



SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY, SURAT  
सरदार वल्लभभाई राष्ट्रीय प्रौद्योगिकी संस्थान, सूरत  
DEPARTMENT OF CHEMICAL ENGINEERING/ रासायनिक अभियांत्रिकी विभाग

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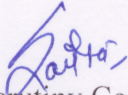
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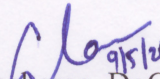
Date: 09-May-2026

**List of Provisionally Eligible Candidates for M.Tech Programme in Chemical Engineering  
(under ICCR scheme) – May 2026**

The following candidates are requested to appear for written test process online on 11/05/2026 at 14:00 hours (IST) for admission to M. Tech. programme in Chemical Engineering. The syllabus for the written test is attached herewith. (Please visit institute website for any updated instructions. The written test process is online. The Google Classroom link will be communicated to the candidates through email.

| S.No. | Name of the candidate            | Remarks                            |
|-------|----------------------------------|------------------------------------|
| 1.    | ISRAA SEDDIG ABDALLAH<br>DAMBASS | --                                 |
| 2.    | MEDRICK KALULUMA PHIRI           | Degree certificate<br>not attached |
| 3.    | BAHATI NELSON NSOLO              | --                                 |

  
Scrutiny Committee Members

  
PG-Incharge, DoChE

  
Head, DoChE

CC to:

(1) Dean (Acad.) (2) Dy. Registrar (Acad.) (3) Prof. I/C CCC for uploading the same on Institute web site.

**Department of Chemical Engineering**

**Written Test Syllabus for the M.Tech. (Chemical Engineering) Admission**  
**for the applicants under ICCR scheme**

**Basic Chemical Engineering Calculations**

Process variables estimation, Basic Chemical Engineering Calculations, Material balance on reactive and non-reactive systems, Energy balance on reactive and non-reactive systems.

**Fluid Flow Operations**

Fluid statics, Pressure drop measurement by manometers, Newtonian and Non-Newtonian fluids, Mass and momentum balance equation, Bernoulli equation, friction factor, pressure drop for flow through pipe, flow meters, pumps and compressors, agitation and mixing.

**Mechanical Operations**

Sieve analysis, Sphericity and Specific surface area of solids, Size reduction, Estimation of terminal velocity, Sedimentation, Fluid flow through a packed bed, Determination of Pressure drop through packed bed, Determination of minimum fluidization velocity and pressure drop.

**Mass Transfer**

Diffusion in fluids, steady state diffusion, diffusivity of liquids and gases, Mass transfer coefficient, theories for mass transfer coefficient, Principles and design aspects of Absorption, Distillation, liquid-liquid extraction, Adsorption and crystallization.

**Heat Transfer**

Steady-State Conduction in Plane Wall, The Cylinder and Sphere, Convection in Laminar Flow in Circular Tubes, Convection in Turbulent Flow in Circular Tubes, Heat Transfer by radiation, Boiling and Condensation, Heat Exchangers, Heat Exchanger Design.

**Chemical Reaction Engineering**

Elementary and non-elementary reactions, Rate of reaction, Rate constant and order of reaction, Arrhenius' law, Activation energy, Constant volume batch reactor, Variable volume batch reactor, Types of reactors, PFR, CSTR etc, Size comparison of single reactors, Performance equations for CSTR and PFR; RTD of fluid in reactors, Homogenous and heterogeneous reactions.

**Chemical Engineering Thermodynamics**

The law of conservation of Energy, First Law of Thermodynamics: Closed and Open Systems, enthalpy, heat capacity, specific heat, Equation of state, Estimation of thermodynamic properties. Heat effects, Second law and entropy, Maxwell's relations and fluid property estimation, Residual properties, Single Phase Mixtures and Solutions; Partial molar properties, Gibbs-Duhem equation, fugacity and fugacity coefficient for pure components and for mixture of gases and liquids. Excess properties of mixtures, activity co-efficient, Chemical reaction equilibrium