Syllabus and Scheme of Examination for the Post of Junior Technical Superintendent-
Office of Dean of Digital & Computing Services,
Advertisement No. IIT Mandi/Recruit./NTS/2023/05 dated 13.05.2023

Date: 06.11.2023
Reporting Time: 11:00 a.m.

There will be two stage examination.
Stage I : Written Examination (Duration: 01:00 hour)- MCQ + Subjective based.
Stage II : Skill/Trade Test

The written examination and trade/skill test will be conducted in three main areas with the following topics in each area:

1. Programming and Data Structures
   C/C++ Programming concepts: conditional statements, loops, etc.
   Elementary Data Types: Int, Float, Object oriented programming concepts
   Abstract Data Type: Linked Lists, Trees, Heaps, Graphs, etc.
   Searching Algorithms
   Sorting Algorithms
   MST and Graph Algorithms
   Time and Space Complexity analysis

2. Database and Web Technologies
   Basics of Database
   RDBMs concepts
   Normal Forms
   Schemas
   SQL on MySQL/MS Server/Oracle
   JDBC/ODBC connectivity
   Basic HTML tags
   Front end designing: HTML tags and CSS
   Backend designing (event based) using Java Scripts
   Dynamic web page designing in PHP/ASP.NET/JSP etc.

3. Networking and Operating systems
   Basics of Network communication: OSI model, etc.
   Various Protocols: HTTP, HPPTS, TCP/IP, UDB, ICMP protocols
   Authentication and Authorization
   Network devices and their functionality and uses
   Responsibilities of OS
   User Interface
   Types of OS: Network, Distributed
   Various OS: DoS, GUI, Windows, Linux based Oss
   System calls, Shell programming
   Resource allocation and process management
   Deadlock detection, prevention and avoidance algos
   Other topics: Security, Files Systems and Storage, Networking.