



ગુજરાત જાહેર સેવા આયોગ

છ-૩ સર્કલ પાસે, છ રોડ, સેક્ટર-૧૦/એ, ગાંધીનગર-૩૮૨૦૧૦

જાહેરાત ક્રમાંક : ૩૪/૨૦૨૦-૨૧

જગ્યાનું નામ : મેનેજમેન્ટ એક્ઝીક્યુટીવ (મેટલ), વર્ગ-૨

ભાગ-૧ અને ભાગ-૨ ના ૧૮૦ મિનિટના સંયુક્ત પ્રશ્નપત્રની પ્રાથમિક કસોટીનો અભ્યાસક્રમ

| ભાગ-૧ પ્રાથમિક કસોટીનો સામાન્ય અભ્યાસક્રમ | | |
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| માધ્યમ : ગુજરાતી | કુલ પ્રશ્નો : ૧૦૦ | કુલ ગુણ : ૧૦૦ |
| ૧ | ભારતની ભૂગોળ - ભૌગોલિક, આર્થિક, સામાજિક, કુદરતી સંસાધન અને વસ્તી અંગેની બાબતો - ગુજરાતના ખાસ સંદર્ભ સાથે | |
| ૨ | ભારતનો સાંસ્કૃતિક વારસો - સાહિત્ય, કલા, ધર્મ અને સ્થાપત્યો- ગુજરાતના ખાસ સંદર્ભ સાથે | |
| ૩ | ભારતનો ઇતિહાસ - ગુજરાતના ખાસ સંદર્ભ સાથે | |
| ૪ | ભારતની અર્થવ્યવસ્થા અને આયોજન | |
| ૫ | ભારતીય રાજનીતિ અને ભારતનું બંધારણ : (૧) આમુખ (૨) મૂળભૂત અધિકારો અને ફરજો (૩) રાજ્યનીતિના માર્ગદર્શક સિદ્ધાંતો (૪) સંસદની રચના (૫) રાષ્ટ્રપતિની સત્તા (૬) રાજપાલની સત્તા (૭) ન્યાયતંત્ર (૮) અનુસૂચિત જાતિ, અનુસૂચિત જનજાતિ અને સમાજના પછાત વર્ગો માટેની જોગવાઈઓ (૯) એટર્ની જનરલ (૧૦) નીતિ આયોગ (૧૧) પંચાયતી રાજ (૧૨) નાણાં પંચ (૧૩) બંધારણીય તથા વૈધાનિક સંસ્થાઓ- ભારતનું ચૂંટણી પંચ, સંઘ લોક સેવા આયોગ, રાજ્ય લોક સેવા આયોગ, કોમ્પ્રોલર એન્ડ ઓડિટર જનરલ; કેન્દ્રીય સતર્કતા આયોગ, લોકપાલ તથા લોકાયુક્ત અને કેન્દ્રીય માહિતી આયોગ | |
| ૬ | સામાન્ય બૌદ્ધિક ક્ષમતા કસોટી | |
| ૭ | સામાન્ય વિજ્ઞાન, પર્યાવરણ અને ઇન્ફર્મેશન એન્ડ કોમ્યુનિકેશન ટેકનોલોજી | |
| ૮ | ખેલ જગત સહિત રોજબરોજના પ્રાદેશિક, રાષ્ટ્રીય અને આંતરરાષ્ટ્રીય મહત્વના બનાવો | |

Part-1 Syllabus of Preliminary Test

Advt. No. 34/2020-21

Post : Management Executive (Metal), Class-II

Medium: Gujarati

Questions – 100

Total Marks - 100

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| 1 | Geography of India-Physical, Economic, Social, Natural Resources and population related topics- with special reference to Gujarat |
| 2 | Cultural heritage of India-Literature, Art, Religion and Architecture- with special reference to Gujarat |
| 3 | History of India with special reference to Gujarat |
| 4 | Indian Economy and Planning |
| 5 | <u>Indian Polity and the Constitution of India:</u> 1. Preamble 2. Fundamental Rights and Fundamental Duties 3. Directive Principles of State Policy 4. Composition of Parliament 5. Powers of the President of India 6. Powers of Governor 7. Judiciary 8. Provisions for Scheduled Castes, Scheduled Tribes and backward classes of the society 9. Attorney General 10.NITI Aayog 11.Panchayati Raj Institutions 12.Finance Commission 13.Constitutional and Statutory Bodies: Election Commission of India, Union Public Service Commission, State Public Service Commission, Comptroller and Auditor General; Central Vigilance Commission, Lokpal and Lokayukta, Central Information Commission |
| 6 | General Mental Ability |
| 7 | General Science, Environment and Information & Communication Technology |

Part-2 Syllabus of Concerned Subject for Preliminary Test

Advt. No. 34/2020-21

Post : Management Executive (Metal), Class-II

Marks – 200

Questions – 200

Medium - English

1. Mine Management:

Principles of scientific management; management functions; planning; organization and control; structure of organization for mining enterprises.

2. Personnel Management:

Selection; training and development of human resources for mining enterprises.

3. Production Management:

Production planning; scheduling and control; short term and long term planning; productivity and its measurements.

4. Environmental Management:

Mine environment monitoring and control; EMP (Environment Management Plan); mine closure plan; R&R (rehabilitation and resettlement).

5. Mine Legislation:

Health and Safety Laws: The Mines Act, 1952; Mines Rules, 1955; Provisions applicable to MMR 1961; Mines Rescue Rules, 1985; Provisions of CEAR 2010 (Measures relating to Safety and Electric Supply) applicable to mines; Vocational Training Rules, 1966; Other rules and legislation applicable to coal mines. General Safety in Mines: safety management system; human elements in mine safety; workers participation in safety management; ISO and safety audit; safety conferences; tripartite and bipartite committees. Disaster management; rescue and recovery;

MMRD Act, MCDR, Mineral Concession Rules, Statutory compliances as mentioned in the said Acts, rules, regulations and orders made thereunder.

6. Winning and Working Geology :

Physical geology, petrology-sedimentry, igneous and metamorphic rocks. Basic principals of stratigrphy, Structural geology-faults, folds, joints, etc. Process of mineral formation, Classification of mineral deposits. Mode of occurrence, distribution and origin of important metallic and non-metallic minerals.

Prospecting and exploration of mineral deposits-geological, geophysical and geochemical methods, groundwater, geological documentation for mine planning. Boring and Trenching, Sampling, etc

7. Mining Methods :

Various accesses to the mines, Choice of methods of metal mining and factors affecting the same, statutory provisions.

Underground and Opencast mining methods for various metals and minerals, different types of extraction of minerals and metal and other associated works.

Mine entries-types, location orientation, etc. Primary and secondary development underground. Shaft sinking-conventional and special methods. Deepening and widening of shafts, tunneling.

Methods of development metalliferous deposits. Various methods of metal opencast mining Handling of ore and waste materials. Development and design of benches, drilling, blasting loading and transport continuous mining systems.

Site selection; formation of benches; stability of benches, design of haul roads, dump management, hydrogeology and water management from seepage and other ingress in mines.

8. Rock Mechanics and Slope stability :

Stress, strain – compressive and tensile, shear strength, uniaxial and tri-axial strength, Poisson's Ratio, Young's Modulus, convergence, elasticity, lithostatic and hydrostatic pressure, rock mass classifications, strength of

stooks, shaft pillars, protection of surface structures, design and stability of structures in rock, dynamic and static loading, measuring instruments, economics of support design, subsidence; caving of rock mass, bumps; monitoring of rock mass performance; mechanics of rock fragmentation, slope stability and dump stability, dump management.

9. Drilling and Blasting

Drilling, Classification, Principles, types and cost, Types and properties of explosives, composition and testing of safe explosives, Milli-seconds detonators, alternatives of explosives, Blasting techniques and their relative efficiency, powder factor, total cost concept.

10. Mine Machineries, Electricity and Mine surveying Mine machineries:

Various machineries used in mining, Excavation, hauling and other machineries used in different operations connected with mining. Material handling machineries, Pumps -types, characteristics, motor power, capacity and calculations, Maintenance systems.

Electricity:

Generation, Transmission and distribution, power economics, industrial tariffs, cables, switch gears, mine signaling, electrical drives and semiconductor controllers, flameproof enclosures and intrinsic safety, use of high voltage operational equipment in mines, types of earthing.

Mine surveying :

Introduction and basic principles of surveying, Types of survey, Survey instruments and their use, Linear and angular measurements, Leveling, Controlled survey, Correlation, area and volume calculations, Types of plans and their preparation, care, storage and preservation; legislation concerning mine plans and sections; duties and responsibilities of surveyors. Application of IT in mine surveying and preparation of plans.

11. Current Trends and recent Advancements in the relevant field.