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No-Rectt. / 2-6 / JTO-SRD(PWD)-2013/16

Bharat Sanchar Nigam Limited

(A Govt. of India Enterprises)

**Office of the Chief General Manager Telecommunications
(Recruitment Section)**

Rajasthan Telecom Circle, Sardar Patel Marg, Jaipur – 302008

Recruitment of Junior Telecom Officers (Electrical)

under Special Recruitment Drive(SRD)-2013

for Persons with Disabilities(PWD)

(विकलांग व्यक्तियों की विशेष भर्ती अभियान के अन्तर्गत कनिष्ठ दूरसंचार अधिकारी (ईलेक्ट्रीकल) के पद पर भर्ती)

CLOSING DATE OF RECEIPT OF APPLICATION: 05-09-2014

EXAMINATION DATE : 23-11-2014(Sunday)

Bharat Sanchar Nigam Ltd. [BSNL] will fill up **01 backlog vacancy** in the cadre of Junior Telecom Officers for Electrical Stream under direct recruitment quota in Rajasthan Telecom Circle reserved for Persons with Disabilities(PWD) through an open competitive **examination to be held on 23-11-2014** as per the details given below:-

| Number of vacancies | PWD-(LI/HI) | Total |
|---------------------|-------------|-------|
| JTO (Electrical) | 1 | 1 |

In respect of Physically Handicapped persons, candidates with following physical disability will be permitted:

- i. Hearing Impairment (HI) - Partially Deaf
- ii. Locomotive Impairment(LI) - one arm or one leg or both legs affected

(Only such persons would be eligible for reservations/concessions/benefits who suffer from not less than 40% of relevant disability. As per 16 (c) of DoPT OM No. 36035/3/2004-Estt (Res) dated 29.12.2005, the vacancies are interchangeable i.e. if vacancy of one category of disability remains unfilled, it may be filled by person of other category of disability.

1. **Scale of Pay:** The Junior Telecom Officer shall be appointed in the IDA pay scale of Rs 16400-40500 with annual increment @ 3% of basic pay plus HRA, Perks, Medical Facility, LTC etc. as admissible as per company rules.
2. **Selection for a Particular Circle & Service liability**

The Junior Telecom Officer is a Circle-based Cadre and required to serve minimum of 5 years in the Rajasthan Circle or until they are promoted to All India Cadre, whichever is earlier. However, BSNL has the right to post any selected

J.T.O. to any of the Circles either temporarily or on permanent basis. The decision of BSNL in this regard shall be final and binding. The service conditions, seniority etc. of selected candidates will be determined as per prevailing rules of the Corporation issued from time to time.

3. Eligibility

3.1 Nationality: Only Indian Nationals would be eligible to apply.

3.2. Educational Qualifications for JTO (Electrical)

Applicant must possess as on 31-12-2014, Bachelor of Engineering / Bachelor of Technology or equivalent in Electrical Engineering from a recognized Institution/University.

Candidates appearing in the final year degree examination may also apply provided they possess the required educational qualification by 31-12-2014.

3.3(a) Age:

The external applicant for JTO (Electrical) should not be more than 30 years of age on the closing date for **receipt of applications**. However, the upper age-limit is relaxable as per standing instructions of Government of India on this subject for:-

- i) For PWD candidates upto 10 years for OC candidate; 15 years for SC/ST and 13 years for OBC.
- ii) Ex-Service Men will get the benefit of age relaxation as per central government rules;
- iii) For Residents of J&K – Relaxation shall be in accordance with DoP&T's Notification No.15012/7/1991-Estt.(D) dtd. 7.12.2007 pertaining to "Residents of State of Jammu and Kashmir (Relaxation of Upper Age Limit for Recruitment to Central Civil Services & Posts) Rules 1997".

3.3(b).i) For BSNL employees the upper age-limit is relax able by upto 5 years in accordance with the instructions or orders issued by the BSNL;

- ii) Govt. servants upto 5 years in accordance with the instructions or orders issued by the Central Govt.;

Note I: Candidates belonging to SC/ST/OBC who are also covered under any other clause of 3(a) above, viz those coming under the category of Ex-Servicemen, Persons domiciled in the state of J&K will be eligible for grant of cumulative age relaxation under both the categories. The candidates covered under clause 3(b) will get the maximum benefit that he or she will be getting under clause 3(a) or 3(b).

Note II: The date of birth entered in matriculation or Secondary School Leaving Certificate or in a certificate recognized by an Indian University as equivalent to Matriculation or in an extract from a Register of Matriculates maintained by a University which extract must be certified by the proper authority of the University or in the Higher Secondary or an equivalent examination certificate. The certificates are required to be submitted only at the time of appointment. No other document relating to age like horoscopes, affidavit, birth extracts from Municipal Corporation, Service records and the like will be accepted.

- 3.4. Further in respect of apprentices who have undergone apprentice training in BSNL successfully, there will be following provision:-
- (a) An apprentice will be required to compete in the common competitive examination conducted by BSNL along with other direct candidates and preference to the apprentices over non-apprentices direct candidates will be given only if apprentices secure equal place in merit in select zone and all other eligibility conditions being equal.
 - (b) The apprentices would not be required to get her/his name sponsored by any employment exchange.
 - (c) The apprentices would be entitled for age relaxation to the extent of the period for which the apprentice had undergone training as apprentice in the BSNL.

4. Mode of selection and nature of Question Paper

The mode of selection is through Open Competitive Examination. The examination will be of three hours duration with one Question Paper containing the following three sections:-

For JTOs(Electrical)

| | | | |
|---------------|-------------------------------|---|--------------|
| Section-I : | Electrical Engineering stream | : | 50 questions |
| Section-II : | Electrical Engineering stream | : | 50 questions |
| Section-III : | General Awareness | : | 20 questions |

The Question Paper will be fully objective type with multiple options as answers to each question. The standard of paper in engineering subjects will be that of Engineering Examination of an Indian University.

However, there would be no separate time fixed for attempting the separate sections. Detailed syllabus is enclosed at Annexure 'A'.

5. Minimum qualifying standards

Minimum qualifying marks are 26% for each section as well as in the aggregate for all candidates irrespective of their category i.e. OC/OBC/SC/ST for SRD of JTOs of PWD. Candidates obtaining less than minimum-qualifying marks in any of the sections or in aggregate shall not be considered for inclusion in the merit-list.

BSNL reserves the right to change the number of vacancies of Junior Telecom Officer Electrical.

The appearance of the name in the merit-list does not confer any right on the candidate for employment and not attained as final selection. A final call letter/ appointment letter will be issued to the candidate after completion of all other formalities. "BSNL is not responsible for any inadvertent error that may have crept in the results.

No request for revaluation of answer books shall be entertained in any case or under any circumstances.

6. Choice of Examination Centre

The examination centre will be the **Jaipur city**. Examination centre may be shifted if required at the sole discretion of BSNL.

7. Application Form

The specimen of the application form is included in this advertisement. Neatly typed [only on one side of paper] copy in A4 size may be used for making application. Mobile numbers and E-mail addresses of the candidates must be mentioned in the application form for communication and information to candidates with regard to events of examination, if required.

The completed application form should be sent by Registered post to the **DGM (HR/Admn), O/o The CGM Telecom, BSNL, Rajasthan Telecom Circle, Sardar Patel Marg, 'C' Scheme, Jaipur (Raj.) – 302 008..** The envelope containing application form should be marked "**Application for J.T.Os (Electrical) SRD Examination-2013 for PWD**" in bold letters on top of the envelope.

8. No Fee payable by PWD

Since the examination is exclusively for Persons with Disabilities (PWD), there will be no examination fees for such candidates. [However, the disabled persons who would otherwise be eligible for appointment to the post on the basis of the standards of medical fitness prescribed for the post (including any concessions specifically extended to the physically disabled) shall have to enclose with the application form, a necessary certificate from a Govt. Hospital/Medical Board in support of his/her claim for being disabled.]

9. Closing date for receipt of Application Forms

Application forms complete in every respect must reach on or before **05-09-2014**. Applications received after the closing date or incomplete in any respect shall be summarily rejected and no communication in respect of the rejected application forms shall be entertained. BSNL shall not be responsible for any postal delay.

The applicants would be admitted to the examination on the basis of the information furnished by them in their application form. They are, therefore, advised to ensure that they fulfil all eligibility conditions before applying. In case it is found at a later stage that the information furnished by an applicant is false or an applicant does not fulfil any of the eligibility conditions, the candidature of such applicants would be cancelled and no correspondence in this regard would be entertained. Issuance of an admit card for the examination will NOT confer any right for appointment. Appointment will be solely subject to fulfilment of all eligibility conditions.

10. Training and Bond

All candidates provisionally recruited shall execute a Bond in the format specified by the BSNL indicating their willingness to serve the BSNL for a period of at least 5 years from the date of their appointment as JTOs. All candidates shall, before their appointment as JTOs have to successfully undergo prescribed training as per the training plan laid down and amended by the Company from time to time.

11. List of enclosures

- a. Three identical passport size photographs out of which two should be pasted (not stapled or pinned) on the application form and one attached to the application form (not to be pasted or attested)
- b. Two self addressed unstamped envelopes of 27 x 12 cms size
- c. Medical certificate in respect of Physically Disabled candidates as per annexure- "B"
- d. Certificate of Apprentice training if undertaken in BSNL successfully
- e. Cast Certificate issued by competent authority in case the candidate belongs to SC/ST/OBC

12. Disqualifications: No person

12.1 Who has entered into or contracted a marriage with a person having a spouse living, or

12.2 Who, having a spouse living, has entered into or contracted marriage with any person; shall be eligible for appointment to the post of JTO:

Provided that BSNL may, if satisfied that such marriage is permissible under the personal law applicable to such person and the other party to the marriage and there are other grounds for so doing, exempt any person from the operation of this rule.

13. No request for withdrawal of candidature received from a candidate after he has submitted his application will be entertained under any circumstances. Any dispute in regard to the recruitment will be subject to the Courts/Tribunals having jurisdiction over the place of Rajasthan Circle of BSNL where the candidate appearing in the examination.
14. Applicant must fill his contact telephone number (mobile no prefer) and e-mail address at appropriate column in application form.

NOTE:

1. Candidates in their interest are advised to refer to the BSNL website www.rajasthan.bsnl.co.in from time to time for any further instruction/information.
2. For any Inquiry, the applicant may contact on telephone number 0141-2375858 during office hours.

SCHEME AND SYLLABUS FOR DIRECT RECRUITMENT OF JUNIOR TELECOM OFFICERS (ELECTRICAL)

For direct recruitment of JTO (Electrical) , an objective type examination of one paper of three hours duration consisting of following sections will be conducted:-

| | | |
|--------------|-------------------------|-----------------------------|
| Section-I: | Electrical Engineering: | 50 Questions (2 Marks Each) |
| Section-II: | Electrical Engineering: | 50 Questions (2 Marks each) |
| Section-III: | General Awareness: | 20 Questions (2 Marks Each) |

1. The standard of paper in engineering subject will be that of Engineering Degree Examination of Indian University.
2. In the general ability test, special attention will be paid to assess the candidate's capacity for general awareness. The standard of paper in general ability test will be such as may be expected of an Engineering Graduate.
3. The syllabus for engineering stream paper will be given below.

SYLLABUS

SECTION –I ELECTRICAL ENGINEERING

1. EM Theory

Electric and magnetic field. Gauss's Law and Amperes Law. Fields in dielectrics, conductors and magnetic materials. Maxwell's equations, Time varying fields, Plane-Wave propagating in dielectric and conducting media. Transmission lines.

2. Electrical Materials

Band Theory, Conductors, Semi-conductors and Insulators. Super-conductivity. Insulators for electrical and electronic applications. Magnetic materials. Ferro and ferri magnetism, Ceramics, Properties and applications. Hall effect and its applications. Special semi conductors.

3. Electrical Circuits

Circuits elements Kirchoff's Laws. Mesh and nodal analysis. Network Theorems and applications. Natural response and forced response. Transient response and steady state response for arbitrary inputs. Properties of networks in terms of poles and zeros. Transfer function. Resonant circuits. Three phase circuits.

4. Measurements and Instrumentation

Units and Standard. Error analysis, measurement of current, Voltage, Power, Power-factor and energy. Indicating instruments. Measurement of resistance, inductance, Capacitance and frequency. Bridge measurements. Electronic

measuring instruments. Digital Voltmeter and frequency counter Transducers and their applications to the measurement of non-electrical quantities like temperature, pressure, flow-rate displacement, acceleration, noise level etc.

5. Control System

Transient and steady state response of control system; Effect of feedback on stability and sensitivity, Root locus techniques; Frequency response analysis. Concept of gain and phase margins; Constant-M and Constant-N Nichol's Chart; Approximation of transient response from constant N Nichol's chart; Approximation of transient response from closed loop frequency response; Design of Control system, Compensators; Industrial controllers.

SECTION-II ELECTRICAL ENGINEERING

1. Electrical Machines and Power Transformers

Magnetic Circuits – Analysis and Design of Power transformers Construction and testing. Equivalent circuits. Losses and efficiency. Regulation, Auto-transformer, 3-phase transformer. Parallel operation.

D.C. Machines, Construction, Excitation methods. Circuit models. Armature reaction and commutation. Characteristics and performance analysis. Generators and motors. Starting and speed control. Testing, Losses and efficiency.

Synchronous Machines. Construction. Circuit model. Operating characteristics and performance analysis. Induction Machines: Construction. Principle of operation. Rotating fields. Characteristics and performance analysis. Starting and speed control.

Fractional KW motors. Single-phase synchronous and induction motors.

2. Power systems

Types of Power Stations, Hydro, Thermal and Nuclear Stations. Power transmission lines. Optimal power system/ transmission lines operation. Power system Transients. Power system protection circuit breakers. Relays.

3. Analog and Digital Electronics and Circuits

Semiconductor device physics, PN junctions and transistors, circuit models and parameters FET, Zener, tunnel, Schottky, photodiodes and their application, rectifier circuits, voltage regulators and multipliers, switching behavior of diodes and transistors.

Small signal amplifiers, biasing circuits, frequency response and improvement, multistage amplifiers and feed-back amplifiers. Operational amplifiers wave shaping circuits. Multivibrators and flip-flops and their applications. Digital logic gate families, universal gates-combination circuits for arithmetic and logic operational, sequential logic circuits. Counters, registers, RAM and ROMs.

4. Microprocessor.

Microprocessor architecture-instruction set and simple assembly language programming. Interfacing for memory and I/O. application of Micro-processor in power system.

5. Communication Systems

Type of modulation; AM, FM and PM. Demodulations. Noise and bandwidth considerations. Digital communication system. Pulse code modulation and demodulation. Carrier communication. Frequency division and time division multiplexing.

6. Power Electronics

Power Semiconductor devices. Thyristors, Power transistor, GTO's and MOSFETS. Characteristic and operation. AC to DC Convertors; Single phase and three phase DC to DC Convertors; AC Regulators. Thyristors controlled reactors; switched capacitor network. Invertors; single phase and three phase. Pulse width modulation. Sinusoidal modulation with uniform sampling. Switched mode power supplies.

SECTION –III GENERAL ABILITY.

The candidate's comprehension and understanding of general English shall be tested through simple exercises. Questions on knowledge of current events and of such matter of everyday observation and experience in their scientific aspects as may be expected of an educated person. Question will also be included on events and developments in Tele Communications, History of India and Geography. These will be of a nature, which can be answered with out special study by an educated person.

NAME & ADDRESS OF THE INSTITUTE/HOSPITAL

Certificate No.....

Date.....

DISABILITY CERTIFICATE

Recent **Photograph** of the candidate showing the disability duly attested by the Chairperson of the Medical Board.

This is certified that Shri/Smt/Kum.....
son/wife/daughter of Shri..... age.....sex.....
identification marks(s) is suffering from permanent disability of following category:

- A. Locomotors or cerebral palsy :
- (i) BL – Both legs affected but not arms.
 - (ii) OL – One leg affected (right or left) (a) Impaired reach
(b) Weakness of grip
(c) Ataxic
 - (iii) BH - Stiff back and hips (Cannot sit or stoop)
 - (iv) MW – Muscular weakness and limited physical endurance.
- B. Blindness or Low Vision:
- (i) B : Blind
 - (ii) PB: Partially Blind
- C. Hearing Impairment:
- (i) D - Deaf
 - (ii) PD - Partially Deaf

(Delete the category whichever is not applicable)

2. This condition is progressive/non-progressive/likely to improve/ not likely to improve. Re-assessment of this case is not recommended/ is recommended after a period of _____ year's _____ months*.

3. Percentage of disability in his/her case is percent.

4. Sh./Smt./Kum. meets the following physical requirements for discharge of his/her duties:-

- | | | |
|--------|--|--------|
| (i) | F-can perform work by manipulating with fingers. | Yes/No |
| (ii) | PP-can perform work by pulling and pushing. | Yes/No |
| (iii) | L-can perform work by lifting. | Yes/No |
| (iv) | KC-can perform work by kneeling and crouching. | Yes/No |
| (v) | B-can perform work by bending. | Yes/No |
| (vi) | S-can perform work by sitting. | Yes/No |
| (vii) | ST-can perform work by standing. | Yes/No |
| (viii) | W-can perform work by walking. | Yes/No |
| (ix) | SE-can perform work by seeing. | Yes/No |
| (x) | H-can perform work by hearing/speaking. | Yes/No |
| (xi) | RW-can perform work by reading and writing. | Yes/No |

(Dr. _____) (Dr. _____) (Dr. _____)

Member
Medical Board

Member
Medical Board

Chairperson
Medical Board

Countersigned by the
Medical superintendent/CMO/Head of
Hospital (with seal)

***Strike out which is not applicable.**