

BHARAT SANCHAR NIGAM LIMITED

(A Government of India Enterprise)

Recruitment of Junior Telecom Officers (Telecom/Civil/Electrical) under Special Recruitment Drive (SRD) for Persons with Disabilities(PWD) in West Bengal Telecom Circle.

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

EXAMINATION DATE: 23-11-2014 (Sunday).

Bharat Sanchar Nigam Limited, (BSNL) will fill up about 12 Nos. (subject to variation depending on the availability of vacancies) backlog vacancies for Junior Telecom Officers reserved for Persons with Disabilities (PWD) candidates is a re-launch of Special Recruitment Drive through an open competitive examination to be held on 23.11.2014 as per the details given below:-

Number of vacancies	PWD (LI)	PWD(HI)	Total
JTO(Telecom)	03	07	10
JTO(Civil)	00	01	01
JTO(Electrical)	01	00	01

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

- Hearing Impairment (HI) - Partially Deaf.
- 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. 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 Benefits etc. as admissible as per company rules.

The emolument at the minimum of the pay scale will be around Rs 31,370/- excluding HRA, Perks, Medical benefits etc.

2. **Selection for a Particular Circle & Service liability:** The BSNL comprises a number of territorial Circles and functional Circles. A list of the existing territorial Circles, their respective headquarters etc. appears in Annexure 'A'.

The Junior Telecom Officer is a Circle-based Cadre and the candidates would be selected against the vacancies in a particular Circle and required to serve minimum of 5 years in that particular Circle only 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 from time to time.

3. **Eligibility:**

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

3.2. **Educational Qualifications:**

Further in respect of apprentices who have undergone apprentice training in BSNL successfully, there will be following provision:-

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.

The apprentices would not be required to get her/his name sponsored by any employment exchange. The apprentices would be entitled to 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(Telecom):

Section-I :	Engineering stream	:	50 questions
Section-II :	Engineering stream	:	50 questions
Section-III :	General Ability Test	:	20 questions

For JTOs (Civil):

Section-I :	Civil Engineering stream	:	50 questions
Section-II :	Civil Engineering stream	:	50 questions
Section-III :	General Ability Test	:	20 questions

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. The Examination will be fully OMR based and Question Papers will consist of 120 questions.

However, there would be no separate time fixed for attempting the separate sections. Detailed syllabus for JTOs (Telecom), JTOs (Civil) and JTOs (Electrical) appear at Annexure 'B', 'C' and 'D' respectively.

5. **Minimum qualifying standards:** BSNL may fix at its discretion minimum qualifying marks for each section as well as in the aggregate. 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 in Telecom, Civil or Electrical cadre.

The appearance of the name in the merit-list does not confer any right on the candidate for employment. A final call letter/ appointment letter will be issued to the candidate after completion of all other formalities.

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 Circle Headquarters city of the CGM concerned i.e. Kolkata. 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 [30 cm. X 20 cm.] may be used for making application. The completed application form should be sent by **Speed /Registered post** to the **DGM (HR/Admn), O/o the CGM, Telecom. BSNL, West Bengal Telecom Circle, 1 Council House Street, (2nd floor), Kolkata – 700 001.** The envelope containing application form should be marked **“Application for J.T.Os (Telecom) Examination-2013 for PWD in WBTC”** or **“Application for J.T.Os (Civil) Examination-2013 for PWD in WBTC”** or **“Application for J.T.Os (Electrical) Examination-2013 for PWD in WBTC”**, as the case may be, in bold letters on top of the envelope.

Original advertisement or photocopy of the format in the advertisement must not be used for applying and in case candidate submits such an application the same will not be entertained. The given application format must be separately typed.

8. **No Fee payable for PWD (by SC/ST/OBC/General):** 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) and who 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 fulfill 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 fulfill 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 Bonds in the format specified by the BSNL indicating their willingness to serve the Circle allotted and Corporation 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. Four, recent colour photographs (size 2.5 cm X 3.5 cm) of candidate's complete face (front side) on white background inscribing name of the candidate and date on photograph. Two photographs are pasted firmly (not to be stapled or pinned) on indicated two places on the Application Form, one photograph is to be pasted firmly on the Admit Card and one photograph is to be attached with the Application Form separately (not to be pasted or attested).
- b. Attested Xerox copy of Birth Certificate (Admit Card of Matriculation or Secondary School Leaving Certificate)
- c. Attested Xerox Copy of Domicile Certificate (in case of Nationality by Domicile)
- d. Attested Xerox copy of SC / ST / OBC certificate.
- e. Attested Xerox copy of Ex-Servicemen Certificate.
- f. NOC for BSNL Employee / Govt. Employee (in Original).
- g. Attested Xerox copy of Apprentice Training Certificate in BSNL
- h. Attested Xerox copy (in Annexure – E) of Medical Certificate for Physically Disabled.
- i. Attested Xerox copy of Ex-Servicemen Certificate.
- j. Attested Xerox copy of J & K residents Certificate.
- k. Attested Xerox copy of Educational Certificates for B.E. / B. Tech & above.

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 concerned Circle office of BSNL where the candidate appearing in the examination.

A candidate must ensure the following before sending the Application Form through Speed /Registered Post.

1. The Application Form & Admit Card is to be filled neatly, in his/her own handwriting with black/blue ball point pen only.
2. All the entries are strictly mandatory and should be made in CAPITAL LETTERS only.
3. Tick Mark (✓) which is applicable.
4. Four, recent colour photographs (size 2.5 cm X 3.5 cm) of candidate's complete face (front side) on white background inscribing name of the candidate and date on photograph. Two photographs are pasted firmly (not to be stapled or pinned) on indicated two places on the Application Form, one photograph is to be pasted firmly on the Admit Card and one photograph is to be attached with the Application Form separately (not to be pasted or attested).
5. Overwriting, Cutting, Erasing, Stapling or pins should not be done anywhere in the Application Form and photographs.
6. LTI in blue indelible ink at two places on the Application Form & Admit Card.
7. Full Signature of the Applicant with date at four places on the Application Form & Admit Card and Check List.
8. A photocopy of the filled in Application Form is to be retained by the candidate.
9. Attested Xerox copy (in Annexure – E) of Medical Certificate for Physically Disabled.
10. Attested Xerox copy of Birth Certificate to be attached (Admit Card of Matriculation or Secondary School Leaving Certificate)
11. Attested Xerox Copy of Domicile Certificate (in case of Nationality by Domicile)
12. NOC for BSNL Employee / Govt. Employee (in original) should be attached.
13. Attested Xerox copy of SC / ST / OBC Certificate should be attached.
14. Attested Xerox copy of J & K residents Certificate.
15. Two self addressed unstamped envelopes of 27 cm x 12 cm size.
16. The envelope containing with application form with relevant documents and photographs should be sent and the envelope should be marked "**Application for J.T.Os (Telecom) Examination-2013 for PWD in WBTC**" or "**Application for J.T.Os (Civil) Examination-2013 for PWD in WBTC**" or "**Application for J.T.Os (Electrical) Examination-2013 for PWD in WBTC**", as the case may be, in bold letters on top of the envelope.
17. The completed application form should be sent by **Speed / Registered Post** only to **The DGM (HR/Admn), O/o the CGM, Telecom. BSNL, West Bengal Telecom Circle, 1 Council House Street, (2nd floor), Kolkata – 700 001.**
18. Closing date for receipt of Application Forms complete in every respect must reach the O/o the CGM, Telecom. BSNL, West Bengal Telecom Circle, 1 Council House Street, (2nd floor), Kolkata – 700 001 **on or before 05. 09. 2014 positively.** BSNL shall not be responsible for any postal delay.
19. 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.
20. If a candidate submits more than one Application Form, his/her candidature shall be liable to be rejected /cancelled.

NOTE BEFORE :-

1. Candidates in their interest are advised to refer to the BSNL website **www.wb.bsnl.co.in** from time to time for any further instruction/information.
2. For any Inquiry, the applicant may contact on telephone number 033-22481802 during office hours.
3. The application form of unsuccessful candidates and also that of ineligible candidates shall be retained for a period of three months from the date of declaration of the result for JTO (T/C/E) under SRD Examination-2013 for PWD in WBTC.

**APPLICATION FOR RECRUITMENT OF JUNIOR TELECOM OFFICER (JTO)
IN BSNL (Telecom/Civil/Electrical) under Special Recruitment Drive (SRD)
for Persons with Disabilities (PWD) in West Bengal Telecom Circle.**

Please affix here
one recent coloured
passport size
(2.5 cm X 3.5 cm)
Photograph
without attestation

1. Please Tick Mark (✓) in one (1) of the blank boxes only which is applied for:

POST APPLIED FOR	JTO TELECOM		JTO CIVIL		JTO ELECTRICAL	
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2. Name (in capital letters) (for Sl. No. 2 & 3 please keep one box blank between first name, middle name & last name)

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3. Attested Xerox copy of Birth Certificate to be attached (Admit Card of Matriculation or Secondary School Leaving Certificate)

Date of Birth (DD-MM-YY)							Age as on 05.09.2014	Y	Y	M	M	D	D
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4. Please Tick Mark (✓) which is applicable.

Whether claiming age relaxation?	YES	Gender	MALE	Marital Status	MARRIED
	NO		FEMALE		UNMARRIED

5. Attested Xerox Copy in case of Nationality by Domicile. Please Tick Mark (✓) which is applicable.

Nationality		BY BIRTH	YES	NO
Caste		If No, Domicile Certificate Attached	YES	NO

6. Please Tick Mark (✓) which is applicable. Attested Xerox Copy of SC/ST/OBC should be attached (Except General/OC).

Category	SC	ST	OBC	GENERAL / OC	Xerox copy of certificate attached	YES	NO
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7. Please Tick Mark (✓) which is applicable.

Whether BSNL employee (Yes/No). If yes, mention HRMS No. (NOC should be attached in Original)	Y E S			N O		
Whether undergone apprentice training in BSNL successfully (Yes/No)	Y E S			N O		
Period and SSA should be mentioned	Period	Name of the SSA				
Physically Disabled [Attach Medical Certificate as in Annexure-(E)]	Y E S			N O		
Whether LOCOMOTIVE or HEARING Impairment (Mandatory)	LOCOMOTIVE			HEARING		
Percentage of disability. Minimum Degree of Disability 40% (Mandatory)						%
Whether Govt. Employee. If yes (NOC should be attached in Original)	Y E S			NO		
Whether belongs to Ex-servicemen / J&K – Please specify						

8. Educational Qualification (B.E. /B. Tech & Above)

Name of Degree/ Course with stream (Last Semester Mark-sheet/Certificate should be attached) (Mandatory)	Name of the Degree/ Course	Name of the Stream				
University/Institute		Month	Year of Passing			

9. Address for Correspondence (in Capital Letters)

Name											
Father's/Husband's Name											
House No.											
Village/Street Name											
Police Station						Post Office					
District						Pin Code					
Mobile No						State					
Email Address											
Full Signature of the Applicant with Date (Not in Capital Letters or initials)											

10. Permanent Address (in Capital Letters):

Name							
Father's/Husband's Name							
House No.							
Village/Street Name							
Police Station				P.O.			
District				Pin Code			
Mobile No.							State
Tele. No. (with STD)							
Email address							

11. Declaration to be given by OBC candidate only, eligible to avail reservation applicable to OBC:

I,.....son/daughter of Shri..... resident of village/town/city..... District.....State.....hereby declare that I belong to thecommunity which is recognized as a backward class by the Government of India for the purpose of reservation in services as per orders contained in Department of Personnel and Training Office Memorandum No. 36012/22/93-Estt.(SCT), dated 8.9.1993. It is also declared that I do not belong to persons/sections (Creamy Layer) mentioned in column 3 of the Schedule to the above referred Office Memorandum dated 8.9.1993 and amended vide OM No. 36033/3/2004-Estt.(Res.) Dated 14.10.2008.

DECLARATION TO BE SIGNED BY THE APPLICANT

12. I do hereby declare that all the statements made in the application are true, complete and correct to the best of my knowledge and belief. I understand that in the event of any particular information given above being found false or incorrect, my candidature for the post of Junior Telecom Officer is liable to be rejected or cancelled and in the event of any mis-statement or discrepancy in the particulars being detected after my appointment, my services are liable to be terminated forthwith without any notice to me. I am willing to serve anywhere in India. I agree BSNL has the right to post/transfer me to any part of the country at their discretion. I understand that if appointed I would have to serve the Circle allotted for the period of five years.

I also understand that if appointed, I would rank junior to any JTO who had been appointed earlier by the erstwhile DoT/DTS/DTO or BSNL or any other candidate who had already qualified in the JTO examination but not appointed as JTO by BSNL so far.

13. Left Thumb Impression in blue indelible ink.	14. Photograph	15. Full Signature of the Applicant with Date. (Not in Capital Letters or initials)
	Please affix here one recent coloured passport size (2.5 cm X 3.5 cm) Photograph without attestation	

CHECK LIST

Please Tick mark (√) in the blank boxes, whether attached or not attached with the Application Form.

Sl No	Particulars	Attached	Not Attached
1	Application Form & Admit Card		
2	Attested Xerox copy of Birth Certificate to be attached (Admit Card of Matriculation or Secondary School Leaving Certificate)		
3	Attested Xerox Copy of Domicile Certificate (in case of Nationality by Domicile)		
4	Attested Xerox copy of SC / ST / OBC certificate.		
5	NOC for BSNL Employee (in original)		
6	Attested Xerox copy of Apprentice Training Certificate in BSNL		
7	Attested Xerox copy (in Annexure – E) of Medical Certificate for Physically Disabled.		
8	NOC for Govt. Employee (in Original)		
9	Attested Xerox copy of Ex-Servicemen Certificate.		
10	Attested Xerox copy of J & K residents Certificate.		
11	Attested Xerox copy of Educational Certificates for B.E./B.Tech & Above.		
12	One photograph is to be attached with the Application Form		
13	Two self addressed unstamped envelopes of 27 cm x 12 cm size		
14	LTI in Two Places & Full Signature with Date in Four Places		

Full Signature of the Applicant with Date.
(Not in Capital Letters or initials)

Annexure-A

List of the Territorial Telecom Circles with the address to whom the applicants should send their completely filled up forms

Sl.No (1)	Name of the Territorial Circle (2)	Address to whom the application is to be sent/Examination Centre City (3)
1.	Andhra Pradesh	DGM (Admn), O/o the CGM Telecom, BSNL, Andhra Pradesh Telecom Circle, 2 nd floor, Doorsanchar Bhavan, Nampalli Station Road, Abids, Hyderabad – 500 001.
2.	Andaman & Nicobar	DGM (Admn.), O/o the CGM Telecom, BSNL, A&N Telecom Circle, Telephone Bhavan, Port Blair – 744 101.
3.	Assam	DGM (Admn), O/o the CGM Telecom, BSNL, Assam Telecom Circle, 3 rd floor, BSNL Administrative Building, Panbazar, Guwahati – 781 001.
4.	Bihar	DGM (Admn), O/o the CGM Telecom, BSNL, Bihar Telecom Circle, Sanchar Sadan, Patna – 800 001.
5.	Calcutta Telephones District	DGM(Admn.), BSNL, Calcutta Telephones, 34, BBD Bag (East), 3 rd floor, Telephone Bhavan, Kolkata-700 001.
6.	Chattisgarh	DGM (Admn), BSNL, O/o CGMT, Chattisgarh Telecom Circle, Vidhan Sabha Road, Khamahardih, Raipur – 492 007.
7.	Chennai Telephone District	DGM (A), BSNL, Chennai Telephones, 89, Millers Road, Chennai-600 010.
8.	Gujarat	DGM (OP &C), O/o the CGM Telecom. BSNL, Gujarat Telecom Circle, 6 th flr., Telephone Bhavan, Off C.G. Road, Navrangpura, Ahmedabad – 380 006.
9.	Haryana	DGM (Admn), O/o the CGM Telecom, BSNL, Haryana Telecom Circle, 107, The Mall, Ambala Cantt-133 001.
10.	Himachal Pradesh	GM (Admn) O/o the CGM Telecom, BSNL, H.P. Telecom Circle, Block No.11, SDA Complex, Kasumpti, Shimla – 171 009

Sl.No (1)	Name of the Territorial Circle (2)	Address to whom the application is to be sent/Examination Centre City (3)
11.	Jammu & Kashmir	DGM (M & IT), O/o the CGM Telecom., BSNL, J&K Telecom Circle, 4th floor, North Block, Bahu Plaza, Rail Head Complex, Jammu – 180 012.
12.	Jharkhand	DGM (Admn) O/o CGM Telecom, BSNL, Jharkhand Telecom Circle, 5th floor, Telephone Bhavan, Ranchi - 834 001
13.	Karnataka	DGM (Staff/Exam Coordinator), O/o the CGM Telecom, BSNL, Karnataka Telecom Circle, No.1, Swamy Vivekananda Road, Halasuru, Bangalore-560 008.
14.	Kerala	DGM (Admn) O/o the CGM Telecom. BSNL, Kerala Telecom Circle, Thiruvananthapuram – 695 033.
15.	Madhya Pradesh	DGM (HRD), O/o the CGM Telecom. BSNL, M.P. Telecom Circle, BSNL Bhawan, 2nd floor, Room No.213, Hoshangabad Road, Bhopal – 462 015.
16.	Maharashtra	DGM (Admn), O/o the CGM Telecom, BSNL, Maharashtra Telecom Circle, Admn. Bldg., 3rd floor, B-Wing, Juhu Road, Santacruz(West), Mumbai – 400 054.
17.	Northern Telecom Region [New Delhi]	DGM (Admn), O/o the CGM (Mtce.), BSNL, Northern Telecom. Region, Room No.257, IInd floor, Kidwai Bhawan, Janpath, New Delhi-110 001.
18.	North East-I [Meghalaya, Mizoram & Tripura]	DGM (Admn), O/o the CGM Telecom, BSNL, N.E.-I Telecom Circle, Shillong-793 001.
19.	North East-II [Arunachal Pradesh, Nagaland & Manipur]	DGM (Wireless) , O/o CGM Telecom, BSNL, N.E. – II Telecom Circle, OCB Telephone Exchange Building, Dimapur – 797 112. Nagaland.
20.	Orissa	DGM (Admn) O/o the CGM Telecom, BSNL, Orissa Telecom Circle, Bhubaneswar-751 001.
21.	Punjab	DGM (Estt.), O/o the CGM Telecom. BSNL, Punjab Telecom Circle, Room No.401, Sanchar Sadan, Plot No.2, Sector-34-A, Chandigarh – 160 022.

Sl.No (1)	Name of the Territorial Circle (2)	Address to whom the application is to be sent/Examination Centre City (3)
22.	Rajasthan	DGM (Admn), O/o CGM Telecom, BSNL, Rajasthan Telecom Circle, Sardar Patel Marg, 'C' Scheme, Jaipur (Raj.) – 302 008.
23.	Tamilnadu	DGM (Admn), O/o the CGM Telecom, BSNL, Tamilnadu Telecom Circle, Room No. 325, No.80 Annasalai, Chennai – 600 002.
24.	Uttar Pradesh [East]	DGM (BD & Rectt.) O/o the CGM Telecom, BSNL, UP (East) Telecom Circle, Hazratganj, Lucknow-226 001.
25.	Uttar Pradesh [West]	DGM (Admn.), O/o the CGM Telecom , BSNL, UP (West) Telecom Circle, Shastri Nagar, Telephone Exchange, Tejgarhi Chauk, Meerut
26.	Uttaranchal	DGM (A&P) O/o CGM Telecom, BSNL, Uttaranchal Telecom Circle, Room No.411, 4th floor, Windlass Complex, Rajpur Road Dehradun – 248 001.
27.	West Bengal	DGM (HR/Admn), O/o the CGM, Telecom. BSNL, West Bengal Telecom Circle, 1 Council House Street, (2nd floor), Kolkata – 700 001.

ANNEXURE-B

Scheme and Syllabus for the Recruitment of Junior Telecom Officers (Telecom)

For Direct Recruitment of Junior Telecom Officers, an objective type Examination of 3 hours duration consisting of following sectional papers will be conducted:

SCHEME:

- A. Engineering Stream Section - I
 - B. Engineering Stream Section - II
 - C. General Ability Test Section - III
1. The standard of paper in Engineering subjects will be that of Engineering Degree Examination of an 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 papers will be as given below.

SYLLABUS:

SECTION - I

1. Materials and components
Structure and properties of Electronic Engineering materials, Conductors, Semiconductors and Insulators, Magnetic, Ferroelectric, Piezoelectric, Ceramic, Optical and Superconducting materials. Passive components and characteristics, Resistors, Capacitors and Inductors; Ferrites, Quartz crystal, Ceramic resonators, Electromagnetic and Electromechanical components.
2. Physical Electronics, Electronic Devices and ICs
Electrons and holes in semiconductors, Carrier Statistics, Mechanics of current flow in a semi-conductor, Hall effect; Junction theory; Different types of diodes and their characteristics; Bipolar Junction transistor; Field effect transistors; Power switching devices like SCRs, CTOs, power MOSFETs; Basics of ICs-bipolar, MOS and CMOS types; Basics of Opto Electronics.
3. Network theory
Network analysis techniques: Network theorem, transient and steady state sinusoidal response, Transmission criteria: delay and rise time Elmore's and other definition, effect of cascading. Elements of network synthesis.
4. Electromagnetic Theory
Transmission lines: basic theory, standing waves, matching applications, microstrip lines; Basics of waveguides and resonators; Elements of antenna theory.
5. Electronic Measurements and instrumentation
Basic concepts, standards and error analysis; Measurements of basic electrical quantities and parameters; Electronic measuring instruments and their principles of working: analog and digital, comparison, characteristics, applications. Transducers; Electronic measurements of non-electrical quantities like temperature, pressure, humidity etc. Basics of telemetry for industrial use.
6. Power Electronics
Power Semiconductor devices, Thyristor, Power transistor, MOSFETs, Characteristics and operation. AC to DC convertors; 1-Phase and 3-phase DC to DC Convertors.
AC regulators. Thyristor controlled reactors, switched capacitor networks.
Inverters: Single-phase and 3-phase. Pulse width modulation. Sinusoidal modulation with uniform sampling. Switched mode power supplies.

SECTION-II

1. Analog Electronic Circuits

Transistor biasing and stabilization, Small Signal analysis. Power amplifiers. Frequency response, Wide band techniques, Feedback amplifiers. Tuned amplifiers. Oscillators. Rectifiers and power supplies. Operational Amplifier, other linear integrated circuits and applications. Pulse shaping circuits and waveform generators.

2. Digital Electronic Circuits

Transistor as a switching element; Boolean algebra, simplification of Boolean functions, Karnaugh Map and applications; IC Logic gates and their characteristics; IC logic families: DTL, TTL, ECL, NMOS, PMOS and CMOS gates and their comparison; Combinational logic circuits; Half adder, full adder; Digital Comparator; Multiplexer De-multiplexer; ROM and their applications. Flip-flops, R-S, J-K, D and T flip-flops; Different types of counters and registers; waveform generators. A/D and D/A converters. Semiconductor memories.

3. Control Systems

Transient and steady state response of control systems; Effect of feedback on stability and sensitivity, Root locus techniques; Frequency response analysis. Concepts 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 Systems, Compensators; Industrial controllers.

4. Communication systems

Basic information theory: Modulation and detection in analogue and digital systems; Sampling and data reconstruction. Quantization & Coding; Time division and frequency division multiplexing; Equalisation; Optical Communication: in free space & fibre optic; Propagation of signals at HF, VHF, UHF and microwave frequency; Satellite communication.

5. Microwave Engineering

Microwave Tubes and solid state devices, Microwave generation and amplifiers, Waveguides and other Microwave Components and Circuits, Microstrip circuits, Microwave antennas, Microwave Measurements, MASERS LASERS; Microwave Propagation. Microwave Communication Systems-terrestrial and satellite based.

6. Computer Engineering

Number Systems; Data representation; Programming; Elements of a high level programming language PASCAL/C; use of basic data structures; Fundamentals of computer architecture processor design; Control unit design; Memory organization. I/O System Organization. Personal computers and their typical uses.

7. Microprocessors

Microprocessor architecture - Instruction set and simple assembly language programming. Interfacing for memory and I/O. Applications of Microprocessors in Telecommunications and power system.

SECTION-III

General ability test

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. Questions will also be included on events and developments in Telecommunications, History of India and Geography. These will be of a nature, which can be answered without special study by an educated person.

ANNEXURE-C

Scheme and Syllabus for the Recruitment of Junior Telecom Officers(Civil)

For Direct Recruitment of Junior Telecom Officer(Civil), an objective type Examination of 3 hours duration consisting of following sectional papers will be conducted:

SCHEME:

- A. Civil Engineering Stream Section - I : 50 questions
 - B. Civil Engineering Stream Section - II : 50 questions
 - C. General Ability Test Section - III : 20 questions
1. The standard of paper in Engineering subjects 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 Civil Engineering stream paper will be as given below.

SYLLABUS:

SECTION-I - CIVIL ENGINEERING STREAM

1. **BUILDING MATERIAL:**
 - Timber: Different types and species of structural timber, density-moisture relationship, strength in different directions, defects, influence of defects on permissible stress, preservation, dry and wet rots, plywood, codal provision for design.
 - Bricks: Types, Indian standard classification, absorption, saturation factor, strength in masonry, influence of mortar strength and masonry strength.
 - Cement: Compounds, different types, setting times, strength.
 - Cement Mortar: Ingredients, proportions, water demands, mortar for plastering and masonry.
 - Concrete: Importance of W/C ratio, strength, ingredients including admixtures, workability, testing, elasticity, non-destructive testing mix design method.
2. **SOLID MECHANICS**
 - Elastic constants, stress, plane stress, Mohr's circle of stress, strains, plain strain, Mohr's circle of strain, combined stress. Elastic theories of Failure, simple and shear bending, Torsion of circular and rectangular section and simple members.
3. **STRUCTURAL ANALYSIS**
 - Analysis of determinate structures- different methods including graphical methods. Analysis of indeterminate skeletal frames- moment distribution, slope deflection, stiffness and force methods, energy methods. Muller-Breslau principal and application. Plastic analysis of indeterminate beams and simple frames-shape factors.
4. **DESIGN OF STEEL STRUCTURES**
 - Principle of working stress method. Design of connections of simple members. Built up sections and frames. Design of Industrial roofs. Principles of ultimate load design. Design of members and frames.
5. **DESIGN OF CONCRETE AND MASONRY STRUCTURES.**
 - Limit state design for bending, shear, axial compression and combined forces, Codal provisions for slabs, beams, walls and footings. Working stress method of design of R.C. members.

Principles of prestressed concrete design, material, method of prestressing losses. Design of simple members and determinate structures. Introductions to prestressing of indeterminate structures. Design of brick masonry as per I.S. codes.

6. CONSTRUCTION PRACTICE, PLANNING AND MANAGEMENT.

Concreting Equipment:

Weight batcher, Mixer, vibrator, batching plant, concrete pump.

Cranes, hoists, lifting equipment.

Earthwork Equipment:

Power shovel, hoe, dozer, dumper, trailers and tractors, rollers, sheep foot rollers, pumps.

Construction, planning and Management:

Bar chart, linked bar chart, work break down structures, Activity-on-arrow diagrams. Critical path, probabilistic activity durations; Event-based networks.

PERT network: Time-cost study, crashing; Resource allocation.

SECTION- II - CIVIL ENGINEERING STREAM

1. (a) FLUID MECHANICS, OPEN CHANNEL, PIPE FLOW:

Fluid properties, pressure, thrust, Buoyancy, Flow Kinematics, integration, of flow equation, Flow measurement, Relative motion, Moment of momentum, Viscosity, Boundary layer and control, Drag, Lift, Dimensional analysis, Modeling, Cavitations, Flow oscillations, Momentum and Energy principles, in open channel flow, Flow control, Hydraulic jump, Flow section and properties, Normal flow, Gradually varied flow, Flow development and losses in pipe flows, Measurements, Siphons, Surges and Water hammer, Delivery of Power Pipe networks.

(b) HYDRAULIC MACHINES AND HYDROPOWER

Centrifugal pumps, performance parameters, scaling, pumps in parallel, Reciprocating pumps, air vessels, performance parameters;

2. (a) HYDROLOGY:

Hydrological cycle, precipitation and related data analysis, PMP, unit and synthetic hydrographs, Evaporation and transpiration, floods and their management, PMG, Streams and their gauging, .River morphology. Routing of floods, Capacity of reservoirs.

(b) WATER RESOURCES ENGINEERING:

Water resources of the globe: Multipurpose uses of Water, Soil Plant water relationships, irrigation systems, water demand assessment, Storage and their yields, ground water yield and well Hydraulics, Water logging, drainage design, Irrigation revenue, Design of rigid boundary canals, Lacey' and Tractive force concepts in canal design, lining of canals; Sediment transport in canals; Non-Overflow and overflow sections of gravity dams and their design, Energy dissipaters and tail water rating, Design of head works, distribution work, falls, cross-drainage work, outlets, River training.

ENVIRONMENT ENGINEERING

3.(a) WATER SUPPLY ENGINEERING.

Sources of supply, yield, design of intakes and conductors, Estimation of demand, Water quality standards, Control of water born diseases. Primary and secondary treatment, detailing and maintenance of treatment units. Conveyance and distribution systems of treated water, leakage and control, Rural water supply, Institutional and Industrial water supply.

(b) WASTE WATER ENGINEERING

Urban rain water disposal, system of sewage collection and disposal, Design of sewers and sewerages systems, pumping, Characteristic of sewage and its treatment, Disposal of products of sewage treatment, stream flow rejuvenation, Institutional and industrial sewage management, plumbing system, Rural and semi-urban sanitation.

(c) SOLID WASTE MANAGEMENT

Sources, classification, collection and disposal, Design and Management of landfills.

(d) AIR AND NOISE POLLUTION AND ECOLOGY.

Sources and effects of air pollution, monitoring of Air pollution, Noise-pollution and standards; Ecological Chain and balance, Environmental assessment.

4.(a) SOIL MECHANICS

Properties of soils, classification and interrelationship, Compaction behavior, method of compaction and their choice, Permeability and seepage, flow nets, Inverter filters, Compressibility and consolidation, shearing resistance, stresses and failure, SO testing in laboratory and in-situ, Stress path and applications, Earth pressure theories, stress distribution in soil, soil exploration, samplers, load tests, penetration tests.

(b) FOUNDATION ENGINEERING

Type of foundations, Selection criteria, bearing capacity, settlement, laboratory and field test, Types of piles and their design and layout, Foundations on expansive soils, swelling and its prevention, foundation on swelling soils.

5.(a) SURVEYING

Classification of surveys, scales, accuracy, Measurement of distances-direct and indirect methods, optical and electronic devices, Measurement of directions, prismatic compass, local attraction, Theodolites-types Measurement of elevations, Spirit and trigonometric leveling, Relief representation, Contours, Digital elevation modeling concept, Establishment of control by triangulations and traversing measurements and adjustment of observations, computation of coordinates, Field astronomy, concept of global positioning system, Map preparation by plane tabling and by photogrammetry, Remote sensing concepts, map substitutes.

(b) TRANSPORTATION ENGINEERING

Planning of highway systems, alignment and geometric design, horizontal and vertical curves, grade separation, Materials and construction methods for different surfaces and maintenance, Principles of pavement design, Drainage.

Traffic surveys, intersections, signalling, Mass transit systems, accessibility, networking.

Planning of railway systems, terminology and designs, relating to gauge, track controls, transits, rolling stock, tractive power and track modernization, Maintenance Appurtenant works, Containerisation.

SECTION-III - GENERAL ABILITY TEST

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. Questions 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 without special study by an educated person.

Annexure-D

SCHEME AND SYLLABUS FOR DIRECT RECRUITMENT OF JUNIOR TELECOM OFFICERS (ELECTRICAL) THROUGH OPEN COMPETITIVE EXAMINATION IN BSNL

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

SCHEME

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)

The standard of paper in engineering subject will be that of Engineering Degree Examination of Indian University.

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.

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.

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.

3. 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.

4. 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

5. 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.

6. 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 .

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.

7. Microprocessor.

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

8. 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.

9. 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.

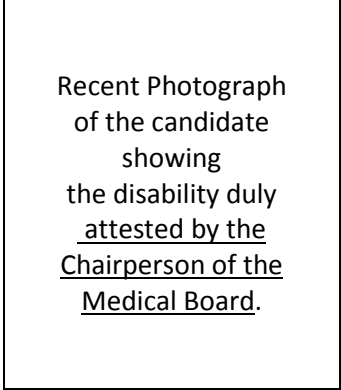
Annexure-E

NAME & ADDRESS
OF THE INSTITUTE/HOSPITAL.....

Certificate No..... Date.....

DISABILITY CERTIFICATE

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) SF-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 (with seal) Member Medical Board (with seal) Chairperson Medical Board (with seal)

Signature of the Patient
*Strike out which is not applicable

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



Bharat Sanchar Nigam Limited
(A Govt. of India Enterprise)

O/O the Chief General Manager, BSNL, West Bengal Telecom Circle,
1 Council House Street, (2nd floor), Kolkata-700 001.

Special Recruitment Drive (SRD) – 2013 for Persons with Disabilities in the cadre of JTO.
BSNL, W.B. Telecom Circle propose to recruit JTOs in the revised IDA pay scale of
Rs. 16400-40500/-.

Date of Examination – 23.11.2014 (Sunday)

Closing date for receipt of application - 05.09.2014

The Applicant must possess as on 31-12-2014 the required degree in the respective
discipline.

For details, log on to www.wb.bsnl.co.in