieth Century British Drama.	Smart, J. (2001).
7.	Modern Critical Views & Interpretations,	Harold Bloom
8.	A Companion to 20 th Century Drama Oxford: Blackwell.	Krasner David. 2005.
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.4-65 (C)/2023-R
Particulars of post	Assistant Professor (Mathematics) (BS-18), Naval Headquarters, Ministry of Defence
Minimum Qualification & Experience:	(i) Second Class or Grade 'C' Master's Degree in relevant subject. (ii) Five (5) years post qualification teaching experience at College level in the relevant subject. OR M. Phil. with three (3) years post qualification teaching experience at College level in the relevant subject. OR Ph.D. in the relevant subject.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & Part-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. Ghorji
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.	Mathematical Techniques	Karamat H. Dar
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.4-67/2023-R
Particulars of post	Joint Director Legal Affairs (BS-19), Directorate of Legal Affairs of Pakistan Railways, (Railway Board), Ministry of Railways.
Minimum Qualification & Experience:	(i) LLM degree or Barrister-at-Law from a University/ Institute recognized by HEC. (ii) Ten (10) years post qualification experience as an Advocate of Supreme Court/ High Courts. (iii) Computer literate in Microsoft word, Excel and Spreadsheet. OR (i) Second Class or Grade 'C' LLB degree from a University/ Institute recognized by HEC. (ii) Twelve (12) years post qualification experience as an Advocate of Supreme Court/ High Courts. (iii) Computer literate in Microsoft Word, Excel and Spreadsheet.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II.

Part-II (Law) (Subjective) : 75 Marks**I. Definitions of Crime****II. All Provisions of:**

- i. Concept of arbitration, arbitration with or without intervention of court and in civil suits.
- ii. Establishment of Civil Courts with their Original & Appellate Jurisdiction.
- iii. The Code of Civil Procedure, 1908
- iv. Pakistan Penal Code, 1860
- v. Qanun-e-Shahdat Order, 1984
- vi. Criminal Procedure Code, 1898

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-Shahdat 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

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

Case No.	F.4-68/2023-R
Particulars of post	Paediatric Surgeon (BS-18), National Institute of Rehabilitation Medicine, Ministry of National Health Services, Regulations & Coordination.
Minimum Qualification & Experience:	(i) MBBS or equivalent qualification recognized by PM &DC. (ii) PM&DC Level-III qualification in the related speciality with 02 years post qualification experience in the relevant field. OR PM&DC Level II (a) or Level II (b) in the related speciality with 04 years post qualification experience in the relevant field.

Part-I: (MCQ)**25 Marks**

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

Part-II: (Qualification Based) (Descriptive)**50 Marks**Core courses of **MBBS Degree****Part-III: (Professional) (Descriptive)****25 Marks**Core courses of Level-II qualification in **Paeds Surgery**.

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

Case No.	F.4-72 (A)/2023-R
Particulars of post	Assistant Professor (Computer Science) (Male) (BS-18), Education Department, GB Colleges, Ministry of Kashmir Affairs & Gilgit Baltistan.
Minimum Qualification & Experience:	(i) Ph. D. degree in the relevant subject from a University recognized by the HEC. (ii) One year post qualification teaching and administrative experience at a College/ University level. <p style="text-align: center;">OR</p> (i) M. Phil. degree in the relevant subject from a University recognized by the HEC. (ii) Three (3) years post qualification teaching and administrative experience at College/ university level. <p style="text-align: center;">OR</p> (i) Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by the HEC. (ii) Five (5) 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.4-72 (B)/2023-R
Particulars of post	Assistant Professor (English) (Male) (BS-18), Education Department, GB Colleges, Ministry of Kashmir Affairs & Gilgit Baltistan.
Minimum Qualification & Experience:	<p>(i) Ph. D. degree in the relevant subject from a University recognized by the HEC.</p> <p>(ii) One year post qualification teaching and administrative experience at a College/ University level.</p> <p style="text-align: center;">OR</p> <p>(i) M. Phil. degree in the relevant subject from a University recognized by the HEC.</p> <p>(ii) Three (3) years post qualification teaching and administrative experience at College/ university level.</p> <p style="text-align: center;">OR</p> <p>(i) Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by the HEC.</p> <p>(ii) Five (5) 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

V. 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.

VI. Process of Teaching and Teaching Strategies

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

VII. 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

VIII. 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. Routledge.	Bertens, H. (2008).
2.	Literary Theory: An Introduction.	Eagleton, E. (2008).
3.	A New Handbook of Literary Terms.	Mikics, W. (2007).
4.	A Companion to Twentieth Century Poetry.	Roberts, N. (2003).
5.	A Reader's Guide to Contemporary Literary Theory	Selden, R., Widdowson, P., & Brooker, P. (2005)
6.	Twentieth Century British Drama.	Smart, J. (2001).
7.	Modern Critical Views & Interpretations,	Harold Bloom
8.	A Companion to 20 th Century Drama Oxford: Blackwell.	Krasner David. 2005.
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.4-72 (C)/2023-R
Particulars of post	Assistant Professor (Geography) (Male) (BS-18), Education Department, GB Colleges, Ministry of Kashmir Affairs & Gilgit Baltistan.
Minimum Qualification & Experience:	(i) Ph. D. degree in the relevant subject from a University recognized by the HEC. (ii) One year post qualification teaching and administrative experience at a College/ University level. <p style="text-align: center;">OR</p> (i) M. Phil. degree in the relevant subject from a University recognized by the HEC. (ii) Three (3) years post qualification teaching and administrative experience at College/ university level. <p style="text-align: center;">OR</p> (i) Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by the HEC. (ii) Five (5) 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: (Geography) (Subjective)**50 Marks****I. Geographical Information System:**

Definitions, key components, functional subsystem, Raster data model, vector data model, attribute data model, Data acquisition techniques, data sources, data capturing techniques and procedures, data transformation, visualization of spatial data, layers and projections and datums, GIS Applications

II. Map design:

Symbols to portray points, lines, polygons and volumes, graphic variables, visual hierarchy, Data classification graphic approach, mathematical approach.

III. Spatial analysis: neighbourhood functions, network, and overlay analysis, buffering, spatial data quality: components of data quality, micro level components, macro level components, usage components, sources of errors, accuracy and resolution and uncertainty.

IV. Remote Sensing

History and Development, Concepts and Foundation of Remote Sensing, Electromagnetic spectrum, Types of Remote Sensing Systems, Types of Satellites, Ground Receiving Stations (Reception of Data), Applications (Hydrology, Geology, Climatology, Environmental etc.), Remote Sensing in Pakistan: Potential and Prospects

V. Land Surveying

- Instrumental survey and records
- Surveying using the following instruments:
 - ✓ Chain survey
 - ✓ Plane Table
 - ✓ Prismatic Compass
 - ✓ Determination of heights and slopes with Abney Level
 - ✓ Contouring by Indian Clinometer
 - ✓ Use of Dumpy level and Theodolite

- ✓ Total station
- ✓ Global Positioning System (GPS)

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.	Geographic Information Systems	Aronoff, S. (2004)
2.	An Introduction to Map Work & Practical Geography	Bygot, J. (1960)
3.	Introduction to Remote Sensing,	Campbell, J. B. (2002)
4.	Fundamentals of Geographical Information Systems.	Demers, M.N. (2008)
5.	Introductory Remote Sensing: Principles and Concepts,	Jensen, J. (2000)
6.	Remote Sensing of the Environment: An Earth Resource Perspective. Second Edition.	Jensen, J. R. (2011)
7.	Cartography: Visualization of Spatial Data,	Kraak, M. J. (1996)
8.	Plane Surveying	Chandra, A. M. (2006)
9.	Advanced Surveying: Total Station, GIS and Remote Sensing	Gopi, S., Kumar, S., & Madu, R. N. (2007)
10.	Fundamentals of Surveying.	Roy, S. K. (2010)
11.	Research in Education	JW Best
12.	Integrating Education Technology into Teaching	Roblyer
13.	Curriculum Development	S. M. Shahid
14.	Educational Measurement and Evaluation	S. M. Shahid
15.	Educational Administration	S. M. Shahid

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

Case No.	F.4-72 (D)/2023-R
Particulars of post	Assistant Professor (Mathematics) (Male) (BS-18), Education Department, GB Colleges, Ministry of Kashmir Affairs & Gilgit Baltistan.
Minimum Qualification & Experience:	(i) Ph. D. degree in the relevant subject from a University recognized by the HEC. (ii) One year post qualification teaching and administrative experience at a College/ University level. <p style="text-align: center;">OR</p> (i) M. Phil. degree in the relevant subject from a University recognized by the HEC. (ii) Three (3) years post qualification teaching and administrative experience at College/ university level. <p style="text-align: center;">OR</p> (i) Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by the HEC. (ii) Five (5) years post qualification teaching and administrative experience at College/ University level.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & Part-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.	Mathematical Techniques	Karamat H. Dar
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.4-72 (E)/2023-R
Particulars of post	Assistant Professor (Political Science) (Male) (BS-18), Education Department, GB Colleges, Ministry of Kashmir Affairs & Gilgit Baltistan.
Minimum Qualification & Experience:	(i) Ph. D. degree in the relevant subject from a University recognized by the HEC. (ii) One year post qualification teaching and administrative experience at a College/ University level. <p style="text-align: center;">OR</p> (i) M. Phil. degree in the relevant subject from a University recognized by the HEC. (ii) Three (3) years post qualification teaching and administrative experience at College/ university level. <p style="text-align: center;">OR</p> (i) Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by the HEC. (ii) Five (5) 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: (Political Science) (Subjective)**50 Marks****I. Political Concept (Western and Islamic):**

Sovereignty, Justice, Law, Liberty, Freedom, Equality, Rights and Duties, Human Rights, Political authority and Power.

II. Comparative Politics:

Political Socialization, Political Culture, Political Development, Political Recruitment, Social Change, Civil Society, Violence and Terrorism in Politics, Gender and Politics, Women Empowerment.

III. Political Participation:

Political Change and Revolution, Elections, Electoral System, Public Opinion, Propaganda, Political Parties, Pressure Groups and Lobbies.

IV. Political Institutions and Role of Government:

Legislature, Executive, Judiciary, Political Elites, Civil-Military and Bureaucracy.

V. Forms of Government:

Monarchy, Democratic, Dictatorship, Totalitarian/Authoritarian, Unitary, Federal, Confederation, Presidential and Parliamentary

VI. Government and Politics in Pakistan:

Constitution making from 1947 -1956, A comparative and critical analysis of 1956, 1962, 1973 Constitutions of Pakistan, Constitutional Amendments up-to-date, Federal structure in Pakistan, and Central-Provincial relations after 18th amendments,

Political Culture of Pakistan, political developments and the Role of civil and military Bureaucracy, Judiciary, feudalism, Dynastic Politics, Political Parties and Interest Groups, Elections and Voting Behavior, Religion and Politics, Ethnicity and National Integration.

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.	Political Thought in Medieval Islam	Erwin I.J. Rosenthal
2.	Modern Islamic Political Thought	Hamid Enayat,
3.	International Politics: A Framework for Analysis	Holsti, K.J.
4.	21 st Century Political Science: A Reference Handbook	John T.Ishiyama, Marijke Breuning,
5.	Political Thought from Plato to Present	Judd Herman,
6.	Government and Politics in Pakistan	Mushtaq Ahmad
7.	Islami Riyasat	Syed Abul Aala Maudoodi
8.	Contemporary Political Philosophy: An Introduction	Will Kymlicka
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.4-72 (F)/2023-R
Particulars of post	Assistant Professor (Sociology) (Male) (BS-18), Education Department, GB Colleges, Ministry of Kashmir Affairs & Gilgit Baltistan.
Minimum Qualification & Experience:	<p>(i) Ph. D. degree in the relevant subject from a University recognized by the HEC.</p> <p>(ii) One year post qualification teaching and administrative experience at a College/ University level.</p> <p style="text-align: center;">OR</p> <p>(i) M. Phil. degree in the relevant subject from a University recognized by the HEC.</p> <p>(ii) Three (3) years post qualification teaching and administrative experience at College/ university level.</p> <p style="text-align: center;">OR</p> <p>(i) Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by the HEC.</p> <p>(ii) Five (5) 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: (Sociology) (Subjective)**50 Marks**

1. **Social Interaction:** Caste and classes, Forms of social classes, Feudal system in Pakistan, Social Mobility-nature of social mobility and its determinants in Pakistani society, Culture of poverty.
2. **Social Control:** Mechanisms of social control-formal and informal means of social control, Anomie, Alienation and social Integration-Means of social integration in Pakistani Society.
3. **Social and Cultural Change and Social Policy:** Processes of Social and Cultural Change-discovery, Inhibitions to social and cultural change in Pakistan, Social planning and directed social and cultural change, Effect of Industrialization, Urbanization, Modernization and Modern Means of Communication on Social Change.
4. **Public Opinion:** Formulation of public opinion, concept of opinion leader, characteristics of opinion leadership.
5. **Community:** The rural community, Traditional Characteristics of rural life, The urban community, Rural – Urban convergence, Urbanism, Future of cities in Pakistan.
6. **Social Institutions:** The nature and genesis of institutions, The process of institutionalization, Functions of Social Institutions: Family, Religion, Education, Economy and Politics.
7. **Social Problems in Pakistan:** High population growth rate, Rural –urban migration. Issues of technical/vocational training, Deviance and street crime,

Unemployment, illiteracy and School drop out, Smuggling, Prostitution, Poverty, Drug Addiction, Child Labour and Abuse, Bonded Labour, Social customs and Traditions affecting Women in Pakistan, Violence Against Women and Domestic Violence, Issues concerning the Elderly in Pakistan.

8. **Methods of Sociological Research:** Scientific Method, Steps in research, Types of Questionnaire Research Design, Surveys, Observation and Case Studies.

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.	Sociology : A down to earth approach	James M. Henslin
2.	Methods of Social Research	Baily
3.	Poverty Curtains	Dr. Mehboob-ul-haq
4.	Sociology	Ogburn & Nimkoff
5.	Feudal System in Pakistan	Nawab Haider Naqvi
6.	Sociology: An Introduction to the Science of Society	Koening Samuel
7.	The Design of Social Research,	Ackoff, Russel, L.
8.	An Introduction to the History of Sociology	Barnes, H.E. (Ed.)
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.4-73 (A)/2023-R
Particulars of post	Associate Professor (Geography) (Male) (BS-19), Education Department, GB Colleges, Ministry of Kashmir Affairs & Gilgit Baltistan.
Minimum Qualification & Experience:	(i) Ph. D. degree in the relevant subject from a University recognized by the HEC. (ii) Eight (8) years post qualification teaching and administrative experience at a College/ University level. OR (i) M. Phil. degree in the relevant subject from a University recognized by the HEC. (ii) Ten (10) years post qualification teaching and administrative experience at College/ University level. OR (i) Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by the HEC. (ii) 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: (Geography) (Subjective)**50 Marks****I. Geographical Information System:**

Definitions, key components, functional subsystem, Raster data model, vector data model, attribute data model, Data acquisition techniques, data sources, data capturing techniques and procedures, data transformation, visualization of spatial data, layers and projections and datums, GIS Applications

II. Map design:

Symbols to portray points, lines, polygons and volumes, graphic variables, visual hierarchy, Data classification graphic approach, mathematical approach.

III. Spatial analysis: neighbourhood functions, network, and overlay analysis, buffering, spatial data quality: components of data quality, micro level components, macro level components, usage components, sources of errors, accuracy and resolution and uncertainty.

IV. Remote Sensing

History and Development, Concepts and Foundation of Remote Sensing, Electromagnetic spectrum, Types of Remote Sensing Systems, Types of Satellites, Ground Receiving Stations (Reception of Data), Applications (Hydrology, Geology, Climatology, Environmental etc.), Remote Sensing in Pakistan: Potential and Prospects

V. Land Surveying

- Instrumental survey and records
- Surveying using the following instruments:
 - ✓ Chain survey
 - ✓ Plane Table
 - ✓ Prismatic Compass
 - ✓ Determination of heights and slopes with Abney Level
 - ✓ Contouring by Indian Clinometer

- ✓ Use of Dumpy level and Theodolite
- ✓ Total station
- ✓ Global Positioning System (GPS)

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
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 - Approaches to Evaluation: Formative Evaluation; Summative Evaluation
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 - 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.	Geographic Information Systems	Aronoff, S. (2004)
2.	An Introduction to Map Work & Practical Geography	Bygot, J. (1960)
3.	Introduction to Remote Sensing,	Campbell, J. B. (2002)
4.	Fundamentals of Geographical Information Systems.	Demers, M.N. (2008)
5.	Introductory Remote Sensing: Principles and Concepts,	Jensen, J. (2000)
6.	Remote Sensing of the Environment: An Earth Resource Perspective. Second Edition.	Jensen, J. R. (2011)
7.	Cartography: Visualization of Spatial Data,	Kraak, M. J. (1996)
8.	Plane Surveying	Chandra, A. M. (2006)
9.	Advanced Surveying: Total Station, GIS and Remote Sensing	Gopi, S., Kumar, S., & Madu, R. N. (2007)
10.	Fundamentals of Surveying.	Roy, S. K. (2010)
11.	Research in Education	JW Best
12.	Integrating Education Technology into Teaching	Roblyer
13.	Curriculum Development	S. M. Shahid
14.	Educational Measurement and Evaluation	S. M. Shahid
15.	Educational Administration	S. M. Shahid

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

Case No.	F.4-73 (B)/2023-R
Particulars of post	Associate Professor (Pakistan Studies) (Male) (BS-19) , Education Department, GB Colleges, Ministry of Kashmir Affairs & Gilgit Baltistan.
Minimum Qualification & Experience:	(i) Ph. D. degree in the relevant subject from a University recognized by the HEC. (ii) Eight (8) years post qualification teaching and administrative experience at a College/ University level. OR (i) M. Phil. degree in the relevant subject from a University recognized by the HEC. (ii) Ten (10) years post qualification teaching and administrative experience at College/ University level. OR (i) Second Class or Grade 'C' Master's degree in the relevant subject from a University recognized by the HEC. (ii) Twelve (12) years post qualification teaching and administrative experience at College/ University level.

Part-I: 25 Marks (MCQ)

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

Part-II: (Pak Studies) (Subjective) : 50 Marks

- Ideology of Pakistan-----definition and elucidation, historical aspects: Muslim rule in the Sub-Continent, its downfall and efforts for Renaissance. Movements for reforms-- Shaikh Ahmad Sarhindi, Shah Waliullah, Sayyid Ahmad Shaheed, Aligarh, Deoband, Nadwah, and other educational institutions-----Sindh Madrassah and Islamia College Peshawar. Ideology of Pakistan in the light of Speeches and statements of Allama Iqbal and Quaid- i Azam Muhammad Ali Jinnah.
- Changing Security Dynamics for Pakistan: Challenges to National Security of Pakistan
- Pakistan War on Terror
- Foreign Policy of Pakistan Post 9/11
- Evolution of Democratic System in Pakistan
- Hydro Politics ; Water Issues in Domestic and Regional Context
- Pakistan's Energy Problems and their Effects
- Pakistan's Relations with Neighbours
- Pakistan and India Relations Since 1947
- Kashmir Issue
- The war in Afghanistan since 1979 and its impact on, and challenges to Pakistan.
- War against Terrorism since 2001 onwards
- The Prevailing Social Problems of Pakistan and the Strategies to Deal with them: Over Population, Poverty, Education, Health and Sanitation.

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
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- Distinction between Assessment, Evaluation and Measurement
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- 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.	Federalism and Ethnic Conflict Regulation in India and Pakistan.	Adeney, Katharine.
2.	Labour, Democratization and Development in India and Pakistan.	Candland, Christopher,
3.	Frontline Pakistan: The Struggle with Militant Islam.	Hussian, Zahid.
4.	Modern South Asia: History, Culture, Political Economy	Jalal, Aisha and Bose, Sugata.,
5.	Back to Pakistan: A Fifty Year Journey.	Mass, Leslie Noyes.
6.	Pakistan: Manifest Destiny.	Qureshi, Atiff.
7.	Pakistan, America, and Future of Global Jihad	Riedel, Bruce. Deadly Embrace:
8.	Kashmir in Conflict: India, Pakistan and the Unending War.	Schofield, Victoria.
9.	The Emergence of Pakistan	Ch. Muhammad Ali
10.	The Last Mughal	William Dalrymple
11.	Jinnah of Pakistan	Stanley Wolpert
12.	A Brief History of Pakistan.	Wynbrandt, James.
13.	Pakistan's Energy Sector: From Crisis to Crisis-Breaking the Chain	Zaid Alahdad
14.	Research in Education	JW Best
15.	Integrating Education Technology into Teaching	Roblyer
16.	Curriculum Development	S. M. Shahid
17.	Educational Measurement and Evaluation	S. M. Shahid
18.	Educational Administration	S. M. Shahid