



TAMIL NADU PUBLIC SERVICE COMMISSION

NOTIFICATION NO: 07 /2017

DATED: 01.03.2017

Applications are invited only through online mode upto 29.03.2017 for Direct Recruitment to **the post of Assistant Works Manager for the years 2015-2016.**

It is mandatory for the applicants to register their basic particulars through One - Time online Registration system on payment of Rs. 50/- towards registration fee and then should apply online for this recruitment.

Name of the Post and Code No.	Name of the Service and Code No.	No. of vacancies	Scale of Pay
Assistant Works Manager in the Government Press (Post Code No.2094)	Tamil Nadu Stationery and Printing Service (Service Code No.063)	3	Rs.15600-39100 + Grade Pay Rs.5400/- (PB3) per mensem
		GT(G)-1, GT(PSTM)-1, BC(G)-1	

Abbreviation:-

GT- General Turn, BC - Backward Class, PSTM- Persons Studied in Tamil Medium.

2. FEES:

a)	<u>Registration Fee</u> For One Time Registration Fee - Note: Applicants who have already registered in One Time Registration system paying Rs.50/- are exempted from paying the registration fee for this recruitment.	Rs.50/-
b)	<u>Written Examination Fee</u> Note: The Written Examination fee should be paid at the time of submitting the online application for this recruitment if they are not eligible for the concession noted below	Rs.125/-

EXAMINATION FEE CONCESSION

Category	Concession	Condition
(i) Scheduled Castes / Scheduled Caste (Arunthathiyars), Scheduled Tribes	Full Exemption	--
(ii) Differently Abled Persons, Destitute Widow of all communities	Full Exemption	(i) For Disabled persons, the disability should be not less than 40%. (ii) For DWs, the DW certificate should have been obtained from the RDO / Sub Collector
(iii) Most Backward Class / Denotified Communities, Backward Classes (Other than Muslim), Backward class (Muslim)	Those who have not availed three free chances so far in any of the previous recruitment may avail exemption from payment of examination fee.	(i) For degree holders only. (ii) Should not have availed three free chances in any of the previous recruitment.
(iv) Ex-Servicemen	Those who have not availed two free chances so far in any of the previous recruitment may avail exemption from payment of examination fee.	(i) Should not have availed two free chances in any of the previous recruitment. (ii) Fee concession will not apply to those who have already been recruited to any class or service or category.

- (i) The Three/two free chances referred to above are not for **EACH POST** but for **ANY THREE/TWO APPLICATION ONLY**. The claim for exemption from payment of examination fee made in any application which is rejected/admitted or withdrawn will be counted as a free chance availed.
- (ii) Failure to pay the prescribed fee along with the application in-time will be liable for rejection of application.
- (iii) If the fee concession claimed in the application exceeds the admissible limits announced above, the application will be rejected.

(For further details regarding fee concession, refer para 12 of "Instructions to Applicants")

3. IMPORTANT DATES:-

Date of Notification	01.03.2017	-
Last date for submission of applications	29.03.2017	-
Last date for payment of Fee through Bank (State Bank of India / Indian Bank)	31.03.2017	-
Date of Written Examination		
Paper – I (Printing Technology)	25.06.2017 FN	10.00 AM – 01.00 PM
Paper – II (General Studies)	25.06.2017 AN	02.30PM – 04.30 PM

4. QUALIFICATIONS:-**A. AGE** (as on 01.07.2017):

Sl. No.	Category of Applicants	Minimum Age (should have completed)	Maximum Age (Should not have completed)
1.	SCs, SC(A)s, STs, MBCs/DCs, BCs (OBCMs), BCMs and Destitute Widows of all Castes.	18 Years	No Age Limit
2.	'Others' [i.e. Applicants not belonging to SCs, SC(A)s, STs, MBCs/DCs, BCs (OBCMs), BCMs and Destitute Widows of all Castes].	18 Years	30 Years

Age Concession:**(i) For Differently Abled Persons:**

Differently Abled Persons are eligible for age concession upto 10 years over and above the maximum age limit prescribed above.

(ii) For Ex-servicemen:

(a) No maximum age limit for applicants belonging to SCs, SC(A)s, STs, MBCs/DCs, BC(OBCM)s, BCMs.

(b) The maximum age limit is 48 years for others (should not have completed) i.e. applicants not belonging to any of the categories mentioned in (a) above.

(c) The above mentioned age concession will not apply to the Ex-servicemen applicants those who have already been recruited to any class or service or category.

(iii) Others [i.e Applicants not belonging to SCs, SC(A)s, STs, MBCs/DCs, BC(OBCM)s, BCMs] who have put in five years of service in the State/Central Government are not eligible even if they are within the age limit. **This clause will not apply to persons who are already employed in the Tamil Nadu Stationery and Printing Service.**

(For further details refer para 5 of the 'Instructions to Applicants').

(B) (i) EDUCATIONAL QUALIFICATION :- (as on 01.03.2017)

Applicants should possess the following or its equivalent qualification awarded by any University or Institution recognized by the University Grants Commission.

Name of the Post	Assistant Works Manager
Educational Qualification	<p>(i) Must possess a B.E degree in Printing Technology Or</p> <p>(ii) (a) Must possess minimum general educational qualification as prescribed in the Schedule to Part II of the Tamil Nadu State and Subordinate Service Rules (Now brought under Tamil Nadu Government Servants (Conditions of Service) Act, 2016) and a diploma in Printing Technology (letter Press or Offset) Or</p> <p>(b) Must possess minimum general educational qualification as prescribed in the Schedule to Part II of the Tamil Nadu State and Subordinate Service Rules (Now brought under Tamil Nadu Government Servants (Conditions of Service) Act, 2016) and a diploma in Printing Technology with any elective subject awarded under the revised integrated pattern of course. and</p> <p>(c) practical experience in Letter Press or Offset printing in a reputed printing press for not less than five years, out of which two years must be in a supervisory capacity; (for clause 'a' & 'b' above)</p>
Preferential Qualification	<p>Provided that other things being equal, first preference will be given to a candidate who possesses all the following four qualification, second preference to a candidate who possesses any three of the four qualifications, third preference to a candidate who possesses any two of the four qualifications and fourth preference to a candidate who possesses any one of the four qualifications.</p> <ol style="list-style-type: none"> 1. A pass in the examination in Typography or Lithography conducted by the City and Guilds Institute, London. 2. A pass in the examination in Costing by any Institute recognised by the Government of Tamil Nadu or by the Government of India. 3. Completion of one year of Apprenticeship in the Printing Technology either under Government of India Scheme or under the government of Tamil Nadu Apprenticeship Scheme. 4. A Degree from any University recognised by the University Grants Commission. <p>Provided further that in case all the Applicants possess only one of the preferential qualifications, preference will be given to those who possess the qualification in the order specified.</p>

Upload of Document

Applicants with Diploma qualification should upload the certificate of practical experience in Letter Press or Offset Printing in a reputed printing press as required in para. 4(B)(i) "**EDUCATIONAL QUALIFICATION**" of the Notification at the time of applying online.

Note:

- (i) The Diploma/Degree qualification prescribed should have been obtained after passing SSLC/10th, Diploma/H.S.C and U.G. Degree as the case may be.
- (ii) Minimum General Educational Qualification means "Must have passed S.S.L.C Public Examination or its equivalent with eligibility for admission to Higher Secondary Courses of Studies (or) to College Courses of studies".
- (iii) Applicants claiming equivalence of qualification to the prescribed qualification should upload and submit evidence for equivalence of qualification in the form of G.O. issued prior to the date of this notification when called for, failing which their application will be summarily rejected. The G.O's issued regarding equivalence of prescribed qualification after the date of this notification will not be accepted. The G.O.s for equivalence of qualification is available in Annexure-II of the Notification. (Refer para 10 of the 'Instructions to Applicants')

Explanation:

Revised integrated pattern means the restructured pattern of course introduced in the year 1986-87 with any of the elective subjects, viz., Press Work and Finishing or Printing and Packaging or Pre-press Operations integrating the basis of the Printing Technology covering both Letter Press and Offset.

(C) CERTIFICATE OF PHYSICAL FITNESS:-

Applicants selected for appointment to the posts will be required to produce a certificate of physical fitness in the form prescribed below:

Name of the Post	Standard of Vision	Form of Certificate of Physical Fitness
Assistant Works Manager in the Government Press	Standard-III or better	Form prescribed for post other than Executive and Ministerial

Colour blindness will be a disqualification. Applicants with defective vision should produce eye fitness certificate from a qualified eye specialist.

5. GENERAL INFORMATION:

- A. The Rule of reservation of appointments is applicable to the post.
- B. In G.O. (Ms.) No.145, Personnel and Administrative Reforms (S) Department, dated 30.09.2010, and G.O.(Ms.)No.40 Personnel and Administrative Reforms(S) Department dated 30.04.2014 the Government have issued orders to fill up 20% of all vacancies in Direct Recruitment on preferential basis to persons who studied the **prescribed qualification** in Tamil Medium. The 20% reservation of vacancies on preferential allotment to **Persons Studied in Tamil Medium (PSTM)** will apply for this recruitment. (Applicants claiming this reservation should have studied the prescribed qualification for the post in Tamil Medium and should have the certificate for the same. Having written the examinations in Tamil language alone will not qualify for claiming this reservation). If the Applicants with PSTM are not available for selection for appointment against preferential turn such turn shall be filled up by Non-PSTM Applicants but belonging to the respective communal category. The PSTM certificate, shall be produced / uploaded by the applicant in prescribed format / proforma available in the Commission's website at 'www.tnpsc.gov.in' which shall be obtained from the Head of the Institution when called for by the commission.

(Further details are at Para 27 (XIX) of the Instructions to Applicants)

- C. The number of vacancies advertised is only approximate and is liable for modification including reduction with reference to vacancy position at any time before finalisation of selection.
- D. If no qualified and suitable women applicants are available for selection against the vacancies reserved for them, those vacancies will be filled by male applicants belonging to the respective communal categories.
- E. In G.O.Ms.No.13 Welfare of Differently Abled Persons (DAP3.2) Department, dated 02.03.2016, the post of Assistant Works Manager in the Government Press has not been identified as suitable for Differently Abled persons. Hence, reservation to Differently Abled persons is not applicable to this recruitment.. However, they can apply and should upload the documents referred in para 14 (b) of the Commission's 'Instructions to Applicants' when called for, if they are otherwise eligible.

- F. The Differently Aabled persons should upload a copy of certificate of physical fitness specifying the nature of physical handicap and the degree of disability based on the norms laid down, from the Medical Board to the effect that his/her handicap will not render him/her incapable of efficiently discharging the duties attached to the post to which he / she has been selected when called for by the Tamil Nadu Public Service Commission.
- G. Reservation of appointment to “Destitute Widows” and “Ex-servicemen” will not apply to this recruitment.
- H. Even after filling up of the vacancies reserved for SC (Arunthathiyars) on preferential basis, if more number of qualified Arunthathiyars are available, they shall be entitled to compete with the Scheduled Castes other than Arunthathiyars in the inter-se-merit among them and if any posts reserved for Arunthathiyars remain unfilled for want of adequate number of qualified applicants, it shall be filled up by Scheduled Castes other than Arunthathiyars.
- I. Evidence for claims made in the online application should be uploaded / submitted in time when documents are called for. Any subsequent claim made thereafter on submission of online application will not be entertained.
- J. Correct and True information regarding arrest, convictions / debarment / disqualification by any recruiting agency, criminal or any disciplinary proceedings initiated / pending or finalised, participation in agitation or any Political Organisation, candidature in election for Parliament / State Legislature / Local Bodies etc, if any, should also be furnished to the Commission at the time of application i.e. the details thereof, originals of the judgement, order/ or G.O. dropping further action in Departmental proceedings or any document that may prove the suitability of such applicants for a Government appointment in such cases must be produced at the stage / time of certificate verification without fail.
- K. Incomplete applications and applications containing wrong claims or incorrect particulars relating to category of reservation / other basic qualification / eligibilitywise / age / communal categories / educational qualification / physical qualification and other basic eligibility criteria will be liable for rejection.**

L. Tamil Nadu Public Service Commission will not be responsible for any consequences arising out of furnishing of incorrect and incomplete details in the application or omission to provide the required details in the application forms.

M. **Knowledge in Tamil:-**

Applicants should possess adequate knowledge in Tamil on the date of this Notification. (For details refer para 11 of Commission's 'Instructions to Applicants')

6. **SCHEME OF WRITTEN EXAMINATION (OBJECTIVE TYPE-OMR METHOD) AND ORAL TEST:-**

Subject	Duration	Maximum Marks	Minimum Qualifying Marks for selection	
			SCs, SC(A)s, STs, MBCs/DCs BC(M)s & BCs (OBCMs)	Others
(i)Paper I				
Printing Technology (Diploma Standard) (200 items)	3 hours	300	171	228
(ii)Paper II				
General Studies (HSC Standard) (100 items) (General Studies -75 and Aptitude and Mental Ability -25 items)(SSLC Standard)	2 hours	200		
(iii) Interview		70		
TOTAL		570		

In respect of Subject Paper and General Studies:-

- The Question paper in "General Studies" will be set both in English and in Tamil and the question paper in the subject "Printing Technology" will be set in English only.
- The applicants who have not appeared for any of the paper in the written examination will not be considered for selection even if they secure the minimum qualifying marks for selection.
- The syllabus for the subjects Paper-I (Printing Technology) and Paper-II (General Studies) are available in the Commission's website www.tnpsc.gov.in and also furnished in **Annexure-I** to this Notification.

Note: (For Written Examination)

Refer para 22 of "Instructions to Applicants" in regard to Instructions to be followed while appearing for competitive Examinations conducted by the Commission.

7. CENTRES FOR EXAMINATION:-

Examination will be held at the Chennai Centres only.

Note:

- (i) The Commission reserves the right to increase/decrease the number of examination centres and to re-allot the applicants.
- (ii) Applicants should appear for the written examination/ Certificate Verification/ Oral Test at their own expenses.
- (iii) Request for change of venue will not be complied with.

8. MODE OF PAYMENT OF EXAMINATION FEE:-

- Examination fee Rs. 125/- (Rupees One Hundred and Twenty Five only) is payable online through Net banking/Credit card /Debit card or it can be paid at State Bank of India/Indian Bank within 2 days on submission of application.
- Applicants have to register their basic particulars through One-Time Registration which is mandatory on payment of Rs.50/- towards registration fee. The registration shall be valid for a period of five years from the date of One-Time Registration.
- Applicants have also to pay the service charges applicable to the **State Bank of India / Indian Bank**.
- Applicants can avail exemption from paying examination fees as per eligibility criteria.
- **Offline mode of payment in the form of Demand Draft / Postal Order etc. will not be accepted and the applications forwarded with such modes of payment will be summarily rejected.**
- Those who have registered in the **One -Time Registration** system, and paid the registration fee of Rs.50/- and received the registration ID **need not pay** the Registration fee i.e., Rs.50/- and it is enough to pay the examination fee alone.
- Applicants who have made One-Time Registration must apply for the notified posts. One – Time Registration is only to avail exemption for Registration fee for a period of 5 years from the date of registration.

(For further details regarding the Examination fee concessions refer para 12 of the 'Instructions to Applicants').

9. PROCEDURE OF SELECTION:-

Selection will be made in two successive stages i.e., (i) Written Examination and (ii) Oral Test in the shape of an interview. Final selection will be made on the basis of the total marks obtained by the Applicants at the Written Examination and Oral Test taken together subject to the rule of reservation of appointments. Applicant appearance in the Written Examination and Oral Test is compulsory. An Applicant who has not appeared for the Written Examination or the Oral Test will not be considered for selection, even if he/she secures qualifying marks for selection.

(For further details refer paragraph 23 (b) of the 'Instructions to Applicants')

10. NO OBJECTION CERTIFICATE AND INFORMATION TO THE EMPLOYER:

For details refer para 15 (g) of Commission's 'Instructions to Applicants'. - Any violation of this instruction will be liable for / end in rejection of application and forfeit his/her candidature. (Para 15(g) of the Instructions to Applicants shall be read as NOC and information to the employer)

11. CONCESSIONS:-

- (i) Concessions in the matter of age and/or fees allowed to SC's, SC(A)'s, ST's, MBC's/DC's, BC's, BCM's, Destitute Widows, Differently Abled Persons, Ex-servicemen, other categories of persons etc., are given in para 12 to 14 of the 'Instructions to Applicants'.
- (ii) Persons claiming concessions referred to above has to produce evidence for such claim when called for, otherwise his/her application will be liable for rejection.

Note:

In all cases, an Ex-serviceman once recruited to a post in any class or service or category, **cannot claim the concession** of being called an Ex-serviceman for his further recruitment (G.O.Ms.No.89, Personnel and Administrative Reform(S) Department, dated 12.08.2015)

12. HOW TO APPLY:

1. Applicants should apply only through online mode in the Commission's Websites www.tnpsc.gov.in/www.tnpscexams.net/www.tnpscexams.in
2. One Time Registration (OTR) and applicant Dashboard are mandatory before applying for any post. One Time Registration is valid for 5 years from the date of registration.

3. For applying in One Time Registration, the applicants should have scanned image of their photograph and signature in CD/DVD/Pen Drive to upload the photo and signature.
4. Applicants who have already registered in One Time Registration on or before 29.09.2015 shall use their existing user ID and Password to create applicant Dashboard in the new One Time Registration system. No applicant is permitted to create more than one registration ID in One Time Registration.
5. Enter the Unique ID and password to view the already available information and update them.
6. One Time Registration is not an application for any post. It is just collection of information from the applicants and giving a separate dashboard to each applicant to facilitate them to maintain their own profile. Applicant who wishes to apply for any post shall click "Apply" against the post Notified in the Commission's Website and use the same USER ID and PASSWORD given for ONE TIME REGISTRATION.
7. Select the name of the post or service for which you wish to apply.
8. Applicants are required to upload their photograph and signature as per the specifications given in the Guidelines for Scanning and Upload of Photograph and Signature.
9. An Online application uploaded without the photograph and signature will be rejected.
10. All the particulars mentioned in the online application including name of the Candidate, Post applied educational qualifications Communal Category, Date of Birth, Address, Email ID, Centre of Examination etc. will be considered as final and no Modifications will be allowed after the last date specified for applying online. Since certain fields are firm and fixed and cannot be edited, applicants are requested to fill in the online application form with the utmost care and caution as no correspondence regarding change of details will be entertained.
11. Print Option:-
 - a) After submitting the application, applicants can print / save their application in PDF format.
 - b) On entering registration number and password, applicants can download their application and print, if required.
 - c) Need not send the printout of the online application or any other supporting documents to the Commission. The certificates will be verified only when the applicants come up for next stage of selection.

12. One Time Registration will not be considered as an application for any post.

13. OTHER IMPORTANT INSTRUCTIONS:-

- a. Applicants **should ensure their eligibility for examination:** The Applicants applying for the examination should go through all instructions carefully and ensure that they fulfil all eligibility conditions for admission to examination. **Their admission to all stages of the examination will be purely provisional subject to satisfying the eligibility conditions.** Mere issue of memo of admission to the applicants will not imply that his/her candidature has been fully cleared by the Commission.
- b. The Hall Tickets for eligible applicants will be made available in the Commission's Website www.tnpsc.gov.in or www.tnpscexams.net or www.tnpscexams.in for downloading the same by applicants. No Hall Tickets will be sent by post. So the applicants should watch TNPSC website before the scheduled date of examination. The applicants must comply with each and every instruction given in the Hall Ticket.
- c. **Grievance Redressal Cell for guidance of applicants:-** In case of any guidance /information / clarification of their applications, candidature, etc., applicants can contact Tamil Nadu Public Service Commission's Office in person or over Telephone No.044-25332833 / 25332855 or the Commission's Office Toll-Free No. 1800 425 1002 on all working days between 10.00 a.m. and 05.45 p.m.
- d. **Mobile Phones and other Articles Banned:**
 - i. Applicants are not allowed to bring Cellular Phone, Watches and Ring with Inbuilt Memory Notes and etc., or any other Electronic device and Non Electronic devices such as P&G Design Data Book, Books, Notes, Hand Bags and Recording Device either as separate piece or part of something used by the applicant such as Watch or Ring etc., to the examination hall / room on the date of examination.
 - ii. If they are found to be in possession of any such thing or instrument they will not be allowed to write the examination further, besides invalidation of answer paper and / or debarment. If it is considered necessary they will be subjected to thorough physical search including frisking on the spot (For further details refer "Instructions to Applicants").

- iii. Do not bring into the Examination Hall any article such as books, notes, loose sheets, electronic or any other type of calculators, mathematical and drawing instruments, Log Tables, stencils of maps, slide rules, Text Books, rough sheets etc., except the permitted writing material (i.e. pen).No colour pen or Pencil must be used.
- iv. Applicants are advised in their own interest not to bring any of the banned items including Mobile Phones to the venue of the examination, as arrangements for safekeeping cannot be assured.
- e. Applicants are not required to submit along with their application any certificates in support of their claims regarding age, educational qualifications, physical qualification, community certificates and certificates regarding their physical disability etc., which should be submitted when called for by the Tamil Nadu Public Service Commission. The applicants applying for the examination should ensure that they fulfil all the eligibility conditions for admission to the Examination. Their admission at all the stages of examination for which they are admitted by the Commission viz. Written Examination and Oral Test will be purely provisional, subject to their satisfying the prescribed eligibility conditions. If, on verification at any time before or after Written Examination, Certificate Verification and Oral Test, it is found that they do not fulfil any of the eligibility conditions, their candidature for the recruitment will be liable for rejection / cancellation by the Commission.
(For Further details refer "Instructions to Applicants")
- f. If any of their claims is found to be incorrect, it will lead to rejection / debarment.
- g. **Unfair means strictly prohibited:** No applicant shall copy from the papers of any other applicant or permit his papers to be copied or give or attempt to give or obtain or attempt to obtain irregular assistance of any description.
(For further details refer "Instructions to Applicants")
- h. **Conduct in Examination Hall:** No applicant should misbehave in any manner or create a disorderly scene in the Examination Hall or harass the staff employed by the Commission for the conduct of the examination. Any such misconduct will be severely viewed and penalised.
(For further details refer "Instructions to Applicants")

- i. For violation of "Instructions to Applicants" in any manner, suitable penalty will be imposed as per the 'Instructions to Applicants' or as deemed fit by the Commission.

The Online Application can be submitted upto 29.03.2017 till 11.59 p.m., after which the link will be disabled

(For detailed information applicants may refer Commission's 'Instructions to Applicants' at the Commission's website www.tnpsc.gov.in)

Secretary

ANNEXURE – I**Paper - I****Printing Technology (Diploma Standard)****Code No.248****UNIT I – Imaging Technology**

Design - Concept, Typography, Graphic Design Layout - Stages in Preparing a Layout; Imposition Schemes; Book Work - Margin Calculations, Dummy. Various designing software used for Designing of Newspapers, Booklets, Magazines and Label works. Digital Pre Press - Image Acquisition - Digital Camera - Principles, Types, Resolution, Memory, Scanner Types - Flatbed and Drum, Screening Frequency, DOT Structure AM and FM Screening, File Formats - OPI, Trapping, Postscript, PDF, CIP3 – JDF; Workflow - File Preparation, Colour Management, Preflighting, Digital Imposition - RIP (Raster Image Processing), Resolution - Input, Output, Plate Setters - Types, Digital Proofing - Need, Proofing Technologies - Inkjet, Dye sublimation, Thermal Wax, Electro Photography . Inks, Dyes, Toners, Quality and Relative Merits.

UNIT II – Image Preparation

Imaging for offset process; Plate chemistry - Light source - Types – advantages, disadvantages - Desensitizing process, gum, Quality Control Aids; Computer to plate (CTP) and Computer to press systems, their architecture, type of plates used- silver halide, thermal fuse, photopolymer plates and their structures and technique of imaging - laser, UV, thermal imaging. Computer to Polyester Plate (CTPP) and technique of imaging, quality control devices.

Imaging for Gravure Process: Electromechanical engraving. Laser cutting of gravure cylinders, system architecture workflow and quality control.

Imaging of Flexography: Plate types - Rubber and Polymer plates, production of design rolls and quality aspects.

Imaging for screen printing: stencil preparation types and quality aspects.

UNIT III – Offset Printing

Sheet-fed offset: Principle, types of offset machines - single colour, multi colour, perfecting presses and small offset presses; Feeding unit; pile board, Feeder head, feed board, registering system and Control. Printing unit - Plate cylinder, blanket cylinder, Impression cylinder, inking system, dampering system drying system and delivery system. Printability and runnability problems.

Web offset: Principle, web fed offset machines - In-line web offset, blanket to blanket press, stack type press, Satellite (CIC) presses; Infeed: Types of reel stands, Automatic pasters, web control devices; Printing Unit design configuration, inking and dampering system, Drying, Chilling, folding, sheeting units and mail room operation. Printing and inline Operations - Make-ready operations, multi colour printing, automatic plate fixing, computer controls in printing, automatic blanket washing devices roller washing devices, spot coating, varnishing and accessories. Print problem identification and quality control.

Unit IV - Gravure, Flexography, Screen and Digital Printing

Gravure: Principle, Press configuration, doctor blade – types, positioning; impression rollers, inking and drying system. Proofing, feed in, feed out and converting operations.

Flexography Printing: Principle, press configuration, corona treatment, Anilox roller, plate mounting, inking, drying and proofing. Feed in, feed out and converting operations.

Screen printing – Screen fabrics, frames and squeegees - types; screen printing machine- types; maintenance.

Digital Presses: computer to press, types, advantages and applications; Green Printing - Principles.

UNIT V - Post Press and Converting Operations:

Production Flow in Print Finishing, Folding - types of fold for sheet and web, methods of feeding and delivery, cutting machine - parts, types of cutting machine, knife, mechanism and maintenance of guillotines, gathering - Principles of Gathering and types of machines, securing - Stitching, Sewing - types; Perfect binding, miscellaneous operations - Edge treatment , Case making, Embossing, Foil Stamping , Die-Cutting, Indexing, Lamination - types, Shrink Wrapping, Automation in Finishing operations; Package design - types, CAD applications in packaging, folding carton manufacturing, collapsible tubes – manufacturing and its applications.

UNIT VI - Printing and Packaging Materials:

Paper - Raw materials, Manufacturing, Paper making machines, paper coatings. Paper classification and sizes. Boards: Raw materials, manufacturing, machineries, classifications and sizes. Paper and Board Properties and testing. Printing Inks - Raw Materials, Manufacturing, types of inks, ink properties and testing. Coating materials, varnish, laminating films and adhesives. Plastic in packaging - types and advantages, Flexible and Rigid Packaging - materials used, properties and its applications. Glass, wood, textile Metals - Tin, Aluminum, Steel, Foils and its applications in packaging, Label - types, Adhesives used, Closures and Sealing; Cushioning materials, Lacquers, Special Additives and Material Testing.

UNIT VII - Planning, Scheduling and Cost Estimation

Planning; Job order docket, scheduling the work, sequencing, inventory management, materials and capacity requirement.

Cost Estimation - Basic concept of costing, Pricing, Estimation and Investment analysis - Cost estimation for printing materials and for different printing process in respect to various print jobs.

UNIT VIII - Printing Machinery Maintenance:

Maintenance Management: Definition, Planned Maintenance and Unplanned Maintenance. Total Planned Maintenance – Safety precautions and House keeping. Preventive, Predictive scheduled maintenance Documentation and Spare parts management. Unplanned maintenance - Breakdown or emergency maintenance. Total Production Maintenance - Six big losses, Pre press maintenance, Press maintenance, Printing and allied equipment maintenance, Electrical component maintenance, Mechanical component maintenance; Equipments and tools used in Erection and Testing. Repairs and Reconditioning of old machines.

UNIT IX - Total Quality Management in Printing:

Concepts of TQM, TQM Framework, Barriers to TQM; TQM Principles - Customer focus, Customer orientation, customer satisfaction, customer complaints, customer retention; TQM Tools and Techniques - Traditional tools of quality, New management tools - Six-sigma: Quality Circles, TPM, 5s, Kaizen. Process control: Visual inspection, Quality Systems and ISO 9000, Statistical Quality Control, Control charts and wastage management. Materials, process control, ISO standards for process, Implementation and Guidelines, Quality Control Devices, Quality control aids - Offset, Flexography and Gravure.

Unit X - Advanced Printing Technology

Digital printing Technology: Definition, Non-impact printing technology (NIP), basic principle; Electrophotography, Ionography, Thermography and Inkjet printing. Security Printing; Hologram, Lenticular printing, waterless offset printing, 3D printing, Hybrid printing and its application. E-publishing Layout and Design preparation, work flow, eBook, eJournals, eNewspaper, internet advertising and digital libraries.

Paper-II

General Studies

(H.S.C Standard)

Unit-I General Science:

Physics Nature of Universe-General Scientific laws-Inventions and discoveries-National scientific laboratories-Mechanics and properties of matter-Physical quantities, standards and units-Force, motion and energy-Magnetism, electricity and electronics- Heat, light and sound

Chemistry-Elements and Compounds-Acids, bases and salts-Fertilizers, pesticides, insecticides

Botany-Main Concepts of life science-Classification of living organism-Nutrition and dietetics-Respiration

Zoology-Blood and blood circulation-Reproductive system-Environment, ecology, health and hygiene-Human diseases, prevention and remedies-Animals, plants and human life

Unit- II. Current Events

History Latest diary of events-national -National symbols-Profile of States-Eminent persons & places in news-Sports & games-Books & authors -Awards & honors'-India and its neighbours

Political Science-Problems in conduct of public elections-Political parties and political system in India-Public awareness & General administration - Welfare oriented govt. schemes, their utility-

Geography-Geographical landmarks-

Economics :Current socio-economic problems

Science: Latest inventions on science & technology

Unit- III. Geography Earth and Universe-Solar system-Monsoon, rainfall, weather & climate-Water resources --- rivers in India-Soil, minerals & natural resources-Forest & wildlife-Agricultural pattern-Transport & communication-Social geography – population-density and distribution-Natural calamities – Disaster Management.

Unit - IV. History and culture of India and Tamil Nadu Indus valley civilization-Guptas, Delhi Sultans, Mughals and Marathas-Age of Vijayanagaram and the bahmanis-South Indian history-Culture and Heritage of Tamil people-India since independence-Characteristics of Indian culture-Unity in diversity – race, colour, language, custom-India-as secular state-Growth of rationalist, Dravidian movement in TN-Political parties and populist schemes.

Unit-V. INDIAN POLITY Constitution of India--Preamble to the constitution- Salient features of constitution- Union, state and territory- Citizenship-rights amend duties-Fundamental rights- Fundamental duties- Human rights charter- Union legislature – Parliament-. State executive-. State Legislature – assembly- Local government – panchayat raj – Tamil Nadu- Judiciary in India – Rule of law/Due process of law-. Elections-. Official language and Schedule-VIII-. Corruption in public life-. Anti-corruption measures –CVC, lokadalats, Ombudsman, CAG- Right to information- Empowerment of women- Consumer protection forms-

Unit-VI. INDIAN ECONOMY

Nature of Indian economy- Five-year plan models-an assessment-Land reforms & agriculture-Application of science in agriculture-Industrial growth-Rural welfare oriented programmers-Social sector problems – population, education, health, employment, poverty-Economic trends in Tamil Nadu

Unit-VII. INDIAN NATIONAL MOVEMENT

National renaissance--Emergence of national leaders-Gandhi, Nehru, Tagore-Different modes of agitations-Role of Tamil Nadu in freedom struggle Rajaji, VOC, periyar, Bharathiar & others

Unit VIII. APTITUDE & MENTAL ABILITY TESTS

Conversion of information to data-Collection, compilation and presentation of data - Tables, graphs, diagrams-Parametric representation of data-Analytical interpretation of data - Simplification-Percentage-Highest Common Factor (HCF)-Lowest Common Multiple (LCM)-Ratio and Proportion-Simple interest- Compound interest-Area-Volume-Time and Work - Logical Reasoning- Puzzles - Dice-Visual Reasoning-Alpha numeric Reasoning-Number Series.

ANNEXURE – II

Educational Qualification prescribed	Qualification considered equivalent	G.O. in which orders issued
Diploma in Printing Technology (letter Press or Offset) or Diploma in Printing Technology with any elective awarded under the revised pattern.	Diploma in Printing Technology	G.O.(Ms) No. 27, Tourism and Tourism Department, dated 15.302.1999

DISCLAIMER

“The Government orders relating to Equivalence of qualification have been hosted in the Tamil Nadu Public Service Commission website. However, the applicants while applying for the examination should furnish the equivalence of qualification in the form of Government order, if any, and produce the same when called for by Tamil Nadu Public Service Commission”.

Secretary