DEPARTMENT OF APPLIED MECHANICS AND HYDRAULICS
NITK, SURATHKAL

ADMISSION TO Ph.D. PROGRAMME 2018-19 (EVEN SEMESTER) : DEC 2018

SHORT LISTED CANDIDATES FOR INTERVIEW

Sl. No.	Appl. No.	Candidates Name & Address
1	AM-02 (FT-IR NITK)	**DINESH KUMAR M.** R. No. 218, 7th Block NITK Hostels, Srinivasnagar – 575025 M : 9791206294 dineshkumar.m1010@gmail.com
2	AM-04 (FT-IR NITK)	**CHINMAYI B. Y.** #110, 4TH Block Girls Hostel, NITK Hostels, NITK, Surathkal M : 9481077811, chinmayi.yogendra@gmail.com
3	AM-05 (FT-IR NITK)	**SWATHI SHETTY** D/o Pushpa Shetty, Udupi Acharya Thota, Nittur, Udupi – 576103, M : 9036128601, meswathi18@gmail.com
4	AM-06 (FT)	**BANDARUPALLI SURESH** Sri. Sai De-Royal Boys Hostel, Room No. 211, Opp. BSNL Office, Kothapet, Hyderabad M : 9490948827, saikumar.b3m@gmail.com
5	AM-07 (FT)	**ABDULLA UMAR NASEEF T.** Insaf Neerolpalam, Thenhipalam P.O. 673636 M : 9847684673, naseef.tpm@gmail.com
6	AM-08 (FT-IR NITK)	**SHARANNYA T.M.** Divya Nivas, B Street, Mananthavady, Wayanad, Kerala M : 9562286977 sharannyatm@gmail.com
7	AM-09 (FT)	**AMBADIPUDI JAYA PRAKASH** Door No. 19-7-483, Sangadigunta, 3rd Lane, Guntur, AP : 522003 M : 8801010191, jpcivil103@gmail.com
8	AM-10 (FT)	**RONY J.S.** Saphalayam, TC 18/100-2, Plavila, Thurumala P.O. Trivandrum, Kerala 695006 M : 8848078067, ronyjs17@gmail.com

Pathuraj U

8/11/18

विभागाध्यक्ष/HOD
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राष्ट्रीय प्रौद्योगिकी संस्थान कर्नाटक, सुरत्कल
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NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL, P. O. SRINIVASNAGAR, MANGALORE – 575 025, DK

DEPARTMENT OF APPLIED MECHANICS AND HYDRAULICS

The candidate is requested to appear for a written test at his/her own cost. He/she has to produce all the original records such as Date of Birth Certificate, Degree Marks Cards, SC/ST/OBC certificate (if applicable as per proforma) Person with disability certificate (if applicable), Sponsorship letter (if applicable) and Conduct Certificate.

Written Test and Interview:

Place of Reporting	**: Department of Applied Mechanics and Hydraulics**
Written Test Date and Time	**: December 05, 2018, 9 AM to 10 AM**
Document Verification	**: December 05, 2018, 10:30 AM Onwards**
Interview Date and Time	**: December 05, 2018, 10:30 AM Onwards**

Syllabus for the PhD Written Test:

PART A (Compulsory) – Basic Sciences, Mathematics and Engineering

Engineering Mechanics: System of Forces, Free-Body Diagrams, Equilibrium Equations; Internal Forces in Structures; Plane Truss, Second Area Moment.

Solid Mechanics: Bending Moment and Shear Force in Statically Determinate Beams; Simple Stress and Strain Relationships; Simple Bending Theory, Flexural and Shear Stresses, Uniform Torsion, Buckling of Column.

Fluid Mechanics: Properties of Fluids, Fluid Statics; Continuity, Momentum, Energy and Corresponding Equations; Potential Flow, Applications of Momentum and Energy Equations; Laminar and Turbulent Flow; Flow in Pipes, Pipe Networks; Concept of Boundary Layer and its Growth.

Numerical Methods: Accuracy and Precision; Error Analysis. Numerical Solutions of Linear and Non-Linear Algebraic Equations; Least Square Approximation, Newton's and Lagrange Polynomials, Numerical Differentiation, Integration by Trapezoidal and Simpson's rule, Single and Multi-Step Methods for First Order Differential Equations.

Calculus: Functions of Single Variable; Limit, Continuity and Differentiability; Mean Value Theorems, Local Maxima and Minima.

PART B (Select Relevant Section) – Core Subjects

Section 1 (Marine Structures)

Marine Structures: Basics of Wave Hydrodynamics, Wave Structure Interactions, Oceanography, Design Aspects of Marine Structures, Port Planning, Marine Geotechnical Engineering.

Section 2 (Water Resources Engineering)

Hydrology: Hydrologic Cycle, Water Budget, World Water Quantities, Precipitation and Abstractions: Forms of Precipitation, Data Analysis, Rain-Gauge Networks; Infiltration – Processes, Infiltration Indices and Horton's Equation; Evaporation and Evapotranspiration – Pan Evaporation, Empirical Equations for Estimating Evaporation and Evapotranspiration; Transpiration; Runoff and Hydrographs: Rainfall Runoff Relations, Time Area Concept, Flow Duration Curve, Mass Curve, Flow Hydrograph, Unit Hydrograph (UH) and its Analysis.

Section 3 (RS & GIS)

Remote Sensing & GIS: Energy Sources & Radiation Principles, EMR & Spectrum, Emission, Transmission, Spectral Response Pattern, Components of GIS, Co-ordinate System, MAP Projections, Input Data for GIS, Types of Output, Level & Scale, Data Quality.

NOTE:

1. Candidates should come prepared to appear for a written Aptitude Test before the interview. Fee Structure for PhD programme can be referred on the Institute's website, i.e. www.nitk.ac.in
2. Candidates who have not submitted marks of final examination along with application form shall produce the same at the time of admission if available. However, candidates who have written final year examinations and yet to obtain final semester mark cards should submit the same on or before **15.01.2019**
4 Your candidature for this test is provisional & is subject to your fulfilling the educational qualifications & other criteria prescribed for the programme as mentioned in Information Brochure, failing which your candidature can be summarily rejected after verification/scrutiny at a later stage
5 Please carry the Admit Card to secure admission to the examination hall. You are responsible for safe custody of the Admit Card and in the event of any other person using this Admit Card, the responsibility lies on you to prove that you have not used the service of an impersonator.
6 The candidates who have qualified from the other university (Other than NITK) have to produce Migration Certificate in order to validate their admission.
7 Please note that no travelling expenses shall be payable for appearing in the written test/Interview
8 The Selected candidates are required to pay fees and get admitted during the period **17.12.2018 – 24.12.2018**

S/d -

Head of the Department