

Date: 8th January 2025

NAME OF THE POST: Assistant Professor (Grade –II) Level-10) [On Contract]

Department Name: Computer Science and Engineering

Schedule for Reporting, written Test/Verification/Seminar/Interview

	Assistant Professor (Grade II) (level-10)	
Reporting	4 th February 2025 at 8.30 AM	<ul style="list-style-type: none">• Reporting at the Venue.• Submission of one set of signed application, Self-attested certificates and other essential documents.
Written Test	4 th February 2025 (9.00AM to 11.00 AM)	<ul style="list-style-type: none">• Written Test (only MCQs) based on the GATE syllabus.
Verification	4 th February 2025 12:30 PM onwards	<ul style="list-style-type: none">• Verification of documents for only candidates shortlisted based on the written test performance.
Seminar	4 th February 2025 from 2:00 PM onwards	<ul style="list-style-type: none">• Seminar presentation for only the shortlisted candidates based on the written test performance.
Interview	5 th February 2025 from 9.00 AM onwards	<ul style="list-style-type: none">• Interview only for candidates shortlisted based on Seminar performance.

Venue for Written Test/Seminar/Interview:

Written Test Venue: Manipur Public Service Commission, North AOC, Imphal West
Seminar/Interview : HOTEL IMPHAL, North AOC, Imphal West, MANIPUR

Provisionally shortlisted candidates

S.No	Application Number
1.	R222410CS002
2.	R222410CS003
3.	R222410CS004
4.	R222410CS005
5.	R222410CS008
6.	R222410CS009

7.	R222410CS010
8.	R222410CS011
9.	R222410CS013
10.	R222410CS014
11.	R222410CS016
12.	R222410CS017
13.	R222410CS018
14.	R222410CS019

15.	R222410CS020
16.	R222410CS021
17.	R222410CS022
18.	R222410CS023
19.	R222410CS024
20.	R222410CS025
21.	R222410CS027
22.	R222410CS028

23.	R222410CS029
24.	R222410CS030
25.	R222410CS031

26.	R222410CS032
27.	R222410CS033
28.	R222410CS034

29.	R222410CS036
30.	R222410CS037
31.	R222410CS038

INELIGIBLE CANDIDATES

S. No.	Application No.	Reason for not Shortlisting
1.	R222410CS001	Not having PG in CSE or equiavlent.
2.	R222410CS006	Not submitted B Tech and MTech degree certificates.
3.	R222410CS007	Not having required UG and PG degrees .
4.	R222410CS012	Not having Phd in relevant specialization.
5.	R222410CS015	Ph.D not completed.
6.	R222410CS026	2nd Class in UG degree.
7.	R222410CS035	Not having relevant UG and PG degrees.

Note:

- 1) Any grievance/objection w.r.t the non-eligible candidates only are to be sent through e-mail: recruit_faculty@nitmanipur.ac.in on or before January 11, 2025.
- 2) The grievance/objection sent to the above mentioned email-id within the stipulated date will **ONLY** be considered.
- 3) Correspondence sent to any other email Id of the institute will not be entertained.
- 4) Syllabus for written Test for **Assistant Professor (Grade –II) Level-10) [On Contract]** is enclosed in **Annexure I.**

Annexure I: Syllabus for Written Test:

Section 1: Engineering Mathematics

Discrete Mathematics: Propositional and first order logic. Sets, relations, functions, partial orders and lattices. Monoids, Groups. Graphs: connectivity, matching, colouring. Combinatorics: counting, recurrence relations, generating functions.

Linear Algebra: Matrices, determinants, system of linear equations, eigenvalues and eigenvectors, LU decomposition.

Calculus: Limits, continuity and differentiability, Maxima and minima, Mean value theorem, Integration.

Probability and Statistics: Random variables, Uniform, normal, exponential, Poisson and binomial distributions. Mean, median, mode and standard deviation. Conditional probability and Bayes theorem.

Section 2: Digital Logic

Boolean algebra. Combinational and sequential circuits. Minimization. Number representations and computer arithmetic (fixed and floating point).

Section 3: Computer Organization and Architecture

Machine instructions and addressing modes. ALU, data-path and control unit. Instruction pipelining, pipeline hazards. Memory hierarchy: cache, main memory and secondary storage; I/O interface (interrupt and DMA mode).

Section 4: Programming and Data Structures

Programming in C. Recursion. Arrays, stacks, queues, linked lists, trees, binary search trees, binary heaps, graphs.

Section 5: Algorithms

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.

Section 6: Theory of Computation

Regular expressions and finite automata. Context-free grammars and push-down automata. Regular and context-free languages, pumping lemma. Turing machines and undecidability.

Section 7: Compiler Design

Lexical analysis, parsing, syntax-directed translation. Runtime environments. Intermediate code generation. Local optimisation, Data flow analyses: constant propagation, liveness analysis, common sub expression elimination.

Section 8: Operating System

System calls, processes, threads, inter-process communication, concurrency and synchronization. Deadlock. CPU and I/O scheduling. Memory management and virtual memory. File systems.

Section 9: Databases

ER-model. Relational model: relational algebra, tuple calculus, SQL. Integrity constraints, normal forms. File organization, indexing (e.g., B and B+ trees). Transactions and concurrency control.

Section 10: Computer Networks

Concept of layering: OSI and TCP/IP Protocol Stacks; Basics of packet, circuit and virtual circuit-switching; Data link layer: framing, error detection, Medium Access Control, Ethernet bridging; Routing protocols: shortest path, flooding, distance vector and link state routing; Fragmentation and IP addressing, IPv4, CIDR notation, Basics of IP support protocols (ARP, DHCP, ICMP), Network Address Translation (NAT); Transport layer: flow control and congestion control, UDP, TCP, sockets; Application layer protocols: DNS, SMTP, HTTP, FTP, Email.

Recruitment Section