

BHARAT SANCHAR NIGAM LIMITED
(A Government of India Enterprise)
O/o Chief General Manager Telecom,
Bihar Circle, Patna

Recruitment of TTA

Rectt/TTA(O/S)/2011

CLOSING DATE OF RECEIPT OF APPLICATION : 15/06/2011

EXAMINATION DATE : Likely to be held in July 2011(date to be announced later)

Bihar Telecom Circle is going to recruit 171 number of Telecom Technical Assistants (TTAs) in the pay scale of Rs. 13600 to 25420 plus allowances per month through an open competitive examination. TTA is an SSA/Telecom District level cadre and examination will be conducted SSA/Telecom District wise on the same day. One applicant is allowed to appear in the examination against vacancy of one SSA/Telecom District only.

SSA wise Vacancy breakup is shown below:

Name of Telecom District/SSA	Community break-up					P/H quota
	SC	ST	OBC	OC	Total	
Ara	1	0	1	3	5	---
Begusarai	0	0	1	2	3	---
Bettiah	1	0	1	2	4	---
Bhagalpur	2	0	3	6	11	1
Chapra	1	0	2	5	8	---
Darbhanga	0	0	1	4	5	---
Gaya	4	1	6	9	20	1
Hajipur	0	0	1	3	4	--
Muzaffarpur	2	0	3	7	12	1
Motihari	1	0	1	3	5	--
Madhubani	1	0	1	3	5	--
Munger	1	0	2	5	8	--
Khagaria	1	0	1	3	5	--
Patna	9	1	16	29	55	2
Katihar	1	0	2	3	6	--
Kishanganj	0	0	0	1	1	--
Saharsa	1	0	1	3	5	--
Samastipur	0	0	1	2	3	--
Sasaram	1	0	2	3	6	--
Total	27	2	46	96	171	5

1. **Reservation for SC/ST/OBC/PH/Ex. Servicemen:**

- (a) Reservation as per Central Govt. guidelines will be applicable for SC/ST/OBC/Physically Handicapped [PH].
- (b) In respect of Physically Handicapped persons, candidates with following physical disability will be permitted as per provision laid in DoT letter no.1-8/2001-AD (SNG) dated 18/10/2001 and 21/04/2003.:

- (i) 1.5% for Locomotive Impairment -
 - OL (one leg affected) or
 - BL (both legs affected but not arms)

- (ii) 1.5% for Hearing Impairment - Partially Deaf

Accordingly, seats are reserved under Bhagalpur, Gaya, Muzaffarpur and Patna Telecom Districts as indicated in last column of table showing vacancy breakup.

- (c) 10% of vacancies are reserved for Ex. Servicemen candidates.

2. **Examination fees:**

- a) Examination fee of Rs. 500/- (Rupees Five hundred) only is payable by the applicants in the form of Demand Draft only addressed to " **A.O. (B&A), BSNL, % C.G.M.T. Patna.**" Examination fee once paid will be not be refunded.
- b) No fee for the applicants of SC & ST categories.
- c) Exemption from payment fees is also available to the applicants of PH category. This exemption will, however, be available to only those handicapped persons who would otherwise be eligible for appointment to the post on the basis of the standards of medical fitness prescribed for that post and who enclose with the application necessary certificate from a Government Hospital / Medical board in support of his /her claim for being handicapped.
- d) The applicants who have appeared in the examination for TTA recruitment held on 22/11/2009 are exempted from the submission of examination fees on production of details given in the application form.

3. **Eligibility Conditions**

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

3.2. **Educational Qualifications:**

The candidate must have obtained Three years Diploma in Engineering in any of the following disciplines as on 20/07/2009 :

- (a) Three years Diploma in Engineering in
- Telecommunications Engineering
 - Electronics Engineering
 - Electrical Engineering
 - Radio Engineering
 - Computer Engineering
 - Instruments Technology
 - Information Technology
- (b) M.Sc. (Electronics) from a recognized institution/University.

Note:

- (a) For above qualifications & streams, no equivalence shall be accepted.
- (b) Candidates possessing higher qualification in the eligible streams are also eligible.
- (c) Candidates possessing Three year Diploma certificates are eligible to appear in the Exam irrespective of percentage of marks obtained by them.
- (d) In case a candidate is possessing requisite educational qualification, irrespective of having entered the course in the 2nd year through lateral entry level after 10+2, he/she will be eligible to appear in the exam.

3.3 **Age:**

The applicant should be between 18 to 27 years of age as on 20/07/2009. However, this age is relaxable for following categories of applications;

- (a) For Scheduled Castes and Scheduled Tribes upto 5 years.
- (b) For OBC candidates upto 3 years.
- (c) For PH candidates upto 10 years (15 years for SC/ST and 13 years for OBC)
- (d) For departmental candidates maximum age limit is
- upto 40 years in respect of general candidates.
 - Upto 45 years in respect of SC/ST candidates in accordance with the instruction or orders issued by the Central Government.
 - Upto 43 years in respect of OBC candidates.
- (e) For Residents of J&K - Relaxation shall be accordance with DoP&T O.M. No. 15012/7/1991-Estt.(D)dtd. 06/12/2005 pertaining to " Residents of State of Jammu and Kashmir (Relaxation of Upper Age limit for recruitment to Central Civil Services & Post) Rules 1997".
- (f) Ex-serviceman shall be allowed age relaxation to the extent that every Ex-Servicemen who has put in not less than six months continuous service in the Armed Forces of the Union shall be allowed to deduct the period of such service from

his/her actual age and if the resultant age does not exceed the maximum age limit prescribe for the post of service for which he seeks appointment by more than three years, he/she shall be deemed to satisfy the condition regarding age limit.

4. **Other Conditions:**

- a) Restriction of residence and Registration with employment exchange of the concerned SSA/Telecom District in which the applicant applies is preferable and not mandatory.
- b) The selected candidates, before their appointment as Telecom Technical Assistant, have to undergo the prescribed course of training.
- c) 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 pro-forma as specified by the Company.
- d) Candidates working under Central/State Govt./Public Sector Undertakings should send their applications through proper channel.

5. **Mode of selection and nature of question paper**

There shall be only one paper of multiple choice objective type of three hours duration as per the following details

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

The total number of questions in the paper shall be 200 and each question shall carry one marks.

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. Answer sheet will be OMR based.

6. **Minimum qualifying standards**

- a) Qualifying marks in the paper will be 40% for the candidates of unreserved communities and 33% for the candidates of SC/ST/OBC category.
- b) As per the scheme and syllabus for the examination, there will be three parts of General Ability Test, Basic Engineering & specialization consisting of maximum marks of 20, 90 and 90 respectively. The minimum qualifying marks in each of the above three parts of the question paper will be 30% for candidates belonging to OC category and 20% for candidates belonging to OBC/SC/ST category, i.e. the minimum passing marks in each of the 3 parts in respect of OC will be 6, 27 and 27 respectively whereas in respect of OBC/SC/ST, it will be 4, 18, and 18 respectively.
- c) Relaxation of 2% in marks will be given to the Physically Handicapped candidates in each category (OC-PH, OBC-PH, SC-PH & ST-PH)

7 Award of Marks:

There shall be Negative Marking. 25% marks i.e. $\frac{1}{4}$ mark will be deducted for each wrong answer for the questions carrying 1 mark.

- (a) One (1) mark will be awarded for each correct answer.
- (b) Zero (0) mark will be awarded for the each un-attempted question.
- (c) The final (sub-total and total) marks obtained will not be rounded off.

8 Merit list & Waiting List:

- (i) Based on the marks obtained by candidates two types of lists will be prepared for each SSA (1) Merit list (for selected candidates) and (2) Waiting list consisting of all those candidates who have qualified the examination but do not find a place in the merit list of successful candidates.
- (ii) Waiting list shall remain valid for a period of one year from the date of declaration of result or the date of notifying the DR Examination for the next recruitment year, whichever is earlier .
- (iii) Appearance of a candidate's name in the waiting list will not confer any right on the candidate for claiming appointment in the company.

9. Concession for SC/ST candidates:

- a) Traveling Allowance to 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) O.M. No. 19014/3/77-E.IV (B) dated 17/02/1978.
- b) Pre-recruitment training for SC/ST candidates : Necessary arrangement for three days pre-recruitment training for SC/ST candidates has been made w.e.f 27/06/2011 to 29/06/2011 All willing SC/ST candidates may send to separate application for this purpose to Principal CTTC at following address :

Principal CTTC, CTTC Building, Sanchar Parisar, Budh Marg, Patna : 800001. All expenses for attending this training program viz expenses on travel, boarding, lodging etc. will have to be born by the candidate himself.

10. How to apply:

The specimen of the application form is included in this advertisement as Annexure I. Neatly typed [only on one side of paper] copy in A4 size [30 cms. X 20 cms] may be used for making application. Applications complete in all respects should reach **AGM (Estt) O/o the Chief General Manager Telecom, Bihar Telecom Circle, Sanchar Sadan, Budh Marg, Patna: 800001** on or before 15/06/2011. 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 to be pasted on the admit card at the place marked for this (Admit Card in Duplicate) (not to be attested) along with two self addressed unstamped envelopes (size 27 cm X 12 cm) should be enclosed.

11. Closing date for receipt of Application forms:

Application forms complete in every respect must reach on or before 15/06/2011 (5.00 PM) Application received after the closing date or incomplete application form 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 even if they qualify 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 fulfillment of all eligibility conditions.

12. In the application form, **Name of Recruitment unit** is a mandatory field which must be filled clearly.

13. Admit Card is given as Annexure III in the advertisement

14. Syllabus is given as Annexure II in the advertisement

15. List of enclosures

- a. Three identical passport size photographs out of which one should be pasted (not stapled or pinned) on the application form, duly attested, and the other two to be Pasted on the admit card at the place marked for this (Admit Card in Duplicate) (not to be attested)
- b. Two self addressed unstamped envelopes of 27 x 12 cms size
- c. Bank Draft for Rs.500/- payable to AO (B&A) O/o CGMT, Bihar Circle, Patna - [Not required for SC/ST/PH candidates applicants and also who appeared in the examination held on 22/11/2009 if they submit the details given in the application form]
- d. Attested copies of following documents:
 - Matriculation certificate (for Age proof)
 - Caste certificate by competent authority
 - Medical certificate in respect of Physically Handicapped candidates
 - Discharge certificate in case of Ex-servicemen
 - Diploma/Degree in Engineering

16. For any query please contact Shri O.P. Lal on Tel. No. 0612-2234705 during office hours.

17. Candidates in their interest are advised to refer to the BSNL Bihar website www.bihar.bsnl.co.in from time to time for any further instruction/information.

Annexure- I

RECENT
PASSPORT
SIZE
PHOTOGRAPH
(Self attested)

APPLICATION FORM

For Telecom Technical Assistant (Direct Recruitment) Examination-2008 in Bihar Telecom Circle.
(Re-conduct of examination held on 22/11/2009)

1	Name of Recruitment Unit (Name of SSA/Telecom District)	
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). (b) Permanent Home Address with PIN CODE : (IN BLOCK LETTERS) (c) Contact Number :	Tele No: Mob. No:
5	(a) Whether you have appeared in the examination held on 22/11/2009 (b) If yes, please write your Roll no. in lieu of examination fee (Attach photo copy of Admit card)	
6	(a) Date of Birth [in the format DD MM YYYY e.g. 1 st May, 2009 will be 01-05-2009] [As mentioned in Matriculation or Equivalent Certificate] [Attested copy of relevant certificate to be enclosed]	__ __ __ __ __ __ __ __ (dd) (mm) (yyyy)
	(b) Age as on 20.07.2009	
	(c) Whether claiming age relaxation? Yes/ No If yes, under what category, [Write the relevant category] (i) BSNL Employees (ii) SC/ST/OBC/PH (Attested copies of the certificate issued by Competent Authority to be enclosed) (iii) Other (Please Specify)	
7	Place of birth and the state in which located	
8	State to which the applicant belongs.	
9	(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. Candidates belonging to OBCs but coming in the "Creamy Layer" are not entitled to OBC reservation] (b) Whether Physically handicapped : Yes/No	_____ % disability _____ (Medical certificate to be attached- Indicate the

	(c) Whether Ex-Servicemen? If yes, the total period of Military service (Attested copy of discharge certificate to be attached)	extent of disability)
10	Whether already employed in Central Government/ State Government/ Public Sector Undertaking (PSU). If yes, give details.	
11	Whether registered in the Employment Exchange of the SSA for which application is made. If yes, give details.	
12	Gender (Male/Female)	
13	(a) Nationality : (b) Whether by birth/by domicile :	
14	Marital status (Married/ Unmarried)	
15	Details of Educational/Technical qualifications (Give details of Engineering Diploma/Degree obtained. Attested copy to be enclosed) 15.1 Name of Engineering/ Diploma/Degree with discipline. 15.2 Name of University/Institute. 15.3 Month and year of obtaining Engineering Diploma/Degree	
16	Medium obtained for answering question paper: English / Hindi	
17	Details of application fee particular 17.1 Bank Draft no. and Date 17.2 Amount Rs : 17.3 Issuing Bank : 17.4 Payable in favour of A.O. (B&A) O/o the CGMT,Patna	

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

Annexure- II
DR-TTA Examination – 2008

Admit Card

Please affix recent
passport size photo
(Not to be signed /
attested)

Roll No: -----(For office use

Please allow Mr. /Mrs/Ms _____
Son/Daughter of Shri _____ whose photograph is affixed
on the Admit card to appear in the examination for Recruitment of TTA-2008 of the Bharat
Sanchar Nigam Limited. The date, time and venue of the exam are as under;

Examination Centre	Date of exam	Time Table
(For office use only)		10:00 AM to 01:00 PM

Note: Candidature of applicants is purely **PROVISIONAL**. Final selection is subject to
fulfillment of all eligibility criteria mentioned in the advertisement dated 13/05/2011.

Date :
Place : Patna

Asstt. General Manager (Estt)
O/o CGMT, Bihar Circle, Patna

DR-TTA Examination – 2008

Admit Card

Please affix recent
passport size photo
(Not to be signed /
attested)

Roll No: -----(For office use

Please allow Mr. /Mrs/Ms _____
Son/Daughter of Shri _____ whose photograph is affixed
on the Admit card to appear in the examination for Recruitment of TTA-2008 of the Bharat
Sanchar Nigam Limited. The date, time and venue of the exam are as under;

Examination Centre	Date of exam	Time Table
(For office use only)		10:00 AM to 01:00 PM

Note: Candidature of applicants is purely **PROVISIONAL**. Final selection is subject to
fulfillment of all eligibility criteria mentioned in the advertisement dated 13/05/2011.

Date :
Place : Patna

Asstt. General Manager (Estt)
O/o CGMT, Bihar Circle, Patna

SYLLABUS FOR TTA DIRECT RECRUITMENT EXAM

The standard part in General ability test will be such as may be expected of an engineering diploma holder. The standard of the paper will approximately be that of Diploma level of an Indian Polytechnic. There shall be a single multiple choice objective type paper of three hours duration as per details give below :-

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

Note: The candidate is required to obtain minimum qualifying marks in each of these parts.

Part-I:-General Ability Test : 20 Marks:

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

Part -II: Basic Engineering: 90 Marks :

- Applied Mathematics:** Co-ordinate Geometry; Vector Algebras, Matrix ad Determinant; Differential calculus; Integral calculus, Differential equation of second order; Fourier series; Laplace Transformer; Complex Number; Partial Differentiation.
- Applied Physics:** Measurement- Units and Dimensions; Waves, Acoustics, Ultrasonics; Light; Laser and its Applications; Atomic Structure and Energy Levels.
- 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.
- Electronic 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 circuit elements. Active and passive components; Semi conductor Physics; Semi Conductor Diode; Bipolar Transistor & their circuits; Transistor Biasing & Stabilisation of operating point; Single stage transistor amplifier field effect transistor, Mosfet circuit 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; Multivibrator circuits; Time base circuits; Thyristors and UJT; Regulated Power supply
- Digital Technique:** Applications and advantages of digital systems; number system(binary and hexadecimal); Logic Gates; Logic simplifications; Codes and Parity; Arithmetic circuits; Decoders, Display Devices and Associated Circuits; Multiplexers and De-Multiplexers; Latches and Flip Flops; counters; Shift Register; Memories; A/D and D/A converters.

Part -III Specialization: 90 Marks

Electrical :- 3 phase 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 chargers, batteries, servo and stepper motors, contactor control circuits, switchgear, relays, protection devices & schemes, substation, protective relaying, circuit breaker, generator protection, transformer protection, feeder & lightning protection, feeder & bus bar protection, lightning arrester, earthing, voltage stabilizer & regulators, power control devices & circuits, phase controlled rectifiers, inverters, choppers, dual converters, cycloconverters; power electronics application in control of drives refrigeration & air conditioning.

Communication:- Modulation and demodulation- Principles and operation of various types of AM, FM and PM modulators / demodulator; 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 area Network; Carrier Telephony- Features of carrier telephone system. Microwave Engineering: Microwave Devices; Waveguides; Microwave Components; Microwave antennas; Microwave communications Systems- Block diagram & working principles of microwave communications link.

Network, Filters and Transmission Lines:- Two ports 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; Principle of impedance matching; Bandwidth consideration of a transmission line.

Instruments and Measurements:- Specifications of Instruments- accuracy precision, sensitivity resolution range, Errors in measurement and loading effect; Principles of voltage, current and resistance measurements; Transducers, measurement of displacement a strain, force & torque measuring devices, pressure measuring devices, flow measuring devices power control devices & circuits. Types of AC mill-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, signal analyzer and logic analyzer, signal generator, distortion factor meter, spectrum analyzer.

Control system:- Basic elements of control system, open and closed loop system concepts of feedback, Block diagram of control system. Time lag, hysteresis linearly concepts; Self regulating and non self regulating control systems. Transfer functions of simple control components, single feedback configuration. Time response of systems; Stability Analysis: Characteristic equation Routh's table Nyquist Criterion, Relative stability, phase margin and gain margin. Routh Hurwitz criterion, Root Locus technique, Bode Plot, Polar plot, gain margin and phase margin.

Microprocessor- Typical organization of a microcomputer system & functions of its various block; Architecture of a Microprocessor; Memories and I/O interfacing; Brief idea of M/s assembly languages, machines & Mnemonic codes; Instructions format and Addressing mode; concept of Instruction set; programming exercises in assembly language; concept of interrupt; Data transfer techniques- sync data transfer, async data transfer interrupt driven data transfer, DMA serial output data, serial input data.

Computers:- Computer and its working, types of computers, familiarization with DOS and windows-concept of file, directory, folder, Number systems; Data Communication. Programming Elements of a high level programming language. PASCAL, c; USE OF BASIS DATA STRUCTURES Fundamentals of computer architecture, Processor design, Control unit design; Memory organization. I/O system Organization. Microprocessor-microprocessor architecture; Instruction set and simple assembly level programming. Microprocessor 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; communications protocols-X-25, TCP/IP Database Management System-basic concepts, entity relationship model, relational model, DBMS based on relational model.