

FEDERAL PUBLIC SERVICE COMMISSION
(Curriculum & Research Wing)

Scheme and Syllabi for Screening/Professional Tests as well as Descriptive Examination
Relating to Posts Advertised Vide Consolidated Advertisement No. 02/2015

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications for Posts	Test Specification	Main Topics for MCQ Test
1.	14/2015	Orientation & Briefing Officer (BS-16), Bureau of Emigration & Overseas Employment, Ministry of Overseas Pakistanis and Human Resource Development.	i. Second Class or Grade 'C' Bachelor's degree from a University recognized by the HEC. ii. Three (3) years post qualification experience in Labour/ Manpower and Overseas Employment Service/ Technical or Vocational Training/ Planning/Economic Development.	Objective Type Test (MCQ) <u>Part-I</u> English = 20 marks <u>Part-II</u> Professional Test=80 marks	<u>Part-I</u> Grammar Usage, Sentence Structuring <u>Part-II</u> <ul style="list-style-type: none"> • Labour Laws of Gulf Countries • Economic Situation of Pakistan • Role of remittances and Impact of Immigrants in Pakistani Economy • Emigration Ordinance and Rules, 1979 • Illegal Migration, Human Trafficking • Importance of Technical/Vocational Training for Immigrants • Govt. Policies/Measures for Technical/Vocational Training • Issues of Pakistani Migrant Workers • Importance of pre-departure Orientation & Briefing for Intending Emigrants
2.	15/2015	Software Engineer (BS-17), Bureau of Emigration & Overseas Employment, Ministry of Overseas Pakistanis and Human Resource Development.	Second Class or Grade 'C' Master's degree in Computer Science/ BCS (4 years)/IT/ Electronics or equivalent from a University recognized by the HEC OR B.Sc. in Computer Engineering (Software) from a University recognized by the HEC.	Objective Type Test (MCQ) <u>Part-I</u> English = 20 marks <u>Part-II</u> Professional Test=80 marks	<u>Part-I</u> Vocabulary, Grammar Usage, Sentence Structuring. <u>Part-II</u> <ul style="list-style-type: none"> • Software Engineering (Complete SDLC) • Database Management System • Software Quality Assurance • Microsoft SQL Server • Software Maintenance • Software Development/Training • Software Architecture Design • Object Oriented Programming & Client-Server Programming • MIS Development and Reporting

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3.	16/2015	Accountant (BS-16), Bureau of Emigration & Overseas Employment, Ministry of Overseas Pakistanis and Human Resource Development.	i. Second Class or Grade 'C' Bachelor's degree in Commerce/ Business Administration from a University recognized by the HEC. ii. Three (3) years post qualification experience in handling of Accounts and other financial matters.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II Professional Test=80 marks	Part-I Grammar Usage, Sentence Structuring Part-II <ul style="list-style-type: none"> • General Financial Rules • System of Financial Control and Budgeting, 2006 • Estacode-Financial Matters • Preparation and Maintenance of Accounts • Pre-Auditing • D.D.O. Handbook • TR Cash Handling • Report Writing • Public Procurement Rules, 2004 • Business Communication
4.	17/2015	Web Developer (BS-17), Bureau of Emigration & Overseas Employment, Ministry of Overseas Pakistanis and Human Resource Development.	Second Class or Grade 'C' Master's degree in Computer Science/BCS (4 years)/IT/ Electronics or equivalent from a University recognized by the HEC OR B.Sc. in Computer Engineering (Software) from a University recognized by the HEC.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II Professional Test=80 marks	Part-I Vocabulary, Grammar Usage, Sentence Structuring. Part-II <ul style="list-style-type: none"> • Website and Web Application Development • Web Administration • Graphic & CASE Tools, Design Tools • Basics of HTML, DHTML, XML • Database/Contents Management System • Knowledge of FTP, Hosting Accounts, DNS, DDNS etc. • Web Server Administration • Web Reports Generation
5.	18/2015	Research & Audio Visual Officer (BS-17), Management Services Wing, Establishment Division.	i. Second Class or Grade 'C' Bachelor's degree in Design/ Fine Arts. ii. Five (5) years post qualification experience of work in handling of office Machines/ Equipment. (Experience in Printing press would be an additional qualification).	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"> • Repair & maintenance of Computers, photocopiers and audio visual equipments • Procedure for purchase of Computers, photocopiers and audio visual equipments • Advance Technological Development for Operations of Computers, photocopiers and audio visual equipments • Techniques for fixation of audio visual equipments • Working of Printing Press. • Public Procurement Rules, 2004

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications for Posts	Test Specification	Main Topics for MCQ Test
6.	22/2015	Charge/ Staff Nurse (Female) (BS-16), Federal Government Polyclinic, Islamabad, Capital Administration and Development Division.	Registered Nurse and Registered Midwife with PNC.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II Professional Test=80 marks	Part-I Grammar Usage, Sentence Structuring. Part-II <ul style="list-style-type: none"> • Basic Medical Sciences • General Nursing • Ward Administration • Hospitality of the Patients • Care vs. Cure for Health Management
7.	27/2015	Assistant Private Secretary (BS-16), Director General's Office, Pak PWD, Ministry of Housing & Works.	i. Second class or Grade "C": Bachelor's degree from a University recognized by HEC ii. A minimum speed of 100/50 w.p.m in shorthand/typing respectively iii. Must be computer literate.	<ul style="list-style-type: none"> • Typing Test with minimum Speed of 50 W.P.M 40 Marks • Shorthand Test with minimum Speed of 100 W.P.M 40 Marks • Computer Literacy Test: <ul style="list-style-type: none"> i Microsoft Word (Typing, Formatting) 10 Marks ii Microsoft Excel (Typing, Graph, Calculations) 10 Marks 	
8.	30/2015	Assistant Private Secretary (BS-16), National Industrial Relations Commission (NIRC), Ministry of Overseas Pakistanis & Human Resource Development.	i. Second class or Grade "C": Bachelor's degree from a University recognized by HEC ii. A minimum speed of 100/50 w.p.m in shorthand/typing respectively iii. Must be computer literate.	<ul style="list-style-type: none"> • Typing Test with minimum Speed of 50 W.P.M 40 Marks • Shorthand Test with minimum Speed of 100 W.P.M 40 Marks • Computer Literacy Test: <ul style="list-style-type: none"> i Microsoft Word (Typing, Formatting) 10 Marks ii Microsoft Excel (Typing, Graph, Calculations) 10 Marks 	
9.	31/2015	Chief (Agriculture & Admin) (BS-20), National Energy Conservation Centre (ENERCON), Ministry of Water And Power.	i. Second Class or Grade 'C' Master's Degree in Agricultural or Mechanical Engineering or equivalent from a University recognized by the HEC. ii. Seventeen (17) years post qualification experience in the relevant field with at least three (3) years in Energy Conservation in Agriculture.	Descriptive Test Only English Essay/ Case Studies = 100 Marks (Syllabus is placed at Page-7)	

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10.	32/2015	Chief (Data Base) (BS-20), National Energy Conservation Centre (ENERCON), Ministry of Water and Power. Development Analysis.	i. Second Class or Grade 'C' Master's Degree in Computer Science/Information Technology or equivalent from an Institute/ University recognized by the HEC. ii. Seventeen (17) years post qualification experience in the relevant field with at least three (3) years in Computerized Data Base Development Analysis	Descriptive Test Only English Essay/ Case Studies = 100 Marks (Syllabus is placed at Page-7)	
11.	33/2015	Chief (Programme Evaluation) (BS-20), National Energy Conservation Centre (ENERCON), Ministry of Water and Power.	i. Second Class or Grade 'C' Master's Degree in Engineering from a University recognized by the HEC. ii. Seventeen (17) years post qualification experience in the relevant field with at least three (3) years in Evaluation of energy conservation programmes.	Descriptive Test Only English Essay/ Case Studies = 100 Marks (Syllabus is placed at Page-7)	
12.	34/2015	Chief (Industry and Power) (BS-20), National Energy Conservation Centre (ENERCON), Ministry of Water and Power.	i. Second Class or Grade 'C' Master's Degree in Chemical/ Mechanical/ Electrical/ Industrial Engineering or equivalent from an Institute/ University recognized by the HEC. ii. Seventeen (17) years post qualification experience in the relevant field with at least three (3) years in Energy Conservation.	Descriptive Test Only English Essay/ Case Studies = 100 Marks (Syllabus is placed at Page-7)	

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications for Posts	Test Specification	Main Topics for MCQ Test
13.	35/2015	Deputy Chief (Industry & Power) (BS-19), National Energy Conservation Centre (ENERCON), Ministry of Water and Power.	i. Second Class or Grade 'C' Bachelor's Degree in Chemical/ Mechanical/ Electrical/Industrial/ Engineering or equivalent from a University recognized by HEC. ii. Twelve (12) years post qualification experience in the relevant field with at least three (3) years in Industry and Power Energy Conservation programmes.	Phase-I (MCQ Test) Professional Test=100 Marks (Syllabus is available in next column) Phase-II (Descriptive Exam) Paper-I (English) = 100 Marks (Syllabus is placed at Page-8) Paper-II (Professional) = 100 Marks (Syllabus is placed at Pages 9-10)	<ul style="list-style-type: none"> • Designing and Planning of Energy Surveys • Development of Feasibility Studies and Surveys in Energy Sector • Procedures for Implementation of Energy Conservation Policies • Technical Barriers in Energy Conservation in Industry and Power Sector • Applied Research and Development • Civil Servant Act 1973 and Rules made thereunder • Secretariat Noting and Drafting • Public Procurement Rules, 2004
14.	36/2015	Deputy Chief (Training & Outreach) (BS-19), National Energy Conservation Centre (ENERCON), Ministry of Water and Power.	i. Second Class or Grade 'C' Bachelor's Degree in Engineering or equivalent from a University recognized by the HEC. ii. Twelve (12) years post qualification experience in the relevant field with at least three (3) years in Energy Conservation programmes.	Phase-I (MCQ Test) Professional Test=100 Marks (Syllabus is available in next column) Phase-II (Descriptive Exam) Paper-I (English) = 100 Marks (Syllabus is placed at Page-8) Paper-II (Professional) = 100 Marks (Syllabus is placed at Pages 9-10)	<ul style="list-style-type: none"> • Development of Training Material and Administer Training for: <ul style="list-style-type: none"> ✓ Designing and Planning of Energy Surveys ✓ Development of Feasibility Studies and Surveys in Energy Sector ✓ Procedures for Implementation of Energy Conservation Policies ✓ Technical Barriers in Energy Conservation in Industry and Power Sector ✓ Applied Research and Development • Civil Servant Act 1973 and Rules made thereunder • Secretariat Noting and Drafting • Public Procurement Rules, 2004
15.	37/2015	Admin Officer (BS-17), National Energy Conservation Centre (ENERCON), Ministry of Water and Power.	i. Second Class or Grade 'C' Master's Degree from a University recognized by the HEC. ii. Two (2) years post qualification experience in Administrative matters.	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"> • Personnel Management • Civil Servants Act, 1973 and Rules made thereunder • Rules of Business, 1973 • Secretariat Noting and Drafting • System of Financial Control and Budgeting, 2006 • Public Procurement Rules, 2004 • Basic knowledge of Computer/IT.

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications for Posts	Test Specification	Main Topics for MCQ Test
16.	40/2015	Assistant Secretary (BS-16), Pakistan Mint, Lahore, Finance Division. Private	i. Second class or Grade "C: Bachelor's degree from a University recognized by HEC ii. A minimum speed of 100/50 w.p.m in shorthand/typing respectively iii. Must be computer literate.	<ul style="list-style-type: none"> • Typing Test with minimum Speed of 50 W.P.M • Shorthand Test with minimum Speed of 100 W.P.M • Computer Literacy Test: <ul style="list-style-type: none"> i Microsoft Word (Typing, Formatting) ii Microsoft Excel (Typing, Graph, Calculations) 	40 Marks 40 Marks 10 Marks 10 Marks

**Syllabi for Written Examination (Descriptive)
for all posts in BS-20**

(Case Nos. 31/2015, 32/2015, 33/2015 & 34/2015)

PAPER: ENGLISH (100 MARKS)

There will be only one paper of 100 marks for BS-20 & BS-21 posts.

English Essay: Candidates will be required to write one Essay in English from three topics comprising approximately **2000 words**. Candidates are expected to reflect comprehensive and research based knowledge on a selected topic. Candidate's articulation, expression and technical treatment of the style of English Essay writing will be examined.

OR

Case Study: Candidates will be given real situation case studies related to advertised posts/organization concerned and will be expected from the candidates to present (i) identification of issues (ii) evaluation of issues (iii) legal or case related theories (iv) evaluation of case facts if required and (v) possible solution of the case or writing judicial order, if the case so requires.

Syllabi for Written Examination (Descriptive)
for all posts in BS-18 & BS-19
 (Case Nos. 35/2015 & 36/2015)

PAPER-I: ENGLISH (100 MARKS)

- (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 sentence 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 (Cambridge University Press)
2.	Practical English Usage	M. Swan (Oxford University Press)
3.	The Little, Brown Handbook	H. Ramsey Flower & Jane Aaron (The Little, Brown & Co; Harper Collins)
4.	A University English Grammar	R. Quirk & S. Greenbaum (ELBS; Longmans)
5.	Write Better, Speak Better	Readers Digest Association
6.	Modern English in Action	Henry Christ (D.C. Heath & Co.)

PAPER-II: PROFESSIONAL (100 MARKS)

for

- i. **Deputy Chief (Industry & Power) (BS-19) (Case No. 35/2015) &**
- ii. **Deputy Chief (Training & Outreach) (BS-19) (Case No. 36/2015)**

Engineering

100 Marks

I. Electricity & Electronics:

Electricity & Magnetism; Electrical potential, Resistance, Laws of resistance, Conductance, Conductivity, Impedance, Ohm law, Resistance in series and in parallel, practical resistors, work, power, Energy, Joule's law of electric field intensity, Gauss's Theorem, Capacitor, Capacitance, Capacitors in parallel and series. Force on a conductor in a magnetic field, electrical and magnetic circuits, leakage flux, Relation between magnetism and electricity, Induced emf, induced current and directions, Faraday's laws of electromagnetic inductions, Lenz's law, dynamically induced emf, Self inductance, mutual inductance and inductance in series/parallel, magnetic hysteresis, Energy stored in magnetic field, Generation of alternating currents and voltages.

II. Electrical Machines:

DC Motors: Shunt, Series and Compound Motors, Speed and Torque Relations. Transformers: Principle, Construction, Voltage transformation ratio, Step-up/step-down transformers, Copper & Iron Losses, Transformer connections; delta and star.

AC Motors: Induction motor, Synchronous motor, Performance, Efficiency. Single phase and three phase Motors.

Generators: Principle, Construction, Different components of generators. AC Generators, DC Generators.

III. Electronics:

Transistors: types, calculations of voltages and currents in simple transistor circuits.

Amplifier & Oscillators: Working and classification of amplifiers, Class A and Class B Amplifiers, Feedback Amplifiers, Types of Feedback, RC Oscillators.

Integrated Circuits: OP Amps, timers, flip flop, converters, filters.

Telecommunications: EM theory, antennas, antenna gain, free space loss, fading. Modulations (AM, FM, PM, PWM, Delta, FSK, ASK, PSK), Error correction, Demodulation, Detectors, Transmitter, Receivers.

DSP and Controls; filters, stability, Z-transform, Nyquist criteria, S domain, transfer functions.

Introduction to Computing: History and evolution of computers, central processing unit, data storage, input/output devices, multimedia, operating systems, programming languages, networking, the internet, system analyses and design, management information system, electronic commerce, security and privacy issues, ethical issues and the computing profession,

IV. Power Systems:

Power network analysis, Polyphase circuits, Transients, Transmission Lines, Losses.

V. Costing, Accounting and Budgeting:

Net present value, Net future value, cash flows, auditing, income statement, balance sheet, taxation, financial risk management, cost analysis.

VI. Project Management:

Time lines, milestones, resources allocation, dependency, Gant Charts,

VII. Inventory Management:

FIFO models, LIFO models, Identification Schemes, Inventory management systems.

VIII. Quality Management Systems:

QA models. Deming, Juran Crosby, Quality circles, management responsibility, quality planning, purchasing, design process and design validation, quality audit, corrective and preventive measures.

SUGGESTED READINGS

S.No.	Title	Author
1.	Electrical Technology	B.L. Tharaja
2.	Electronic Devices and Circuits.	Bogart
3.	DC Machines	P.C. Sen
4.	Semiconductors	Manzar Saeed
5.	Modern Digital and Analog Communication	B.P.Lathi
6.	Computers, tools for an Information age,	H.L. Captron, Addison Wesley
7.	Handbook of Engineering Management	Dennis Lock.
8.	Total Quality Management	Dale H. Besterfield, Carol Besterfield-Michna, Glen H. Besterfield, Mary Gesterfield-Sacre