



राष्ट्रीय प्रौद्योगिकी संस्थान नागालैंड
NATIONAL INSTITUTE OF TECHNOLOGY NAGALAND
(An Institute of National Importance under Ministry of Education, Govt of India)
Chumukedima, Dimapur
Nagaland - 797 103

Advt. No. NIT-N/RECT-NT/2022/11

Date: 29/09/2022

INDICATIVE VACANCY NOTIFICATION FOR NON – TEACHING POSTS

National Institute of Technology Nagaland is one among 31 NITs established at Chumukedima, Nagaland by the Government of India by an Act of the Parliament offering UG, PG and Ph.D programs in Engineering / Technology and Sciences. The Institute invites applications from Indian Nationals possessing the requisite qualifications and experience as per the extant Recruitment Rules duly approved by the Ministry of Human Resources Development, Government of India for appointment to the following Non-Teaching (Technical) posts on direct recruitment / deputation basis.

Sl.No	Name of the Post	Discipline/ Trade/ Laboratory Trade	Pay Level and Entry pay as per 7 th CPC	Number of Post				
				UR	SC	ST	OBC	Total
1	Technical Assistant	Discipline: Physics Specialization: Condensed Matter Physics and Electronics	Level 6 (Rs.35,400/-)	-	-	-	1	1
2	Technician	Chemistry Laboratory.	Level 3 (Rs. 21,700/-)	1	-	-	-	1

Mode of Appointments: On Direct Recruitment / Deputation basis as per NIT Recruitment Rules.

(REGISTRAR)

Registrar/कुलसचिव
National Institute of Technology,
राष्ट्रीयप्रौद्योगिकीसंस्थान
Nagaland/नागालैंड

GENERAL INFORMATION

1. The application form must be submitted in the prescribed format as available in the Institute's Website. Application Form can be downloaded from the Institute website www.nitnagaland.ac.in.
2. Application must be sent in the prescribed format only through speed post/registered post to "**The Registrar, National Institute of Technology Nagaland, Chumukedima, Nagaland-797103**".
3. Internal candidates including contract/ outsourced staff can submit their application form in hand.
4. On the envelope please inscribe "Application for Recruitment for the post ofAdvt.No.....(please fill in name of post applied)"
5. Last date of receiving and submission of filled in application is **45 days from the date of publication of advertisement in the Employment News** and application received thereafter on account of what so ever reasons may be; shall not be entertained and no correspondence in this regard shall be entertained. However, if the above said last date is happened to be a General Holiday for the NIT Nagaland and for the Departments/ Offices of the State Government of Nagaland and Central Government in the State of Nagaland; the next working day is deemed to be the last date for the receipt of the application till 17:30 Hrs. on that day.
6. Applications sent through e-mail will not be entertained. NIT Nagaland shall not be held responsible for any delay in receipt of the application forms from the candidates.
7. The last date of application shall be considered for fixing any kind of eligibility criteria.
8. The Application Form should be enclosed with prescribed application fee of Rs.500/- (Five Hundred Only) for General/ OBC category in the form of Demand Draft/ Indian Postal Order in favour of **IRG, NIT Nagaland payable at State Bank of India, Chumukedima Branch, Dimapur**. However, SC/ST/ DIVYANG (PH) candidates are exempted from payment of the prescribed fees subject to submission of relevant certificate issued by the competent authority.
9. Internal candidates including contract / outsource are exempted from application fee. However, their application should be routed through proper channel well in time.
10. Candidate applying for more than one post should submit separate application forms for each post along with application Fee.
11. Government Rules and norms will be applicable for every post and category of the post. Candidates belonging to SC/ST/OBC/ DIVYANG (PH) categories should attach certificate from the competent authority. The category benefit will be given subject to candidate has claimed in the application form.
12. Mere fulfilment of the required qualifications and experience, does not entitle a candidate to be called for interview / selection. The Institute reserves the right to fix the criteria of shortlisting after scrutiny by duly constituted committee and their decision of the committee will be made applicable for mode of selection with the approval of the competent Authority.
13. For the post at Sl. No. 1, if the numbers of shortlisted applicants are more based on the data furnished by the candidates in the applications, a "Written Test" will be conducted for further shortlisting of the candidates for the final Selection Process including Interview by a Selection Committee.



14. For the posts at Sl. No. 2 to 5, both "Written Test" as well as "skill test" shall be conducted for selection of the suitable candidates.
15. Details of Pay, essential required Qualifications and Experience are given in the **Annexure - I**
16. The syllabus and mode of the examinations are given in the **Annexure - II**
17. The list of screened - in candidates will be made available on the website. Only the screened - in candidates will be allowed for Test/Interview and those candidates shall be communicated through e-mail or SMS.
18. Candidates in Govt./Semi-Govt./ reputed private institutions should send their applications through proper channel. However, an advance copy shall reach NIT Nagaland before the last date. Further, such candidates are required to produce "No Objection Certificate" at the time of interview from their employers, failing which they may not be considered for **written test/** interview. It is the sole responsibility of the candidates to comply the above be it not communicated to the candidates while requisitioning them for attending the "Written Test for Screening" / Selection Process / test / Interview..
19. Experience of working in IITs/NITs/CFTIs will be a desirable qualifications.
20. One-Time Age relaxation shall be made applicable to the eligible departmental candidates including the employees working on outsourced basis in NIT Nagaland, in accordance with the communication of Ministry of Education, Government of India Ref. No. F.35- 5/2018-TS.III Dt. 20/2/2019.
21. Canvassing in any form will be a disqualification for the post.
22. Legal disputes, if any, with NIT Nagaland will be restricted within the jurisdiction of the Courts of Nagaland only.
23. TA/DA will not be paid for attending the interview.
24. The Institute reserves the right to defer or cancel the advertisement at any stage of processing without assigning any reasons, if required.
25. Self attested copies of the following documents must be attached along with application:
 - a) Reservation category certificate (if reservation/ fee concession claimed). For OBC candidates, OBC Status and Non-Creamy Layer Status duly issued by the competent authority on or after 1st April 2021
 - b) Certificates and marks sheet/grade card of all degrees, 10th and 12th standard
 - c) Experience certificate
 - d) Certificates of all other additional qualifications claimed, if any
 - e) Age Proof (HSLC/HSC or equivalent certificate issued by competent authority)
26. Claims of educational qualifications, experience or any other technical qualifications must be supported by relevant self attested certificates as well as mark sheets. Applications not supported by relevant documents shall be summarily rejected.
27. All Degree / diploma certificates should be from UGC recognized Universities/ Institutes which is the basic criteria for consideration.
28. Selected Candidates should be ready to join within the stipulated time.
29. Applications not submitted in prescribed format will not be considered.
30. It is desired that the applicants will provide correct information. If it is found, at a later date, that any information given in the application is incorrect / false or any information if suppressed, the candidature / appointment is liable to be cancelled / terminated without assigning any reason.



31. Notwithstanding anything contained in guideline recruitment rules, as communicated by Department of Higher Education, MHRD, Govt. of India vide letter No. F.35-5/2018 - TS.III, dated 4th April 2019 will be applicable. The candidates are advised to refer to all other related MHRD/ MoE notifications regarding, the Non-Teaching recruitment rules.
32. The RRs issued by MHRD is the guiding document and shall be relied upon for any case of discrepancies. In case of any change in the Recruitment Rules of Non-Faculty of NITs by MHRD in its Anomaly Report, the Institute may incorporate the changes during its recruitment process & notify the same on the Institute website.
33. Any addendum/corrigendum and related notifications will be published on the Institute website: www.nitnagaland.ac.in only. Applicants are advised to regularly check the Institute website for any update/notification.

Note:

Candidates belonging to OBC category shall also submit photocopy of non-creamy layer certificate of the year 2021-22 without which they will be considered only for OPEN category. The appointment under ST/SC/OBC quota is provisional and is subject to the community certificate being verified through the proper channels. If the verification reveals that the claim of the candidate belong to ST/SC/OBC is false, his/her services will be terminated forthwith without assigning any further reasons and without prejudice to such further action as may be taken under the provisions of Indian Penal Code for production of false certificates



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Annexure – I

DETAILS OF PAY, ESSENTIAL QUALIFICATIONS AND EXPERIENCE

Recruitment Rules (2019) for the post of TECHNICAL ASSISTANT in NITs

Sl.No.	Particular	Criteria
1.	Name of the Post	Technical Assistant
2.	Number of Post(s)	As per sanctioned strength.
3.	Classification	Group - B
4.	Scale of Pay (Grade Pay, Band Pay)	PB -2 (Rs.9,300 - 34,800/-) with Grade Pay of Rs.4200/-
5.	Whether Selection Post or non-Selection Posts	Not Applicable
6.	Age limit for direct recruits	30 years. Note:- Relaxable for Departmental Candidates up to five years in accordance with the instructions or orders issued by the Central Government
7.	Educational and other qualifications required for direct recruits	Essential: First Class or equivalent Grade in B.E. / B.Tech. / MCA in relevant subject from a recognized University / Institute. Or First Class Diploma in Engineering in relevant Field with excellent academic record Or First Class Bachelor's Degree in Science from a recognized University or Institute Or Master's Degree in Science from a recognized University or Institute with at least 50% marks or equivalent grade
8.	Whether age and educational qualifications prescribed for direct recruits will apply in the case of promotees	Age bar: Not applicable Educational Qualification: No. However must possess any of the qualifications mentioned in Row 7 without insisting on percentage of marks/class.
9.	Period of probation, if any	1 Year for direct recruits as per NIT Statutes.
10.	Method of Recruitment whether by direct recruitment or by promotion or by deputation or transfer & percentage of the vacancies to be filled by various methods	75% by direct Recruitment 25% by Promotion, failing which by deputation (including short term contract).

K. Rajin

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Sl.No.	Particular	Criteria
11.	In case of recruitment by promotion / deputation / transfer, grades from which promotion / deputation / transfer to be made	<p>Promotion: At least 2 Years regular service with Grade Pay of Rs.4200/- as Technician (Selection Grade-I) through DPC and working performance record (APAR), through prescribed test and interview.</p> <p>Deputation (including short term Contract): Officers of the Central/State Govt. or similar organized services/semi-Govt./PSU/ autonomous organization/ University/ Institute of national importance: a i) holding analogous post; or ii) 6 years regular service with Grade Pay of Rs.2800/- as Technician (SG-II) or its equivalent post. b) Possessing educational qualification as prescribed in Row 7.</p>
12.	If DPC exists, what is its composition	As per the provisions contained in the NITSER Act, 2007, First Statutes and the subsequent Statutes.
13.	Circumstances in which UPSC is to be consulted in making recruitment	Not Applicable

K. Rajan



Recruitment Rules (2019) for the post of TECHNICIAN

Sl.No.	Particular	Criteria
1.	Name of the Post	Technician
2.	Number of Post(s)	As per sanctioned strength.
3.	Classification	Group - C
4.	Scale of Pay (Grade Pay, Band Pay)	PB :1 (Rs.5,200 - 20,200/-) with Grade Pay of Rs.2000/-
5.	Whether Selection Post or non-Selection Posts	Not Applicable
6.	Age limit for direct recruits	27 years Note:- Relaxable for Departmental Candidates upto five years in accordance with the instructions or orders issued by the Central Government
7.	Educational and other qualifications required for direct recruits	Essential: Senior secondary (10+2) with Science from a Government recognized board with at least 60% marks Or Senior secondary (10+2) from a Government recognized board with at least 50% marks and ITI Course of one year or higher duration in appropriate trade. Or Secondary (10) with at least 60% marks and ITI Certificate of 2 years duration in appropriate trade. Or Diploma in Engineering of three year's duration in relevant field from a Government recognized Polytechnic / Institute.
8.	Whether age and educational qualifications prescribed for direct recruits will apply in the case of promotees	Age bar: Not applicable Educational Qualifications: No. However, must possess at least Senior Secondary with Science or Secondary and ITI certificate of 2 years duration in appropriate trade.
9.	Period of probation, if any	1 year for direct recruits as per NIT Statutes
10.	Method of Recruitment : whether by direct recruitment or by promotion or by deputation or transfer & percentage of the vacancies to be filled by various methods	i) 75% Direct recruitment ii) 25% by Promotion.

K. Rajin

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Sl.No.	Particular	Criteria
11.	In case of recruitment by promotion/deputation/absorption, grades from which promotion/ deputation/ absorption to be made	<u>Promotion:</u> Lab Attendant (SG-II) with at least 2 years regular service with Grade Pay of Rs.2000/- through DPC and working performance record (APAR), through prescribed test and interview.
12.	If DPC exists, what is its composition	As per provisions contained in the NITSER Act, 2007, First Statutes and the subsequent Statutes.
13.	Circumstances in which UPSC is to be consulted in making recruitment	Not Applicable

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Annexure – II

A. Syllabus for the Practical Examination and Written Examination for the Post of Technician - Chemistry

i. Syllabus for Practical Examination / Laboratory Experiments/Procedure:

Senior secondary (10+2) level Chemistry; e.g: Preparation of standard Solution, Titration, inorganic complex preparation and Determination water quality parameters

ii. Syllabus for the Theory Examinations (Written):

Unit – I (General Chemistry)

Fundamentals of atomic structure. Periodicity of the elements – shielding - effective nuclear charge - Slater's rule - atomic, covalent and van der Waals radii - ionization energy - electron affinity – electronegativity - Electronic and steric effects - Inductive effect – resonance – hyper-conjugation - steric effect, covalent and ionic bonding – Electrophiles and nucleophiles. Ionization of water - pK_w and pH - solubility product - common ion effect - Buffer solutions - standard solution – concept of normality, formality, molarity and molality.

Unit –II (Organic Chemistry)

Fundamentals of organic chemistry: Hydrocarbons, Alcohol, Phenol and Ether, Aldehydes, Ketones and Carboxylic Acid - Aromaticity and Hückel Rule - Concept of hybridization of organic compounds and shapes of molecules - Reactive intermediates: Carbocation, carbanion, free radical and benzyne, Friedel-Crafts alkylation/acylation, nitration, sulfonation, halogenation - Grignard reagents. Basics of stereochemistry of organic molecules, symmetry elements - molecular chirality - optical activity - optical purity - meso compounds - racemic mixture – resolution – enantiomers – diastereomers, basic concepts of stereo-chemical nomenclatures: threo/erythro, syn/anti, R/S, cis/trans and E/Z.

Unit – III (Physical Chemistry)

Laws and terms of Thermodynamics; State & path functions - concept of heat and work - internal energy, enthalpy, entropy, free energy, heat capacities & their applications. Electrochemistry: Conduction in electrolyte solutions-ionic mobility-dilution principle-transport number- electrochemical cells - EMF, Nernst equation - Primary & Secondary cells - Ionic equilibrium - Ion conductance - Measurement of conductance - cell constant. Specific conductance & molar conductance and their variation with dilution for strong and weak electrolytes - Kohlrausch's law of independent migration of ions - Equivalent and molar conductance at infinite dilution and their determination for strong and weak electrolytes - Ionic mobility.

B. Syllabus for the Written Examination for the Post of Technical Assistant – Physics

Syllabus for the Theory Examinations (Written):

PART-A – General Physics

- a) **Quantum Mechanics:** Physical basis of quantum mechanics; uncertainty principle; Schrodinger equation; one, two and three dimensional potential problems; particle in a box, harmonic oscillator, hydrogen atom; linear vectors and operators in Hilbert space; angular momentum and spin; addition of angular momenta; time independent perturbation theory; elementary scattering theory.
- b) **Electromagnetic Theory:** Solution of electrostatic and magnetostatic problems including boundary value problems; dielectrics and conductors; Biot-Savart's and Ampere's laws; Faraday's law; Maxwell's equations; scalar and vector potentials; Coulomb and Lorentz gauges; Electromagnetic waves and their reflection, refraction, interference, diffraction and polarization. Poynting vector, Poynting theorem, energy and momentum of electromagnetic waves; radiation from a moving charge.
- c) **Optics:** Reflection, Refraction, Fermat principle, focal plane, Image formation and magnification, F-number, Depth of the focus and depth of the field, aberrations, Snell's law, Polarization, collimation, optical components and their geometry effect on ray propagation. Basics of Interference.
- d) **LASER:** Einstein's quantum theory of radiation; Boltzmann distribution, Population inversion, Rate equations, Three level and four level lasers; Issues in designing a laser; Pumping mechanisms; Laser Cavity, Longitudinal and Transverse Modes, Mode Selection, Laser amplification. Different types of Laser.

PART B- Electronics

- a) **Analog Electronics:** Semiconductor Devices : Structure of Atom - Atomic Number - Valence Electrons - Bonding in Conductors - Insulators - Semiconductors - Energy Band Diagram of Conductors - Insulators - Semiconductors - Intrinsic Semiconductor - Extrinsic Semiconductor - P Type Semiconductor - N type Semiconductor - Carrier Life Time.
Theory of PN Junction Diode - Energy Band Structure - Diode Current Equation - Diode Resistance - Depletion Capacitance - Diffusion Capacitance - Effect of Temperature - PN Junction Diode as a Rectifier - Zener Diode - Avalanche Break Down - Zener Break Down - Zener Diode as a Voltage Regulator.
Operation of PNP & NPN Transistor - CB , CE , CC Configuration and Characteristics - Transistor as an Amplifier. Construction - Operation - Output & Transfer Characteristics of P Channel & N Channel JFET - Characteristic Parameters of the JFET - Biasing the FET - Comparison of JFET & BJT - Comparison of P Channel & N Channel JFET - Applications of JFET - JFET as a Voltage Variable Resistor.
Construction, Operation, Output & Transfer Characteristics of P Channel & N Channel Depletion MOSFET - Construction, Operation, Output & Transfer Characteristics P Channel & N Channel Enhancement MOSFET - Biasing the MOSFET - Comparison of P Channel MOSFET with N Channel MOSFET - Comparison of JFET with MOSFET – Handling Precautions for the MOSFET.



b) Digital Electronics: NUMBER SYSTEMS : Binary Signals – Binary Number System – Decimal Number System - Octal Number System – Hexadecimal Number System – Conversion from One Number System to Another Number System - BCD – Gray code – Excess – 3 Code – ASCII code. BOOLEAN ALGEBRA : Binary Addition, Subtraction, Multiplication & Division - 1's and 2's Complement Subtraction - 9's & 10's Complement Subtraction - Basic laws of Boolean Algebra - Duality Theorem – De Morgan's Theorem - Sum of Products – Product of Sum - Two Variable, Three Variable & Four Variable Karnaugh Maps. COMBINATIONAL ELEMENTS : Logic Gates : AND, OR, NOT, EX-OR, EXNOR, NAND & NOR - Logic Gates using Discrete Components - NAND & NOR as Universal Gates - Half Adder and Full Adder – Half and Full Subtractor - Encoder - Decoder – Multiplexer - Demultiplexer - Implementation using 74147, 7442, 74153 & 74155 IC's.

PART C-Condensed Matter Physics

Elements of crystallography; diffraction methods for structure determination; bonding in solids; elastic properties of solids; defects in crystals; lattice vibrations and thermal properties of solids; free electron theory; band theory of solids; metals, semiconductors and insulators; transport properties; optical, dielectric and magnetic properties of solids; elements of superconductivity.

Magnetic properties of solids. Diamagnetism, Langevin equation. Quantum theory of paramagnetism. Curie law. Hund's rules. Paramagnetism in rare earth and iron group ions. Elementary idea of crystal field effects. Ferromagnetism. Curie-Weiss law. Heisenberg exchange interaction. Mean field theory. Antiferromagnetism. Neel point. Other kinds of magnetic order. Nuclear magnetic resonance



Registrar

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