

જાહેરાત ક્રમાંક : ૧૨૦/૨૦૧૬-૧૭

જગ્યાનું નામ :- નિયામકશ્રી, સરકારી મુદ્રણ અને લેખનસામગ્રી ખાતામાં વ્યવસ્થાપક, વર્ગ-૧
(ઉદ્યોગ અને ખાણ વિભાગ)

ભાગ-૧ અને ભાગ-૨ ના ૧૫૦ મિનિટના સંયુક્ત પ્રશ્નપત્રની પ્રાથમિક કસોટીનો અભ્યાસક્રમ

પ્રાથમિક કસોટીનો અભ્યાસક્રમ ભાગ-૧	
માધ્યમ: ગુજરાતી	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) રાજ્યપાલની સત્તા (૭) ન્યાયતંત્ર (૮) અનુસૂચિત જાતિ, અનુસૂચિત જનજાતિ અને સમાજના પછાત વર્ગો માટેની જોગવાઈઓ (૯) એટર્ની જનરલ (૧૦) નીતિ આયોગ (૧૧) પંચાયતી રાજ (૧૨) નાણા પંચ (૧૩) બંધારણીય તથા વૈધનિક સંસ્થાઓ- ભારતનું ચૂંટણી પંચ, સંઘ લોક સેવા આયોગ, રાજ્ય લોક સેવા આયોગ, કોમ્પ્ટ્રોલર એન્ડ ઓડિટર જનરલ; કેન્દ્રીયસતર્કતા આયોગ, લોકપાલ તથા લોકાયુક્ત અને કેન્દ્રીય માહિતી આયોગ
૬	સામાન્ય બૌદ્ધિક ક્ષમતા કસોટી
૭	સામાન્ય વિજ્ઞાન, પર્યાવરણ અને ઈન્ફર્મેશન એન્ડ કોમ્યુનિકેશન ટેકનોલોજી
૮	ખેલ જગત સહિત રોજબરોજના પ્રાદેશિક, રાષ્ટ્રીય અને આંતરરાષ્ટ્રીય મહત્વના બનાવો

Syllabus of Preliminary Test

Part-1

Medium: Gujarati

Total Marks- 100

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) NITIAayog (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
8	Daily events of Regional, National and International Importance including Sports

જાહેરાત ક્રમાંક : ૧૨૦/૨૦૧૬-૧૭

ભાગ- ૨ સંબંધિત વિષયનો અભ્યાસક્રમ

જગ્યાનું નામ :- નિયામકશ્રી, સરકારી મુદ્રણ અને લેખનસામગ્રી ખાતામાં વ્યવસ્થાપક, વર્ગ-૧
(ઉદ્યોગ અને ખાણ વિભાગ)

કુલ પ્રશ્નો : ૨૦૦

કુલ ગુણ : ૨૦૦

માધ્યમ : અંગ્રેજી

- 1. Reproduction Techniques:** Classification and handling of originals for reproductions: Classification line, tone, halftone, suitability for different printing processes. Transparency-choosing, evaluating, content requirement, Balance and Exposure level, Characteristics of different originals and precautions and techniques in handling them for reproduction. Difficult line originals - lines originals with colour, line originals with line and screen; line originals with broken effect. Light and Colours: Basic colours theory, Additive and Subtractive colours, Colours analysis, Applications of colours theory. Basic concept of light. Optical-equipment and accessories, Photographic material and chemistry of photography, Types of Illuminations, Halftone photography, Tone and Correction, negative/positive shooting straight reversal and lateral reversal, Colour separation.
- 2. Printing Processes:** Development of offset process: Lithographic Principles, Surfaces, Properties. Principles of offset printing. Parts of single colour sheet-Fet offset printing machine, Classification, Characteristics and Applications of plate, Blanket, rollers, ink, pre make ready and make ready, Study of operating sequences of offset printing machine for various types of jobs, Printability. Printing problems and their remedies, Introduction of screen printing process, Stencil preparations in screen process printing, Screen printing of various varieties of jobs, Relief printing process / letter press.
- 3. Graphic Design :** Design and Originals, Tools for Layoutman, Colours, Art work preparation, Layout, Design by computer techniques (Introduction): CorelDraw software, Illustrator software, Photoshop software, and PageMaker software for package design and page layout, Application of different software in one design (printing product).

4. **Image Carrier:** Different types of metals: Characteristics of zinc, aluminium, copper, chromium, different metals suitable for surface preparation, Surface treatment to the plate: Knowledge related to graining machine, Environmental condition: Chemical hazards and safety precaution, light, temperature, ventilation, Equipments for plate making chemistry of sensitising and desensitising, Study of various image carriers for different printing processes: Engraving block. Flexo plates. Gravure cylinders. Offset plates. (Classification) Screen preparation film assembly: Layout and page-making, Image correction.
5. **Preventive maintenance :** Knowledge related to cleaning and lubrication in printing processes, Knowledge related Printing Equipment and Machines, Corrosion and its prevention, Maintenance of printing Equipment and machines, Preventive maintenance of printing machines, Safety in printing industry, Erection of machines and Equipment used in printing industry, Environmental pollution in printing industry
6. **Image generation & Correction :** Colour separation, Halftone screening work, Inherent errors of Trichromatism, Colour correction, Knowledge related to reproduction by electronic scanning, Brief study of drum scanners, Originals for scanning, Quality Control, Designing softwares, Film processing , Role of internet in printing industry, Role of multimedia in printing industry.
7. **Binding & finishing processes:** Equipment and Machines, Binding materials, Adhesives securing operations, various binding jobs, ware-house operations and maintenance, Forwarding operations, Decorative processes, Miscellaneous binding: Various categories of binding jobs, Introduction to loose leaf binding, Adhesive binding, Stationary binding, Rebinding, Coating.
8. **Advanced offset printing:** Introduction to multicolour sheet Fed and web Fed, Offset printing machine, Configuration of multicolour sheet Fed and web Fed offset printing machine, Construction and working of multicolour sheet Fed and web Fed offset printing machines, Their units, Press accessories and Auxiliary units, make-ready and printing of various jobs, Introduction to sheet fed metal decorating press and inks used for the process. Advance developments in multicolour sheet fed and web fed offset printing machines: use of c. p. c., use of c. t. p., Monitoring sheet Fed offset and Web Fed offset printing machines.

Various substrates / objects / printing jobs based on offset printing technique (pad printing), Digital offset printing

- 9. Advanced Image carrier: Bimetal and Multimetal plate process, Application of photopolymer in Image carrier, Layout preparation for step and repeat machine, Image carrier - Gravure, Image carrier - Flexo, Water-soluble photosensitive resin plate, and Diffusion transfer plates: Reflex plates, Projection plates, Automatic plate processing machines, Computer to plate technology.**
- 10. Quality control in printing : Substrates & their properties and applications (uses): Paper, Board, Wrapping paper, Metal, Ceramic, Plastic, Standard sizes of paper, Materials for papermaking: Materials for fibres, Materials for sizing, Materials for filling, Materials for coating, Materials for pulp, Pulp manufacturing process, (mechanical, chemical, sizing, beating and coating processes), Paper manufacturing process: Sketch of paper mfg. machine, Water mark, Wire mark, Calendaring, Surface Sizing, Physical characteristics of paper, Colour and Brightness, Resistance properties , Paper testing, Optical properties ,Moisture content, Humidity and relative humidity, Effects on film and chemical, Effect of humidity on blanket, Dimensional stability, Surface strength ,Smoothness ,Oil absorbency ,Water absorbency, Ink manufacturing systems, Drying methods of ink (oxidation, evaporation, absorption, precipitation, heat curing, uv curing) ,Characteristics of ink: Flow properties, Press stability, Drying time on paper, Lithographic performance, Printability, Ink thickness, Ink testing: Flow properties, PH value, test photographic films: Visual defects on print products, Inspect product: Uses of reflection densitometer, Comparison of multicolour job with print control strip.**
- 11. Printer's management and costing - estimating :Structure and plan of organization: Definition, goals, factors consider in formation of structure, structural and organization chart of a printing press, Division of labour, Functional process, Method of control, Delegation of powers and authority, Managerial and supervising structure in a printing press , Supervise a print press, Office routine in a printing press, Purchase procedure for new material, Factory and printing related acts and laws: Marketing and sales management, Work**

measurement and methods study, Project report, Costing: Estimating, Accountancy:

12. **Flexo-gravure printing:** Introduction to gravure printing, gravure image preparation: Gravure printing techniques: single/multicolour gravure printing: problems, causes and remedies in gravure printing, Flexo printing, Flexo image preparation: Quality control in Flexo printing.
13. **Computer aided graphic design:** Digitization, page make up software. (PageMaker): graphic software. (Photoshop, COREL draw, illustrator): Graphic design. (by use of COREL draw software), Output devices, Impact of electronic image setting on printing industry, Desk top publishing, Video image processing, Modern developments in graphic creations.
14. **Converting & packaging:** Introduction to converting and packaging, Different systems of packaging: Packaging material, Production of package: Modern development in preparing various packs, Modern packaging machine: Carton packaging machine, Film (flexible) packaging machines. Production planning and control.
15. **Gujarat State Purchase Policy, 2016.**
16. **Store Management and Inventory Control Methods.**
17. **Printing and Stationary Manual.**
18. **Basic Knowledge regarding Confidential Printing.**
19. **Industrial Disputes Act, 1947.**
20. **Factory Act, 1948.**
21. **Apprentice Act, 1961.**
22. **Current Trends and Recent Advancements in the Printing Field.**