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JKSSB JE, Assistant & Various Post Syllabus

Dear Candidates, We are providing the Latest Syllabus for the JKSSB JE, Assistant & Various Post Recruitment 2017 which helps you to prepare for your Prelim Exam.

The details descriptions of the Syllabus are as follows- :

For Junior Engineer

- Surveying:

Importance of surveying, principles and classifications, measurements of distance and directions, chain surveying, compass surveying, leveling, tachometry, theodolite, traversing, contouring, plane table surveying, curves.

- Mechanics and Structural analysis:

Introduction, Concept of rigid body scalar and vector quantities, Laws of forces, moment, friction, centre of gravity, simple machines, torsion, Properties of material, Bending moment and shear force in statically determinate beams. Simple stress and strain relationship. Stress and strain in two dimensions, principal stresses, stress transformation. Simple bending theory, flexural and shear stresses, unsymmetrical bending, shear centre. Thin walled pressure vessels, uniform torsion, buckling of column, combined and direct bending stresses. slope and deflection, Analysis of trusses.

- RCC Structures:

Concrete technology, Ingredients of concrete, water cement ratio, workability properties of concrete, admixtures, special concretes, Non destructive tests, basics of mix design. Concrete design-basic working stress and limit state design concepts, analysis of ultimate load capacity and design of members subjected to flexure, shear, compression and torsion by limit state methods. Basic elements of prestressed concrete, analysis of beam sections at transfer and service loads. One way slab, two way slab.

- **Soil Mechanics:**

Origin of soils, properties, soil classification, three phase system, fundamental definitions, relationship and interrelationship, flow of water through soils, permeability & seepage, effective stress principle, deformation of soils, consolidation, compaction, shear strength characteristics, plate load test, SPT, Density control, Measurement of field density by core cutter and sand replacement method, soil exploration, bearing capacity and its methods

- **Fluid Mechanics and Hydraulics:**

Properties of fluids, hydrostatic pressure, measurement of pressure, flow measurements, flow through pipes, flow through open channels, hydraulic pumps, principle of conservation of mass, momentum, energy and corresponding equations, potential flow, applications of momentum and Bernoulli's equation, laminar and turbulent flow, flow in pipes, pipe networks. Concept of boundary layer and its growth. Uniform flow, critical flow and gradually varied flow in channels, specific energy concept, hydraulic jump. Forces on immersed bodies, flow measurements in channels, tanks and pipes. Dimensional analysis and hydraulic modeling. Kinematics of flow.

- **Irrigation Engineering:**

Introduction, water requirement of crops, hydrological cycle, Dams, Canals, dams, canal head works and regulatory works, cross drainage works, hydraulic structures, river training works, water-logging, drainage, ground water recharge, well hydraulics.

- **Water supply and waste water Engineering:**

Introduction, quantity of water, quality of water, water treatment, conveyance of water, laying out of pipes, Building water supply, water supply fixtures and installation ,plumbing, sewerage system, laying and construction of sewers, sewage characteristics, Methods of disposal, sewage treatment , building drainage, air and noise pollution

- **Highway Engineering:**

History of development of highway and planning ,Definitions of various terms used in highway engineering., Methods of road construction, IRC classification, Highway surveys and plans Geometric design, Different types of road materials in use, Binders, Types of pavement, CBR method ,sub grade preparation, WBM, WMM, Bituminous Macadam, dense bituminous macadam, special problems in hill road.

- **Railway Engineering:**

History of Indian railways, Gauges used, permanent way its components, Types of rails, creep, welding, Rail fixtures and fastenings, Signaling, Points and Crossings, Bridge terminology, classification, components, foundations.

- **Construction planning management:**

Network diagrams, PERT-CPM, cost optimization contracts, tenders, depreciation, valuation, organization, measurement books, cash book, functions of management, construction planning, quality control, inventory control, Estimation and costing definitions, methods of estimation and type of estimates.

For Patwari, Village Level Worker

- **GENERAL ENGLISH**

(I) Paragraph writing / Comprehension

(II) Editing / Proof Reading.

(III) Rearranging of jumbled sentences

(IV) Dialogue

(V) Narration

(VI) Models

(VII) Articles

(VIII) Paragraph writing with blanks to be filled in with the following

Phrases, Pronouns, Homonyms / homophones, Tenses.

(IX) Clauses

(X) Punctuation

(XI) Synonyms and antonyms

(XII) Pairs of words and their use in meaningful sentences.

(XIII) Idioms and phrases.

(XIV) Uses of Prepositions

- **MATHEMATICS**

(i) Problems on finding Surface areas and volumes of combinations of any two of the following cubes, cuboids, spheres, hemispheres and right circular cylinders / cones. Frustum of a cone.

(ii) Problems involving converting one type of metallic solid into another and other mixed problems.

(iii) Profit and loss

(iv) Simple / Compound interest.

(v) Linear equations with two variables.

(vi) Progression / BODMAS

(vii) Probability: Simple problems on Single event.

- **HISTORY**

(i) Revolt of 1857 - Causes and Effects.

(ii) Rise of National Movement - Factors.

- (iii) Formation of the Indian National Congress in 1885 and Role of Moderates.
- (iv) Factors leading to the rise of Exremism in the Congress with special reference to the Partition of Bengal.
- (v) Important dates and historical events with reference to India
- (vi) Boycott and Swadeshi Movement.
- (vii) Rise of Muslim League in 1906 : Cause.
- (viii) Khilafat Movement and the Non-Cooperation Movement.
- (ix) Quit India Movement.
- (x) Independence and Partition of India.

- **CIVICS**

- (i) Fundamental Rights.
- (ii) Fundamental duties.
- (iii) Directive Principles.
- (iv) Origin of democracy and its types. Direct and Indirect Democracy, Hindrance to Democracy
- (v) Public opinion.
- (vi) Representaion.
- (vii) Franchise.
- (viii) Secret Ballot.
- (ix) Nomination.
- (x) Symbol.
- (xi) The Campaign
- (xii) Presidential elections.

(xiii) Languages

(xiv) Cities and Villages.

(xv) The United Nations.

• **GEOGRAPHY**

(i) Change of Seasons/ Planets/ Solar System/ Longitude - Latitude.

Types of forests (with special reference of J&K State)

(ii) Conservation and protection of forests.

(iii) National / Zoological Parks and wildlife sanctuaries (Reference of J&K Sanctuaries and National Parks).

(iv) Water resources. Sources of Water (with special reference of J&K State), Uses of water Resources. Conservation and management of water resources.

(v) Rainwater Harvesting.

(vi) Transport.

(vii) Roads (Different routes of J&K State)

• **GENERAL SCIENCE**

(i) Gravitation / Heat / Light / Matter / Acids / Salts / Elements / Cells.

(ii) Various sources of energy; conventional sources of energy; improvement in technology for using conventional source of energy (Biomass and wind energy)

(iii) Non-conventional sources of energy (Solar energy, Energy from sea).

(iv) Physical properties of metals and non-metals.

(v) Chemical properties of metals like action of water, air, acids, salts; Reactivity series of metals.

(vi) Occurrence of metals; their extraction, enrichment of ores. Extraction of metals in accordance

with activity series; refining of metals.

(vii) Life processes: Nutrition and its types, Respiration, Transportation of water, food and minerals

in plants, Excretion with reference to plants and animals.

(viii) Environmental pollution.

(ix) Ecosystem – Its components, Food chains and Food webs.

(x) Ozone layer, its depletion, Green House Effect.

(xi) Mendel's contribution and experiments on pea plant.

(xii) Types of reproduction in Plants and Animals.

(xiii) Classification of Plants and Animals.

• **GENERAL KNOWLEDGE AND CURRENT AFFAIRS**

Abbreviations, Important Dates, Popular Personalities, Geographical Discoveries, Books and

Authors, Principal Languages of India, Capitals and Currencies of Countries, United Nations

Organisation, Members of United Nations Organisation (UNO), Other International Organisations

and Groups, Members of SAARC, ASEAN, BRICS AND G-7, Space Programme of India, India's

Atomic Research Programme, Awards, Honours and Prizes, Seven Wonders. The World of Sports,

Exports and Imports, India GDP, Per capita Income, Thermal / Nuclear/ Hydro Power Plants in

India.

- **(B) GENERAL KNOWLEDGE WITH SPECIAL REFERENCE TO J&K**

- (I) Important dates, Popular names of personalities and their achievements / contribution.
- (II) Constitution of J&K with reference to constituent Assembly.
- (III) Centre-State relationship.
- (IV) Weather, Climate, Crops, Means of Transport.
- (V) Important projects and their impact on State Economy.
- (VI) Rivers and Lakes.
- (VII) Important Tourist Destinations.
- (VIII) History of J&K State.
- (IX) Historical places and their importance.
- (X) Flora and Fauna of J&K State.

- **MENTAL ABILITY TEST**

- (I) Number series
- (II) Letter series
- (III) Coding decoding
- (IV) Direction sense
- (V) Blood relations
- (VI) Mathematical reasoning
- (VII) Speed, Distance and Time
- (VIII) Statements and conclusions.

For Junior Statistical Assistant

• General Knowledge And Current Affairs

Important dates in Indian History / Freedom struggle, different dates and events.

First in world (Adventure, Sports, Discoveries).

First in India (Adventure, Sports, Discoveries).

Popular names of Personalities (Religion, Politics, Scientific discoveries,

Geographical,

Sports, History)

The Newspaper world – (Current Dailies & Weeklies of India).

Books & Authors – General

Languages.

Capitals & Currencies.

United Nations Organisations – Veto Powers

No. of Countries as its Members.

Principal organs and their functions.

SAARC, ASEAN.

Everyday Science

(A) World famous Awards –

(1. in Science)

(2. in Literature)

(3. in Sports)

(B) National Awards -

(1. in Science)

(2. in Literature)

(3. in Sports)

The world of Sports

Climate & Crops in India.

Democratic institutions

Forms of Government

Political & Physical divisions of world & India

Important rivers & Lakes in India.

Current Events of National and International Level.

Role of Mathematics in Economics.

Agriculture in economic development; Industrialization and economic development.

Indian Foreign Trade

New economic reforms and growth of foreign trade.

Inflation – Concept and types; Causes and consequences

• **GENERAL KNOWLEDGE WITH SPECIAL REFERENCE TO J&K**

(I) Abbreviations, Important dates, popular names of personalities and their achievements/Contribution (National and International).

(II) Constitution of J&K – Formation, Fundamental rights, Directive Principles.

(III) Weather, Climate, Crops, Means of Transport.

(IV) Important power projects and their impact on State Economy.

(V) Rivers and Lakes.

(VI) Important Tourist Destinations.

(VII) History of J&K State.

(VIII) Historical places of the State and their importance.

(IX) RTI Act.

(X) Indus Water Treaty and its impact on State economy.

- **Statistical Methods**

Primary and secondary data,

Methods of collecting primary data and

Preparation of questionnaires-

Tabulation and compilation of data.

Measures of central Tendency.

Theory of probability

Correlation and Regression- Concept and simple applications.

Theory of Attributes- Basic concepts and their applications

- **Applied Statistics**

Sampling techniques- Simple Radom Sampling (with and without replacement),

Stratified Sampling.

Sampling and non- Sampling errors

Analysis of Time Series components

Theory of Index Numbers: Tests of Index numbers- Wholesale and Consumer price

Index numbers.

Demography-Census, its features and functions.

Vital Statistics- Measures of fertility, Crude fertility rates, specific fertility rates, gross and net reproduction rates, measures of Mortality

- **General Economics**

Meaning, Scope and methodology,

Theory of consumers demand using indifference curve technique.

Demand Analysis.

Factor Pricing:- Marginal Productivity Theory & Ricardian Theory of Rent

Pricing under various forms of Market.

Factors of production: factors of production & laws of Production.

Concept of economic growth and its measurement

Characteristics and problems of developing economy.

Rationale of Planning in Developing Countries.

Objectives & Strategies of Indian Planning.

Five Year Plans

Fiscal and Monetary Policy

Inflation & Deflation

Concepts of National Income

- **Knowledge of Computer Applications**

Fundamentals of computer sciences,

Hardware & Software, Concept of Open Source Technologies

Input & Output Devices,

Flow Charts and Algorithms

Operating System:- MS Word, MS Excel, MS Access, MS Power-Pont ,PDF,

Internet &E-mail

Concept of Computer Virus & latest Anti-Virus.

Terms and Abbreviations used in IT

- **Principles of Business Management**

Nature Scope and Significance of Management.

The process of Management

Process of Control: Production Planning & Control, Quality Control, Inventory Control, Budgetary Control and Cost Control. PERT, CPM and GNATT Charts.

Personnel Management: Definition, meaning and Scope, Performance appraisal, Evaluation and Monitoring, Human Resource Planning.

Marketing Management: Definition, Meaning and Scope, Marketing Environment in India, Consumer Behavior, Marketing Strategies, Challenges of Marketing In India, Social Responsibilities & Marketing Ethics.

Financial Management: Definition, meaning and Scope, Financial Statement

Analysis:, Income & Expenditure Statement, Profit & Loss Account, Balance Sheet, Ratio Analysis, Working Capital Analysis.

Taxation- Meaning, Classification and Principles of taxation.

Public Finance: Nature Scope and Importance of Public Finance.

Registration of Companies- Memorandum of Associations, Articles of Associations,

Mergers, Acquisition, Diversification, Expansion.

Zero Based Budgeting & Performance Budgeting.

Indian Financial System.

- **Mathematics**

Set Theory - Basic Concepts & Applications.

Matrices & Determinants, Simultaneous Linear Equations- Cramer's Rule.

Analytical Geometry.

Differentiation- Basic Concepts (Addition, Product & Chain rule)

Integration- Reduction & Substitution Method.

Differential Equations.

Interpolation & Extrapolation.

For Junior Librarian & Library Assistant

- **Unit-I**

Types of Libraries and their Features

Role of Libraries in contemporary Society

Five Laws of Library Sciences

Library legislation in different states of India

Intellectual Property Rights(IPR)

National and International Library Associations: ILA, IASLIC, IATLIS ,

SIS IFLA, FID ALA, ASLIB, SLA etc

National and intercalation Agencies : UNESCO, OCLC, PRRLF, UGC,

INFLIBNET, DELNET ,etc

Information Centres, DRTC, ISI, INSDOC(NISCAIR),NASSDOC,

DESIDOC, SENDOC, etc

- **Unit-II**

Basic Terminology: call Number, Class Number, Book Number, Isolates

Classification; concept, purpose and species

Features of DDC, UDC, and CC

Five Fundamental Categories

Notation: Definition and Purpose

Library Catalogue; Definition and purpose

OPAC AND WebOPAC

Cannons of Classification and Cataloguing

- **Unit-III**

Principles of Book Selection

Selection Tool; Print and Non-Print Materials

Processing of Documents; Accessioning, Classification,

Cataloguing labeling and shelving

Serials/ Journals; Selection and procurement

Book Transaction System: Traditional and Modern

Stock verification of Books; Methods and Tools

Weeding Process

- **Unit-IV**

Information Sources: Print and No- Print ; Primary,

Secondary and Tertiary Sources

Types of Dictionaries, Encyclopedias

Geographical and Biographical Sources

Indexing and Abstracting Sources

Types of Bibliographies

Bibliographies Sources

- **Unit-V**

Types of Reference service ,Ready reference service,

Long Rang Reference Service

Reference Librarian: Role Skills and Competences

User Education/ Information Literacy Skills

CAS/SDI

International Information System;

INIS,AGRIS,MEDLARS/MEDLINE,INSPEC

Information Seeking Pattern

- **Unit-VI**

Computer Genesis

Computer Generations

Primary and Secondary Memory; Storage Devices

Operating System: MS DOS, Windows, Linux

Programming; Algorithm, Flowcharts, Languages

MS-WORD , MS-Excel –Ms-Power point, DBMS,CDS/ISIS, WINISIS

For Draftsman

- Importance of safety and general precautions observed in the Instt. and in the section. Importance of trade in the development of Industrial Economy of the Country. Related Instruction. Recreational, medical facilities & other extracurricular activities of the Instt. (All necessary guidance to be provided to the new working of Industrial Training Institute system including stores procedures etc.
- Nomenclature. Description and use of drawing instruments & various equipment in drawing office. Their care and maintenance, lay out of a drawing sheet.
- Type of lettering proportion and spacing of letter and words
- Terms & definitions-polygons and circles. Lines and their meaning, section lines of different materials, conventional signs, symbols & abbreviations, hatching, & shading, Norms of dimensioning different types of drawing sheets.
- Definition of ellipse, parabola, hyperbola, different methods of their construction, Definition and method of drawing involutes cycloid curves, helix and spiral.
- Planes and their normal, projections, projection and orthographic projection, first angle and Third angle projection.
- Concept about Horizontal & Vertical Plane.

- Principle of orthographic Projection, projection of solids like prism, cones, pyramids and frustums in various position.
- Solution of problems to find out the true shape of surfaces when solids are cut by different cutting planes.
- Construction of different types of scales, their appropriate uses, principle of R.F. diagonal & vernier.
- Importance of free hand sketching, machine drawing. Material and equipment required in Sketching.
- Importance of sectional views. Types of Sectional views & their uses. Parts not shown in Section
- Definition of Intersection & interpenetration curves. Common methods to find out the curve of interpenetration.
- Solution of problems on interpenetration of prism, cones, and pyramids with their axes intersecting at an angle. Intersection of cylinder.
- Theory of projection as specified in SP - 46-1938.
- Definition of development, its need in industry and different method of developing the surface.
- Principle of Isometric projection, Difference between isometric drawing and isometric projection. Isometric Scale, Dimensions an isometric drawing.
- Different methods of drawing Isometric views.
- Principle and types of oblique projection. Advantage of oblique projection over isometric projection.

- Types of perspective projection fundamental concept & definition, location of station point.
- Terminology- feature, functional feature, functional dimension, datum dimension, principle.
- Units of dimensioning, system of dimensioning, method of dimensioning and common features limit, fit, tolerance.
- Tolerances dimensioning, geometrical tolerance. Indication of symbols for machining and surface finishes on drg. (Grades and micron values).
- Screw thread, terms and nomenclature, type of screw thread, proportion and their uses, Thread conventions.
- Types of bolts and nuts their proportions, uses, different types of locking devices.
- Different types of machine screws cap screws and their specifications. Different types of foundation bolts.
- Purpose, terms different types keys(Heavy duty and light duty) and proportions use of cotters, pins and circlips.
- Types of fastening materials, types of rivets, their proportion & uses. Types of riveted joints, terms & proportions or riveted joints. Conventional representation.
- Causes of failure of riveted joints, efficiency of riveted joints
- Description of welded joints and their representation (Actual and symbolic) Indication of welding symbols on drawings as per BIS.

- Description and use of drafting machine. Different sizes of drawing sheets as per BIS
- Safety precaution descriptions uses and care o hand tools including contraction rule. Brief description of production of cast iron, wrought iron steel and alloy steel.
- Safety precautions, Hand tools used for moulding. The description, use and care of hand tools. Description of different types of moulding. Description of different types of core, sand, and dressing material, Description of cupola.
- Description of measuring tools and hand tools used in forge work. Description and use of the mechanical hammer. Colour coding of different metals and identification.
- Description and application of simple measuring tools, description of parts of lathe & its accessories.
- Method of using precision measuring instrument such as inside & outside micrometers, depth gauges, vernier, calipers dial indicator, slip gauges, sine bars, universal bevel protractor etc.
- Brief description of milling, shaping, slotting and planning machines, quick return mechanism of these machines.
- Name and brief description of common equipment necessary for sheet metal work. Different type and uses of joints employed in sheet metal work.
- AC & DC Motors, Generators of common types and their uses. Names and brie description of common equipment necessary for sheet metal work.

- Type of Ferro-printing papers. Specification of Sensitized. Ammonia paper-Expiry-precautions in Ammonia Printing.
- Introduction to computer-DoS, windows and to AUTO CAD. related theory.
- Procedure of inking a drawing conventional colours used for different metals as per ISI material and equipment for colouring procedure.
- Procedure of tracing on tracing cloth and specification of tracing cloth.
- Types of assembly drawing. Different types of detailed drawings and preparation of bill of materials.
- Use of bearing, types of bearing and materials used.
- Difference between frictional and antifriction bearing. Advantages of antifriction bearing over frictional bearing. Materials and proportion of parts for drawing purposes.
- Heat treatment of steel.
- Shadelines & their use on machine drawings. Conventional method for drawings shade lines, surface shading by means of lines.
- Piping materials and specifications of WI & Steel pipes, pipe threads pipe fittings, specifications of fittings.
- Different types of pipe joints.
- Use of gears in transmission of power. Different types of gears. Cast gears and machined gears. Use of odontograph for drawing profile of gears etc.

- Brief description of Petrol, Diesel and Gas engines.
- Brief description, working principle and function of hydraulic jack, press accumulator, ram etc.
- Different locating methods clamping devices.
- Lay out of machine foundations. Brief treatment of the principal involved and the precautions to be observed, Lay out of machine foundation.
- Related theories of press tool with tolerance.
- Working of Blow off cock and simple carburetor.
- Numbering of drawings and standard parts > Familiarization with BIS.698
- Production of interchangeable parts, fits limits, tolerance & amiliarisation with IS -919 & IS 2709 . Different methods of showing machine surfaces on drawings.

These JKSSB JE, Assistant & Various Post Syllabustopics are given only for the practice & reference purpose. For More Details, visit SarkariExam.com regular & Stay updated..

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