

राष्ट्रीय प्रौद्योगिकी संस्थान, मणिपुर
**NATIONAL INSTITUTE OF TECHNOLOGY
MANIPUR**

Langol, Imphal, Manipur, Ph. (0385) 2058566/ 2445812

E-mail: nitmanipur@yahoo.in,

Website: www.nitmanipur.ac.in

An Autonomous Institute under MoE, Govt. of India.



**SCHEME OF SYLLABUS FOR
COMPETITIVE EXAMINATION FOR NON-TEACHING
GROUP 'A' 'B' & 'C' POSTS**

CONTENT

Sl. No.	Post	Page
1	Assistant Registrar	3-4
2	Library and Information Assistant	5-7
3	Technical Assistant (CSE, ECE, EE, ME, CE, Phy & Chem)	8-11
4	Junior Engineer	12-13
5	Superintendent	13-15
6	Junior Assistant	16-17
7	Technician (CSE, ECE, EE, ME, CE, Phy & Chem)	18-21
8	Office Attendant/Lab. Attendant	22-23

ASSISTANT REGISTRAR: DIRECT RECRUITMENT

I. SCHEME OF SCREENING TEST:

The purpose of **Screening Test carrying 200 marks** is purely for selection of candidates to appear in the interview/Selection Committee and shall have no weightage in the interview.

A. Scheme of Screening Test: The Screening Test will consist of **One Objective Type Paper** and **One Descriptive type Paper**, as follows:-

Paper	Subject	Maximum Marks	Minimum Qualifying Marks	Duration	Compensatory Time*
Paper-I	General Studies MCQ Type (50 questions)	100	50	1½ hours	40 minutes
Paper-II PART-A	General English Descriptive type	50	50	3 hours	40 minutes
PART-B	NIT Act and Statutes, GFR, and CCS Rules, F.R. & S.R. Descriptive Type	50			

*PWD Candidates availing scribe/reader/lab. Assistant

INDICATIVE SYLLABUS:

Paper –I, General Studies: Questions will be designed to test the ability of the candidate's General Studies viz., General Science, current events of national and international importance, History of India and Indian National Movement, India and World Geography, Indian Polity and north-Eastern States, India and other countries.

Question on General Science will cover general appreciation and understanding of science including matters of every day observation and experience, as may be expected of a well-educated person who has not made a special study of any particular scientific discipline. In current events, knowledge of significant national and international events will be tested. In History of India, emphasis will be on broad general understanding of the subject in its social, economic and political aspects.

Questions on the Indian National Movement will relate to the nature and character of the nineteenth Century resurgence, growth of nationalism and attainment of Independence. In Geography, emphasis will be on Geography of India. Questions on the Geography of India will relate to physical, social and economic Geography of the country, including the main features of Indian agricultural and natural resources. Questions on Indian Polity and Economy will test knowledge of the country's political system, and Constitution of India, Social systems and economic developments in India. On general mental ability, the candidate4s will be tested

on reasoning and analytical abilities.

Paper-II, PART-A, General English: Essay, Office Precis, Drafting and Applied English Grammar.

PART-B.

NIT Act and Statues, GFR, and CCS Rules: Manual of Office Procedure of the finance and Accounts, NPS, Leave Rules, GFR, NIT Act and Statues, FR & SR.

B. Interview: Candidates who qualify in the Screening Test will be called for Interview. The selection Committee at its own discretion shall decide the nature or standard of interview to be conducted by it.

NOTE:-

1. The question paper would be in English, the same medium of language must be used throughout.
2. Answer script of Paper-II (A & B) of a candidate would be evaluated, only if the candidate qualifies in Paper-I.
3. There shall be negative marking for wrong answer in Paper-I to the tune of $\frac{1}{4}$ of marks allocated per question.
4. Merit list for short listing of the candidates for interview will be based on the marks scored in Paper-I and Paper-II (A & B). The final merit shall be drawn on the basis of marks scored in the personal interview.
5. At any stage of the selection process, National Institute of Technology, Manipur may specify cut-off qualifying marks higher than the minimum qualifying marks based on the number of vacant posts and the number of candidates qualified as per the minimum standard.
6. The minimum qualifying marks is relaxable at the discretion of National Institute of Technology Manipur, if at any stage of the selection process; National Institute of Technology Manipur is of the opinion that sufficient number of candidates from the reserved categories are not likely to be available to fill up the vacancy reserved for them.

[Handwritten signatures and initials in blue ink at the bottom of the page, including "B. Prasad", "S. D. IT", and "CLM"]

LIBRARY INFORMATION ASSISTANT: DIRECT RECRUITMENT
EXAMINATION

I. MODE OF SELECTION: The Mode of Selection will be as follows:-

- (i) Candidates fulfilling the minimum eligibility conditions will be considered **provisionally eligible** and they will be called for the Competitive Written Examination carrying **200 marks** (Paper – I of 100 marks and Paper – II of 100 marks).
- (ii) Candidates will be recommended for appointment in order of merit on the basis of their performance in the competitive written examination, **depending on the number of vacant post and in order of merit.**
- (iii) Success in the examination confers no right of appointment unless the Institute is satisfied after such enquiry as may be considered necessary that the candidate is suitable in all respects of appointment to the service/post.

II. SCHEME OF EXAMINATION: The Competitive Written Examination will consist of **One Objective and One descriptive type question Papers**, as follows:-

Paper I: Total Marks = 100

Part	Subject	Maximum Marks	Minimum Qualifying Marks	Duration	Compensatory time*
Part A (MCQ)	General Aptitude & Reasoning	30	50	2 hours	40 minutes
Part B (MCQ)	General Knowledge	30			
Part C (MCQ)	General English	40			

* PWD Candidates availing scribe / reader / lab. Assistant.

Paper II: Total Marks = 100

Subject	Maximum Marks	Minimum Qualifying Marks	Duration	Compensatory time*
Library Information Science (Descriptive)	100	60	2 hours	40 minutes

* PWD Candidates availing scribe / reader / lab. Assistant.

INDICATIVE SYLLABUS:

PAPER – I:

Part-A: General Aptitude & Reasoning: The test will include questions on analogies, similarities and differences, problem solving, analysis, judgment, decision making, visual

[Handwritten signatures and initials at the bottom of the page]

memory, relationship concepts, verbal and figure classification, arithmetical number series, non-verbal series etc. The test will also include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationship and other analytical functions.

Part-B: General Knowledge: Questions in this component will be aimed at testing the candidates' general awareness of the environment around him and its application to society. Questions will also be designed to test knowledge of current events and of such matters of every day observations and experience in their scientific aspect as may be expected of any educated person. The test will also include questions relating to National Institute of Technology Manipur, North-Eastern States, India and other countries especially pertaining to Sports, History, Culture, Geography, Economic Scene, General Polity and Scientific Research.

Part-C: General English: Questions in this component will be designed to test the Candidate's understanding and knowledge of English Language like Error recognition, Fill in the blanks (using verbs, preposition, articles etc.), One word substitution, Improvement of Sentences, Vocabulary, Spellings, Grammar, Sentence Structure, Synonyms, Antonyms, Sentence Completion, Phrases and Idiomatic use of words, Comprehension of Passages.

PAPER – II: THEORY

Unit-I: Library Organization and Administration:

- a) Library in society, concept and role, etc
- b) Fundamentals of Library Planning
- c) Types of Libraries
- d) Laws of Library Science
- e) Library Cooperation
- f) Professional Organizations
- g) Library housekeeping operations
- h) Stock verification
- i) Conservation and preservation of Library materials

Unit-II: Information Sources and Services:

- a) Sources of information
- b) Repackaging of information
- c) Reference and information services
- d) Five laws and reference service

Unit-III: Organization of Knowledge:

Library classification

- a) Definition, need and purpose
- b) General theory of classification
- c) Classification schemes.

Library Cataloguing

- a) Definition, need and purpose
- b) Kinds of entries
- c) Dictionary, Classified and Subject cataloguing
- d) Centralized and cooperative cataloguing
- e) Anglo American Cataloguing Rules – 2 (AACR-2)
- f) Classified catalogue code (CCC)

Unit-IV, Information Technology:

- a) Fundamentals of Information Technology
- b) Internet and Networking
- c) Library Automation
- d) Digital Library
- e) Electronic Resources and Access
- f) Institutional Repository
- g) Plagiarism
- h) Social Media and its application in library services

Note:-

1. The question paper would be in English, the same medium of language must be used throughout.
2. Answer script of Paper- II of a candidate would be evaluated, only if the candidate qualifies in Paper-I.
3. There shall be negative marking for wrong answer in Paper-I to the tune of $\frac{1}{4}$ of marks allocated per question.

**TECHNICAL ASSISTANT (CE, CSE, EE, ME, ECE, Phy. & Chem.): DIRECT
RECRUITMENT EXAMINATION**

I. MODE OF SELECTION: The Mode of Selection will be as follows:-

Candidates fulfilling the minimum eligibility conditions will be considered **provisionally eligible for the Trade Test/Skill Test.**

Subject/Test	Maximum Marks	Minimum Qualifying Marks	Duration	Compensatory time*
Trade Test	50	25	45 minutes	20 minutes

* PWD Candidates availing scribe / reader / lab. Assistant.

Trade Test: Trade Test is of **qualifying nature**. Assessment will not be done on the basis of marks for Trade Test.

(i) Only those Candidates who qualify in the Trade Test/Skill Test will be called for Competitive Written Examination carrying a total of **100 marks and qualifying mark shall be 60 marks**. Questions for Competitive Written Examination will be designed to test the candidate's knowledge of concerned subject of specialization.

(ii) Candidates will be recommended for appointment, **in order of merit, on the basis of their** Performance in the Competitive Written Examination only.

(iii) Success in the examination confers no right of appointment unless the Institute is satisfied after such enquiry as may be considered necessary that the candidate is suitable in all respects of appointment to the service/post.

II. SCHEME OF EXAMINATION: The examination will consist of a **Trade Test/Skill Test (Maximum Marks 50)** and **Competitive Written Examination (Maximum Marks 100)**.

A. SCHEME OF EXAMINATION: The Competitive Written Examination will consist of **One Objective Type Paper**, as follows:-

INDICATIVE SYLLABUS:

TECHNICAL ASSISTANT (CIVIL ENGINEERING)

PART A (Trade Test/Skill Test)

Syllabus for Trade or Skill test will be based on the PART B syllabus.

PART B (Syllabus for Competitive written examination)

Building Materials, Surveying, Soil Mechanics, Hydraulics, Environmental Engineering,

[Handwritten signatures and marks at the bottom of the page]

Structural Engineering, Concrete Technology, RCC Design, Steel Design.

TECHNICAL ASSISTANT (COMPUTER SCIENCE AND ENGINEERING)

Paper A Trade Test/Skill Test

Hardware: Assembling of PC; Installation of Systems and troubleshooting, BIOS settings
3. Installation and testing of a printer, Printer Maintenance, Scanner Installation
4. Installation and Maintenance of UPS Systems
5. Installation of Firewalls and Connectivity of LAN & WAN
6. Installation of Wireless network devices.

Software: Debugging C/ C++ Programs; Installation and Administration of SQL & Oracle,
3. Installation of various variants of Operating systems like Windows and Linux
4. Installation of Software like Visual Studio, UML, Cisco Packet tracer
5. Working of MS-Office components like Word, Excel & PowerPoint
6. Configuring and sharing internet in PCs and other devices
7. Object oriented Programming: Functions, Data type, Recursion, Arrays, Stacks, Queues, Binary Search Trees, Sorting

PART-B (Syllabus for Competitive written examination)

- 1. Programming and Data Structure** - C Language, Object oriented Programming, functions, datatype, Recursion, Arrays, Stacks, Queues, Binary Search Trees, Sorting.
- 2. Operating system** – System calls, processes, threads, Inter process communication, concurrency and synchronization. Deadlock. CPU and I/O scheduling. Memory management and virtual memory
- 3. Computer Networks-** OSI and TCP/IP Protocol Stacks, Basics of packet, circuit and virtual circuit switching, framing, error detection, Medium Access Control, Ethernet bridging, Fragmentation and IP addressing, IPv4, CIDR notation.
- 4. Digital Logic-** Boolean algebra. Combinational and sequential circuits. Minimization. Number representations and computer arithmetic.
- 5. Computer Organization and Architecture-** Machine instructions and addressing modes. ALU, datapaths and control units, Instruction pipelining, pipeline hazards, Memory hierarchy- cache, main memory and secondary storage.
- 6. Algorithm-** Searching, sorting, hashing. Asymptotic worst-case time and space complexity. Algorithm design techniques: greedy, dynamic programming and divide-and-conquer. Graph traversals, minimum spanning trees, shortest paths.

TECHNICAL ASSISTANT (ELECTRICAL ENGINEERING)

PART A (Trade Test/ Skill Test)

Trade or Skill test will be based on the syllabus provided in PART B.

PART B (Syllabus for Competitive written examination)

Basic Electrical Engineering, D.C. Machines, Batteries and Measuring Instruments, A.C. Circuits and Transformers, A.C. Machines, Power System Generation and Protection, Transmission and Distribution, Basic Electronics and Digital Electronics, Power Electronics and Micro Controller, Control System.

TECHNICAL ASSISTANT (MECHANICAL ENGINEERING)

PART A (Trade Test/ Skill Test)

Trade or Skill test will be based on the syllabus provided in PART B.

PART B (Syllabus for Competitive written examination)

Engineering Mechanics, Engineering Drawing, Manufacturing Technology, CNC, Mechanics of Solids, Thermodynamics and IC Engine, Kinematics and Dynamics of Machines, Fluid Mechanics and Turbomachinery, Heat Transfer, Thermodynamics and IC Engine, Refrigeration and Air Conditioning.

TECHNICAL ASSISTANT (ELECTRONICS AND COMMUNICATION ENGINEERING)

PART A (Trade Test/ Skill Test)

Trade or Skill test will be based on the syllabus provided in PART B.

PART B (Syllabus for Competitive written examination)

Basic Electronics, devices and circuits, Electrical circuits, Electronic Instruments and Measurements, Communication Engineering, Digital Electronics, Power Electronics, Microprocessor, Electronics Design and Simulation.

TECHNICAL ASSISTANT (PHYSICS)

PART A (Trade Test/ Skill Test)

Trade or Skill test will be based on the syllabus provided in PART B.

PART B (Syllabus for Competitive written examination)

Properties of Matter, Mechanics, Electricity and Magnetism, Optics, Quantum Mechanics, Thermodynamics and Statistical Physics, Semiconductors, Solid State Physics, Nuclear and Particle Physics, Knowledge of measurements and errors.

TECHNICAL ASSISTANT (CHEMISTRY)

PART A (Trade Test/ Skill Test)

Trade or Skill test will be based on the syllabus provided in PART B.

PART B (Syllabus for Competitive written examination)

Atomic and Molecular Structure, Gaseous State, Liquid State, Solid State, Chemical Thermodynamics, Chemical and Phase Equilibria, Electrochemistry, Chemical Kinetics, Adsorption, Spectroscopy, Basic Concepts in Organic Chemistry and Stereochemistry, Organic Reaction Mechanism and Synthetic Applications, Organometallic reagents in organic synthesis, Qualitative Organic Analysis, Natural Products Chemistry, Aromatic and Heterocyclic Chemistry, Periodic Table, Extractions of Metals, Chemical Bonding and shapes of molecules, Main Group Elements (s and p blocks), Transition Metals (d block), Bioinorganic Chemistry, Instrumental Methods of Analysis, Analytical Chemistry.

JUNIOR ENGINEER: DIRECT RECRUITMENT EXAMINATION

CIVIL/ELECTRICAL

I. MODE OF SELECTION: The Mode of Selection will be as follows:-

- (i) Candidates fulfilling the minimum eligibility criteria will be considered **provisionally eligible** and they will be called for the Competitive Written Examination carrying 200 marks (Paper-I of 100 marks + Paper-II of 100 marks).
- (ii) Candidates securing the minimum qualifying marks will be recommended for appointment, **depending on the number of vacant post and in order of merit.**
- (iii) Success in the examination confers no right of appointment unless the Institute is satisfied after such enquiry as may be considered necessary that the candidate is suitable in all respects of appointment to the service/post.

II. SCHEME OF EXAMINATION: The Competitive Written Examination will consist of

Two Objective Type Papers (I and II) as shown below:-

Paper I: Total Marks = 100

Part	Subject	Maximum Marks	Minimum Qualifying Marks	Duration	Compensatory time*
Part A	General Aptitude & Reasoning	30	50	2 hours	40 minutes
Part B	General Knowledge	30			
Part C	General English	40			

* PWD Candidates availing scribe / reader / lab. Assistant.

Paper II: Total Marks = 100

Subject	Maximum Marks	Minimum Qualifying Marks	Duration	Compensatory time*
Civil Engineering OR Electrical Engineering	100	60	2 hours	40 minutes

* PWD Candidates availing scribe / reader / lab. Assistant.

INDICATIVE SYLLABUS:

Paper-I

Part-A: General Aptitude & Reasoning: The test will include questions on analogies, similarities and differences, problem solving, analysis, judgment, decision making, visual memory, relationship concepts, verbal and figure classification, arithmetical number series, non-verbal series etc. The test will also include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationship and other analytical functions.

Part-B: General Knowledge: Questions in this component will be aimed at testing the candidates' general awareness of the environment around him and its application to society. Questions will also be designed to test knowledge of current events and of such matters of every day observations and experience in their scientific aspect as may be expected of any educated person. The test will also include questions relating to National Institute of Technology Manipur, North-Eastern States, India and other countries especially pertaining to Sports, History, Culture, Geography, Economic Scene, General Polity and Scientific Research.

Part-C: General English: Questions in this component will be designed to test the Candidate's understanding and knowledge of English Language like Error recognition, Fill in the blanks (using verbs, preposition, articles etc.), One word substitution, Improvement of Sentences, Vocabulary, Spellings, Grammar, Sentence Structure, Synonyms, Antonyms, Sentence Completion, Phrases and Idiomatic use of words, Comprehension of Passages.

PAPER-II:

CIVIL ENGINEERING

Building Materials, Surveying, Soil Mechanics, Hydraulics, Environmental Engineering, Structural Engineering, Concrete Technology, RCC Design, Steel Design.

ELECTRICAL ENGINEERING

Basic Electrical Engineering and Electrical Measurements, Circuit Law, Electrical machines, 1-phase and 3-phase Transformers, Generation, Transmission and Distribution, Utilization of Electrical Energy.

Note:-

1. The question paper would be in English, the same medium of language must be used throughout.
2. Answer script of Paper- II of a candidate would be evaluated, only if the candidate qualifies in Paper-I.
3. There shall be negative marking for wrong answer in Paper-I to the tune of $\frac{1}{4}$ of marks allocated per question.

SUPERINTENDENT: DIRECT RECRUITMENT EXAMINATION

I. MODE OF SELECTION: The Mode of Selection will be as follows:-

(i) Candidates fulfilling the minimum eligibility conditions will be considered **provisionally eligible** and they will be called for the Competitive Written Examination and computer proficiency test carrying 200 marks (Paper – I of 150 marks and Paper – II of 50 Marks).

(ii) Candidates will be recommended for appointment, **in order of merit**, on the basis of their performance in the Competitive Written Examination and Computer Proficiency Test put together i.e., the sum total of marks scored by the candidate out of 200 marks.

(iii) Success in the examination confers no right of appointment unless the Institute is satisfied after such enquiry as may be considered necessary that the candidate is suitable in all respects of appointment to the service/post.

II. SCHEME OF EXAMINATION: The examination will consist of a **Competitive Written Examination and computer proficiency test: (Maximum Marks 200)**

Paper I of 150 Marks & Paper II of 50 Marks

Scheme of Competitive Written Examination and Syllabus: The Competitive Written Examination will consist of **Objective Type and descriptive type questions papers**, as follows:-

Paper I: Total Marks = 150

Part	Subject	Maximum Marks	Minimum Qualifying Marks	Duration	Compensatory time*
Part A (MCQ)	General Aptitude & Reasoning	30	75	3 hours	40 minutes
Part B (MCQ)	General Knowledge	30			
Part C (MCQ)	General English	40			
Part D Descriptive	Office Procedure, FR/SR, GFR, NIT Act and Statues	50			

* PWD Candidates availing scribe / reader / lab. Assistant.

Paper II: Total Marks = 50
Computer Proficiency Test:

Subject	Maximum Marks	Minimum Qualifying Marks	Duration	Compensatory time*
Word Processing, Spread Sheet, PPT	50	25	45 mins	20 minutes

INDICATIVE SYLLABUS:

Paper – I:

Part–A: General Aptitude & Reasoning: The test will include questions on analogies, similarities and differences, problem solving, analysis, judgment, decision making, visual memory, relationship concepts, verbal and figure classification, arithmetical number series, non-verbal series etc. The test will also include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationship and other analytical functions.

Part–B: General Knowledge: Questions in this component will be aimed at testing the candidates' general awareness of the environment around him and its application to society. Questions will also be designed to test knowledge of current events and of such matters of every day observations and experience in their scientific aspect as may be expected of any educated person. The test will also include questions relating to National Institute of Technology Manipur, North-Eastern States, India and other countries especially pertaining to Sports, History, Culture, Geography, Economic Scene, General Polity and Scientific Research.

Part–C: General English: Questions in this component will be designed to test the Candidate's understanding and knowledge of English Language like Error recognition, Fill in the blanks (using verbs, preposition, articles etc.), One word substitution, Improvement of Sentences, Vocabulary, Spellings, Grammar, Sentence Structure, Synonyms, Antonyms, Sentence Completion, Phrases and Idiomatic use of words, Comprehension of Passages.

Part-D: Manual of Office Procedure of the finance and Accounts, NPS, Leave Rules, Travelling Allowance Rules of the Government of India, FR/SR, GFR, NIT Act and Statutes

PAPER – II:

Computer Proficiency Test: Questions will be designed to test the candidate's knowledge of Computer Applications for everyday office work like Word Processing, Spread Sheet etc. including usage of internet, Mailing Ethics and internal Security.

Note:-

- 1 The question paper would be in English, the same medium of language must be used throughout.
- 2 There shall be negative marking for wrong answer in Paper-I (A, B and C) to the tune of $\frac{1}{4}$ of marks allocated per question.

JUNIOR ASSISTANT: DIRECT RECRUITMENT EXAMINATION

I. MODE OF SELECTION: The Mode of Selection will be as follows:-

(i) Candidates fulfilling the minimum eligibility criteria will be considered **provisionally eligible** and they will be called for the Competitive Written Examination carrying **Total 200 marks**.

(ii) Candidates securing the minimum qualifying marks in the Competitive Written Examination will be called for Typing Test (Qualifying nature).

(iii) Candidates will be recommended for appointment, **in order of merit**, on the basis of their performance in the Competitive Written Examination of marks scored by the candidate out of **200 marks**.

(iv) Success in the examination confers no right of appointment unless NIT Manipur is satisfied after such enquiry as may be considered necessary that the candidate is suitable in all respects of appointment to the service/post.

II. SCHEME OF EXAMINATION: The examination will consist of a **Competitive Written Examination (Maximum Marks 200)**, Typing Test on Computer (Qualifying nature).

A. Scheme of Competitive Written Examination and Syllabus: The written examination will consist of **one Objective type (Paper-I)** and **one Descriptive Type Papers (Paper-II)** as shown below:

Paper – I:

Part	Subject	Maximum Marks	Minimum Qualifying Marks	Duration	Compensatory time*
Part A	General Aptitude & Reasoning	40	50	2 hours	40 minutes
Part B	General English	60			

* PWD Candidates availing scribe / reader / lab. Assistant.

Paper – II:

Subject/Test	Maximum Marks	Minimum Qualifying Marks	Duration	Compensatory time*
General Office Procedure, Service Rule and Financial Regulation, NIT Act and Statues, FR/SR	100	50	45 minutes	20 minutes

* PWD Candidates availing scribe / reader / lab. Assistant.

INDICATIVE SYLLABUS:

Paper-I:

Part-A: General Aptitude & Reasoning: The test will include questions on analogies, similarities and differences, problem solving, analysis, judgment, decision making, visual memory, relationship concepts, verbal and figure classification, arithmetical number series, non-verbal series etc. The test will also include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationship and other analytical functions.

Part-B: General English: Questions in this component will be designed to test the Candidate's understanding and knowledge of English Language like Error recognition, Fill in the blanks (using verbs, preposition, articles etc.), One word substitution, Improvement of Sentences, Vocabulary, Spellings, Grammar, Sentence Structure, Synonyms, Antonyms, Sentence Completion, Phrases and Idiomatic use of words, Comprehension of Passages.

Paper -II:

General Office Procedure of the finance and Accounts, NPS, Leave Rules, Travelling Allowance Rules of the Government of India, FR/SR, GF, NIT Act and Statues,

Typing Test: The Typing Test is of **qualifying nature**. It will be conducted in English to be administered on the Computer using Microsoft Word. The speed requirement is **35 w.p.m.** corresponds to 9000 key depressions per hour.

The speed will be adjudged on the accuracy of typing on the Computer of a given text passage in 10 minutes. Visually Handicapped candidates (with 40% disability and above) will be allowed compensatory time of 20 minutes.

Passage Dictators will be provided to each of VH candidates for the Computer Typing test. The Passage Dictators will read out the passage to the VH candidates within the allotted time period.

Note:-

- 1 The question paper would be in English, the same medium of language must be used throughout.
- 2 Answer script of Paper- II of a candidate would be evaluated, only if the candidate qualifies in Paper-I.
- 3 There shall be negative marking for wrong answer in Paper-I to the tune of $\frac{1}{4}$ of marks allocated per question.

[Handwritten signatures and marks at the bottom of the page, including "H2H", "Sofia", "B", "M", "S0-11", and "Ch"]

**TECHNICIAN (CE, CSE, EE, ME, ECE, Phy & Chem): DIRECT RECRUITMENT
EXAMINATION**

III. MODE OF SELECTION: The Mode of Selection will be as follows:-

Candidates fulfilling the minimum eligibility criteria will be considered **provisionally eligible for the Trade Test**.

Subject/Test	Maximum Marks	Minimum Qualifying Marks	Duration	Compensatory time*
Trade Test	50	25	45 minutes	20 minutes

* PWD Candidates availing scribe / reader / lab. Assistant.

Trade Test: Trade Test is of **qualifying nature**. Assessment will not be done on the basis of marks for Trade Test.

(i) Only those Candidates who qualify in the **Trade Test** will be called for Competitive Written Examination carrying a total of **100 marks and qualifying mark shall be 60 marks**. Questions for Competitive Written Examination will be designed to test the candidate's knowledge of concerned subject of specialization.

(ii) Candidates will be recommended for appointment, **in order of merit**, on the basis of their Performance in the Competitive Written Examination only.

(iii) Success in the examination confers no right of appointment unless the Institute is satisfied after such enquiry as may be considered necessary that the candidate is suitable in all respects of appointment to the service/post.

IV. SCHEME OF EXAMINATION:

The examination will consist of a **Trade Test (Maximum Marks 50)** and **Competitive Written Examination (Maximum Marks 100)**.

SCHEME OF EXAMINATION: The Competitive Written Examination will consist of **One Objective Type Paper**, as follows:-

INDICATIVE SYLLABUS:

TECHNICIAN CIVIL ENGINEERING

PART A (Trade test/ Skill Test)

Trade or Skill test will be based on the syllabus provided in PART B.

PART B (Syllabus for Competitive written examination)

Engineering Mechanics, Solid Mechanics, Structural Analysis, Construction Materials, Steel Structures, Water Resource Engineering, Surveying and Geomatics, Foundation Engineering,

TECHNICIAN COMPUTER SCIENCE AND ENGINEERING

PART A (Trade test/ Skill Test)

Trade or Skill test will be based on the syllabus provided below.

Hardware

1. Assembling of PC 2. Installation of Systems and troubleshooting, BIOS settings 3. Installation and testing of a printer, Printer Maintenance, Scanner Installation 4. Webcam Installation, Making various types of cables for networking 5. Installation of Firewalls and Connectivity of LAN & WAN 6. Installation of Wireless network devices

Software

2. Debugging C/ C++ Programs 2. Installation and Administration of SQL & Oracle 3. Installation of various variants of Operating systems like Windows and Linux 4. Installation of Software like Visual Studio, UML, Cisco Packet tracer 5. Working of MS-Office components like Word, Excel & PowerPoint 6. Configuring and sharing internet in PCs and other devices 7. Designing webpages: HTML, CSS, Java Script.

PART B (Syllabus for Competitive written examination)

1. Hardware - Hardware Devices and Troubleshooting, Components, tools and safety measures, assembling a PC, Firmware upgrade, Dual BIOS & BIOS settings, Diagnose & Resolve issues related to a PC, Laptop features, Components, tools and safety measures, Diagnose & Resolve issues related to a laptop, upgrading a PC or Laptop, Smartphone features and Tools & Safety, Types of printers, Installing and testing a printer, Printer, Maintenance, Scanner Installation, Webcam Installation

2. Programming in C - Fundamentals in C, Operators and Expressions, Input-Output, Library Functions, Control statements, Functions, Pointer and Function, Array and functions, Dynamic memory allocation.

3. Web Designing- HTML and CSS, SQL, JavaScript

4. Operating system – Application and Troubleshooting, Different OS and Compatibility, Window and Linux installation, Upgrading OS, Software Installation, Working on MS Word, Excel, PowerPoint, MS Office Troubleshooting, Different, Browser setup, back up.

5. Computer Networks- OSI and TCP/IP Protocol Stacks, Transmission Media, Networking devices, Network Topology, LAN Basics, IP Addressing, Analog and digital signals, multiplexing.

TECHNICIAN ELECTRICAL ENGINEERING

PART A (Trade test/ Skill Test)

Trade or Skill test will be based on the syllabus provided in PART A.

PART B (Syllabus for Competitive written examination)

Units and Measurement, Mass, Weight and Density, Work Power and Energy, Speed and Velocity, Heat and Temperature, Basic Electricity, Occupational safety, health.

TECHNICIAN MECHANICAL ENGINEERING

PART A (Trade test/ Skill Test)

Trade or Skill test will be based on the syllabus provided in PART B.

PART B (Syllabus for Competitive written examination)

Foundry Shop, Welding Shop, Machining, Sheet Metal Work, Carpentry.

TECHNICIAN ELECTRONICS AND COMMUNICATION ENGINEERING

PART A (Trade test/ Skill Test)

Trade or Skill test will be based on the syllabus provided in PART B.

PART B (Syllabus for Competitive written examination)

Network Theory, Control Systems, Electromagnetic Fields Theory, Electronic Devices, Signals & Systems, Digital Electronics, Analog Circuits, Communication Systems, Audio Video Systems.

TECHNICIAN PHYSICS

PART A (Trade test/ Skill Test) Trade or Skill test will be based on the syllabus provided in PART B.

PART B (Syllabus for Competitive written examination)

Mathematical Methods, Mechanics and General Properties of Matter, Oscillations, Waves and Optics, Electricity and Magnetism, Kinetic Theory, Thermodynamics, Modern Physics, Solid State Physics, Devices and Electronics.

TECHNICIAN CHEMISTRY

PART A (Trade Test/Skill Test)

Trade or Skill test will be based on the syllabus provided in PART B.

PART B (Syllabus for Competitive written examination)

Structure of Atom, Classification of Elements and Periodicity in Properties, Chemical Bonding and Molecular Structure, Redox Reactions, States of Matter, Solid State, Thermodynamics, Equilibrium, Solutions, Chemical Kinetics, Surface Chemistry, Electrochemistry, Hydrogen, s- Block Elements (Alkali and Alkaline earth metals), Some p-Block Elements, d and f Block Elements, General Principles and Processes of Isolation of Elements, Coordination compounds, Hydrocarbons, Haloalkanes and Haloarenes, Alcohols, Phenols and Ethers, Aldehydes, Ketones and Carboxylic Acids, Organic Compounds Containing Nitrogen, Biomolecules, Environmental Chemistry, Polymers, Chemistry in Everyday Life: (1. Chemicals in medicines—analgesics, tranquilizers, antiseptics, disinfectants, antimicrobials, antifertility drugs, antibiotics, antacids, antihistamines. 2. Chemicals in food—preservatives, artificial sweetening agents, elementary idea of antioxidants. 3. Cleansing agents – soaps and detergents, cleansing action).

OFFICE ATTENDANT/LAB. ATTENDANT: DIRECT RECRUITMENT
EXAMINATION

I. MODE OF SELECTION: The Mode of Selection will be as follows:-

(i) Candidates fulfilling the minimum eligibility criteria will be considered **provisionally eligible** and they will be called for the Competitive Written Examination carrying 100 marks.

(ii) Candidates securing the minimum qualifying marks will be recommended for appointment, **depending on the number of vacant post and in order of merit.**

(iii) Success in the examination confers no right of appointment unless the Institute is satisfied after such enquiry as may be considered necessary that the candidate is suitable in all respects of appointment to the service/post.

II. TRADE TEST: Trade Test with Knowledge of Basic Computer Applications (Word Processing, Spread Sheet etc.) Carrying 50 marks which is of **qualifying nature** will be conducted. Candidates securing 20 marks and above shall be declared qualified for the Competitive Written Examination.

III. SCHEME OF EXAMINATION: The Competitive Written Examination will consist of **One Objective Type Paper** as shown below:-

Part	Subject	Maximum Marks	Minimum Qualifying Marks	Duration	Compensatory time*
Part A	General Aptitude & Reasoning	30	50	2 hours	40 minutes
Part B	General Knowledge	30			
Part C	General English	40			

* PWD Candidates availing scribe / reader / lab. Assistant.

INDICATIVE SYLLABUS:

Questions on Numerical Aptitude and General English will be simple, of a level that an average matriculate will be in a position to answer comfortably. Questions on General Awareness will be also of similar standard. Questions on General Intelligence will be non-verbal considering the functions attached to the post.

Part-A: General Aptitude & Reasoning: It would include questions of non- verbal type. The test will include questions on similarities and differences, problem solving, analysis, judgment, decision making, relationship concepts, arithmetical number series, non-verbal

[Handwritten signatures and initials at the bottom of the page]

series. The test will also include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationship, arithmetical computation and other analytical functions.

Part-B: General Knowledge: Questions will be designed to test the ability of the candidate's general awareness of the environment around him and its application to society. Questions will also be designed to test knowledge of current events and of such matters of everyday observation and experience in their scientific aspects as may be expected of an educated person. The test will include questions relating to National Institute of Technology Manipur and Manipur especially pertaining to Sports, History, Culture, Geography, Economic scene and General Polity. These questions will be such that they do not require a special study of any discipline.

Part-C: General English: Candidates' understanding of the Basics of English Language, its vocabulary, grammar, sentence structure.

IV. RESOLUTION OF TIE CASES: Tie cases will be resolved by applying one after another, as applicable till the tie is resolved, as follows:-

- (i) Candidates securing higher marks in Part-A shall be placed higher.
- (ii) Candidates securing higher marks in Part-C shall be placed higher.
- (iii) Date of Birth, with older candidate placed higher.
- (iv) Alphabetical order in which the names of the candidate appear.

Note:-

- 1. The question paper would be in English, the same medium of language must be used throughout.
- 2. Answer script of Paper- II of a candidate would be evaluated, only if the candidate qualifies in Paper-I.
- 3. There shall be negative marking for wrong answer in Paper-I to the tune of $\frac{1}{4}$ of marks allocated per question.

Handwritten signatures and marks at the bottom of the page, including a large signature on the left, a circular stamp, and several other signatures and initials.