NOTIFICATION

THE governor of Nagaland is pleased to order that the grant of Licenses, Certificates and permits to Electrical Contractors, Electrical Supervisors and Electrical Workman shall be governed by the Nagaland Electrical Licensing Regulations 2005 framed in accordance with Rule 45 of the Electricity Rules, 1956, namely-

The Nagaland Electrical Licensing Regulations, 2003.

1. Short title, extent and commencement.

(1) These Regulations shall be called Nagaland Electrical Licensing Regulations, 2005
(2) They shall extend to the whole of Nagaland.
(3) They shall come to force from the state of publication in the official Gazette.
(4) The words used in these Regulations shall have the same meaning as defined and assigned to them in the Electricity Act, 2005 and Indian Electricity Rules, 1956.

2. Constitution of Licensing Board.

(1) For carrying out the purposes of these Regulations, a licensing Board namely, "The Nagaland Electrical Licensing Board- hereinafter referred to as "the Board", shall be constituted by the State government of Nagaland.
(2) There shall be a secretary to the Board, hereinafter referred to as "the Secretary".

3. **Members of the Licensing Board.**

The Board shall consist of the following members: -

(a) Any person to be appointed by the Government- Chairman

(b) The Chief Electrical Inspector to the Government of Nagaland -Vice Chairman (ex-officio)

(c) The Electrical Inspector to the Government of Nagaland -Member Secretary (ex-officio)

(d) Principal, Industrial Training Institute, Nagaland -Member (ex-officio)

(e) Works & housing Department, Nagaland to be nominated by the Department -Member

(f) Representative of Power Department, Nagaland to be nominated by the Department
-Member

4. Place and term of Office.

(1) The Office of the Board shall be situated in the State capital.

(2) The Term of Office members other than ex-officio members of the Board shall be three years or such shorter period as the State Government may direct. The Board shall have powers to act not withstanding any vacancy in its membership.

5. Functions of the Board.

The functions of the Board shall be-

(a) To grant Licenses to Electrical Contractors;

(b) To conduct examination for Electrical Supervisors and Electrical Workmen;

(c) To grant Certificates to Electrical Supervisors and Permits to Electrical Workmen;

(d) To enquire into allegations of incompetence, negligence, violations of the Indian Electricity Rules,1956 or malpractice on the part of Workmen/Supervisors/Contractors holding permits/Certificates/Licenses granted by the Board or breach of conditions as may be considered necessary;

(e) To maintain Registers of Licensed Electrical Contractors, Electrical Supervisors, and Electrical Workmen; and

(f) Generally, to carry out the provisions of these Regulations.

6. Meeting of the Board and Quorum.

(1) The Board shall meet once in three months or at such other times as maybe in the opinion of the Secretary, necessary for transaction of business.

(2) The Chairman or the Vice-chairman or the Secretary together with two other members shall form a quorum at any meeting of the Board.

(3) The Chairman or in his absence, the Vice-chairman or in absence of both, one of the members present who may be elected at the meeting (other than the Secretary), shall be the Chairman of the meeting.

7. **Duties of the Chairman.**

The Duties of the Chairman shall be-

(a) To preside over meetings of the Board;

(b) To take necessary actions to implement decisions of the Board;

(c) To keep liaison between the Board and the Government; and

(d) To sign and issue jointly with the Secretary-Contractor's License, Supervisor's Certificates and Workmen's Permits.

8 Duties of the Secretary.

The duties of the Secretary shall be-

(a) To receive applications of Contractor's Licenses, Supervisor's Certificates, Workmen's Permit and process them;
(b) To maintain Registers of Contractor's Licenses. Supervisor's Certificates and Workmen's Permits;
(c) To make all correspondences on behalf of the Board regarding issue/renewal/allegation etc. in respect of Licenses, Certificates and permits;
(d) To place before the Board/Chairman any matter regarding violation of Indian Electricity Rules 1956 or conditions of Licenses/certificates/Permits by Contractors/ Supervisors/ Workmen.

9. Electrical Contractor's License.

(1) No electrical installation work shall be undertaken except by an Electrical Contractor licensed under these Regulations read with Rule 45 of the Indian Electricity Rules 1956.
(2) An Electrical Contractor's License shall be granted only to a person (or a firm) approved by the Board who-

(a) Himself holds an Electrical Supervisor's Certificate or who has in his employ an Electrical Supervisor holding a valid Certificate granted by the Board and who is not a full time employ of a Government or any other agency;
(b) Has in his employ at least one Electrical Workman holding a valid Permit granted by the Board and who is not a full time employ of a Government or any other agency;
(c) Is a permanent resident of Nagaland and not below 18 years of age;
(d) Has in his possession the instrument prescribed for the class of contractor which he proposes to apply;
(e) Has a library containing Electricity Act 2003, Indian Electricity Rules 1956, Terms and Conditions of Supply of Electrical Energy, Nagaland Electrical Licensing Regulations, and any other book prescribed by the Board from time to time;

(f) Pays in advance the prescribed fees and fulfill the conditions laid down in the application form;

(g) Any other requirement that the Board may prescribe from time to time such as proof of address of the Cnntractor's establishment, Financial capability, production or copy of trade license, etc.

Provided that the Board may refuse to grant such license to any person (or a firm) who (or which) in the opinion of the Board is not fit to hold such license. The Electrical Contractor's License is not transferable.

10. Classes of Electrical Contractors.

(1) There shall be two classes of licensed Electrical Contractors namely: Class-I & Class-II.

(2) Class-I Electrical Contractor shall be eligible to carry out electrical wiring, construction of overhead lines and installation works up to 33,000 colts, subject to the limits of the Certificate of the Electrical Supervisor employed. The scope of works may be increased when the limit of the Certificate is increased by paying the prescribed fees.

(3) The contractor should possess at least the following instruments:

(a) Insulation Tester: 500 V, 1000 V, 2500 V each	-1 No.
(b) Earth Tester with accessories (0-10 Ohms)	-1 No.
(c) Voltmeter)-"00 V	-1 No.
(d) Tong Tester with Ammeter 300 A	-1 No.
(e) Phase Sequence Indicator	-1 No
(f) Crimping Tool with dye set	-1 No. for
(g) Rubber Hand Gloves each Workman	.-1 No.
(h) Portable Drilling Machine	.-1 No.

(4) At least 3 years experience as class-II Contractor is essential for awarding Class-I Contractor's License.

(5) There should be a registered office within the State.

(6) Class-II Electrical Contractor shall be eligible to carry out electrical wiring and installation works up to 650 volts, subject to the limits of the Certificate of the Electrical Supervisor employed. The scope of works may be increases when the limit of the Certificate is increased by paying the prescribed fees.

(7) The Contractor should possess at least the following instrument:

(a)	Insulation Tester, 500 V	-1 No.
(b)	Earth tester with accessories (0-10 Ohms)	-1 No.
(c)	Voltmeter, 0-600 V	-1 No.
(d)	Tong Tester with Ammeter, 300 A	-1 No.
(e)	Portable Drilling Machine	-1 No.

(8) there should be a registered office within the State.

11. When Electrical Contractor's License shall not be granted:

An Electrical Contractor's License shall not be granted to any holder of an Electrical supervisor's Certificate or any holder of an Electrical Workman's Permit while he is in the employ of another Electrical Contractor.

12. Applications for Electrical Contractor's License.

Application for Electrical Contractor's License shall be made to the Secretary in Forni A' by paying the schedule of fees in Annezure-1.

13. Form of Electrical Contractor's License.

An Electrical Contractor's License shall be issued in "Form D".

14. Cancellation of Electrical Contractor's License.

(1) If Electrical Supervisor/Electrical Workman, on the strength of which an Electrical Contractor's License has been granted. leaves the service of such Electrical Contractor, such Contractor's License shall be deemed to have been suspended. If such Electrical Contractor fails to employ an Electrical Supervisor/Electrical Workman within one month from the date on which the Electrical Supervisor/Electrical Workman has left such Electrical Contractor's service, such Electrical Contractor's License shall be cancelled.

(2) If an Electrical Supervisor/Workman to whom an electrical Contractor's License has been granted accepts employment under any other Electrical Contractor, the Contractor's License granted to such Electrical Supervisor/Workman shall be automatically cancelled.

(3) (3) The Board may, at any time cancel an Electrical Contractor's License if the person (or firm) to whom the license has been granted is

in the opinion of the Board, not fit to hold such license. For this purpose the Board may take into consideration, amongst others, the provisions contained in regulation 31.

15. Renewal of Electrical Contractor's License.

(4) Every Electrical Contractor's License granted under these Regulations shall be renewed annually. A license which is not renewed after expiry will become invalid from the date of expiry. Application for renewal in Form 'K.' together with the license and non-refundable prescribed fees shall be submitted to the Secretary before the date of expiry of the license.

Provided that is the application for renewal as aforesaid is received within twelve months from the date of expiry of the License, it may be renewed on payment of the prescribed annual renewal fee and prescribed fee for late renewal of the License. The date of renewal after expiry will be twelve months from the date of last expiry.

(5) Electrical Contractor's License which has not renewed within twelve months from the date of expiry will be automatically cancelled. Fresh initial fee with an application in "Form A" must be furnished as in case of fresh application before a new License will be granted.

(6) The License shall automatically become invalid after its expiry till renewal and No electrical work shall be done by the Contractor while the License is invalid.

16. Forms to be maintained.

All licensed Electrical Contractors are required to maintain the following Forms and submit to the Secretary along with applications of renewal of Licenses.

(a) Form ‘H’- Details of Supervisors, Workmen and Apprentices;

(b) Form `I'- Yearly return of work done;

(c) Form `J'- 'Notice before commencement or work'-should be submitted regularly whenever new works are to be taken up.

17. Register of Contractors.

A register of all Electrical Contractors Licensed under these Regulations shall be maintained by the Secretary and published from time to time.

18. Electrical Contractor to keep instruments in good order.

(7) All Electrical Contractors to whom Licenses have been granted shall keep all the prescribed instrument in good order.

(8) The instrument in the possession of every licensed Electrical Contractor may be inspected from time to time by the Secretary or his representatives.

19. Notice of termination of services.

If an Electrical Supervisor/Workman in the employment of a Licensed Electrical Contractor leaves his service, the termination of the service shall be notified in writing to the Secretary both by the Electrical Contractor and the Electrical Supervisor/Workman.

20. Test reports.

(9) For all electrical installation works carried out as per Rule 45 of the Indian Electricity Rules 1956, Test Reports shall be submitted by the Licensed Electrical Contractor to the Electrical Supplier concerned in the form approved by the Electrical Inspector (Rule 47 of I.E. Rules 1956).

(10) After carrying out all necessary tests of all electrical installation works, the Test Reports shall be filled up and signed by the Electrical Supervisor under whose supervision the works have been carried out. All the test results should be satisfactory and within permissible limits. The Test Reports shall be countersigned by the Licensed Electrical Contractor.

(11) The Licensed Electrical Contractors and Electrical Supervisor shall be jointly responsible for the due execution of all the electrical installation works and the

Materials used and the Electrical Supervisor shall present at the time of testing by the Electrical supplier.

21. Electrical Supervisor's Certificate.

(1) All electrical installation works are to be carried under the direct supervisor of Electrical supervision of Electrical supervisor holding a valid Certificate.

(2) Candidates for examination of Electrical Supervisor's Certificate shall be person who have

a. Have read up to class X

b. Are permanent residents of Nagaland and not below 18 years of age.

c. Have passed the examination for Electrical workman and have at least 5 years practical experience, of which not less that- years should be after passing Workman's Examination.

22. Examination for Electrical Supervisor's Certificate.

(1) A candidate for examination must apply to the Secretary in the prescribed form (Form-B) with all necessary documents and the examination fee.

(2) Candidate for examination of Electrical Supervisor's Certificate shall be examined by a written paper and by oral and practical tests. Candidates will normally be examined through the medium of English language through any other medium as may be possible for the Board to arrange.

(3) For the purpose of these regulations, all electrical installation works shall be divided in classes as shown under sub\-regulation.

(4) (4) The syllabi of the several parts of the examination are set out in Annexure – II. Candidates may appear in examination for any class of certificate; The parts to be passed to qualify for different Classes of Certificate are as below: -

Classes Compulsory	Certificate for		Parts
Class- 1	Wiring for system not exceeding 250 volts	-	1,2
Class- II	Wiring for system not exceeding 650 volts	-	1,2,3
Class- III	AC&DC Apparatus not exceeding 650 volts	-	1,4
Class- IV	Overhead lines not exceeding 650 volts	-	1,5
Class -V	Overhead lines not exceeding 33,000 volts	-	1,5,6
Class- VI	Underground cable not exceeding 650 volts	-	1,7
Class- VII	Underground cable not exceeding 33,000, volts	-	1,7,8
Class -VIII	Installations not exceeding 33,000 volts	-	1,4,5,6,7,9

23. Grant of electrical supervisor's Certificate.

(1) Every candidate who passed the examination for electrical supervisor will be granted a certificate for installation works of different class as set out in form E, which the board decides that they are competent to supervise, after paying the initial prescribe fee.

(2) The Board may also grant Electrical Supervisor's Certificate in any class commensurate with practical knowledge and experience to a candidate who holds a Degree or Diploma in Electrical Engineering without requiring him to sit for written examination, based on viva- voce, after paying the prescribed initial fee.

24. Renewal of Electrical Supervisor's Certificate.

(1) Every Electrical Supervisor's Certificate granted under these Regulations shall be renewed every year or three years at a time after paying prescribed fees shown in Annexure – 1. Any Certificate which is not renewed after expiry will become invalid from the date of expiry. Application for renewal in Form 'L' together with the Supervisor's Certificate and non- refundable prescribed fees shall be submitted to the Secretary within one month before the date of expiry of the Certificate.

Provided that if the application for renewal as aforesaid is received within twelve months from the date of the expiry of the Certificate, it may be renewed on payment of the prescribed renewal fee and the prescribed fee for the late renewal of the Certificate. The date of renewal after the expiry

will be the date on which the certificate is renewed. The date of next expiry will be one year or three years of from the date of last expiry.

(2) Electrical Supervisor's Certificate will has not been renewed within twelve months from the date of expiry will be automatically cancelled and fresh initial fee with an application in 'Form 'B" must be furnished as in case of fresh application before a new supervisor's Certificate will be granted.

(3) The Board may, at anytime cancel an Electrical Supervisor's Certificate if the person to whom the Certificate has been granted is in the opinion of the Board, not fit to hold such Certificate. For this purpose Board may take into consideration amongst others, the provision contained in Regulation 31.

25. Electrical Workman's Permits.

(1) Every Electrical Installation work is to be carried out by person(s) holding valid Electrical Workman's Permit issued by the Board.

(2) Candidate for examination of Electrical Workman's permit shall be person who-

a. Have read up to Class VII'
b. Are permanent residents of Nagaland and not below 18 years of age;
c. Have worked on wiring and electrical installations work as an apprentice for at least two years under licensed Electrical Contractors: or
d. Have completed other electrical training or practical experience in electrical installation works which is regarded satisfactory by the Board.

Provided that a candidate for a Workman's permit in the class or classes relating to high pressure installation works must be in possession of a valid permit in the corresponding class or classes respectively, pertaining to medium pressure works. Detail syllabus for Workman's examination is provided in Annexure -III.

26. EXAMINATION FOR ELECTRICAL WORKMAN'S Permit.

(1) A candidate for Electrical Workman's Permit examination must apply to the Secretary in a prescribed form (Form- C) with all necessary documents and pay the examination fee.

(2) Candidate for examination of Electrical Workman's Permit shall be examined by a written paper and by oral and practical test. Candidates will normally be examined through the medium of English language but the Board may permit a candidate to be examined through the medium as may be possible for the Board to arrange.

(3) For the purpose of these regulations, all electrical installation works shall be divided in classes as shown under regulation 26.4 below.

(4) The syllabi of the several parts of the examination are set out in Annexure-III. Candidates may appear in examinations for any class of permit. The parts to be passed to qualify for different Classes of Permit are as below: -

Classes	Permit for	Parts compulsory
Class-I	Wiring for system not exceeding 250 volts	1,2
Class-II	Wiring for system not exceeding 650 volts	1,2,3
Class- III	AC&DC Apparatus not exceeding 650	1,4
Class-IV	Overhead lines not exceeding 650 volts	1,5
Class- V	Overhead lines not exceeding 33,000 volts	1,5,6
Class-VI	Underground cable not exceeding 650 volts	1,7
Class -VII	Installation not exceeding 33,000 volts	1,7,8
Class -VIII	Installation not exceeding 33,000 volts	1,4,5,6,7,9

27. Grant of Electrical Workman's Permit.

(1) Every candidate who passed the examination for Electrical Workman's permit shall be granted a permit as set out in form F after paying the initial prescribed fee.

(2) The Board may also grant a Permit to any person who has satisfied the Board that his qualification and practical experience are such as to justify the grant of Workman's Permit without requiring him to sit for written examination, based on viva-voce after paying the prescribed initial fee.

28. Renewal of Electrical Workman's Permit.

(1) Every electrical Workman's Permit granted under these Regulation shall be renewed every year or three at a time by paying prescribed fees shown in Annexure – I. Any Permit which is not renewed after expiry will become invalid from the date of expiry. Application for renewal in Form "L" together with the Workman's permit and non – refundable prescribed fees shall be submitted to the Secretary within one month before the date of expiry of Permit.

Provided that if the application for renewal as aforesaid is received within twelve months from the date of the expiry of the permit, it may be renewed on payment of the prescribed renewal fee and the prescribed fee for the late renewal of the Permit. The date of renewal after the expiry will be the date on which the Workman's permit is renewed. The date of next expiry will be one year or three years of from the date of last expiry

.

(2) Electrical Workman's permit which has not been renewed within twelve months from the date of expiry will be automatically be cancelled and fresh initial fee with an application in Form "B" must be furnished as in case of fresh application before a new Workman's Permit will be granted.

(3) The Board may, at any time cancel an Electrical Workman's Permit if the person to whom the Permit has been granted is in the opinion of the Board m, not fit to hold such Permit. For this purpose Board may take into consideration amongst others, the provision contained in Regulation 31.

29. Grant of duplicate License, Certificate of Permit.

On being that an original License Certificate of Permit granted under these regulation has been lost or destroyed, the Secretary may, on request in writing by the application, grant a duplicate. A duplicate of License, Certificate of Permit granted under these Regulation shall be issued on payment of the prescribed fee.

30. Restriction of employment for Electrical Supervisors and Electrical Workman.

(1) A person holding Electrical Supervisor's Certificate should not be an employee of more than two different. Electrical Licensed Contractors within the same period of time.
(2) A person holding Electrical Workman's Permit should not be an employee of more than one Electrical Licensed Contractor.
(3) An Electrical Supervisor/Workman employed by Licensed Electrical Contractor should not be a regular/ work-charged/officiating/contract/muster roll employee of a Central or State Government undertaking or a regular/ full employee of any company or Firm or Agency.

31. Report of negligence.

(1) When in the opinion of Licensee or of a person for whom any electrical installation work is being or has been carried out by an electrical Contractor Licensed under these Regulation not in accordance with the Indian Electricity Rules, 1956 Licensee or Board desire to bring the facts to the notice of the Board, he shall make a report in writing to the Secretary.
(2) A report made to the Secretary under these Regulations by a person rather than a Licensee shall be accompanied by a deposit of Rs.10.00 or such larger amount as the Board may fix by special order in any case. If in the opinion of the Board, the charge contained in the report is not substantiated, the Board may direct that the deposit shall be forfeited.
(3) If any person holding an Electrical Workman's Permit or an Electrical Supervisor's Certificate or an Electrical Contractor's License is found by the board to be guilty of negligence, misrepresentation , or deliberate suppression of facts, incompetence or breach of these Regulation or of the condition of his Permit/ Certificate/ License, the Board may suspend or cancel his Permit, Certificate or License. The decision of the Board in this regard shall be final.
(4) Any mutilation or defacement, or any unauthorized entry in any Electrical Workman's Permit of Electrical Supervisor's Certificates or Contractor's License, shall make the Permit, Certificate or

License, as the case may be liable to cancellation by the Board. The decision of the Board in this regard shall be final.

32. Electrical License to obtain Contractor's License.

No electrical installation work shall be carried out by a person licensed under Part- IV of the Electricity Act 2003 or an Electrical Board or a State Government Department responsible for distribution of energy, in a premise beyond the point of commencement of supply unless he has obtained an Electrical Contractor's License and employs staff of Electrical Supervisors and Electrical Workman in conformity with this regulations.

33. Cancellation of Contractor's License granted to Electrical Licensee.

An Electrical license granted under these Regulations to a person License under Part-IV of the Electricity Act 2003 shall be liable to be withdrawn or cancelled if in the opinion of the Board preferential treatment in unfair completion with local contractors is given to prospective consumers.

34. Examinations.

(1) Examination shall be held by the Board at such place and on such date as may be notified by the Secretary from time to time in Local Newspapers.

(2) Every examination shall be of such nature as to test the practical knowledge of the candidate and to ascertain his competency and the adequacy of his practical experience to the satisfaction of the /board for the purpose of granting Permit and Certificate under these Regulations.

(3) Every examination shall be conducted in place where the candidate's knowledge can be practically tested and each candidate shall be tested viva-voce.

35. Application for Workman's permit or Supervisor's Certificate Examinations.

(1)Every candidate for admission to an examination shall make as application in the 'Form-B" for Supervisor's Certificate or 'Form-C' for Workman's Permit. The candidate shall forward the application duly filled in to the Secretary not less than 10 days before the date fixed for examination together with:-

a) Testimonial of good character.

b) Certificate from Contractor in 'Form-G' appended to these Regulations

c) Electrical Workman's Permit, if any

d) Certificated of technical qualification

e) The prescribed fee for each examination

f) Two copies of recent passport sized photographs, all of which shall bear the applicant's signature on the back.

(2)The fee paid by a candidate whose application for admission to an examination has been accepted, shall not be refunded on any account. Provided that the Board may allow the candidate who was unable to appear in the examination to appear in the next examination without furthur payment. If the candidate fails to appear in the next examination, the fees paid will be forfeited.

36. Pass Marks.

Electrical Supervisor's Certificate and Electrical Workman's Permit will not be granted unless a candidate secures 50% of total marks each in written examination also have to secure at least 50% marks in viva-voce.

37. Amendment of Annexure.

Schedule of fees contained in Annexure- 1 , Syllabus for Electrical Supervisor's Certificate examination contained in Annexure –II , Syllabus for Electrical Workman's Permit examination contained in Annexure-III and forms contained in Annexure may be amended in viva-voce.

38. General provisions for Appeals.

(1) An appeal against an order made under these regulations shall lie to the State Government.

(2) Every appeal made under sub regulation(1) shall be in writing, shall be accompanied by a copy of the order appealed against and shall be presented within 3 months of the date on which such order has been made.

39. Repeal and saving.

On and from the commencement of these Regulations, Government notification if any, issued from time to time in connection with Licensing Regulation shall stand repealed provided that any order made or anything done or any action taken under the notification so repealed shall be deemed to have been done or taken under the corresponding provision of these regulations.

ANNEXURE-1
(See Regulation 12)
SCHEDULED OF FEES

The following fees shall be under the Nagaland electrical Licensing Regulation, Fees paid shall not be refunded on any account.

1. Fees for Electrical Contractor's License:

Class of Contractors	Initial fee	Renewal fee	Late renewal fee per month	Duplicate License fees	Increase of scope fees	Reg. Fee
Class-1	Rs.2000.00	Rs.1500.00	Rs.100.00	Rs.250.00	Rs.250.00	Rs.10000.00
Class- II	Rs.1500.00	Rs.1000.00	Rs.100.00	Rs.250.00	Rs.250.00	Rs.6000.00

2. **Fees for Electrical Supervisor's Certificate.**

Initial Fee	Examination fee	Renewal fee	Late renewal fee per month	Duplicate License fees	Reg. Fee
Rs.200.00	**Rs100.00**	**Rs.500.00**	**Rs.50.00**	**Rs.200.00**	**Rs2000.00**

3. **Fees for Electrical Workman's Permit:**

Initial fee	Examination fee	Renewal fee	Last renewal fees per month	Duplicate License fee	Reg. fee
Rs150.00	**Rs.50.00**	**Rs.200.00**	**Rs.30.00**	**Rs.200.00**	**Rs.500.00**

NOTE:

i. An Electrical Contractor holding a valid license granted under these Regulations and who desire to increase the scope of his License shall submit a fresh application in 'Form A'.

ii. Should a passed candidate desire to qualify, subsequently for a class other than that for which a certificate or permit has been granted, he will be permitted to appear in the examination for the parts concerned. Similarly, those who apply for exemption from examination and who have been granted a Permit/ Certificate for in class or more classes may apply with the requisite fee for examination in any other additional class or classes.

iii. All fees levied under these regulations shall be paid to the secretary through treasury under head of account "0043"- Taxes and Duties on Electricity.

iv. Printed copies of these Regulations may be obtained from the Secretary, on payment of the cost.

v. Forms of Application may be obtained from the Secretary.

ANNEXURE-II

[*See sub-regulation (4) OF regulation 22*]
SYLLABUS FOR ELECTRICAL SUPERVISOR'S CERTIFICATE EXAMINATION
PART- 1
Elementary Principles.

1. Principles of Electricity

Electric Pressure, current and resistance.
Ohm's Law; Kirchhoff's Law: calculation of colt age drop;
Series and parallel circuits.
Units of voltage, current, resistance, power and energy.
Relation between Electrical power unit (KW) and mechanical power unit (HP).
Induction, capacitance, reactance and impedance.

2. Electromagnetism:

Flux, Flux density, Magnetic field strength, Permiability.
Magnetic circuits, Reluctance, calculation of MMF.
Effect of air gap, Hysteresis loop of magnetic materials.
Electromagnetic Inductance, production EMF.
Fleming's Hand Rule, Faraday's Law's, Lenz's Law.
Self and mutual Inductance, coupling coefficient.
Magnetic properties of materials, Electro magnets and their application.

3. Material:

Conductor's, Non-conductors and insulators.
Insulating materials and their utilities.
Transformers oil, effect of heat and moisture on insulation.
Dielectrics, dielectric strength, permittivity.
Different types if wires, cables, switches, circuit breakers, fuses.

4. Generation of Electricity:

Methods of generation of electric power.
Block schematic layout of generation stations.
Hydro- electric, Thermal and Nuclear stations.
Non-conventional Energy sources, Solar, Wind power.

5. Rules and standards:

Working knowledge of

1) Electricity Act, 2003.
2) Indian Electrical Rules, 1956.
3) Nagaland Electrical Licensing Regulations.
4) Terms & Conditions of supply of electrical energy.

PART-2
WIRING FOR SYAYTEM NOT EXCEEDING 250 VOLTS

1. Domestic Installation:

Various types of LT wiring- Cleat, Casing and Capping, Metal sheathed, conduit.
Types of wires, cables and their standard sizes with current carrying capacities.
Estimates of materials and cost of different types of installations.
Load survey, connected load, maximum demand.
Main switch, distribution broads, Location of switch boards.
Distribution layout and circuit diagram.
Selection of fuses, M.C.C.B, P.M.C.C.B, P.C.C.B.

2. Illumination:

Characteristics of different types of lamps.
Incandescent lamps, Fluorescent lamps.
Vapour lamps, HPSV,LPSV, Energy efficient lamps.
Photomatic units and their measurements.

3. Earthing:

Resistivity of soil and their measurements.
Computation of Earth resistance.
Different materials used for earthing conductor.
Corrosion factors, determination of sizes of earth bus.
Plate, pipe and strip earthing.

4. Installation testing and measurements:

Insulation tester, Earth tester, Ammeter, Voltmeter, Wattmeter.
Recommended values of insulation resistance, earth resistance.
Polarity test, Continuity test, Insulation test, Earth resistance test.
Detection and location of faults.

Part-3
WIRING FOR SYSTEM NOT EXCEEDING 650 VOLTS

1. A.C. Circuits:

Alternating current fundamentals.
Generation of alternating currents.
Different waves forms, frequency period, average value, rms value and forms factor.
Phasor representation of alternating quantities, rectangular, polar and exponential forms.
Analysis of simple AC circuits with resistance, inductance and capacitance.
Concept of impedance and admittance, phasor representation.
Power and power factor in AC circuits.
Active and reactive components.
Solution of RL, RC and RLC circuits, Series, Parallel and
Series- parallel circuits.

2. Three phase system:

Star and Delta connection.
Relationship between phase and line values of voltage and current.
Phasor representation, solution of balanced and unbalanced three phase circuits.

3. Symbols:

List of symbols.
Preparation of electrical wiring diagrams and electrical circuits diagrams
Reading of electrical circuits diagrams.

4. Tariffs:

Prevailing schedule of tariff.
Different types for LT consumers.
Calculations relating to cost of energy.

5. Special Type of Equipments:

X-Ray, Neon sign, Lift, Cinema Installations:
-Relevant Rules, Circuitry, Safety Precautions, Earthing, Fire Precaution measures for the above installations.
-IS 4878/91- Code of practice for Cinema Installations.

PART-4
AC & DC APPARATUS NOT EXCEEDING 650 V

1. AC Generators (Alternators):

Basic principles, detasils construction and essential components.

Voltage regulation, metods of voltage control and frequency control.

Syncronising of alternators, Syncroscope, bright lamp and dark lamp method.

Associated switch board and its accessories.

2. DC Generators:

Basic principle, detail construction and essential components.

Shunt, series and compound generators and their characteristics.

Commutators and their maintenance.

Carbon brushes- their adjustments and care

Voltage regulation, Parallel operation.

Associated switch board and its accessories.

3. Batteries:

Primary cell, dry cell, Lead and Nickel- Cadmium batteries.

Construction, Characteristics, charging and discharging.

Specification, maintenance, storage of batteries, use of hydrometers.

Battery charging equipments and their operations.

4. AC Motors:

Three phase induction motors, construction, principle of operation.

Speed, Frequency, Slip , star-delta starting.

Single phase induction motors, construction, different methods of starting.

Squirrel cage induction motors, slip ring induction motors.

Synchronous motors, general principle of operation, uses, installation, methods of starting and speed control and reversal of direction. Commutor motors.

5. DC Motors:

Motor principles, series, shunt and compound wound type motors, their uses, installations, methods of starting, speed control, reversal of directions.

6. Control Gears:

Various types of switches, fuses, starters, controllers, regulators- their uses and installations.
Earthing of Motors and Generators.

7. Conversion:

Principle of Operation of motors and Generators.
Rotary or Synchronous converters, Mercury- Arc rectifiers.
Inverters, Thyristors and other static device.
Filtering –Half Wave, Full Wave, Bridge rectifiers.

Part-5
OVERHEAD LINES NOT EXCEEDING 650 VOLTS.

1. Construction of Lines:

Construction of low and medium Voltage lines.
Size of conductor, length of span, sags, strength of poles, different types of [poles.
Spacing of Conductors, cross arms, effects of temperature, wind pressure, ice and snow, Tension wire, insulators, brackets, stays, struts, guard wires, protective devises.
Earthing, lighting arrestors and lightning conductors and their testing.

2. Operation:

Testing and fault location.

Methods of working on overhead lines.

Inspection of distribution lines.

Three wire and four wire systems.

Power in three phase systems. Phase sequence.

Measurement of active and reactive power in single phased and three systems.

3. Clearances:

Statutory clearance of live parts from ground and buildings.

Sectional clearance, equipment clearance

Clearances of switch boards

Oil containing equipments

Indoor and outdoor equipment clearances.

PART-6
OVERHEAD LINES NOT EXCEEDING,33,000 VOLTS

1. Construction of Lines:

Construction of High Voltage lines.
Size of conductor with current capacity.
Length of span, sags, strength of poles, different types of poles.
Design of different types of towers and their construction, erecting and stringing of conductor.
Spacing of conductors, cross arms, effects of temperature, wind pressure, ice and snow.
Tension of wire, insulators, vibration dampers, brackets, stays, struts, guard wires, protective devises.
Earthing, lighting arrestors and lighting conductors and their testing

2. Clearances:

Statutory clearances of live parts from ground and buildings.

Sectional clearances, equipments clearances.

Oil containing equipments.

Indoor and outdoor equipment clearances.

3. Operation:

Methods of working on overhead lines.

Equipments used for replacement of insulators, their ratings.

Methods of replacement of Insulators.

Inspection of Transmission lines.

Line constants, determination of voltage drop.

Voltage Regulations.

Effect of power factor and their improvements.

4. Transmission:

Bulk Transmission of electric power.

Typical power transmission scheme.

Need for high transmission voltage.

Primary and secondary transmission systems.

PART- 7
UNDERGROUND CABLES FOR VOLTAGE UPTO 650 VOLTS

Basic knowledge of different types of cables – PVC, APVC. General practical knowledge of lying Cables direct in ground, in trough and pipes. Handling, bending, jointing, plumbing.

Underground and above ground junction boxes.

Distribution boxes and pillars.

Joint box compounds, melting of compounds, filling boxes with compounds.

PART-8
UNDERGROUND CABLES FOR VOLTAGE UPTO 33,000 VOLTS

Basic knowledge of different types of cables- AYFY, XLPE, oil filled, gas filled and any other types.

Testing and fault location, Murray Varley loop tests.

Current ratings- short time ratings and continuous rating.

Derating factors of cables.

Calculation of voltage drop.

Aluminum and copper cable jointing- types, precautions, termination.

I.S Regulations regarding cables.

PART -9
INSTALLATIONS NOT EXCEEDING 33,000 VOLTS

1. **Switch Gear and Protection:**

Knowledge of various types of switches, proactive fuses.

Circuits breakers- OCB, VCB, ACB, MCCB, MCB, SF6 Breakers

Thermal and magnetic release Relays, Buchholtz Relays, IDMT, Instantaneous types.

Over current, earth fault and earth leakage relays – time and current settings.

HRC fuses, paper barrel and HV fuse- use and construction.

Lighting Arresters, Isolators, Bus bar, D.O. cum Gang Switch, Hook sticks.

Earthing of Sub- Stations.

2. Transformers:

Transformers- construction, use and maintenance.

Voltage and current relations.

Losses and efficiency. Parallel operation of three phase transformers.

Three phase transformer connections- star/Star, Delta/ Delta, Star/Delta, Delta/Star.

Auto transformer, Transformer tapping's.

3. Instrument Transformers:

Current transformers, CT specifications and error factors.

Potential Transformer, CVTs.

4. Selection of Equipments:

Different types of breakers- OCB, VCB, ACB, MCCB , MCB, SF6 Breakers.

Contractors,

Breaking capacity, Making Capacity, Selection of Breakers.

Selection of Switches, Short tine and continuous ratings.

Power factor correction by capacitors. Shunt Reactors.

5. Connection:

Methods of connection of special type transformers, Furnace transformers,

Welding transformers, Rectifier transformers.

Determination of capacity, Load segregation, Double bus system.

Change over arrangements, Preparation of schematic diagram of Sub- Station.

6. Energy measurements:

Measurement of power , /watt meters, Energy meters, Trivector meters.

Computation of energy.

7. Clearance:

Statutory clearance of live parts from ground.

Sectional clearance, equipment clearances.

Clearance of Oil containing equipments.

ANNEXURE – III
[see sub- regulation (4) of Regulation 26]
SYLLABUS FOR ELECTRICAL WORKMEN'S PERMIT EXAMINATIONS.

PART-1
Elementary Principles

1. Principles or Electricity:

Concept of electric voltage, current, resistance, inductance, capacitance, reaction, impedance, power, energy and power- factor.
Comparison between series and parallel connection of loads.
Simple calculation of current, power, energy and voltage drop.
Units of voltage, current, resistance, power and energy.

2. Materials:

Properties of Conductors, Non- conductors and insulators.
Properties of copper and aluminum conductors.
Insulating materials and their utilities such as PVC, rubber and porcelain.
Different types of wires, cables, switches, circuits breakers, fuses.

3. Drawings and circuits:

Reading of schematic drawing for internal wiring, power wiring and control circuits.
Standards symbols of various types of electrical equipments.
Wireman tools and accessories.

4. Safety measures:

Safety measures to be observed while working.
Device used for wireman safety.
Actions to be taken in case of electrical accidents.

5. Rules and Standards:

Knowledge of prevailing electric tariffs.
Procedure for availing electric supply to consumers.
Submission of test reports/completion reports.
Knowledge of Indian Electricity Rules, 1956-Rulrd 36 to 46, 60, 61, 61A,71 & 73.
Knowledge of Nagaland electrical Licensing regulations.
Knowledge of Terms & Conditions of supply of electrical energy.

PART- 2
WIRING FOR SYSTEM EXCEEDING 250 VOLTS.

1. Domestic Installations:

Various types of LT wiring- Cleat, Casing and Capping, metal sheated, conduit.
Types of wires, cables and their standard sizes with current carrying capacities.
Main switch board, distribution boards, Location and clearance of switch boards.
Distribution layout and circuit diagram.
Different types of fittings, and switches: use to test lamp.
Connections and diagram of distribution board, ceiling roses, plugs and sockets,
Lamp holders- incandescent and fluorescent lamps, Fans with regulators, two way switches.

2. Protection;

Overload protection, Earth leakage protection

Permissible load.

Selection of fuses, Rewirable and HRC types.

Circuits Breakers, M.C.C.B, P.M.C.C.B, P.C.C.B.

3. Illumination:

Characteristic of different types of lamps.

Incandescent lamps, Fluorescent lamps.

Compact Fluorescent lamps.

4. Earthing:

Earthing of system.

Necessity of earthing

Types of earthing.

Selection and location of earthing.

Type and size of earthing conductor.

5. Installation testing and measurements:

Insulation tester, Earth tester.

Recommended values of insulation resistance, earth resistance.

Polarity test, continuity test, Earth resistance test.

PART-3
WIRING FOR SYSTEM NOT EXCEEDING 650 VOLTS

1. Three phase systems;

Relationship between phase and line values of voltage and current.

Wiring of three phase system. Star and Delta Connection.

Selection and identification of different cables and conductor.

Protective system used in internal wiring.

Use of bell and battery for sorting out circuits.

Methods of testing polarity and phasing out circuits.

2. Jointing and Soldering:

Making straight and T joints in solid and stranded conductors and soldering them.

Soldering plugs and sockets, wires and cables and insulating them.

3. Symbols:

List of symbols.

Preparation of simple electrical wiring diagrams and electrical circuit diagrams.

Reading of simple electrical circuit diagrams.

4. Tariffs:

Knowledge of prevailing electric tariffs.

Different types for LT consumers.

Simple calculations relating to coast of energy.

5. Special type of Equipments:

X-Ray, Neon- Sign, lift, Cinema Installation.

-Circuitry, Safety Precautions Earthing, Fire Precaution measures for the above installations.

Wiring of special equipments like UPS, Invertors, Stand by for computers, etc.

Essential factor for wiring High Rise Buildings.

PART- 4
AC& DC APPARATUS NOT EXCEEDING 650 V

1. AC& DC generators:

Basic principle, construction and components.

Commutators and their maintenance.

Carbon brushes-their adjustment and care.

2. Batteries:

Primary cell, Dry cell, Lead acid and Nickel- Cadmium batteries.

Construction, charging and discharging.

Maintenance, storage of batteries, Use of hydrometers.

3. AC Motors:

Three phase induction motors, construction principle of operation.

Starters- Direct on line and star- delta starting.

Single phase induction motors, construction.

Different types of Fan regulators- resistant and electronic types.

Principle of operation of fractional Horse Power motors used in appliances such as Mixies, Washing Machine, etc.

4. DC Motors:

Motor principle, their uses, installation, methods of starting, reversal of directions.

PART-5
OVERHEAD LINES NOT EXCEEDING 650 VOLTS

1. Construction of Lines:

Construction of low and medium Voltage lines. Use of safety and protective device.
Size of conductor, length of span, sags.
Different types of poles, Pole concreting and erection of poles.
Spacing of conductors, fixing of cross arms, jointing and binding of conductors.
Fitting of different types of insulators, brackets, stays, struts, guard wires.
Earthing of overhead lines, fitting of lighting arrestors and lighting conductors and their importance. Service connections.

2. Operation:

Methods of working on overhead lines.

Inspection of distribution lines.

Three wire and four wire systems.

3. Clearances:

Statutory clearance of live parts from ground and buildings.

Sectional clearance, equipment clearances.

Clearances of switch boards.

PART-6
OVERHEAD LINES NOT EXCEEDING 33,000 VOLTS.

1. Construction of Lines.

Construction of high Voltage Line. Use of safety and protective devices.
Sizes of conductor, length of span, sags.
Different types of poles, strength of poles, pole concreting and erection of poles.
Spacing of conductors, Tension of wire
Fitting of cross arms, fitting of insulators, vibration dampers, brackets.
Fitting of stays, struts, guard wires.
Earthing, fitting of lighting arrestors and lighting conductors and their testing.

2. Clearances:

Statutory clearance of live parts from ground and buildings
Sectional clearance of Oil containing equipments.
Clearance of Oil containing equipments.

3. Operation:

Methods of working on overhead lines.
Equipment used for replacement of insulators, their ratings.
Methods of replacement of Insulator.

4. Transmission:

Bulk Transmission of electric power.
Typical power transmission scheme.
Need for high transmission voltage.

PART-7
UNDERGROUND CABLE FOR VOLTAGES UPTO 650 VOLTS.

Basic knowledge of different types of cables- PVC, APVC.

General practical knowledge of laying Cables direct in ground, in troughs and pipes.

Handling, bending, jointing, plumbing.

Underground and above ground junction.

Distribution boxes and pillars

Joint box compounds, melting of compounds, filling boxes with compounds.

PART-8
UNDERGROUND CABLES FOR VOLTAGE UPTP 33,000 VOLTS

Basic knowledge of different types of cables – AYFY, XLPE, oil filled, gas filled and any other types.

Current ratings- short time rating and continuous rating.

Calculation of voltage drop.

Aluminum and copper cable jointing- types, precautions, termination.

I.S. Regulation regarding cables.

PART -9
INSTALLATION NOT EXCEEDING 33,000 VOLTS

1. Switch Gear and Protection:

Knowledge of various types of switches, protective fuses.

Circuit breakers- OCB, VCB, ACB, MCCB, SF6 Breakers.

Over current, earth fault and earth leakage relays and their settings.

HRC fuses, paper barrel and fuse- use and construction.

Lightning Arresters Isolators Bus bar, D.O cum Gang Switch, Hook Sticks.

Earthing of Sub- Stations.

2. Transformers:

Transformers- construction, use and maintenance.

Voltage and current relations.

Three phase transformer connections- Star/ Star, Delta/Delta, Star/ Delta/Star.

Transformer tappings.

3. Instrument Transformers:

Current transformers, CT specifications

Potential Transformers, CVTs.

4. Energy Measurements:

Measurement of Power,

Watt meters, Energy meters, Trivector meters

Computation of energy.

5. Clearances:

Statutory clearances of live parts from ground,

Sectional clearances, equipment clearances.

Clearances of Oil containing equipments.

ANNEXURE-IV

FORMS

FORM A

[See Regulation 12]

Application for Electrical Contractor's License

1	Name of firm in which an Electrical Contractor's License is applied	: ….....
2	Business address with phone number	: ….....
3	Full name of the proprietor (in capital letter)	: ….....
4	Home address with phone number	: ….....
5	Date of Birth	: Day……. Month …..... Year.....
6	Class of License applied for (Class- I or II)	: ….....
7	Previous License No., if any	: ….....

8 Details of Electrical Supervisor holding valid Certificate in the sole and whole time employ of the applicant

: Name:.....

: Certificate Number:….....

: Date of expiry:….....

9 Details of Electrical Workman holding valid permit in the sole and whole time employee of the applicant

: Name:.....

: Permit Number:….....

: Date of expiry:….....

10 Initial Fee : Rs. 2,000.00 for Class-1
Rs, 1,500 for Class-II

11 Instruments in my possession are as follows: -

SI No	Name of instrument	Maker's Name	Serial Number	Remarks
1	2	3	4	5

I …… hereby declare that the particulars stated above are correct to the best of my knowledge. I fully understand the Terms and Conditions under which an Electrical Contractor's License is granted, a breach of which will render the License liable to cancellation.

Date.....

Signature

Name: .....

Note: 1) The applicant shall submit proof of address for which Electricity Bill, Telephone Bill, Bank Pass Book or Ration Card will be acceptable.

2) Any person who makes or assist in making false representation for the purpose of obtaining an Electrical Contractor's License shall render himself liable to be prosecuted.

3) Two copies of recent passport size photographs of the applicant should accompany the application.

DECLARATION BY ELECTRICAL SUPERVISOR

This is to declare that I (name in capital letters) …….. holding valid electrical Supervisor's Certificate No..... is not a regular/work-charge/officiating/contract/muster roll employee of any Government Department/Undertaking or a regular or full time employee of any company or firm.

I am willing to work under (name of firm) M/s ……... as an Electrical Supervisor.

Date.....

Signature

Full Name: .....

DECLARATION BY ELECTRICALWORKMAN

This is to declare that I (Name in capital letters) …… holding valid Electrical Workman Permit No ……. is not a regular/work-charged/officiating/contract/muster roll employee of any Government Department/Undertaking or a regular or full time employee of any company or firm.

I am willing to work under (name of firm) M/s ……..... as an Electrical Workman.

Date.....

Signature

Full Name: .....

FORM B

[See sub-regulation (1) of Regulation 22]

Application For Electrical Supervisor's Certificate

Application For Electrical Supervisor's Certificate

1. Full name of the applicant (in capital letters): .....
2. Father's name : .....
3. Date of birth Dte..... .. Mnth ..... Year .....
4. Permanent address in full with phone no. : .....
   : .....
5. Present address in full with phone no. : .....
   : .....
6. Details of technical qualifications : .....

   (attested copy of certificate to be enclosed)
7. Fees payable i) Initial fee : Rs 200.00
   ii) Examination fee : Rs 100.00 for each class

I hereby declare that the particulars stated above are correct and true to the best of my knowledge and believe.

Date : ..... Signature of applicant

Note :

1) Attested copy of certificate to be submitted with the application.

2) Original copy of the certificate should be produced at the time of interview.

3) Two copies of recent passport size photograph of the applicant with name and signature of the applicant on the back should accompany the application.

4) Any person making false statement shall render himself liable for prosecution.

INCOMPLETE APPLICATION WILL BE REJECTED.

FORM C

[see sub-regulation (1) of Regulation 26]

Application For Electrical Workman's Permit

Application For Electrical Workman's Permit

1. Full name of the applicant (in capital letters): .....
2. Father's name : .....
3. Date of birth Dte..... Mnth ..... Year .....
4. Permanent address in full with phone no. : .....
   : .....
5. Present address in full with phone no. : .....
   : .....
6. Details of technical qualifications : .....

   (attested copy of certificate to be enclosed)
7. Fees payable i) Initial fee : Rs 150.00
   ii) Examination fee : Rs 50.00 for each class

I hereby declare that the particulars stated above are correct and true to the best of my knowledge and believe.

Date : ..... Signature of applicant

Note :

1) Attested copy of certificate to be submitted with the application.

2) Original copy of the certificate should be produced at the time of interview.

3) Two copies of recent passport size photograph of the applicant with name and signature of the applicant on the back should accompany the application.

4) Any person making false statement shall render himself liable for prosecution.

INCOMPLETE APPLICATION WILLBE REJECTED.

FORM D

(See regulation 13)

Sample of Electrical Contractor's License

Front Page

GOVERNMENT OF NAGALAND

NAGALAND ELECTRICAL LICENSING BOARD

ELECTRICAL CONTRACTOR'S LICENCE

No……./C/200

Photo

Firm :……...

Proprietor :……..

Date of birth :……..

Address :…….

Valid upto : ……/……../200....

Signature of Proprietor :……..

Back Page

CLASS AUTHORISED TO WORK

1. Wiring for system not exceeding 250 V
2. AC &DC apparatus not exceeding 650 V
3. Underground cable not exceeding 650 V
4. Overhead lines not exceeding 650 V

Secretary Chairman

NAGALAND ELECTRICAL LICENSING BOARD

FORM E

[See-sub- regulation (1) of regulation 27]

Sample of Electrical Supervisor's Certificate

Front Page

GOVERNMENT OF NAGALAND

NAGALAND ELECTRICAL LICENSING BOARD

ELECTRICAL SUPERVISOR'S CERTIFICATE

No……./S/200

Firm :……...

Proprietor :……..

Date of birth :……..

Address :…….

Valid upto : ……/……../200....

Signature of Certificate Holder :……..

Back Page

CLASS AUTHORISED TO WORK

1. Wiring for system not exceeding 250 V
2. AC &DC apparatus not exceeding 650 V
3. Underground cable not exceeding 650 V
4. Overhead lines not exceeding 650 V

Secretary Chairman

NAGALAND ELECTRICAL LICENSING BOARD

FORM F

[See-sub- regulation (1) of regulation 27]

Sample of Electrical Workman's Permit

Front Page

GOVERNMENT OF NAGALAND

NAGALAND ELECTRICAL LICENSING BOARD

ELECTRICAL WORKMAN'S PERMIT

No……./W/200

Firm :……...

Proprietor :……..

Date of birth :……..

Address :…….

Valid upto : ……/……../200....

Signature of Permit Holder :……..

Back Page

CLASS AUTHORISED TO WORK

1. Wiring for system not exceeding 250 V
2. AC &DC apparatus not exceeding 650 V
3. Underground cable not exceeding 650 V
4. Overhead lines not exceeding 650 V

Secretary Chairman

NAGALAND ELECTRICAL LICENSING BOARD

FORM G

[See clause (b) of sub- regulation (1) of Regulation 35]

Certificate to be granted to electrical staff for admission to Electrical Workman's and Electrical Supervisor’s examination.

1. Name of employee (in capital letters) :

2. Date of employment :

3. Date of discharge, if discharged :

4. Nature of work in which engaged :

5. Skill in the work in which engaged :

6. Conduct :

7. General Remarks :

I hereby declare that the particulars stated above are correct and true to the best of my knowledge.

Date: .....

Signature of Employer/Licensed Electrical Contractor's

SEAL

Note:

1) This certificate should be granted only to persons who are or have been actually employed on electrical wiring and installation works and whose names are entered in the register of wiring staff in form ‘H’ maintained by every Licensed Electrical Contractor.

2) Issue of false certificate will render the Licensed Electrical Contractor and the person concerned liable for action against them.

3) The employer or the Licensed Electrical Contractor shall, if required by the Secretary, be responsible for producing documentary evidence regarding the applicant’s employment.

FORM H

[See clause (a) of Regulation 16]

Details of Electrical Supervisors, Electrical Workmen and Apprentices

Name of Contractor :

Licence no. :

Period from dt ...../...../..... to dt ...../...../.....

Sl No.	Name of employee	Permit/Certificate Number if any	Date of Employment	Date of discharge	Remarks
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Place : .....

Date : ...../...../..... Signature of contractor with seal

FORM I

[See clause (b) of Regulation 16]

RETURN OF WORKS DONE

Name of contractor :

License no :

Period from dt...../……/……. To dt ...../……/……

SL No.	Name of work with Address/location	Name of supervisor with certificate no	Name of workman with permit no.	Date of completion	Total Load	Test Report submitted to
1	2	3	4	5	6	7

Place :……

Date : ……/……./……. Signature of contractor with seal

FORM J

[See clause (c) of Regulation 16]

NOTICE BEFORE COMMENCEMENT OF WORK

Work Sl. No..... Date: .....

1. Name of Contractor : .....
2. License Number : .....
3. Details of work to be done : .....
   (Attach electrical drawing) .....
   .....
   .....
4. Full address where work is to be done : .....
   .....
   .....
   .....
5. Tentative date of starting the work : .....
6. Expected date of completion of the work : .....
7. Name of Supervisor with Certificate no. : .....
8. Name of Workman with Permit no. : .....

Date : ...../...../..... Signature of contractor with seal

Note : A copy of this form for each work shall be submitted to the following :

1) Concerned Sub-Divisional Officer
2) Concerned Electrical Inspector
3) Secretary, MELB

FORM K

[See sub-regulation (1) of Regulation 15]

APPLICATION FOR RENEWAL OF ELECTRICAL CONTRACTOR'S LICENCE

1. Name of the Applicant (in capital letters) : .....

2. Detail Address with phone number : .....

.....

3. Name of Firm : .....

4. Licence Number : .....

5. Date of Expiry : Dt...../...../.....

6. Name of Supervisor with Certificate no. : .....

.....

7. Name of Workman with Permit no. : 1) .....

.....

: 2) .....

.....

8. Renewal fee : Rs. 1500.00 for Class - I

Rs. 1000.00 for Class – II

9. Late Renewal fee, if any : Rs. 100 per month

10. Enclosure : 1) Form H-List of employee

2) Form I- Return of work done

3) List of Form J Submitted

Date : ...../...../..... Signature of contractor with seal

FORM L

[See sub-regulation (1) of Regulation 24]

APPLICATION FOR RENEWAL OF SUPERVISOR'S CERTIFICATE

&

WORKMAN'S PERMIT

1. Name of Applicant (in capital letters) : .....

.....

2. Detail Address with phone number : .....

.....

3. Certificate/Permit number : .....

4. Date of Expiry : Dt ...../...../.....

5. Present occupation with address : .....

.....

.....

6. Renewal fee : Rs. 500.00 for Supervisor

Rs. 200.00 for Workman

7. Late Renewal fee, if any : Rs. .....

a) @Rs. 50 per month for Supervisor.

b) @Rs. 30 per month for Workman.

Date : ...../...../..... Signature of contractor with seal

Form:CEIN/TECH-1.

INSPECTOR OF ELECTRICITY

GOVERNMENT OF NAGALAND

TEST REPORT FOR CHARGINF OF OVERHEAD LINE REQUIRED TO THIS PURPOSE OFACCORDING APPROVL UNDER RULE 63 OF THE INDIAN ELECTRICITY RULE, 1956

NOTE:

1. No HV/EHV, line or equipment shall be energized without written approval from the inspectorate of Electricity.
2. the Electrical Inspector may require certain additional test, to be carried out before authorizing the supplier to commence power supply
3. this report shall be submitted in duplicate.

****

1.	General information about the line	
	1.1 Voltage of line	:
	1.2 Location	:
	1.3 From	:
	1.4 Purpose for which the line is constructed	:
	1.5 Length of line	:
	1.6 Quantum of power proposed to be transmitted (Rule 85)	:
2.	Type of support used and materials	:
3.	Type and size of conductor used (Rule 74)	:
4.	Total Nos of supports	:
5.	Span of line	:
	Average	:
	Maximum	:
6.	Type of insulator used	:

7.	Type of cross arms used with size	:
8.	Clearance from ground to the lowest conductor (Rule 77)	
	8.1 Across a street	:
	8.2 Along a street	:
	8.3 Elsewhere	:
9.	Clearance from nearby building, if any (Rule- 80)	:
	9.1 Minimum, vertical clearance above highest part of such building	:
	9.2 minimum horizontal clearance between nearest conductor & any part of such building	:
	9.3 If proper guarding provided in case of 9.1 above	:
10.	Where conductor forming parts of system of different voltage are erected on the same support, has adequate provision been made to guard against the danger from the lower voltage system being charged above the normal working voltage by leaking from or contact with higher voltage system ? (Rule 8.1)	:
11.	Where overhead lines cross or are in proximity of each other, have they been suitably protected to guard against possibility of their coming into contact with each other (Rule 87)	:
	11.1 Mention the voltage of the other line in the vicinity	:
	11.2 what are the minimum clearance between such lines	:
	b) Horizontal	
	c) Vertical	
	11.3 Has guard been provided	:
	11.4 In case two lines are crossing, what is the angle of crossing	:
12.	Where an overhead line is crossing or is in the proximity of any telecommunication line, has the overhead line protected in the manner laid down in the code of practice of	:

Power and Telecommunication co-ordination committee (Rule 87)

12.1 Whether necessary clearance has been received from P.T.C.C.? (A copy of such approval to be enclosed) :

13. Insulation resistance of the line :

13.1 Phase to earth (a)(b) (c)

13.2 Phase to Phase (a) (b) (c)

13.3 Mention voltage of insulation tester used

14. What is the type and size of guard wire used? (Details of earthing is to be furnished in the Annexure-1) :

15. If all mental support of overhead line and metallic fittings attached thereto are permanently & efficiently earthed (Rule 90) :

15.1 If continuous earth wire is provided :

15.2 If so, at what intervals is earth wire earthed :

15.3 If on earth wire is used, whether metallic support of all individual place are earthed? (Details of earthing is to be furnished in the Annexure) :

16. If stay wires are permanently earthed (Rule 90) :

Guy insulators are used :

Mention the minimum height at which guy insulator is used

17. Has the overhead line been suitably protected with device for rendering the line electricity harmless in case it breaks (Rule 91)? :

17.1 Give detail of such device used :

(a) Make :

(b) Specifications :

(c) Type of protection provided :

(d) Normal setting :

18.	Whether anti-climbing devices has been provided for each support (Rule 91)?	:
19.	Has the overhead line been provided with efficient means for diverting electrical surge due to lightning (Rule 92)	:
	19.1 What type of lightning arrester used	:
	19.2 Location for lightning arrester	:
	19.3 Has the lightning arrester been efficiently earthed to an independent electrode/System?	:
	19.4 Number of electrodes used for directly earthing the lightning arrester system (Details of earthing is to be furnished in the Annexure-I	:
	19.5 Is the lightning arrester connected to any other earthing system?	:
20.	Has any gang operated switch been provided anywhere?	:
	20.1 Indicate location(s) of the same	:
	20.2 Mention rating of each gang switches	:
	20.3 If all gang switches efficiently earthed? (Details of earthing to be provided in Annexure I)	:
	20.4 State whether an insulated or efficiently earthed platform for the operator is provided? (Details of earthing, if any, is to be provided in Annexure-I)	:
21.	Have caution notice boards been provided at each support (Rule 35)?	:
22.	Installation and testings done (Cancel item which are not applicable)	:
	22.1 By the supplier as a departmental work	:
	22.2 By the supplier as a deposit work	:
	22.3 by the Contractor engaged by supplier	:
	22.4 By the Contractor engaged by the owner/consumer/occupier.	:

(In case of the work is done by a Contractor, a copy of Contractor License and Supervisor License will be enclosed)

23. Enclosures:

1) Annexure-I for details of earthing done :

2) A route map of the line indicating positions of sub-stations, breakers, fuses, gangs and also roads, rivers and prominent structures along with nearby power and communication lines, if any :

3) A sketch of guards provided with dimensions and size of wires used. :

24. Inspection fee amounting to Rs. ..... Rupees. ……
……..) vide Treasury Challan no……..
dt…….. In the..... Branch of SBI enclosed (original challan)

Certified that the above statements are correct to the best of my knowledge and understanding and that the work was done under my direct supervision, complying with all the provisions of Indian Electricity Rules 1956 and relevant standards.

Date: Signature :

Place : Name :

Seal

To be signed by the official of the supplier/contractors/ Supervisor under whose direct supervisions the installation works were done with registration Number of Supervisors Certificate indicating qualifying parts)

Countersigned by: Designated officer of Supplier/ Contractor with seal

Signature :

Name :

Address :

Witness (Owner of the installation)

(Not necessary for supplier installation)

For official use:

1. Approval — Accorded vide…… Dated……

2. Remarks:

……..…
……..

Chief Electrical Inspector

Govt. of Nagaland.

Annexure -I

TEST REPORTS FOR INITIAL CHARGING OF OVERHEAD LINE DETAILS OF EARTHING (RULE 61.....67)

NOTE: 1) These particulars are required in respect of items 10,1,2,3,14,15,3,19,4,20,4 of performa,

ii) General condition of soil at the time of taking the reading should be mentioned in the remark column (Dry- wet- etc.)

Sl No	Earthing for (mention identify cationin in drawing or in the form)	Size of material of earthing conduct path	No.of indepen-dent earthing conductor path	Size of electrode	Impedence of independent electrode	Mention whether electrodes are inter connec-ted	Total impede - nce of system	Remarks
1	2	3	4	5	6	7	8	9

Measurement taken by

Authorised Officer

Date

Full Designation

& Address of office seal

Form: CEIN/Tech-2

TEST REPORT OF SUB-STATION OR HT/EHT INSTALLATION REQUIRED FOR THE PURPOSE OF ACCORDING APPROVAL UNDER RULES 63 OF THE INDIAN ELECTRICITY RULES, 1956.

NOTE:

1. No HT/EHT Sub-Station or HT/EHT installation shall be energized without Written approval from the Inspectorate of Electricity.
2. Annexure IIA and IIB need not be submitted where only HT/EHT equipment, such as transformer is installed.
3. The Electrical Inspector may require certain additional tests to be carried out before authorizing the supplier to commence supply.
4. This report shall be submitted in duplicate.

1. Name and address of owner
   Of the installation/ sub-station :
2. Name and address of supplier :
3. Name/identification of the
   Transmission line/feeder
   Supplying power to the sub-station/installation :

4.1 Voltage of the sub-station : Primary .....KV
Secondary .....KV

4.2 Capacity of Transformer : .....MV/KV
(Inn case more than one transformer and/or equipment installed in Annexure IIA have to be Submitted)

5. Type of sub-station, indoor/outdoor
   Platform mounted/Pole mounted etc.
   (To specify)
6. Identification of the sub-station :

6.1 Name of the sub-station :

6.2 Purpose & type of load to be supplied :

6.3 New/ renovation/ augmentation work :

6.4 Location of the sub-station :

6.4.1 District :

6.4.2 Full address of the sub-station :

7. Specification of the transformer :

7.1 Type :

7.2 Make :

7.3 Winding configuration :

7.4 Serial Number :

7.5 Rating/ Capacity :

7.6 Voltage at no load : H/T ..... L/T .....

7.7 Current rating : H/T ..... L/T .....

7.8 Percentage impedance :

7.9 Oil Capacity (Total) :

7.10 Di-electric strength of oil used ..... KV at ..... mm gap.

(A copy of manufacturer list required to be enclosed)

7.11 Insulation test results :

7.11.1 Between HV & LV :

7.11.2 Between HV & Earth :

7.11.3 Between LV & Earth :

7.12 Continuity Test Results (L. V. Side, with neutral earth connected)

7.12.1 Between Neutral & Earth :

7.12.2 Phase 1 and Earth :

7.12.3 Phase 2 and Earth :

7.12.4 Phase 3 and Earth :

7.13 Details of insulation tester

High Voltage Test (7.11.2 & 7.11.2)	Low Voltage Test (7.11.3 & 7.12)
a) Voltage rating :	a) Voltage rating :
b) Make :	b) Make :
c) Serial No :	c) Serial No :

8. Type of protection used :

a) HT side :

b) LT side :

Note: Incase circuit breakers are used, details should be submitted in Annexure-II A & II B

9. Size and specification of conductors/cables :

a) HT side :

b) LT side :

10. Indicate type of platform constructed: pole mounted sub-station :

11. In case of outdoor sub-station : (Except pole mounted Sub-Station) indicate if efficiently protected fencing is used as per rule 48. mention type of fencing and the height of the fencing

12. In case of indoor sub-station: if proper soak pits are provided for drainage of oil which may leak, to prevent spreading of accidental fire as per provision of Rule 64 of IE Rules, 1956 :

Details of such arrangement, if any :

13. Mention if cable trench inside the Sub-Station are filled with sand or similar non-inflammable materials or covered with non-flammable slabs.
14. Are the conductors and apparatus so arranged that they may be made dead in section and work carried out in each section by authorized person without any danger.
15. Have lightning arrestors been provided
    a) Type LA used
    b) Have these been properly earthed?
16. Whether any provision is made to protect the sub-station from direct lightning stroke. If so, furnish details of such protection.
17. Have all the equipments in the sub-station been earthed as per provision of Rule 67 of the IE rules, 1956? Furnish details of earthing in Annexure-I along with drawing showing details of earth electrodes manner of earthing in Annexure-V.
18. Furnish details about arrangements made/ equipment provided to control fire in the electrical equipments.
19. Has suitable provisions been made for immediate and automatic discharge of every static condensers on disconnection as required vide Rule 70 of IE Rules, 1956.
20. Name of person/ Agency who will be responsible for operation and maintenance of the sub-station with authority/competency.
21. Installation and testing done:
    (Cancel item which are not applicable)

21.1 By the supplier as a departmental work

21.2 By the supplier as a deposit work

21.3 By the Contractor engaged by supplier

21.4 By the Contractor engaged by the owner/consumer/occupier

(In case of the work is done by a Contractor, a copy of Contractor License and Supervisor License will have to be enclosed)

22. The following material documents are to be enclosed

22.1 Details of earthing in Annexure-I

22.2 (a) List of equipment Annexure IIA

(b) Test Report of individual equipment (Annexure-IIB)

22.3 Single line diagram of the installation (Annexure-III)

22.4 Front & Plan view and equipment with dimensions and clearance from nearby structures/ buildings (Annexure IV)

22.5 A sketch showing earthing system (Annexure V)

22.6 In case of consumer's installation only:

(a) Copy of load sanction letter

(b) Copy of agreement(s) with supplier regarding installation and maintenance of the substation.

23. Inspection fee amounting to Rs..... (Rupees .....
.....) vide Treasury Challan no .....
dt ..... in the .....Branch of SBI is enclosed (original challan)

(Head of Account- 0043 Taxes and Duties on Electricity- 102 fees under the IE Rules 1956)

Certified that the above statements are correct to the best of my knowledge and understand and that the works were done under my direct supervision. Complying with all the provisions of Indian Electricity Rules 1956 and relevant standards.

Date :

Place :

Signature :

Name :

Seal :

Supervisor's Certificate No.

(To be signed by an official of the supplier/ Contractor's Supervisor under whose direct supervisions the installation and testing works were done with registration Number of Supervisors Certificate indicating qualifying parts and designation)

Countersigned by

Designated officer of Supplier/
Contractor with seal
Signature :
Name :
Designation :
License No :

Witness: (Owner of the installation. Not necessary for Supplier's installation)

Signature :

Name :

Address :

NOTE: To be submitted in duplicate.

For Official use:

1. Approval accorded vide..... dated .....
2. Registration number of the installed.....
3. Remarks:

Date :

Place :

Signature :

Name :

Designation (Seal)

(**Note :** A copy to be returned to the applicant)

Chief Electrical Inspector
Govt. of Nagaland.

ANNEXURE-I

TEST REPORTS FOR INITIAL CHARGING OF HT/EHT INSTALLATION/ LINE EARTHING (RULE 61..... 67)

NOTE: General condition of soil at the time of taking the reading should be mentioned in the remark column (Dry- wet- etc)

Sl No	Earthing for (mention identification in drawing or in the form)	Size material of earthing conductor or paths	No of independent Earthing conductor path	Size of electrode	Impedance of individual electrode	Mention whether electrodes are inter connected	Total impedance of system	Remarks
1	2	3	4	5	6	7	8	9

Measurement taken by

Authorised Officer

Date :

Full Designation & Address of office seal

ANNEXURE - IIA

List of H.V./ E.H.V. Equipment

Name of Sub-Station :

Sl No	Equipment	Rating/ Specification	Make & Sl. No.	Remarks

ANNEXURE-IIB

TEST REPORTS OF H.V/E.H.V. INSTALLATION

Note: 1. This proforma should be filled in separately for all equipments, e.g, Transformers, Breakers, CT, PT, ete.

1. Identification of Sub-station :
   - 1.1 Name :
   - 1.2 Location :
2. Equipment to be energized :
3. Equipment details :
   - 3.1 Name :
   - 3.2 Rating Make : Make
   - 3.3 Voltage at No load. : HV_____ LV_____
   - 3.4 Current rating : HV_____ LV_____
   - 3.5 Percentage impedance :
   - 3.6 Oil Capacity :
   - 3.7. Manufacturer's test report enclosed :
   - 3.8 Insulation required :
     - 3.8.1 Between phase to earth [HV/income]
     - 3.8.2 Between phase to each [LT/Out going]
     - 3.8.3 Between HV/LVC (As may be applicable) tested
     - 3.8.4 Details of insulation tester :
       - (a) Voltage rating
       - (b) Make
       - (c) Serial No.

Date :

Place :

Tested by: Signature :

Name :

Designation :

Authority :

Competency :

Attested by: Signature :

Name :

Designation :

Authority :