

OS/DRM cell

South Eastern Railway

No: SER/P-ADA/EE/3/IMAQ(Works)/18

Adra, Date: 23.03.2018

To,
The ADEN,s (Special,Settlement/Adra), BQA,PRR, BKSC,BJE,MHQ)
S.E.Railway,Adra Division

Sub: Selection for promotion to the post of JE (Works) against 15 % (DPQ)
Intermediate Apprentice Quota in scale Level-6 (7th CPC)/ GP 4200/-
in Departmental Promotion Quota.

It has been decided by the competent authority to hold the selection for the post of JE(Works) in scale Level-6(7th CPC)/ GP 4200/- against 15% Intermediate Apprentice Quota to form a panel of eligible candidates(UR-04, SC-01, ST-NIL). The selection shall consist written test followed by scrutiny of service record and APAR/ACR's of the candidate who will qualify in the written test and the panel will be formed in order of merit

In terms of Esstt.Srl. No: 112/2006 the staff working in the following Categories may complete in the said selection provided they fulfill other eligibility conditions in this connection.

15% by induction of Intermediate Apprentice Quota from amongst staff in skilled grades in works branch having qualification of ITI/Act Apprenticeship pass or 10+2 in science stream with 03 years' service in skilled grades and upper age limit not exceeding 45 years as on 23.04.2018 i.e date of last receipt of application.

The tentative schedule for the subject selection is as under:-

1. Date of last receipt of application: **23.04.2018**
2. Date of main written test : [will be notified later on]
3. Date of Suppl.written test : -do-

Eligible SC/ST candidates to be opted for the subject selection should be imparted pre- selection coaching for 03 to 04 weeks in terms of Estt.Srl No.81/91 & 24/98 and completion certificates to this effect must reach to Sr.DPO/ADA before the original written test.

The notification should be given wide publicity amongst the staff of works and also displayed in the notice board in each Station/Unit/Office positively and application as received by them should be sent in a bunch duly forwarded by their Controlling Officer to this office through Sr.DEN (Co)/Adra office on or before **03.05.2018** positively and it should be ensured that service particulars must be verified by the Bill Compiling In-charges.

The proforma of the application is enclosed herewith and all the 13 columns of the proforma should be correctly filled-up and forwarded by the controlling Officer. Application not completed in all respects or not fulfilled the eligibility criteria will liable to be rejected.

- Enco: 1) Syllabus for JE(Civil)
2) Proforma of the Application

For Sr.Divl.Personnel Officer
S E Railway, Adra

Copy forwarded for information & necessary action to:-

Sr.DEN (Co)/ Adra, Sr.DEN (North)/ Adra, Ch.OS(G)/Sr.DEN(Co)/Adra.SSE(Works)/East,South,North,
Water Supply/ Adra, PRR,BQA,BKSC & ,BJE,VAA,MHQ. SSE (Bridge) PRR. SSE/STMMD/ Adra.

Copy to OS/DRM cell (Sri Soumen Chatterjee) for uploading in Rail.net/web. site,/Adra Divn

For Sr.Divl.Personnel Officer
S E Railway, Adra

PROFORMA FOR APPLICATION

To,
The Sr.Divl.Personnel Officer
South Eastern Railway, Adra

Sub: Selection for promotion to the post of JE(Works) in scaleRs- 9300-34800/+
GP- 4200/- against 15% DPQ in reference to Sr.DPO/ADA's letter No:
SER/P- ADA/EE/3/IMAQ(Works)/18. dtd.23.03.2018.

In response to the above circular, I beg to offer myself a candidate for the said selection.

My Service particulars are as under:-

1	Name (Block Letter)	
2	Designation/Stn/Unit	
3	Department	
4	Supervisor In-Charge	
5	Date of Birth	
6	Date of Appointment	
7	Present Scale as per 7 th CPC & Grade of 6 th CPC)	
8	Date of Promotion to the scale Rs-5200/-20200/- GP-1900/-(Level-2)	
9	Date of Promotion to the Present Grade & Scale	
10	Date of last medical Exam	
11	Declared fit in which medical Category.	
12	Whether SC/ST	
13	Educational Qualification	

Yours faithfully,

Service Particulars verified By the Bill Compiling In-Charge
With seal.

Sig :-


23/3/18

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20/12/18

Syllabus for Junior Engineer (Civil)

Building Materials, Estimating, Costing and Valuation, Surveying, Soil Mechanics, Hydraulics, Transportation Engineering, Environmental Engineering.

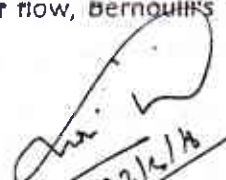
Building Materials: Physical and Chemical properties, classification, standard tests, uses and manufacture/quarrying of materials e.g. building stones, silicate based materials, cement (Portland), asbestos products, timber and wood based products, laminates, bituminous materials, paints, varnishes.

Estimating, Costing and Valuation: estimate, glossary of technical terms, analysis of rates, methods and unit of measurement; Items of work - earthwork, Brickwork (Modular & Traditional bricks), RCC work, Shuttering, Timber work, Painting, Flooring, Plastering. Boundary wall, Brick building, Water Tank, Septic tank, Bar bending schedule, Centre line method, Mid-section formula, Trapezoidal formula, Simpson's rule. Cost estimate of Septic tank, flexible pavements, Tube well, isolates and combined footings, Steel Truss, Piles and pile-caps. Valuation - Value and cost, scrap value, salvage value, assessed value, sinking fund, depreciation and obsolescence, methods of valuation.

Surveying: Principles of surveying, measurement of distance, chain surveying, working of prismatic compass, compass traversing, bearings, local attraction, plane table surveying, theodolite traversing, adjustment of theodolite, Levelling, Definition of terms used in levelling, contouring, curvature and refraction corrections, temporary and permanent adjustments of dumpy level, methods of contouring, uses of contour map, tachometric survey, curve setting, earth work calculation, advanced surveying equipment.

Soil Mechanics: Origin of soil, phase diagram, Definitions-void ratio, porosity, degree of saturation, water content, specific gravity of soil grains, unit weights, density index and interrelationship of different parameters, Grain size distribution curves and their uses. Index properties of soils, Atterberg's limits, IS soil classification and plasticity chart. Permeability of soil, coefficient of permeability, determination of coefficient of permeability, Unconfined and confined aquifers, effective stress, quick sand, consolidation of soils, Principles of consolidation, degree of consolidation, pre-consolidation pressure, normally consolidated soil, e-log p curve, computation of ultimate settlement. Shear strength of soils, direct shear test, Vane shear test, Triaxial test. Soil compaction, Laboratory compaction test, Maximum dry density and optimum moisture content, earth pressure theories, active and passive earth pressures, Bearing capacity of soils, plate load test, standard penetration test.

Hydraulics: fluid properties, hydrostatics, measurements of flow, Bernoulli's theorem and its application, flow through pipes.


22/12/18
Sr. Divisional Engineer/Co
S. E. Riv. / Adra.

Transportation Engineering : Highway Engineering - cross sectional elements, geometric design, types of pavements, pavement materials - aggregates and bitumen, different tests, Design of flexible and rigid pavements - Water Bound Macadam (WBM) and Wet Mix Macadam (WMM), Gravel Road, Bituminous construction, Rigid pavement joint, pavement maintenance, Highway drainage, Railway Engineering- Components of permanent way - sleepers, ballast, fixtures and fastening, track geometry, points and crossings, track junction, stations and yards.

Environmental Engineering : Quality of water, source of water supply, purification of water, distribution of water, need of sanitation, sewerage systems, circular sewer, oval sewer, sewer appurtenances, sewage treatments. Surface water drainage. Solid waste management - types, effects, engineered management system.

Structural Engineering:-

Theory of structures : Elasticity constants, types of beams - determinate and indeterminate, bending moment and shear force diagrams of simply supported, cantilever and over hanging beams. Moment of area and moment of inertia for rectangular & circular sections, bending moment and shear stress for tee, channel and compound sections, chimneys, dams and retaining walls, eccentric loads, slope deflection of simply supported and cantilever beams, critical load and columns, Torsion of circular section.

Concrete Technology : Properties, Advantages and uses of concrete, cement aggregates, importance of water quality, water cement ratio, workability, mix design, storage, batching, mixing, placement, compaction, finishing and curing of concrete, quality control of concrete, hot weather and cold weather concreting, repair and maintenance of concrete structures.

RCC Design : RCC beams-flexural strength, shear strength, bond strength, design of singly reinforced and double reinforced beams, cantilever beams. T-beams, lintels. One way and two way slabs, isolated footings. Reinforced brick works, columns, staircases, retaining wall, water tanks (RCC design questions may be based on both Limit State and Working Stress methods)

Steel Design: Steel design and construction of steel columns, beams roof trusses plate girders.

General Intelligence & Reasoning:

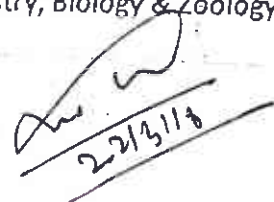
Questions will be asked from analogies, similarities and differences, spatial visualization, spatial orientation, problem solving, analysis, judgment, decision making, visual memory, discrimination, observation, relationship concepts, arithmetic reasoning, verbal and figure classification, arithmetical number series, non-verbal series, coding and decoding, statement conclusion, syllogistic reasoning.

[Signature]
21/11/11
Sr. Divisional Engineer/Co.
S. E. Riv. / Adm.

Arithmetic:- Algebra Basic algebra, factors & simplification, polynomials, Arithmetic Simple & compound interest, installments, taxation, shares & dividends, Ratio & proportion, percentage, time, distance & work, profit & loss, Pipes & Cisterns, Mensuration, Problem on Ages, Investment etc.. From Data Interpretation Use of Tables and Graphs, Histogram, Frequency polygon, Bar-diagram, Pie-chart, Pictorial Graph etc.

General Awareness:- Question will be asked from Indian History, Indian Polity, Current Events, Geography, Economy etc. Focus will be on Current national & International events, banking, sports etc. Some questions from Finance & Marketing can be ask in the exam. Focus will be on News related to Railway, Rail Budget, New Technologies & Reform in Indian Railway.

General Science:- Questions will be of Basic Concept of Science (Class 12th standard), Questions will be ask from Daily use science. Physics, Chemistry, Biology & Zoology.


22/3/18

Sr. Divisional Engineer/Co