

# RESOLUTION 1949

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## INDUSTRIES AND MEDICAL DEPARTMENTS

### COMMENCE

[25<sup>th</sup> March, 1949]

No. 1162-Com-49/26285. Punjab Government Notification No. 2318-EP-37/1761, dated the 7<sup>th</sup> December, 1937, an amended copy of which was republished with Punjab Government Notification No. 2436/962-S-EI-41/49328, dated the 15<sup>th</sup> September, 1941, is republished for general information with the adaptations necessitated by the partition of the Punjab under the Indian Independence Act, 1947, and incorporating the amendments made from time to time:-

### RESOLUTION

[7<sup>th</sup> December, 1937]

No. 2318-EI-37/41761- The Governor of West Punjab has had under consideration Rule 48 of the Indian Electricity Rules, 1937, which provides generally that no electrical installation work, with the exception of some petty classes of work, shall be carried out upon the premises or on behalf of any consumer or owner for the purposes of the supply of energy to such consumer or owner except by an electrical contractor licensed by the Provincial Government in this behalf and under the direct supervision of a person holding a certificate of competency issued by the Provincial Government. The object of this rule, so far as it appears to the Governor of West Punjab is the protection of consumers and owners from the risk to life and property arising from bad electrical work, and the Governor of West Punjab is satisfied that the increase which has been taking place in the use of Electricity by the Public in the Province of West Punjab justifies the enforcement of this rule in the Province. In order, however, that no hardship may be caused to the persons employed in the electrical trade at present and to consumers and owners, the Governor of West Punjab contemplates bringing Rule 48 into force by the issue of a notification under sub-rule (2) of that rule only after the expiry of 12 months from the date of this resolution and he has decided that, in the meantime, the procedure laid down below, which will be followed by West Punjab Government in the licensing of electrical contractors and the issuing of certificates of competency to Supervisors should be published for general information. The Governor of West Punjab hopes that by the time Rule 48, of the Indian Electricity Rules, 1937 is brought into force in West Punjab a sufficient number of electrical contractors and supervisors will have obtained licenses and certificates so carry on the electrical installation work and that no inconvenience will be experienced by the public. The certificate or license will enable consumers and owners to ascertain whether any particular electrical contractor or supervisor is certified by the Provincial Government as competent.

Co-operation on the part of the electric supply undertakings and the public would greatly facilitate the work of the administration in checking mal-practice and West Punjab Government would be grateful if such undertakings and or the persons for whom any electrical installation work is carried would report to the Secretary of the Advisory Committee, mentioned hereafter, cases in which the work carried out is considered not to be in accordance with the Indian Electricity Rules, 1937

The infringement of Rule 48 tenders, the offender punishable under Rule 123.

Procedure to be followed by West Punjab Govt: in Licensing Electrical Contractors and issuing certificates of Competency to Supervisors.

#### I - LICENSING BOARD

1. For the purpose of granting certificate of competency to the electrical supervisors and Licenses to electrical contractors, there shall be established by Government two Licensing Boards, one having jurisdiction in the Divisions of Lahore and Rawalpindi, and the other having jurisdiction in the Divisions of Multan, Sargodha and Bahawalpur.

2. **Constitution of the Board.**— (1) A Licensing Board shall consist of the following:-

- (i) Deputy Secretary (Power), .....President  
Irrigation & Power Deptt:
- (ii) One nominee of the Electricity.....Member  
Department, WAPDA, not below the rank of Executive Engineer.
- (iii) One nominee of the Chambers of .....Member  
Commerce, Lahore/Multan, Region.

- (iv) Electric Inspector to Government.....Secretary of Punjab, Lahore/Multan Region.
- (2) The term of the appointment of a nominated member shall be three years.

**3. (1)The Functions of the Board. —**

- i. To grant licenses to the electrical contractors;
- ii. To prescribe and conduct examination for supervisors and to grant certificate of competency to successful examinees;
- iii. To deal with applications and testimonials found to be incorrect and to take such action thereon as may be deemed fit;
- iv. To hear and decide cases of mal-practices by electrical contractors and supervisors;
- v. generally to carry out the purposes of this Resolution;

(2) Subject to the provisions of paragraph 3A an order passed by the Board shall be final.

3-A APPEAL: Any person feeling aggrieved by an order passed by the board in disciplinary matters mentioned in paragraph 3(iv) may, within 90 days of the receipt of the order, prefer an appeal to Government and thereupon the Government, after giving the person concerned an opportunity of being heard, pass such order as it may deem fit.

**II- CERTIFICATES OF COMPETENCY**

**4. Examinations of Supervisors.—** Except as provided in the notes below, certificates of competency will be granted to supervisors on the candidates passing an examination.

Note: — (i) (a) Exemption from Examination- Every candidate who produced any of the degree, certificates or diplomas mentioned in Appendix A to the Punjab Service of Engineers (Electricity Branch) (Recruitment) Rules, 1939, or who holds any of the certificates / or diplomas named against the under-mentioned institutions will be exempted from appearing for the examination provided that he has gone through a further period of practical training for at least one year in suitable electrical practice unless exemption from such practical training also is earned under sub-paragraph (b) below:-

Sr. No.	Name of Institution	Certificate, degree or diploma
1	Punjab College of Engineering & Technology, Lahore.	'B' Class certificate.
2	Victoria Diamond Jubilee Hindu Technical Institute, Lahore.	Diploma of the Mechanical & Electrical Engineering Class.
3	Government Technical School, Lahore	Electro-Mechanics Course.
4	Kala-Bhavan Technical Institute, Baroda	Diploma in Electrical Engineering.
5	Thomason College of Civil Engineering, Roorkee.	Diploma of Mechanical and Electrical Engineering class and course of Electrical Engineering in Assistant Engineer's class.
6	Benaras Hindu University.	Diploma of Licentiate in Engineering.
7	Technical College, Dayal Bagha, Agra	Diploma of Licentiate in Electrical Engineering.
8	Victoria Jubilee Technical Institute,	Diploma in Electrical Engineering.

Bombay

9	Institution of Electrical Engineers, London	Corporate or Associate Membership
10	University of Sheffield, England	Associateship in Electrical Engineering
11	City and Guilds of London Institute, London	Intermediate or final grade examination in Electrical Engineering Practice.
12	Engineering College of Lewis Institute, Chicago. USA	Degree of B.Sc. in Mechanical and Electrical Engineering.
13	Institution of Engineers (India)	Corporate or Associate Membership resulting from electrical experience or qualifications.
14	Michigan University, USA	Degree of B.S.E. in Electrical Engineering.
15	Government Technical School, Lucknow.	Diploma of Electrical and Mechanical Engineering.
16	Electrical Engineering of the University of Durham.	Degree of B.Sc. in Electrical Engineering.
17	Muslim University, Aligarh.	Diploma of Licentiate in Electrical Engineering.
18	Karachi University.	Degree of Bachelor of Engineering (Mechanical and Electrical)
19	N.E.D. Government Engineering College, Karachi.	3 Years' diploma in Electrical Engineering.
20	Dacca University	B.Sc. Engineering.
21	American Institute of Electrical Engineering.	Associate member and full Membership.
22	All Govt: Polytechnic.	Diploma in Electrical Technology.

(b). If a University, College, School or Institute, recognized in the preceding subparagraph, grants the degree, diploma or certificate, after a full four years' course of training of which at least one is covered by suitable practical training in the trade of electrician in an institution other than the University, College, School or institute itself, then the persons qualifying there from will be exempted from the practical training required under the preceding subparagraph.

(c). The practical training required under this condition must have been in installation work (viz: wiring and rectifying common defects in electric light and power installations) under a licensed electrical contractor a licensee holding license granted under the Indian Electricity Act, 1910, or the Electricity Branch of West Punjab Public Works Department, provided that in the case of a licensed electrical contractor practical training for one year shall not be recognized for the purposes of this rule unless the contractor has been in the electrical business for at least five years.

(ii) For the purpose of supervising work of the description given in Rule 48 of the Indian Electricity Rules, 1937, when executed by--

(1) Licensees holding licenses granted under the Indian Electricity Act, 1910, or

- (2) The Electrical Section of the West Punjab Public Works Department, Buildings & Roads Branch, or
- (3) The Electricity Branch of the West Punjab Public Works Department,

a certificate will be granted to such officers, not below the rank of sub-overseer or works Manager, as the Departments of Government, institutions or bodies mentioned above may name in this behalf;

Provided, first, that such certificates when granted to employees of licensees holding licenses under the Indian Electricity Act, 1910, shall be valid only for supervising work required for the purpose of supply of energy to the premises of such licensees and work, not including work on internal wiring, on the consumers' or prospective consumers, premises upto the point of commencement of supply:

Provided, secondly, that such certificates, when granted to the employees of the Departments of Government or institution mentioned at items No. 2 and 3 above, shall be valid only for supervising work carried out by those department or institutions through their own agency,

- (iii) A certificate granted to an official of the Electricity Department under clause (ii) shall continue to be valid after the retirement of the official provided the official retires after supervising such work as aforesaid for a period of ten years.

**5. Dates to be notified.—** Examination will be held in Lahore on dates which will be fixed by the President in consultation with the members of the committee and notified in the West Punjab Government Gazette and also advertised in two successive issue of not less than three local newspapers. The notification and advertisement will also specify the date by which applications or permission to appear in the examination must reach the Secretary.

**6. Candidates.—** Examinations are primarily intended for candidates residing or, actually working within the Punjab. Candidates from outside the Punjab may, however, be admitted to an examination on payment of prescribed fee in the manner specified.

**7. Nature of test.—** Every examination will be of such a nature as to test the practical knowledge of the candidate and to ascertain his competency.

**8. Place.—** Every examination will be conducted in a place where the candidates' knowledge can be practically tested.

**9. Form of application.—** Applications for permission to appear in the examination for a certificate of competency shall be made in Form 'A', shall be accompanied by a treasury receipt for the prescribed fee and shall be addressed to the Secretary to be received by him by such dates as may be fixed in the notification (Condition 7). The applications shall be accompanied by true copies of the applicant's testimonials and the applicant shall produce at the examination the original testimonials.

**10. Examination fee not to be returned.—** The fee paid by a candidate who's application for an examination has been accepted, will be not be returned to him on any account. Provided that in the event of a candidate's inability to attend the examination for a valid reason it shall be competent to the committee to allow such candidate to appear at the next examination without further payment.

**11. Photographs of persons certificated.—** The committee will arrange at the examination for the photographing of all candidates and shall not charge any separate fee on this account.

**12. Unsatisfactory testimonials.—** No candidate shall be admitted to any examination whose testimonials are, in the opinion of the committee unsatisfactory.

**13. Return of testimonials.—** The original testimonials, after being scrutinized, will be returned to the applicant

**14. Syllabus.—** Candidates will be examined by a written paper and by a practical test in accordance with the following syllabus:-

- (a) Electrical units – Ohm's Law, calculation of "Drop" and size of conductors for various loads and length of run. Resistance and insulation resistance and their measurement.
- (b) Electrical current – Its calculations and measurement current carrying capacity of conductors – effect of heat on conductors.

- (c) Electrical Power – Measurement and calculation of power consumed by motors and other consuming devices – conversion of H.P. into K.W. – power factor, low and medium pressure power transmission and distribution – methods and calculation.
- (d) Electrical energy – Methods of measurement and calculation of cost of energy.
- (e) Electrical measuring instruments – Principles and connection of Ohm Meter, Volt Meter, Ammeter, Watt Meter and Energy Meter.
- (f) Storage Batteries – Main principles, calculations of capacity, installation, erection and connection. Importance of specific gravity and voltage readings – maintenance.
- (g) Electric Machines – Elementary theory, installation, connection, operation and repair of the following:-
  - A.C. single and poly phase Alternators including parallel running of the same.
  - A.C. single and poly phase motors – synchronous and induction types – (including squirrel cage and wound motors type).
  - A.C. single and poly phase transformers for medium and high pressures;
  - D.C. dynamo – series, shunt and compound wound types – parallel running of dynamos;
  - Rotary converters and Balancers.
  - D.C. motors – series, shunt and compound wound types;
  - Metering of D.C. & A.C. Machines for faults and insulation;
  - Care of Brushes, Commutator, Slip Rings, Bearings, etc:
  - Theory and practice of armature winding of small A.C. & D.C. machines.
- (h) Control gear for A.C. and D.C. machinery – Various types of switch gear fuses, regulators, motor starters relays, over-load and no volt releases and other safety devices auto-cutouts, circuits breakers, etc:- their uses and connections.
- (i) Electric Pumps – General principles and elementary calculations of head, power and energy consumption.
- (j) Electrical Power plant – Calculations, erection, running and maintenance of small engine driven plants with storage of batteries.
- (k) Electricity Act – The Indian Electricity Act, 1910, and the Indian Electricity Rules, 1937 as amended from time to time pertaining to low medium and high pressure.
- (l) Installation wiring – Various methods of wiring and distribution – installation maintenance – systematic testing of installations – location and repair of fault earthing of installations, wiring and installation accessories and their uses. Different kinds and sizes of wires and cables, their uses, and calculation of sizes making wiring schedules and wiring diagrams for installations.
- (m) Overhead Lines – Simple calculations and construction for low, medium and high pressures. Strength of pole with stresses, sag, temperature effects and tension on wires, insulators, brackets, guy wires, stays, struts, guard wires, protective devices, out door fittings, lighting conductors and arrestors.
- (n) General – Making dimensioned sketches and reading drawings (Plans, Elevations and Sections) power and lighting circuit diagrams.
- (o) Resuscitation from electric shock.

**15. Grant of certificates of competency to supervisors.—** A candidate who passes the examination for supervisors, or who is exempted from appearing for such examination, will be granted a Certificate of Competency in Form 'B' Or 'C' as the case may be.

**16. Grant of Duplicate Certificates.—** A duplicate of any certificate granted under these conditions will be issued on payment of rupees ten and on production by the application of the latest copy of his photograph, subject to the satisfaction of the Secretary as to identify of the applicant.

**17. WITHDRAWAL OR SUSPENSION OF SUPERVISORS CERTIFICATE OF COMPETENCY.—** The supervisor's Certificate of Competency shall be liable to be withdrawn or suspended for such period as the Board may decide, if in its opinion the holder of the certificate has not, in the exercise of his duties, reasonably observed the provisions of the Electricity Rules, 1937, or has been guilty of any other mal-practice.

**18. Certified Electrical Supervisor.—** The holder of a supervisor's Certificate of Competency shall be entitled to write the words "Certified electrical supervisor" after his name.

### **III.ELECTRICAL CONTRACTORS LICENSES**

**19. Applications for Contractors' Licenses.—** An application for a contractor's license shall be made to the Secretary of the Committee in Form 'D'.

**20. Grant of Electrical Contractor's License.—** An Electrical Contractor's License will be granted only to a person (or a firm) who has in his possession testing instruments to the satisfaction of the committee, and either himself holds a certificate of competency and personally executes or supervise all work under taken by him has in his employ a supervisor holding a certificate of competency under whose direct supervision all work under taken by him is carried out;

Provided that a contractor's License will not be granted to any holder of a Certificate of Competency while he is in the employ of a firm of electrical contractors.

**21. Form of contractor's license.—** The Electrical Contractor's license will be in form "E" and will be subject to the conditions printed thereon.

**22. Renewal of contractor's license.—** Every Contractor 's License shall be renewable annually provided that no license may be renewed unless an application for the purpose is received by the Secretary within fourteen days from the date of the expiry of the license.

A license which is not renewed shall be automatically cancelled and the full initial fee will be charged for the issue of a new license.

Every application for renewal shall be accompanied by the license in respect of which the application is made, and the treasury receipt for the renewal fee.

**23. Grant of duplicate of Contractor's License.—** A duplicate of an electrical contractor's license will be issued on payment of a fee of Rs. 10/-.

**24. Suspension OR Cancellation of Contractor's License.—** If a contractor commits a breach of any of the terms and conditions of his license or is adjudged by the Board to be guilty of mis-conduct, carelessness, or any mal-practices, the Board may suspend the license for such period as it may deem fit or cancel the license.

### **IV- FEES**

**25. Fees.—** Fees on the scales prescribed below will be payable by the candidates for Supervisor's examination and applicants for contractor's license.

- (I). Supervisor's Examination ..... Rs. 25/-
- (II). Certificate to candidates who are exempted from the supervisor's Examination. ----. Rs. 5/-
- (III). Contractor's License:-
  - (a). Initial fee .....Rs. 100/-
  - (b). Annual Renewal fee .....Rs. 25/-

Note:- The fees should be paid into any Government Treasury or sub-treasury in the West Punjab for credit to the head XIII- Other Taxes and Duties-Receipts from Electricity Duties and the treasury receipt forwarded to the Secretary of the Advisory Committee along with the application for admission to Supervisor's examination or the application for the grant of an electrical contractor's license. The same procedure will apply to the charge to be paid for a duplicate of a supervisor's certificate or a contractor's License.