

**No. 1-1/2015-Rectt.
BHARAT SANCHAR NIGAM LIMITED
(RECRUITMENT BRANCH)**

**SPECIAL RECRUITMENT DRIVE FOR SC, ST AND OBC CANDIDATES IN
POSTS OF TTA IN BSNL FROM EXTERNAL CANDIDATES**

STARTING OF ONLINE REGISTRATION OF APPLICATION : 01-12-2015

LAST DATE OF ON LINE REGISTRATION : 10-12-2015

DATE OF WRITTEN TEST : 20-12-2015

Bharat Sanchar Nigam Ltd. (BSNL) will conduct a Special Recruitment Drive (SRD) for Scheduled Caste (SC), Scheduled Tribe (ST) and Other Backward Castes (OBC) candidates for filling up total 147 (25 for SC, 77 for ST and 45 for OBC) posts of Telecom Technical Assistant {TTA}. All SC, ST and OBC candidates fulfilling the prescribed eligibility conditions and possessing qualification as detailed in **Annexure-A** are eligible to apply for the above said post.

The detailed number of vacancies in the cadre of TTA are as under :-

Sl. No.	Name of the Circle	SC	ST	OBC
1	Gujarat	3	18	0
2	Maharashtra	1	13	17
3	West Bengal	2	9	1
4	North East - II	0	5	0
5	Andhra Pradesh	0	1	0
6	Himachal Pradesh	0	2	3
7	Jammu & Kashmir	4	9	12
8	Orissa	1	5	0
9	Uttar Pradesh (West)	1	0	0
10	Uttar Pradesh (East)	2	1	0
11	Assam	0	0	1
12	Rajasthan	1	9	0
13	Madhya Pradesh	3	3	1
14	Karnataka	5	1	5
15	Bihar	2	0	0
16	Andaman & Nicobar	0	0	1
17	Kerala	0	1	0
18	Chengalpet under Chennai TD	0	0	4
	Total	25	77	45

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1. Scale of Pay:-

The Telecom Technical Assistant (TTA) shall be appointed in the IDA pay scale [NE-9] of Rs 13,600-25,420/- with annual increment @ 3% of basic pay plus IDA, HRA, Perks, Medical Benefits, etc. admissible as per company rules.

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 'B'**.

The Telecom Technical Assistant (TTA) is a Circle-based Cadre and the candidates would be selected against the vacancies of a particular Circle. The candidates are 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 TTA 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 Company from time to time.

3. Eligibility:-

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

3.2 Educational Qualifications: Applicant must possess the educational qualifications as given in **Annexure-A**, on the closing date of application for TTA Exam in BSNL.

4. (a) Age:-

Candidate shall not be below 18 years and not exceed 30 years as on the last date of receipt of Online applications from the candidates (as on 10th December, 2015). However, the upper age limit is relaxable as per the standing instructions of Government of India for the following categories :-

- i) Upto five (5) years for SC/ST candidates
- ii) Upto three (3) years for OBC candidates, who are eligible to avail of the reservation
- iii) Upto ten (10) years for SC/ST-PWD candidates
- iv) Upto eight (8) years for OBC-PWD candidates
- v) Upto five (5) years for BSNL employees
- vi) Ex-Servicemen will get the benefit of age relaxation as per Central Govt. Rules

Candidates would have to submit a Disability Certificate issued by a Competent Authority in the Annexure-E.

Note : The date of birth entered in matriculation or Secondary School Leaving Certificate or in a Certificate recognized by an Indian University as equivalent to Matriculation or in an extract from a Register of Matriculates maintained by a University, which must be certified by the proper authority of the University or in the Higher Secondary or an equivalent examination certificate. The certificates are required to be submitted only at the time of document verification. No other document relating to age like horoscopes, affidavit, birth extracts from Municipal Corporation, Service records and the like will be accepted.

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4. Disqualifications: No person

- (i) Who has entered into or contracted a marriage with a person having a spouse living, or
(ii) Who, having a spouse living, has entered into or contracted marriage with any person; Shall be eligible for appointment.

Provided that the Government 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

5. Mode of selection and nature of Question Paper:

The mode of selection is through an All India Competitive Examination. The examination will consist of a single paper of three hours duration having objective type multiple choice questions, which is to be conducted through Online examination mode.

6. Scheme of examination & Syllabus:

The pattern of the question paper will be multiple choice objective types with negative marking. All candidates will undergo a common multiple-choice type examination of three hours duration consisting of the following three parts :

Paper	Subjects	Number of Questions	Marks	Duration
Part - I	General Ability Test	20	20	3 hours 2.00 P.M. to 5.00 P.M.
Part - II	Basic Engineering	90	90	
Part-III	Specialization	90	90	
Total		200	200	

Syllabus for each of the three sections has been detailed in **Annexure-C**.

7. Minimum qualifying standards

The minimum qualifying marks for each of the above three parts of the question paper will be 20% for candidates belonging to SC/ST/OBC category i.e. the minimum qualifying marks for SC/ST/OBC in respect of Part-I, Part-II and Part-III will be 4, 18 and 18, respectively. Candidates obtaining less than minimum-qualifying marks in any of the parts shall not be considered for inclusion in the merit-list.

BSNL reserves the right to change the number of vacancies of TTA as per Circle's requirement.

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 under any circumstance.

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8. Bond and Training

- (i) The candidates selected shall execute a Bond in the format as specified by the Company to serve in BSNL for a period of two years from the date of their appointment as Telecom Technical Assistant (TTA) or for a period as specified by BSNL for the post from time to time.
- (ii) The candidates selected shall have to successfully undergo training as per the training plan laid down by the Company. If the official do not qualify the pre-appointment training in 1st attempt, he/she will be given one more chance to qualify the pre-appointment training examination, failing which he/she will not be appointed as TTA and he/she has to appear afresh in the subsequent Direct Recruitment Examination.
- (iii) During the period of training, the Direct Recruited TTAs will be entitled to Stipend (Training Allowance) as decided by the BSNL from time to time.

9. Choice of Examination Centre

The TTA Exam will be held in **25** BSNL Territorial Circles only at their respective headquarters. The details of the Territorial Circle where the examination will be conducted are given in **Annexure-B**.

10. Online Application and Fee for examination:

Candidates applying for Telecom Technical Assistant (TTA) posts are required to apply online for which link shall be provided through BSNL web site www.externalexam.bsnl.co.in. Applications will be considered only through the online registration process which is to start from 01-12-2015 and will be closed on 10-12-2015. Therefore, candidates are advised to visit our web site (www.bsnl.co.in/) for any updates regarding Examination. All candidates applying for TTA posts are required to read all the instructions provided on website www.externalexam.bsnl.co.in before filling the online application form. Candidates will have to provide valid Email ID and Mobile Number at the time of online Registration.

Fee:-

The prescribed examination fee Rs. 1000/- (Rupees One Thousand only) for OBC candidates and Rs.500/- (Rupees Five Hundred only) for SC/ST candidates shall be paid through online mode i.e. Internet Banking, Credit Card, Debit Card only.

The amount of the fee shall not be accepted in any other form. Fee once paid shall NOT be refunded under any circumstances nor can be held in reserve for any other examination or selection.

11. Closing date for receipt of Online Registration Forms

- (i) Registration forms complete in every respect must be submitted Online on or before 10-12-2015. Candidates are advised to complete their registration process well before last date to avoid last day. Registration process will not be allowed after last date and all incomplete registrations will be treated as rejected. Candidates will have to download their Admit Card from the BSNL website www.bsnl.co.in / www.externalexam.bsnl.co.in at least before 5 days from the date of the Written Test by using their user name & password. **It will not be sent either by post or by e-mail.** BSNL shall not be responsible for server crash problems or delays occurring on last day of registration.

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- (ii) The applicants would be admitted to the examination on the basis of the information furnished by them in their registration 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 fulfillment of all eligibility conditions.

12. Travelling Allowance

- 12.1 The candidates belonging to SC/ST categories will be entitled to TA as per provisions of Ministry of Finance (Department of Expenditure) O.M. No. 19014/3/77-E.IV (B) dated 17/02/1978, as amended from time to time.
- 12.2 The unemployed SC/ST candidates called for the Written Test shall be entitled for reimbursement of second class (Sleeper) rail fare from their place of residence to the nearest Examination Centre, subject to production of ticket.
- 12.3 The SC/ST candidates also have to produce a certificate of unemployment issued by MP/MLA or a designated Government Officer of the place where the candidate normally reside.
- 12.4 The form for reimbursement of TA in respect of SC/ST candidates for attending Written Test is given at **Annexure-D**.

13. No request for withdrawal of candidature received from a candidate will be entertained under any circumstances. Any dispute in regard to the recruitment will be subject to the Courts/Tribunals having jurisdiction at New Delhi.

14. BSNL reserves the right to modify/amend any of the terms & conditions of this recruitment at any point of time.

15. Disqualification

'Violation of any of the instructions issued along with the admission certificate or at any other stage will be liable the candidate to be disqualified in the examination.'

NOTE :

1. Candidates in their interest are advised to refer to the BSNL website (www.bsnl.co.in) or examination website (www.externalexam.bsnl.co.in) from time to time for any further instruction/information.
2. For any query, the applicant may contact AGM (Rectt.), BSNL Corporate Office, New Delhi at his Telephone No. 011-23352491 or 011- 23765386 during office hours.

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AGM
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ESSENTIAL QUALIFICATIONS FOR TTA CANDIDATES

Name of the Post	Essential Qualification for External Candidates
Telecom Technical Assistant (TTA)	Three years Engineering Diploma in any of the following disciplines :- <ol style="list-style-type: none">1. Telecommunications2. Electronic3. Electrical4. Radio5. Computer6. Instrumentation7. Information Technology From a Central Govt./State Govt. recognized Institution Or B. Sc. (Electronics)

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Annexure-B

List of the Examination Centres for the External Candidates of TTA SRD Examination

Sr. No	Name of the BSNL Coordinating Circle authorized to coordinate for the TTA SRD Exam (External) for Circles as mentioned	Name of Circles	Name of the Examination Centre
1	Andhra Pradesh	Andhra Pradesh	Hyderabad
2	Andaman & Nicobar	Andaman & Nicobar	Port Blair
3	Assam	Assam	Guwahati
4	Bihar	Bihar	Patna
5	Chhattisgarh	Chhattisgarh	Raipur
6	Gujarat	Gujarat	Ahmedabad
7	Haryana	Haryana	Ambala
8	Himachal Pradesh	Himachal Pradesh	Shimla
9	Jammu & Kashmir	Jammu & Kashmir	Jammu
10	Jharkhand	Jharkhand	Ranchi
11	Karnataka	Karnataka	Bangalore
12	Kerala	Kerala	Thiruvananthapuram
13	Madhya Pradesh	Madhya Pradesh	Bhopal
14	Maharashtra	Maharashtra	Mumbai
15	Northern Telecom Region [New Delhi]	Northern Telecom Region [New Delhi]	New Delhi
16	North East – I	North East – I	Shiling
17	North East – II	North East – II	Dimapur
18	Odisha	Odisha	Bhubaneshwar
19	Punjab	Punjab	Chandigarh
20	Rajasthan	Rajasthan	Jaipur
21	Tamilnadu	Tamilnadu & Chennai Telecom. District	Chennai
22	Uttar Pradesh [East]	Uttar Pradesh [East]	Lucknow
23	Uttar Pradesh [West]	Uttar Pradesh [West]	Meerut
24	Uttaranchal	Uttaranchal	Dehradun
25	West Bengal	West Bengal & Calcutta Telecom. District	Kolkata

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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	3 hrs.
PART - II BASIC ENGINEERING	90	
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.

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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 electrical and electronic circuits elements. Active and passive components; semiconductor 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, Thyristor 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, 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.

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.

From
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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,

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

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

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BHARAT SANCHAR NIGAM LTD
 (A GOVERNMENT OF INDIA ENTERPRISE)
 OFFICE OF CHIEF GENERAL MANAGER
 -----TELECOM CIRCLE

Form for reimbursement of Travelling Allowance in respect of SC/ST candidates for attending _____
 For the post of _____ held on _____ at _____ centre

1. Name of Applicant :
2. Roll Number :
3. Whether SC or ST
 (Attested photocopy of the certificate enclosed) :
4. Residential Address
 (As given in Application Form) :
5. Address from where journey has been performed :
6. Whether employed or not :
7. If employed, whether in Central/State Govt. or
 Central/State Govt. Corporation, Public Sector
 Undertaking, Private Sector etc. :
8. Details of Journey and Rail/Bus fare etc. :

Date of Journey	From	To	Mode of Journey	Class of Travel Bus/Rail	Distance travelled (one side)	Ticket Number	Fare (in Rs.)

CERTIFIED THAT

- (i) I am unemployed and a certificate of unemployment issued by MP/MLA or a Gazetted Officer of the place where I normally reside is enclosed.
- (ii) I have not claimed / will not claim T.A. for this journey from any other source.
- (iii) I have actually travelled by the shortest route and by the class/mode for which I have preferred the claim.
- (iv) 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 found false or incorrect, necessary action as deemed fit may be taken by BSNL.

Dated: _____

Signature of Applicant

- Note: 1. Candidate will have to submit original ticket for inward journey.
 2. The payment will be made by BSNL through cheque.

FOR USE OF BSNL

Verified by _____

(Signature of Designated Officer of BSNL)

Admissible Amount Rs. _____

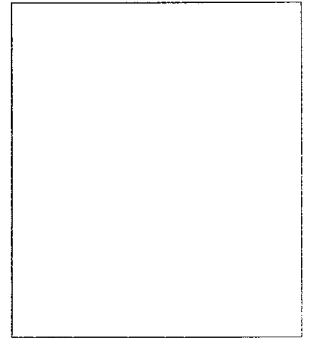
Signature of DDO

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NAME & ADDRESS OF THE INSTITUTE/HOSPITAL

Certificate No. _____

Date : _____

DISABILITY CERTIFICATE

This is certified that Shri / Smt. /Kum _____
 son/wife/daughter of Shri _____ age _____
 is sex _____ identification mark(s) _____ is suffering from
 permanent disability of following category :

A. Locomotor or cerebral palsy :

- (i) BL-Both legs affected but not arms
- (ii) BA-Both arms affected
 - (a) Impaired reach
 - (b) Weakness of grip
- (iii) BLA-Both legs and both arms affected
- (iv) OL-One leg affected (right or left)
 - (a) Impaired reach
 - (b) Weakness of grip
 - (c) Ataxic
- (v) OA-One arm affected
 - (a) Impaired reach
 - (b) Weakness of grip
 - (c) Ataxic
- (vi) BH-Stiff back and hips (Cannot sit or stoop)
- (vii) MW-Muscular weakness and limited physical endurance

B. Blindness or Low Vision :

- (i) B-Blind
- (ii) PB-Partially Blind

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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 _____ years _____ 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) | SE-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 _____)
Member
Medical Board

(Dr _____)
Member
Medical Board

(Dr _____)
Chairperson
Medical Board

Countersigned by the
Medical Superintendent/CMO/Head c
Hospital (with sea

* **Strike out which is not applicable.**

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