



BHARAT SANCHAR NIGAM LTD.

(A Govt. of India Enterprise)

Office of the Chief General Manager Telecom.
Assam Telecom. Circle, BSNL Administrative Building,
Panbazar, Guwahati-781 001.

CLOSING DATE OF RECEIPT OF APPLICATION : 01.12.2008

RECRUITMENT YEAR 2008

Applications are invited for the post of Telecom. Technical Assistant (TTA) in the pay scale of Rs. 7100 – 200 – Rs. 10100 plus usual allowances as per TTA Recruitment Rule-2001 of BSNL

Number of shortfall vacancies occurred for the Recruitment Year 2007 to be filled up against the **Recruitment Year 2008** in the Secondary Switching Areas (SSAs) of Assam Telecom. Circle are as under (Table-I):

Table: 1

Name of the SSA	Vacancies available in different categories				Jurisdiction of the SSA comprises of the following Revenue districts.
	UR	SC	ST	OBC	
Kamrup	NIL	NIL	4	11	Kamrup (Metro), Kamrup (Rural)
Silchar	20	1	5	13	Cachar, Karimganj, Hailakandi & NC Hills
Dibrugarh	5	1	2	8	Dibrugarh, Tinsukia
Jorhat	NIL	NIL	5	11	Jorhat, Sivasagar, Golaghat
Bongaigaon	3	NIL	2	6	Dhubri, Bongaigaon, Kokrajhar, Goalpara, Nalbari, Barpeta, Chirang, Baska
Tezpur	5	NIL	2	7	Darrang, Sonitpur, Lakhimpur, Dhemaji, Udalguri
Nagaon	3	NIL	1	5	Nagaon, Morigaon, Karbi Anglong.

(The vacancies shown above in Table: 1 are provisional)

[3% vacancies (1.5% for LI and 1.5% for HI) (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.]

In respect of physically handicapped persons, candidates with following **physical disabilities** will be **permitted**:

- i) Hearing Impairment (HI): Partially Deaf (PD)
- ii) Locomotive Impairment (LI): OL (One Leg affected) or BL (Both Leg affected) but **not arms**.
- iii) Visual: NIL

The minimum degree of disability is 40% in order for a person to be eligible for any concession/benefits.

Eligibility :

Age :

- (a) The applicant should be between 18 and 27 years as on **01.12.2008** i.e. last date of receipt of application.
(b) However, the age is relaxable for following categories of applicants:
- (i) For Scheduled Castes & Schedules Tribes candidates upto 5 years
 - (ii) For OBC candidates upto 3 years.
 - (iii) For PH candidates upto 10 years (15 years for SC/ST and 13 years for OBC)
 - (iv) For departmental candidates upto 40 years in respect of OC candidates, upto 45 years in respect of SC/ST candidates and upto 43 years in respect of OBC candidates.
 - (v) For Ex-Servicemen as per Rule.

Qualification: The applicant must possess, as on the last date of receiving applications, the educational qualification in any of the following disciplines from a recognized Institute/University:

- a) Three Year Engineering Diploma in Telecommunication Engineering, Electronics Engineering, Electrical Engineering, Radio Engineering, Computer Engineering, Instrumentation Technology or Information Technology.
- b) M.Sc (Electronics) from a recognized Institution/University.

Note: (a) Candidates possessing higher qualification in the eligible stream are allowed to appear in the examination.
(b) In case a candidate is possessing requisite educational qualification, irrespective of having entered the course in the 2nd through lateral entry level after 10+2, he/she will be eligible to appear in the examination.

Selection: Candidates will be selected as TTA on the basis of a written competitive examination scheduled to be held on **22.2.2009** and followed by a medical test, appointment and posting will be subject to successful completion of training, other eligibility conditions and requirements such as the prescribed educational qualification, age-limit with relaxation, if any, whether presently employed in Central or State Govt. etc. to be fulfilled by the applicants.

Syllabus & Question Paper:

(a) There shall be only one paper of multiple choice objective type of three hours duration with the following details:

Paper		Marks
Part-I	General Ability Test	20
Part- II	Basic Engineering	90
Part-III	Specialisation	90

(b) The total number of questions in the paper will be 200 and each question shall carry one mark.

(c) 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 subject will approximately be that of Diploma level of an Indian Polytechnic. In the Specialization Part- III, a candidate has to attempt a common set of questions from the consolidated syllabus prescribed under Specialization Part- III. (Syllabus, application form with Specialization available in website www.bsnl.co.in and www.assam.bsnl.co.in) A candidate will have the option to answer the multiple choice type question either in English or in Hindi.

Minimum Qualifying Standard:

(a) Qualifying marks in the paper will be 40% for the candidates of **unreserved communities** and 33% for the candidates of **SC/ST/OBC**.

(b) Relaxation of 2% in marks will be given to the **Physically Handicapped** candidates in each category (OC-PH, OBC-PH, SC-PH & ST-PH)

Conditions :

- i) 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 BSNL. The selected candidate will have to serve in Assam Circle and transfer to other State will not be allowed in normal case.
- ii) The selected candidates shall have to execute a bond in the form as specified by BSNL to serve in BSNL for a period of 5 (Five) years from the date of appointment as Telecom. Technical Assistant.
- iii) Candidate working under Central/ State Govt./ Public Sector Undertakings should send their application through proper channel.
- iv) An applicant is allowed to appear for examination against the vacancy of **one SSA only. TTA is a SSA cadre and examination will be conducted SSA wise by the Circle on the same day.** Examination is likely to be held on 22nd February, 2009.

Examination fee :

(a) Examination fee of Rs. 500.00 (Rupees Five hundred) only is payable by the applicant in the form of Indian Postal Order/Demand Draft to be drawn in favour of the Accounts Officer (Cash) of the concerned SSA **as given in Table-2**. Examination fee once paid will not be refunded.

(b) **No fee for the applicants of SC & ST category.**

(c) **Exemption from payment of examination fees is also available to the applicants of PH category.** The exemption will, however, be available to only those handicapped persons who otherwise be eligible for appointment to the post on the basis of the standards of medical fitness prescribed for the post and who enclose with the application form, necessary certificate from a Government Hospital/Medical Board in support of his/her claim for being handicapped.

Concession for SC/ST candidates:

(a) **Travelling Allowance for SC/ST candidates:** The applicants belonging to SC/ST categories will be entitled to T.A. as per provisions of Ministry of Finance (Deptt. of Expenditure) OM No. 19014/3/77-E-IV (B) dtd. 17.02.1978.

(b) **Pre-recruitment training for SC/ST candidates:** Necessary arrangement for pre-recruitment training will be conducted for SC/ST as per rule.

How to apply :

A candidate can apply for vacancies of any one SSA only of Assam Telecom Circle and submit application in the format attached hereunder. Neatly typed (only on one side of paper) copy in A4 size (30 cm x 20 cm) may be used for making application. The application filled up in photocopy of the format given in the advertisement will not be entertained.

The application complete in all respect along with the examination fee should be sent by Registered post/ Speed Post/ by hand to the SSA concerned on or before **01.12.2008**. A list of SSA with the address to whom the applicants should send their application is given in **Table-2**. The envelop containing the application must be **superscribed** with “**APPLICATION FOR RECRUITMENT OF TELECOM. TECHNICAL ASSISTANT – 2008**” on top of the envelope. Two self addressed unstamped envelopes of 27 x 12 cms should be enclosed along with the application. Merit list of the successful candidates selected provisionally will be prepared SSA-wise.

Table - 2

S. No.	Name of the SSA	Address to whom the application be sent/ Examination Centre	IPO/Demand Draft to be drawn in favour of
1	Kamrup	Divisional Engineer (P&A), O/o the General Manager Telecom. BSNL, Kamrup Telecom. District, Guwahati-781 001	Accounts Officer (Cash) O/o GM, KTD BSNL, Guwahati
2	Silchar	Divisional Engineer (P&A), O/o the General Manager Telecom BSNL, Silchar Telecom. District, Silchar- 788 001.	Accounts Officer (Cash) O/o the GMTD, BSNL Silchar.
3	Dibrugarh	Divisional Engineer (P&A), O/o the General Manager Telecom. BSNL Dibrugarh Telecom. District, Dibrugarh- 786 001.	Accounts Officer (Cash) O/o the GMTD, BSNL, Dibrugarh.
4	Jorhat	Divisional Engineer (P&A), O/o the General Manager Telecom. BSNL, Jorhat Telecom. District, Jorhat- 785 001.	Accounts Officer (Cash) O/o the GMTD, BSNL, Jorhat.
5	Bongaigaon	Divisional Engineer (P&A), O/o the General Manager Telecom. BSNL, Bongaigaon Telecom. District, Bongaigaon- 783 380.	Accounts Officer (Cash) O/o the GMTD, BSNL, Bongaigaon.
6	Tezpur	Divisional Engineer (P&A), O/o the General Manager Telecom. BSNL, Tezpur Telecom. District, Tezpur- 784 001.	Accounts Officer (Cash) O/o the GMTD, BSNL, Tezpur.
7	Nagaon	Divisional Engineer (P&A), O/o the General Manager Telecom. BSNL, Nagaon Telecom. District, Nagaon- 782 001.	Accounts Officer (Cash) O/o the GMTD, BSNL, Nagaon.

List of enclosures :

- a) Three (3) identical passport size photographs out of which one should be pasted (**not stapled or pinned**) in the space specified at the top of the application form **duly attested**. The second and third copy of the photograph be attached to the application (**not to be pasted or attested**)
- b) IPO/Bank Draft for **Rs. 500/-** (Not required for **SC/ST/PH** candidates)
- c) Attested copy of Matriculation & Higher Secondary Pass Certificate.
- d) Attested copy Diploma Pass Certificate/ Marks sheet.
- e) Attested copy of Employment Exchange Registration Card, if any.
- f) Attested copy of Caste certificate in respect of **SC/ST/OBC** candidate.
- g) Discharge certificate in respect of Ex-servicemen
- h) Attested copy of medical certificate in case **physically handicapped**.
- i) Age proof certificate (Admit Card/ Matriculation Pass Certificate issued by Board/ University)
- j) Two self addressed unstamped envelopes of **27cm. x 12 cm.**

Please Note:

Please log on to www.bsnl.co.in and www.assam.bsnl.co.in

1. Application received after the last date (i.e., 01.12.2008) 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.

SPECIMEN APPLICATION FORM FOR TELECOM TECHNICAL ASSISTANT (DIRECT RECRUITMENT) EXAMINATION-2008

Passport size
photograph to be
affixed here

1. Name of Recruitment Unit :
.....
[Name of SSA]
2. Full Name of the candidate :
.....
[IN BLOCK LETTER]
3. Father/ Husband's Name :
4. a) **Postal Address with PIN CODE** to where communication is to be sent
[IN BLOCK CAPITAL LETTERS]
.....
..... Pin

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- b) **Permanent Home Address with PIN CODE**
[IN BLOCK CAPITAL LETTERS]
.....
..... Pin

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- c) Contact number : Telephone No..... Mobile No.....
5. a) **Date of Birth** -----(DD)------(MM) -----(YYYY)
[in the format DD MM YYYY e.g. 1st May 2008 will be 01-05-2008]
[As mentioned in Matriculation or Equivalent Certificate]
[Attested copy of relevant certificate to be enclosed]
- b) Age as on **01.12.2008**years.....Months.....Days.
- c) Whether claiming **age relaxation** ? **Yes/ No**.....
If yes, under what category, [write the relevant category below]
- i) BSNL employees
- ii) SC/ST/OBC/PH
- (Attested copies of certificate 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) 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. Candidate belonging to OBCs but coming in the **“Creamy Layer”** are **not** entitle to OBC reservation]
- b) Whether **Physically handicapped** : Yes/No..... % disability.....
- i) **HI** (PD), ii) **LI** (OL), iii) **LI** (BL). (Please tick whichever is applicable)
(Medical certificate to be attached. Indicate the extent of disability)

- c) Whether Ex-servicemen ? If yes, the total period of Military service
(Attested copy of Discharge Certificate to be attached)
9. Whether already employed in Central Government / State Government /Public Sector undertaking (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) Whether by birth/by domicile :.....
13. Marital Status : [Marred/Unmarried].....
- 14. Details of Educational /Technical qualifications**
[Give details of Engineering Diploma/Degree obtained. Attested copy to be enclosed]
- 14.1 Name of the Engineering **Diploma/ Degree** with discipline
- 14.2 Name of the **University/ Institute**
- 14.3 **Month and year** of obtaining Engineering 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. and date:
- 16.2 **Amount in Rs** :
- 16.3 Issuing **Bank/ Post** Office:
- 16.4 Payable in favour of..... at.....

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 service are liable to be terminated forthwith without any notice to me.

Full Signature of the applicant: _____

Full Name of the applicant (With Alias if any): -----

Date: ___/___/ 2008

Place: _____

SCHEME & SYLLABUS FOR TTA DIRECT RECRUITMENT EXAMINATION

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 type Paper of 3 hrs. duration as per details given below:

<u>Paper</u>	<u>Marks</u>	<u>Time allowed</u>
PART - I GENERAL ABILITY TEST	20	
PART - II BASIC ENGINEERING	90	3 hrs.
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

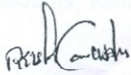
PART-I: GENERAL ABILITY TEST - 20 MARKS

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, Acoustics, 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, Kirchoff's voltage, current laws and their applications in simple DC circuits, Basic Magnetism; Electro Magnetism; Electromagnetic Induction; Concept of alternating voltage & current; Cells and Batteries; Voltage and Current Sources; Thevenin'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 and electronic circuits elements. Active and passive components; semi conductor Physics; Semiconductor Diode; Bipolar transistor & their circuits; Transistor Biasing Stabilization of operating point; Single stage transistor amplifier; field effect transistor, Mosfet circuits applications.

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

Block diagram of I.C. Timer (such as 555) and its working; Motivation Circuits; Time Base Circuits, Thyristory and UJT; Regulated Power Supply.

5. **Digital Techniques:** Applications and advantages of digital systems; number system (binary and hexadecimal); Logic Gates; Logic Simplification; Codes and Parity; Arithmetic Circuits; Decoders, Display Devices and Associated Circuits; Multiplexers and De-multiplexers; Latches 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 phases vs. single-phase supply, Star Delta 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 motors, 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 & air-conditioning.

2. Communication:

Modulation and demodulation – principles and operation of various types of AM, FM and PM modulators/demodulators; pulse modulation – TDM, PAM, PPM, PWM, Multiplexing, Principles and applications of PCM.

Introduction of Basic block diagram of digital and data communication systems, Coding error detection and correction techniques; Digital Modulation Techniques – ASK, ICW, FSK, PSK; Characteristics/working of data transmission circuits; UART, USART; Modems; Protocols and their functions, brief idea of ISDN interfaces, local areas Network; Carrier Telephony – Features of carrier telephone system.

Microwave Engineering; Microwave Devices; Wave-guides; Microwave Components; Microwave Antennas; Microwave Communication Systems- Block diagram & working principal's of microwave communication link.

R. S. K. Kishore

3. Network, Filters and Transmission Lines:

Two port network; Attenuators; Filters; Transmission Lines and their applications: characteristic impedance of line; concept of reflection 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 Systems:

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 criterion, root locus techniques, Bode plot, Power plot, Gain margin and phase margin.

6. Microprocessors:

Typical organization of a microcomputer 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, familiarization with DOS and Windows- concept of file, directory, folder, 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. Microprocessors- microprocessor 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,

Rashid C. A. A.

OSI model, functions of data link layer and network layer, networking components; communications protocols-X.25, TCP/IP.

Database Management System – Basic concepts, entity relationship model, relational model, DBMS based on relational model.

P. S. K. K.
ADG (P-III)