National institute of technology, Tiruchirappalli - 620 015, Tamil Nadu, India

Temporary faculty selection- shortlisted candidates for written test and interview schedule

Instructions to the candidates

The shortlisted candidates for the written test for Temporary Faculty position is put up in the NIT website **www.nitt.edu**

The written test for the shortlisted candidates is scheduled on **24.08.2013(Satuday).** The duration of the test will be for **one hour from 09.00 a.m. to 10.00 a.m. on 24.08.2013** at **IT Center (Computer Science Building), NIT, Tiruchirappalli.** The candidates are requested to be present in the test venue half-an-hour before written test i.e.by 08.30 a.m. on 24.08.2013. The candidates are requested to produce a valid Photo ID proof at the time of written test. The syllabus for the written test of the concerned department is available from page no 6-9.

After the written test, the candidates will be shortlisted and then they will be called for interview. All the shortlisted candidates for the interview have to appear before a selection committee and also have to give a presentation on any topic of their interest (no power point presentation) to test their communication skills. The shortlisted candidates for oral presentation and interview will be displayed in test venue itself, department wise, by **10.30 a.m. onwards on 24.08.2013.**

The interview will be held at **Oom Room(next to Director's Office), Administrative building NIT, Tiruchirappalli, Tamilnadu.** The oral presentation and interview will be held as per the following schedule.

SCHEDULE FOR INTERVIEW			
Sl.No.	**DATE**	**TIME**	**DEPARTMENT**
1.	24.08.2013 SATURDAY	11.00 am – 12 Noon	Metallurgical and Materials Engineering
2.		12 Noon – 1.00 pm	Production Engineering
3.		2.00 pm – 4.00 pm	Mechanical Engineering
4.		4.00 pm – 5.00 pm	Humanities-English
5.	25.08.2013 SUNDAY	9.00 am – 10.00 am	Chemical Engineering
6.		10.00 am - 1.00 pm	Center for Energy & Environmental Science and Technology (CEESAT)
7.		2.00 pm – 5.00 pm	Computer Science and Engineering

Additional information for the candidates:-

1. Kindly refer the application number(given beside your name in the short listed candidates list) to the written test for seating arrangements .
2. Report to the venue of written test/interview half an hour before the scheduled time.
3. Bring one set of attested copies of relevant documents such as educational qualification, experience certificates, community certificate, etc. You are also required to bring all the original documents for verification purpose.
4. Bring at least one of the following documents as proof of identity
   i. Valid passport
   ii. Voter identify card
   iii. PAN Card
   iv. Driving License
   v. Govt. or PSU undertaking issued valid photo identity cards.
   vi. Aadhar card
   vii. Any other valid Identity card
5. Venue for the interview:---

Oom ROOM(NEXT TO DIRECTOR'S OFFICE),
ADMINISTRATIVE BUILDING
NIT, TIRUCHIRAPPALLI, TAMILNADU-620015.

Please note the following:

1. No TA/DA will be paid for attending the written test and interview.
2. The request for change of date will not be entertained.
3. The invitation is a mere request to appear for written test/interview and does not assure that he/she will be recommended or selected.
4. The decision of the selection committee of the institute is final.

Encl: 1. Instructions : Page No-1
2. List of candidates called for written test : Page No-2-5
3. Syllabus for written test for concern Department : Page No-6-9

NATIONAL INSTITUTE OF TECHNOLOGY : TIRUCHIRAPPALLI – 620 015
DEAN (FACULTY WELFARE)
List of Candidates Short Listed For written test

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

Sl.no	Application no.	Name
1.	TF/13/MME001	R. Durgha
2.	TF/13/MME002	G. Gauthamprakash
3.	TF/13/MME003	J. Maya
4.	TF/13/MME004	B. Thirumaran
5.	TF/13/MME005	C. Anand Chairman
6.	TF/13/MME006	S. Ramakrishnan
7.	TF/13/MME007	S. Krishnamoorthi
8.	TF/13/MME008	Muralidharan Ramachandran

DEPARTMENT OF PRODUCTION ENGINEERING

Sl.no	Application no.	Name
1.	TF/13/PROD001	K. Kamal babu
2.	TF/13/PROD006	A. Antony Cruz Leo. A
3.	TF/13/PROD008	Sonu Rajak
4.	TF/13/PROD011	G. Sukumar
5.	TF/13/PROD017	K. Ganesa Balamurugan

DEPARTMENT OF MECHANICAL ENGINEERING

Sl.no	Application no.	Name
1.	TF/13/MECH001	Chenchumohan Cherakala
2.	TF/13/MECH002	K. Kamal babu
3.	TF/13/MECH003	D. Arun Sundara Nayagam
4.	TF/13/MECH004	C.N. Kowthaman
5.	TF/13/MECH005	S. Mohanasundaram
6.	TF/13/MECH007	N. Karthikeyan
7.	TF/13/MECH009	M. Arulprakasajothi
8.	TF/13/MECH010	N. Nagasathya
9.	TF/13/MECH011	V. Lakshmanan
10.	TF/13/MECH012	V. G. Ganesan
11.	TF/13/MECH013	M. Prabakaran
12.	TF/13/MECH014	R. Sirajudeen
13.	TF/13/MECH015	Ganesa Balamurugan.K

DEPARTMENT OF HUMANITIES - ENGLISH

Sl.no	Application no.	Name
1.	TF/13/H-ENG001	Kandharaja.K.M.C
2.	TF/13/H-ENG002	T. Haseena Banu
3.	TF/13/H-ENG004	J. Sakthi Kumar
4.	TF/13/H-ENG005	Jaware Pramod Rohidas
5.	TF/13/H-ENG006	J. Muthulekha
6.	TF/13/H-ENG007	M. Senguttuvan

DEPARTMENT OF CEESAT

Sl.no	Application no.	Name
1.	TF/13/CEESAT001	D.V. Siva Krishna Rao K
2.	TF/13/CEESAT002	F. Fenila
3.	TF/13/CEESAT003	Kamble Lohitkumar Pundlik
4.	TF/13/CEESAT004	N. Kalaiselvan
5.	TF/13/CEESAT005	Rathod Merwan Kishanrao
6.	TF/13/CEESAT006	S. Senthil kumar
7.	TF/13/CEESAT007	Marttin. G.P
8.	TF/13/CEESAT009	Chris sheba. M
9.	TF/13/CEESAT010	Dhivya Roselin. J
10.	TF/13/CEESAT011	Aviraj Datta
11.	TF/13/CEESAT013	N. Karthikeyan
12.	TF/13/CEESAT014	Jothi. N
13.	TF/13/CEESAT016	B. Vanavil
14.	TF/13/CEESAT017	P. Balasubramanian
15.	TF/13/CEESAT018	G. Shanthi
16.	TF/13/CEESAT019	N. Nagalakshmi
17.	TF/13/CEESAT020	K. Dasa prabhu
18.	TF/13/CEESAT021	R. Agnes Granabh
19.	TF/13/CEESAT022	M.R. Rooseveli
20.	TF/13/CEESAT023	T. Sathya

DEPARTMENT OF CHEMICAL

Sl.no	Application no.	Name
1.	TF/13/CHL001	M. Kranthi Kumar
2.	TF/13/CHL003	N. Mohan Raj
3.	TF/13/CHL004	S. Senthil kumar
4.	TF/13/CHL005	Sivagaminathan
5.	TF/13/CHL006	Rayi Naveen Kumar
6.	TF/13/CHL013	A. Subathira
7.	TF/13/CHL015	J. Dhanalakshmi

DEPARTMENT OF CSE

Sl.no	Application no.	Name
1.	TF/13/CSE001	Bhukya Krishna Priya
2.	TF/13/CSE002	A. Udayakumar
3.	TF/13/CSE003	V. Periakaruppan
4.	TF/13/CSE004	K. Soundarya
5.	TF/13/CSE006	K. Premavathy
6.	TF/13/CSE007	S. Surendran
7.	TF/13/CSE010	M. Sujitha
8.	TF/13/CSE011	S. Venkatesh
9.	TF/13/CSE012	S. Preethi
10.	TF/13/CSE013	S. Pragadeeswaran
11.	TF/13/CSE014	K. Deepika
12.	TF/13/CSE015	A. Theepika Velam
13.	TF/13/CSE016	S. Pavaimalar
14.	TF/13/CSE017	N. Kathirvel
15.	TF/13/CSE018	M. Elayaperumal
16.	TF/13/CSE020	S. Sugantha
17.	TF/13/CSE021	S.L. Vijayakumar
18.	TF/13/CSE022	N. Sathiya Priya
19.	TF/13/CSE023	P. Niranjana
20.	TF/13/CSE024	R. Kesavaraman
21.	TF/13/CSE025	Vinayagam.N.S
22.	TF/13/CSE027	R. Bhuvani
23.	TF/13/CSE028	T. Siron Antia Susan
24.	TF/13/CSE029	B. Kinduja
25.	TF/13/CSE030	O.S. Jannath Nisha
26.	TF/13/CSE032	S. Sivapradha
27.	TF/13/CSE033	K. Nandhini
28.	TF/13/CSE035	Revathy Krishnan. G
29.	TF/13/CSE036	V. Sukanya
30.	TF/13/CSE037	R. Gayathri
31.	TF/13/CSE039	A. Jeya Christy
32.	TF/13/CSE040	G. Thilak
33.	TF/13/CSE041	D.S. Pricilla Rajakumari
34.	TF/13/CSE042	C. Murugan
35.	TF/13/CSE044	C. Sudha
36.	TF/13/CSE045	R. Gopi
37.	TF/13/CSE046	P. Manikandan
38.	TF/13/CSE048	Ponsahana.P
39.	TF/13/CSE049	M. Yogadharani
40.	TF/13/CSE050	S.K. Geetha
41.	TF/13/CSE051	S. Muthuraj Kumar
42.	TF/13/CSE052	Nizar ahamed. M
43.	TF/13/CSE053	R. Sornalatha
44.	TF/13/CSE054	R. Sendhil
45.	TF/13/CSE055	G. Karthick Prabhu
46.	TF/13/CSE057	V. Revathi
47.	TF/13/CSE058	K. Sathya
48.	TF/13/CSE060	K. Muruganandam
49.	TF/13/CSE061	P. Mahendran
50.	TF/13/CSE062	M. Amutha prabakar
51.	TF/13/CSE063	P. Manoj Kumar

52.	TF/13/CSE064	S. Ram Prakash
53.	TF/13/CSE065	F. Sophia
54.	TF/13/CSE066	P. Rengasamy
55.	TF/13/CSE067	D. Shibin
56.	TF/13/CSE068	K. Arul Deepa
57.	TF/13/CSE069	S. Angala Manimuthu
58.	TF/13/CSE070	R. Manoj Kumar
59.	TF/13/CSE073	P. Baby Shalini
60.	TF/13/CSE074	J. Dathy Karunya
61.	TF/13/CSE075	J. Kokila
62.	TF/13/CSE077	R.Rajapriya

SYLLABUS FOR WRITTEN TEST FOR SELECTION OF TEMPORARY FACULTY

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

"The question paper for written test in dept Metallurgical and materials engineering , for temporary faculty year 2013, will be at the general competency level of a degree holder in B.Tech. Metallurgical and Materials Engineering . Question will cover various areas of metallurgy and materials."

DEPARTMENT OF HUMANITIES-ENGLISH

LINGUISTICS:

1. Language and linguistics – Language acquisition and learning – Behaviourist and Cognitivist schools.
2. Grammar, lexis – Phonology and morphology – Internalization – Grammatical competence – Generative grammar.
3. L 2 Acquisition and learning – Theories of SLA and SLL – Bilingualism— Bilingual communities – needs and reasons.
4. Contrastive analysis – Contrastive linguistics – Contrastive grammar –Semantics- Restriction in meaning.
5. Relevance of linguistics to teaching – Class room methods – Selection of materials - Managing learner difficulties.

ENGLISH LANGUAGE TEACHING:

1. Theories of language teaching – Audio-lingual, grammar translation, total Immersion – Communicative language teaching – computer aided teaching
2. English for specific purposes – English for occupational purposes – English for Academic purposes – English for Science & Technology.
3. Importance of the four language skills – Role of materials, tasks in learning – Methodology and its role in the learning process.
4. Evaluation methods and testing techniques – testing as a teaching procedure – Designing tasks and tests – Evaluating testing methods.
5. Teacher orientation and training – Class room interaction – Motivating and Managing learners – Responding to diversity – School, curriculum and society – Teacher, a professional.

COMPUTER AIDED LANGUAGE LEARNING

1. Computer – Scope in language teaching - Integration of CALL – the Natural languages –Synthesis – Universal Grammar.
2. Background of CALL – Constructivist theory of learning – Self learning and testing -- Interactive learning practice.
3. Individual styles and motivation – Student tracking—Affective impact of computer learning – Problems and possibilities.
4. Material production – Online communication – Reaching the disadvantaged lean – varied leaning pace – Creative element in CALL
5. Competence of English teachers in computer use – Interactive software and CD ROMs – Future trends

DEPARTMENT OF MECHANICAL ENGINEERING

Engineering Mechanics, Industrial safety, Mechatronics, Enginering Graphics, CAD/CAM, Automobile engineering, Thermal Engineering, Machine Design, Turbo machines, Power Plant Engineering, Refrigeration & Air-conditioning, Mechanics of Machines, Thermodynamics, Heat Transfer, GD & T, Machine drawing

DEPARTMENT OF PRODUCTION ENGINEERING

ENGINEERING MATHEMATICS: Linear Algebra Calculus Differential equations: Complex variables: Probability and Statistics: Numerical Methods:

GENERAL ENGINEERING: Engineering Materials: Applied Mechanics: Theory of Machines and Design: Thermal Engineering:

PRODUCTION ENGINEERING: Metal Casting: Metal Forming: Metal Joining Processes: Machining and Machine Tool Operations: Tool Engineering: Metrology and Inspection: Powder Metallurgy: Polymers and Composites: Manufacturing Analysis: Computer Integrated Manufacturing

INDUSTRIAL ENGINEERING: Product Design and Development: Engineering Economy and Costing: Work System Design: Facility Design: Production Planning and Inventory Control: Operation Research: Quality Management: Reliability and Maintenance: Management Information System. Intellectual Property System:

CENTRE FOR ENERGY & ENVIRONMENTAL SCIENCE AND TECHNOLOGY (CEESAT)

1.Heat Transfer.
2.Mass Transfer
3.Fluid Mechanics.
4.Thermal Engineering.
5.Wind Energy
6.Solar energy.
7.Air Pollution.
8.Water Pollution.
7.Basics of Mechanics
8.Basics of Electrical Engineering and Biotechnology.

DEPARTMENT OF CHEMICAL ENGINEERING

ENGINEERING MATHEMATICS

Linear Algebra: Matrix algebra, Systems of linear equations, Eigen values and eigenvectors.

Calculus*:* Functions of single variable, Limit, continuity and differentiability, Mean value theorems, Evaluation of definite and improper integrals, Partial derivatives, Total derivative, Maxima and minima, Gradient, Divergence and Curl, Vector identities, Directional derivatives, Line, Surface and Volume integrals, Stokes, Gauss and Green's theorems.

Differential equations: First order equations (linear and nonlinear), Higher order linear differential equations with constant coefficients, Cauchy's and Euler's equations, Initial and boundary value problems, Laplace transforms, Solutions of one dimensional heat and wave equations and Laplace equation.

Complex variables: Analytic functions, Cauchy's integral theorem, Taylor and Laurent series, Residue theorem.

Probability and Statistics: Definitions of probability and sampling theorems, Conditional probability, Mean, median, mode and standard deviation, Random variables, Poisson, Normal and Binomial distributions.

Numerical Methods: Numerical solutions of linear and non-linear algebraic equations Integration by trapezoidal and Simpson's rule, single and multi-step methods for differential equations.

CHEMICAL ENGINEERING

Process Calculations and Thermodynamics: Laws of conservation of mass and energy; use of tie components; recycle, bypass and purge calculations; degree of freedom analysis. First and Second laws of thermodynamics. First law application to close and open systems. Second law and Entropy. Thermodynamic properties of pure substances: equation of state and departure function, properties of mixtures: partial molar properties, fugacity, excess properties and activity coefficients; phase equilibria: predicting VLE of systems; chemical reaction equilibria.

Fluid Mechanics and Mechanical Operations: Fluid statics, Newtonian and non-Newtonian fluids, Bernoulli equation, Macroscopic friction factors, energy balance, dimensional analysis, shell balances, flow through pipeline systems, flow meters, pumps and compressors, packed and fluidized beds, elementary boundary layer theory, size reduction and size separation; free and hindered settling; centrifuge and cyclones; thickening and classification, filtration, mixing and agitation; conveying of solids.

Heat Transfer: Conduction, convection and radiation, heat transfer coefficients, steady and unsteady heat conduction, boiling, condensation and evaporation; types of heat exchangers and evaporators and their design.

Mass Transfer: Fick's laws, molecular diffusion in fluids, mass transfer coefficients, film, penetration and surface renewal theories; momentum, heat and mass transfer analogies; stagewise and continuous contacting and stage efficiencies; HTU & NTU concepts design and operation of equipment for distillation, absorption, leaching, liquid-liquid extraction, drying, humidification, dehumidification and adsorption.

Chemical Reaction Engineering: Theories of reaction rates; kinetics of homogeneous reactions, interpretation of kinetic data, single and multiple reactions in ideal reactors, non-ideal reactors; residence time distribution, single parameter model; non-isothermal reactors; kinetics of heterogeneous catalytic reactions; diffusion effects in catalysis.

Instrumentation and Process Control: Measurement of process variables; sensors, transducers and their dynamics, transfer functions and dynamic responses of simple systems, process reaction curve, controller modes (P, PI, and PID); control valves; analysis of closed loop systems including stability, frequency response and controller tuning, cascade, feed forward control.

Plant Design and Economics: Process design and sizing of chemical engineering equipment such as compressors, heat exchangers, multistage contactors; principles of process economics and cost estimation including total annualized cost, cost indexes, rate of return, payback period, discounted cash flow, optimization in design.

Chemical Technology: Inorganic chemical industries; sulfuric acid, NaOH, fertilizers (Ammonia, Urea, SSP and TSP); natural products industries (Pulp and Paper, Sugar, Oil, and Fats); petroleum refining and petrochemicals; polymerization industries; polyethylene, polypropylene, PVC and polyester synthetic fibers.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

1. Data Structures and Algorithms

Development of Algorithms - Notations, Concepts - Arrays - Linked lists - Stacks and queues Trees - Tree Traversing - Operations on Binary Trees – Sorting and Searching techniques - Graphs - BFS, DFS - Shortest path problems.

2. Operating Systems

Basic OS Concepts - Thread and process scheduling - Synchronization - Semaphores - Critical regions - Deadlock prevention and recovery - Memory Management - File Management - I/O Management – Case Studies on Windows and Linux OS.

3. Computer Organization and Architecture

Basic structure of Computers **-** Arithmetic - Addition & subtraction of signed numbers - Multiplication - Integer division - Floating point operations - Pipelining - Multiple bus organization - Micro programmed control – Hazards - Memory System - Semiconductor RAM memory - Cache memory - Virtual memory - Secondary storage - I/O Organization - Interrupts - DMA - Buses - Interface circuits - Serial communication links.

4. C Programming

C programming – Memory Concepts – Arithmetic Operations - Control Statements – Functions - Pointers – Structures – User Defined Data types - File handling.

5. Microprocessors

8085 processor - Architecture - Bus organization - Registers - ALU - Instruction set of 8085 - Instruction format - Addressing modes - System design using controllers - Microprocessor Interfacing Techniques - Segmented memory concepts - Bus concepts.