BHARAT SANCHAR NIGAM LTD.

(A Govt. of India Enterprise)

Office of the Chief General Manager,

North East - I Circle, Shillong -793 001.

No. Rectt-225/TTA/Direct-Rectt/2012

BHARAT SANCHAR NIGAM LIMITED

(A Government of India Enterprise)

Recruitment of Telecom Technical Assistant

CLOSING DATE OF RECEIPT OF APPLICATION: 31.12.2012

EXAMINATION DATE : To be announced later.

Bharat Sanchar Nigam Ltd. BSNL NE-I Circle, will fill up about 15(fifteen) vacancies for Mizoram SSA [subject to variation depending on the availability of vacancies] of Telecom Technical Assistant in the IDA Pay Scale of Rs.13600-25420 through an open competitive examination likely to be held in the month of February-March **2013** as per the details given below: -

Name of SSA	UR	ST	TOTAL
Mizoram	14	1	15

Eligibility :

Age: - Candidate must be between 18 and 27 years of age as on **31.12.2012** i.e. last date of receipt of application. Upper age limit is relaxable by 5 years for SC/ST and 3 years for OBC candidates. In case of departmental candidates the upper age limit is relaxable upto 45 years in respect of Scheduled Caste/ScheduledTribe/OBC candidates as per Rules. The employees of the BSNL only will be treated as departmental employee. Ex-servicemen are eligible for relaxation in age limit as per Rule. For residents of J&K – relaxation shall be in accordance with DoP&T O.M. No. 15012/7/1991-Estt.(D) dated 6-12-2005 pertaining to "residents of state of Jammu & Kashmir (relaxation of upper age limit for recruitment to Central Services & Posts", Rules-1997".

Qualification: - A candidate must have obtained Three Years Diploma in Engineering in any of the following disciplines:- Telecommunications Engineering/Electronics Engineering/Electrical Engineering/ Radio Engineering /Computer Engineering / Instrument Technology/Information Technology/ M.Sc.(Electronics) from a recognised Institution/University. Candidates possessing higher qualification in the eligible stream are also allowed to appear in the Examination.

Selection: Candidates will be selected as Telecom Technical Assistant on the basis of a competitive examination. Date and venue of the examination will be communicated to the candidates in due course.

Conditions :

i) Registration in Employment Exchange is not necessary. However, preference will be given to those who have registered their names in Employment Exchange within the concerned unit of Recruitment.

ii) The selected candidates, before their appointment as Telecom Technical Assistant, have to undergo the prescribed course of training in one of the Telecom. Training Centres of the Corporation.

iii) The selected candidates shall have to execute a bond for a period of 2(two) years from the date of appointment as Telecom Technical Assistant in the proforma as specified by the Corporation.

iv) Candidates working under Central/State Govt./Public Sector Undertakings should send their applications through proper channel.

Examination fees : Examination fee of Rs. 500.00 (Rupees five hundred) only is payable by the applicant in the form of Demand Draft/Indian Postal Order addressed to **"The Accounts Officer (Cash), BSNL, Office of the Chief General Manager, N.E-I Telecom. Circle, Shillong-793001".** Fees once paid shall NOT be refunded under any circumstances nor can it be held in reserve for any other examination or selection. ***SC/ST and Ex-servicemen candidates need not pay the Examination Fee.***

How to apply : A candidate shall have to apply in the typed or Xeroxed form as in Annexure-I. Applications complete in all respects should reach Asstt. General Manager (HR), Office of the Chief General Manager, N.E-I Telecom Circle Shillong-793001 on or before 31.12.2012. The Envelope containing the application must be superscribed with " **APPLICATION FOR RECRUITMENT OF TELECOM TECHNICAL ASSISTANT - 2012 "** in block letters. A self addressed unstamped envelope (size 12 cm X 25 cm) along with two self-addressed slips (size 12 cm x 8 cm) should be enclosed along with the application.

Examination : The examination is fully objective multiple choice pattern . There will be a written test comprising of 3 (three) parts consisting of Part-I (General ability test - 20 marks), Part-II (Basic Engineering-90 marks) and Part-III (Specialisation - 90 marks) of 3 hours duration. Candidates will have the option to answer Part-II & III in Hindi or English language. Option once exercised in respect of medium of answer shall be final and in no way will be allowed to change. Scheme and syllabus of the examination is in Annexure-II

1. Application received after the last date will not be entertained.

2. Applications, which are incomplete in any respect, will summarily be rejected and no correspondence in this connection shall be entertained.

3. Travelling allowance to SC/ST candidates: **The *candidates* belonging to SC/ST categories will be entitled to TA as per provisions of Ministry of Finance (Deptt. Of expenditure) O.M. No. 19014/3/77-E.IV(B) dated 17.2.1978.**

Annexure-I

APPLICTION FORM

Direct Recruitment of Telecom Technical Assistant (TTA) -2012 for Mizoram SSA.

PASSPORT SIZE PHOTOGRAPH

1	Full Name of the Candidate (in block letters)	
2	Fathers/Husband's name	
3	(a) Postal address with PIN CODE to which communication is to be sent (IN BLOCK LETTERS)	
	(b) Permanent home address with PIN CODE(IN BLOCK LETTERS)	
	(c) Contact No:	Telephone No._____ Mobile No. _____ e-mail _____
4	(a) Date of Birth : (In the format DD MM YYYY e.g. 1st May 2010 will be 01-05-2010) (As mentioned in Matriculation or equivalent certificate)(Attested copy of relevant certificate to be enclosed)	(dd) (mm) (yyyy)
	(b) Age as on 31.12.2012	
	(c)Whether claiming age relaxation? Yes/No.	
	If yes, under what category, (write the relevant category below) i) BSNL employees ii) SC/ST (Documentary proof to be attached) iii) Others (please specify)	
5	Place of birth and the state in which located	

6	State to which the applicant belongs :	
7	(a) Whether belongs to SC/ST/OBC/General (Write the relevant category) [A copy of OBC Certificate in prescribed format with creamy layer clause issued by the competent authority should be submitted. Candidates belonging to OBCs but coming in the " Creamy Layers" are not entitled to OBC reservation]. (b) Whether Ex-servicemen? If yes, indicate the total period of Military service.(Attested copy of discharge certificate to be attached)	
8	Whether already employed in Central Govt/State Govt/Public Sector undertaking(PSU). If yes, give details.	
9	Whether registered in the employment exchange of the SSA for which application is made. If yes, give details.	
10	Gender(male/female)	
11	(a) Nationality (b) Whether by birth or domicile.	
12	Marital status(married/unmarried)	

13	Details of Educational/Technical Qualifications Give details of Engineering Diploma/Degree obtained. Attested copy to be enclosed)		
	Name of the Engg. Diploma/Degree with discipline	Name of the University/ Institute	Month & Year of obtaining Engg. Diploma /Degree
14	Any other relevant information		
15	Option for Part-II & III Language HINDI ☐ ENGLISH ☐		

16	Details of application fee particulars	

	16.1 Indian Postal Order/Bank Draft No. and date:	
	16.2 Amount Rs. :	
	16.3 Issuing Bank/Post Office :	
	16.4 Payable in favour of	at

List of enclosures:

a) Attested copy of Matriculation/Higher Secondary certificate.
b) Attested copy of Diploma & mark-sheet
c) Attested copy of Employment Exchange Registration card, if any.
d) Attested copy of Caste certificate in case of SC/ST/OBC candidate.
e) Discharge certificate in case of Ex-Servicemen.
f) Attested copy of medical certificate in case of Physically Handicapped.
g) Age proof certificate.
(Admit card/HSLC pass certificate issued by Board/University).No objection certificate from present employer (in case of candidate already in service).
h) **Three copies** of passport size photographs.
i) A self-addressed, unstamped envelope & two self addressed slips.

Declaration of the candidate

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 Telecom Technical Assistant 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.

Place_____

Date_____

_____
Signature of the applicant

NOTE:

1. Candidates in their interest are advised to refer to the BSNL website www.ne1.bsnl.co.in from time to time for any further instruction/information.
2. For any Inquiry, the applicant may contact to AGM (HR) O/o CGMT, Shillong on telephone number 0364- 2210012 during office hours.
3. Before filling up the application form candidates should read the detailed advertisement carefully.

Annexure-II

SCHEME & SYLLABUS FOR TTA DIRECT RECRUIMENT EXAMINATION

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The standard of Paper in General ability test will be such as may be expected of an Engineering Diploma holder. The standard of papers in other subjects will approximately be that of Diploma level of an Indian Polytechnic. There shall be a single multiple choice objective types Paper of 3 hrs duration as per given below:

	Paper	Marks	Time
PART-I	**GENERAL ABILITY TEST**	**20**	
PART-II	**BASIC ENGINEERING**	**90**	**3hrs**
PART-III	**SPECIALIZATION**	**90**	

Note: 1. The candidate is required to obtain minimum qualifying marks in each of these parts as may be prescribed by the BSNL.

Detailed syllabus

PART-I: GENERAL ABILITY TEST – 20 MARKS

The candidate's comprehension and understanding of General English shall be tested through simple exercise such as provision of antonyms and synonyms, fill in the blanks and multiple-choice exercise etc. This shall also include questions on current events, general knowledge and such matters of everyday observation and experiences as may be expected of Diploma holder.

PART-II: BASIC ENGINEERING –90 MARKS

Detailed Syllabus is as under:

1. **Applied mathematics**: Co-ordinate Geometry, Vector Algebra; Matrix and Determinant; Differential Calculus; Integral Calculus Differential equation of second order; Fourier series; Laplace Transform; Complex Number; Partial Differentiation.

2. **Applied Physics**: Measurement- Units and Dimension; Waves, Acoustic, Ultrasonic; Light; Laser and its Application, Atomic Structure and Energy Levels.

3. **Basic Electricity**: Electrostatics; Coulomb's law, Electric field, Gauss's theorem, concept of potential difference, concept of capacitance and capacitors; Ohm's law, power and energy, Kirchhoff's voltage, current laws and their applications in simple DC circuits, Basic Magnetism;

   Electric Magnetism; Electromagnetic Induction; Concept of alternating voltage & current; Cells and Batteries, Voltage and Current Sources, The venin's theorem, Norton's theorem and their applications.

4. **Electronics Devices and Circuits:** Classification of materials into conductor, semi conductor, insulator etc, electrical properties, magnetic materials, various types of relays, switches and connectors. Conventional representation of electric & electronics circuits elements. Active and passive components; semi conductor Physics; Semiconductor Diode; Bipolar transistor & their circuits; Transistor Biasing stabilisation of operating point; Single stage transistor amplifier; field effect transistor, Mosfet circuits application.

Multistage Transistor Amplifier; Transistor Audio Power Amplifier; feedback in Amplifier; Sinusoidal; Oscillators; Tuned Voltage Amplifier; Opto Electronics Devices and their applications; Operational Amplifier, Wave shaping and switching circuits.

Block diagram of IC. Timer (such as 555) and is working; Motivation Circuits; Time Base Circuits; Tnyristory and UT Regulated Power Supply.

5. **Digital Techniques**: Applications and advantages of digital system; number system (binary and hexadecimal); Logic Gates; Logic Simplication; Codes and Parity; Arithmetic Circuits; Decoders, Display Devices and Associated Circuits,Multliplexers and De- multiplexers; batches and Flip Flops; Counters; Shift Registers; Memories A/D and D/A converters.

PART-III: SPECIALIZATION – 90 MARKS

Detailed Syllabus is as under:-

1. Electrical:

3 phase's vs single-phase supply, Star data connections, relation between phase & line voltage power factor and their measurements; construction and principles of working of various types of electrical measuring instruments. All types of motor and generator –AC & DC transformers,starters,rectifiers, inverters, battery charges, batteries, servo and stepper motor, contactor control circuits, switchgear, relays, protection devices & schemes, substation, protective relaying, circuits breaker, generator protection. Transformer protection, feeder & lightening protection feeder & bus bar protection, lightening arrestor,earthing, voltage stabilizer & regulators, power control devices & circuits phase controlled rectifiers,inverters,choppers dual converters cycloconverters; power electronics application in control of drivers, refrigeration and air conditioning.

2. **Communication:**

Modulation and de- modulation – and principles and operation of various type of AM, FM and PM modulator/demodulator pulse modulation – TDM, PAM, PPM, PWM, Multiplexing. Principle and applications of PCM.

Introduction of basic block diagram of digital and data communication system. Coding error detection and correction techniques; digital modulation techniques – ASK, ICW, FSK,PSK; Characteristic/ working of data transmission circuits; UART,USART;Modems ; protocols and

their function; brief idea of ISDN interfaces; local area Net work, carrier Telephony – futures of carrier telephone system.

Microwave Engineering; Microwave Devices; Waves –guides; microwaves component; microwave Antennas; Microwaves communication systems- block diagram and working principle of microwave communication link.

3 **Network, Filters and Transmission Lines**:

Two port network; Attenuators; Filters; Transmission Lines and their applications characteristic impedance of line; concept of refection and standing waves on a transmission line; Transmission line equation; principles of impedance matching, Bandwidth consideration of a transmission line.

4. **Instruments and Measurements**:

Specification of instruments- accuracy, precision, sensitivity, resolution range, Errors in measurements and loading effect; principles of voltage, current and resistance measurements; Transducers, measurement of displacement & strain forces & torque measuring devices, pressure measuring devices flow measuring devices, power control devices & circuits. Types of AC milli voltmeters – Amplifier rectifier and rectifier amplifier. Block diagram explanation of a basic CRO and a triggered sweep oscilloscope, front panel controls; impedance Bridges and Q- Meters.
Principles of working and specifications of logic probes, signature analyzer and logic analyzer, signal generator, distortion factor meter, spectrum analyzer.

5. **Control System:**

Basic elements of control system, open and closed loop system, concept of feedback, Block diagram of control system, Time lag, hysteresis, linearity concepts, self regulating and non- self regulating control systems. Transfer function of simple control components, single feedback configuration.

6. **Time response of systems.**

Stability Analysis Characteristics equation, Routh's table, Nyquist criterion, Relative stability, phase margin and gain margin.

Routh Hurwitz criteria, root locus techniques, Bode plot, Power plot, Gain margin and phase margin.

7. **Microprocessors**:

Typical organization of a microprocessor system & functions of its various blocks; Architecture of a Microprocessors; Memories and I/O Interfacing, Brief idea of M/C assembly languages, Machines & Mnemonic codes; Instruction format and Addressing Mode; concept of Instruction set; programming exercises in assembly language; concept of interrupt Data transfer

techniques- sync data transfer, interrupt driven data transfer , DMA, serial output data, serial input data.

8. **Computer**:

Computer and its working, types of computers, familiarisation with DOS and Windows, concept of file, directory, folder, number system. 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 Organisation. I/O system organisation. Microprocessors - Microprocessors Architecture, instruction set and simple Assembly level programming. Microprocessors based system design; typical examples. Personal computers and their typical uses. Data communication principles, types and working principles of modems. Network principles, OSI model, functions of data link layer and network layer, networking components; Communication protocol- X.25, TCP/IP.

9. **Database Management System:**

Basic concepts, entity relationship model, relational model, DBMS based on relational model.

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