BHARAT SANCHAR NIGAM LTD.

(A Govt. of India Enterprise)

Office of the Chief General Manager,

North East - I Circle, Shillong -793 001.

DIRECT RECRUITMENT OF TTA 2008

Applications are invited for the post of Telecom Technical Assistant (TTA) in the pay scale of Rs. 7100-200-10100 plus allowances per month as per Rule.

Number of vacancies to be filled up in Tripura, Meghalaya and Mizoram Telecom. Districts of North -East -I Telecom Circle are as follows: -

Name of Telecom. District/SSA	Category					Jurisdiction of the Telecom. District/SSA comprises of the following Revenue districts
	SC	ST	OBC	U/R	TOTAL	
TRIPURA	7	14	1	22	44	All the Revenue districts in the state of Tripura
MEGHALAYA	1	25	3	28	57	All the Revenue districts in the state of Meghalaya
MIZORAM	0	15	2	17	34	All the Revenue districts in the state of Mizoram

[3% of vacancies (SSA wise) are reserved for Physically Handicapped candidates and 10% vacancies (SSA wise) are reserved for Ex-servicemen candidates, which will be adjusted with the category to which Physically Handicapped/Ex-Servicemen belong]

(The above vacancies are likely to change)

Eligibility :

Age: - Candidate must be between 18 and 27 years as on **30-09-2008** i.e. 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 40 years in respect of General candidates, upto 45 years in respect of Scheduled Caste/Scheduled Tribe candidates and upto 43 years for 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.

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.

Selection: Candidates will be selected as Telecom Technical Assistant on the basis of a competitive examination. There shall be only one paper multiple choice objective type of three hours duration with the following: -

	Part	Marks
Part-I	General Ability Test	20
Part-II	Basic Engineering	90
Part-II	Spcialisation	90
	Total Marks	200

BSNL shall fix minimum qualifying marks for OC/OBC/SC/ST/PH candidates for each Part as well as aggregate. Candidates obtaining less than minimum qualifying marks in any of the Part or in aggregate shall not be considered for inclusion in the merit-list. The merit list will be drawn depending on the vacancies. The appearance of the name in the merit list does not confer any right to the candidate for employment. A final call letter/appointment letter will be issued to the candidate after completion of all formalities.

If syllabus and any other information required, the GMTD concerned may be contacted. Candidates may also log on to www.ne1.bsnl.co.in.

Date and Venue of the Examination: Date and venue of the examination will be communicated to the candidates in due course. SSA will be the Unit of Recruitment.

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 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.

v) An applicant is allowed to appear for examination against the vacancy of one SSA only. TTA is the SSA cadre and examination will be conducted SSA wise by the Circle on the same day.

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 : The specimen of the application form is included in this advertisement. Neatly typed [only on one side of paper] copy in A4 size [30 cms. X 20 cms] may be used for making application. Original advertisement or photo copy of the format in the advertisement must not be used for applying and in case a candidate submits such an application the same will not be entertained. Applications complete in all respects should reach O/o the Chief General Manager N.E-I Telecom Circle Shillong-793001 on or before **30th October, 2008**. BSNL shall not be responsible for any postal delay. The Envelope containing the application must be superscribed with "**APPLICATION FOR RECRUITMENT OF TELECOM TECHNICAL ASSISTANT-2008**" in block letters. Three identical copies of recent Passport size Photographs out of which one should be pasted (not stapled or pinned) on the application form, duly attested, and the other two attached to the application (not to be pasted or attested) along with two self addressed unstamped envelopes (size 12 cm X 25 cm) should be enclosed.

1. ***This advertisement is also available in the website www.ne1.bsnl.co.in***
2. ***Those who have already applied for recruitment of TTA-2008,published in local newspapers need not apply again.***
3. ***Application received after the last date will not be entertained.***
4. ***Applications, which are incomplete in any respect, will summarily be rejected and no correspondence in this connection shall be entertained.***

AGM (A),
O/o. CGMT/Shillong

APPLICATION FORM

For Direct Recruitment of Telecom Technical Assistant against the vacancies of Tripura SSA/Meghalaya SSA/Mizoram SSA.

PASTE A RECENT ATTESTED PASSPORT SIZE PHOTOGRAPH

1	Please indicate the Name of the SSA for which applied for _____	
2	Full Name of the Candidate (in block letters)	
3	Father's name/Husband's name	
4	(a) Postal address with PIN Code to which communication is to be sent (IN BLOCK LETTERS) Contact Telephone No./Mobile No. if any	
	(b) Permanent home address with PIN Code in Block letters:	
	c) Contact No: Telephone No._____, Mobile No. _____	
5	(a) Date of Birth (in Christian Era) (dd/mm/yyyy) _____ _____ _____	
	(b) Age as on **30-09-2008**.	
	c) Whether claiming age relaxation? Yes/No. If Yes, under what category(Write the relevant category below)	
	i) BSNL Employee	
	ii) SC/ST/OBC/PH (attested copies of certificates issued by competent authority to be enclosed)	
	iii) Others, please specify:	
6	Place of birth and the state in which located	
7	State to which the applicant belongs:	
8	(a) State whether belongs to SC/ST/OBC/ General (Write the relevant category) A copy of OBC certificate in the prescribed format with creamy layer clause issued by the competent authority should be submitted. Candidates belonging to OBCs but coming in the "Creamy Layer" are not entitled to OBC reservation.	
	(b) Whether Physically Handicapped: Yes/No_____ % of disability_____ (Medical Certificate to be attached - indicate the extent of disability.	
	c) Whether Ex-serviceman? If yes, the total period of military service _____ (attested copy of discharge certificate to be attached).	
9	Whether already employed in Central Govt/State Govt/Public sector undertakings (PSU). If yes, give details.	

10	Whether registered in the Employment Exchange of the SSA for which application is made. If yes, give details.	
11	Gender: Male/Female	
12	a) Nationality	
	b) By birth/by domicile	
13	Marital Status:(Married/Unmarried)	
14	Details of educational/technical qualifications (give details of engineering diploma/degree obtained (attested copy to be enclosed)	
14	14.1) Name of Engg.Diploma/Degree with discipline :	
1	14.2) Name of University/Institute	
	I14.3) Month and year of obtaining in Engg.diploma/degree	
15	Medium opted for answering question paper – English/Hindi	
16	Details of application fee particulars	
	16.1) Indian Postal Order/Bank Draft No. & Date	
	16.2) Amount Rs.	
	16.3) Issuing Bank/Post Office	
	16.4) Payable in favour of _____ at _____	

Declaration of the candidate

I do hereby declare that all 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 service are liable to be terminated forthwith without any notice to me.

Date_____
Place_____

_____
Signature of the applicant

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 GENRAL 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.

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.

6. **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.

7. **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.

8. **Database Management System:**

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