



IRIS

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

राष्ट्रीय प्रौद्योगिकी संस्थान कर्नाटक, सुरत्कल

P.O SRINIVASNAGAR, MANGALORE - 575025

**AM Call Letter List**

PhD, 2020 - 21

The following applicants have been selected for written exam and/or interview for the department for the department of Applied Mechanics and Hydraulics for PhD Programme. The applicants are requested to go through additional information provided in their Call letters.

Name	Reference Number	Branch/Specialisation
BALAN R	PH2020AM0033	Applied Mechanics and Hydraulics
Shivakumara M J	PH2020AM0035	Applied Mechanics and Hydraulics
Rizana Salim	PH2020AM0036	Applied Mechanics and Hydraulics
SAVITHA CHIRASMAYEE	PH2020AM0037	Applied Mechanics and Hydraulics
MADURU GANESH	PH2020AM0038	Applied Mechanics and Hydraulics
SALANA GNANESWARARAO	PH2020AM0039	Applied Mechanics and Hydraulics
ALLU AYYAPPA REDDY	PH2020AM0040	Applied Mechanics and Hydraulics
BIBEKANANDA SAHOO	PH2020AM0041	Applied Mechanics and Hydraulics
DUBBA Jyothsna	PH2020AM0042	Applied Mechanics and Hydraulics
namrata marium chacko	PH2020AM0044	Applied Mechanics and Hydraulics
Chaitanya J C	PH2020AM0047	Applied Mechanics and Hydraulics
KAGITHA LAVANYA	PH2020AM0048	Applied Mechanics and Hydraulics
MUKUL KUMAR SAHU	PH2020AM0049	Applied Mechanics and Hydraulics
ASHIQUE ALI P	PH2020AM0051	Applied Mechanics and Hydraulics
Muhammed Rashid R	PH2020AM0052	Applied Mechanics and Hydraulics
Athira K	PH2020AM0054	Applied Mechanics and Hydraulics
Adithya Samanth	PH2020AM0056	Applied Mechanics and Hydraulics
THAJUDDIN UBAID B M	PH2020AM0059	Applied Mechanics and Hydraulics

**PROFESSOR & HEAD**

Dept. of Water Resources & Ocean Engineering  
(Formerly Dept. of Applied Mechanics & Hydraulics)

NITK Surathkal, P.O. Srinivasa Nagar, Mangalore - 575025



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<b>Name</b>	<b>Reference Number</b>	<b>Applied Mechanics and Hydraulics Branch/Specialisation</b>
HARSHKUMAR ANNIGERI	PH2020AM0060	Applied Mechanics and Hydraulics
Soniya Xaviour	PH2020AM0061	Applied Mechanics and Hydraulics
ADHEENA THOMAS	PH2020AM0062	Applied Mechanics and Hydraulics
HARIKRISHNAN T A	PH2020AM0064	Applied Mechanics and Hydraulics
GIRISHA K	PH2020AM0065	Applied Mechanics and Hydraulics
Abhilash H N	PH2020AM0066	Applied Mechanics and Hydraulics
MATTA KOIAH NAGESWARA RAO	PH2020AM0067	Applied Mechanics and Hydraulics
Abhipreet Mohapatra	PH2020AM0068	Applied Mechanics and Hydraulics
Ronit Muduli	PH2020AM0069	Applied Mechanics and Hydraulics
Sangeetha Somanath	PH2020AM0070	Applied Mechanics and Hydraulics
Uttarwar Sameer Balaji	PH2020AM0071	Applied Mechanics and Hydraulics
SUDHANSU SEKHAR MOHANTA	PH2020AM0072	Applied Mechanics and Hydraulics
APARNA PANDA	PH2020AM0073	Applied Mechanics and Hydraulics
DEVANAND M R	PH2020AM0074	Applied Mechanics and Hydraulics
CHINTHU NARESH	PH2020AM0075	Applied Mechanics and Hydraulics
ISHFAKH M SHAFEEKH	PH2020AM0076	Applied Mechanics and Hydraulics
S Hemanth	PH2020AM0077	Applied Mechanics and Hydraulics
Pasupuleti Venkata Mouni Vardhan	PH2020AM0078	Applied Mechanics and Hydraulics
Guruprasad T N	PH2020AM0079	Applied Mechanics and Hydraulics
MOHAN KUMAR R	PH2020AM0080	Applied Mechanics and Hydraulics
Mahima John Horta	PH2020AM0081	Applied Mechanics and Hydraulics
Palagiri Hussain	PH2020AM0082	Applied Mechanics and Hydraulics
Ruchir A J	PH2020AM0085	Applied Mechanics and Hydraulics



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PhD, 2020 - 21

<b>Name</b>	<b>Reference Number</b>	<b>Branch/Specialisation</b>
SATISH KUMAR KOLLURU	PH2020AM0086	Applied Mechanics and Hydraulics
GUGULOTH PRAVEEN KUMAR	PH2020AM0087	Applied Mechanics and Hydraulics
deepak chaurasia	PH2020AM0088	Applied Mechanics and Hydraulics
VINOD V	PH2020AM0089	Applied Mechanics and Hydraulics
Praveen Kumar Sakare	PH2020AM0090	Applied Mechanics and Hydraulics
REVATHY R	PH2020AM0091	Applied Mechanics and Hydraulics
BONTHU SANDEEP REDDY	PH2020AM0092	Applied Mechanics and Hydraulics
PANDURANG	PH2020AM0093	Applied Mechanics and Hydraulics
KALAKOTI NAVEENA	PH2020AM0094	Applied Mechanics and Hydraulics
S P AKSHARA	PH2020AM0095	Applied Mechanics and Hydraulics
SHANMUKHA B J	PH2020AM0096	Applied Mechanics and Hydraulics
Naren Chakravarthy Kamineni	PH2020AM0097	Applied Mechanics and Hydraulics
Shrudha V K	PH2020AM0098	Applied Mechanics and Hydraulics
Shrinath	PH2020AM0099	Applied Mechanics and Hydraulics
SAMIR KUMAR BERA	PH2020AM0100	Applied Mechanics and Hydraulics
PRAVEEN J V	PH2020AM0101	Applied Mechanics and Hydraulics
Anusha Jain	PH2020AM0102	Applied Mechanics and Hydraulics
APOORVA K V	PH2020AM0103	Applied Mechanics and Hydraulics
Parvathy M M	PH2020AM0107	Applied Mechanics and Hydraulics
Ravichandra Masuti	PH2020AM0108	Applied Mechanics and Hydraulics
PREETAM CHOUDHARY	PH2020AM0109	Applied Mechanics and Hydraulics
ARPITHA G A	PH2020AM0110	Applied Mechanics and Hydraulics
ABDUL RAHMAN	PH2020AM0117	Applied Mechanics and Hydraulics

**PROFESSOR & HEAD**

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**AM Call Letter List**

PhD, 2020 - 21

<b>Name</b>	<b>Reference Number</b>	<b>Branch/Specialisation</b>
Vivek Kumar Tripathi	PH2020AM0120	Applied Mechanics and Hydraulics
Nandana Ramesh	PH2020AM0121	Applied Mechanics and Hydraulics

**Head Of Department**  
**Applied Mechanics and Hydraulics**

**PROFESSOR & HEAD**

Dept. of Water Resources & Ocean Engineering  
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NITK Surathkal, P.O. Srinivasnagar, Mangaluru-575025

**Dean Academics**

# **Dept. Water Resources & Ocean Engineering**

**(Formerly Dept. of Applied Mechanics & Hydraulics)**

**NITK, Surathkal, Mangalore, Pin: 575 025**

## **General Instructions for the candidates who are appearing for the Ph.D. Written Aptitude Test & Interview:**

1. The candidates are expected to provide the subject preference available in syllabus which is given in Annexure (**PAPER 1: MARINE STRUCTURES/ PAPER 2: WATER RESOURCES ENGINEERING/ PAPER 3: REMOTE SENSING & GEOGRAPHIC INFORMATION SYSTEM (RS & GIS)**) to the DRPC Chairperson (Email address: **amba\_shetty@yahoo.co.in**) and Copy to DRPC Secretary (Email address: **vadivuchezhian\_k@yahoo.co.in**), Department of Water Resources and Ocean Engineering on or before 3<sup>rd</sup> September 2020, 5.00 pm. They are allowed to select any one of the subject preferences available in Annexure (**Please refer next page**).
2. Mode of the written aptitude test is online. Details of examination will be announced in our Institute's Website (**<https://www.nitk.ac.in/>**). For further updates, the candidates are requested to visit our Institute's Website regularly.
3. There will be 50 multiple choice questions (MCQ) for the Ph.D. Written Aptitude Test. For every question, four options will be given. The candidates are expected to select correct option.
4. Each correct answer carries one mark. Total marks for the test is 50.
5. There is negative marking for wrong answer. For each wrong answer, 0.25 marks will be deducted.
6. Time duration is 60 minutes.
7. The candidates are allowed to use scientific calculators for solving numerical problems.
8. After the written test, the shortlisted candidates will be allowed to attend the technical interview. For the technical interview, the candidates are expected to prepare maximum of 10 PPT slides. The presentation slides should include the present and the proposed research work.
9. **Written Test Date and Time:** September 9<sup>th</sup> 2020, 8.00 AM onwards. **No extra time will be given** and your login page will be closed after the test duration.
10. **Interview Date and Time:** September 9<sup>th</sup> 2020, 11.30 AM Onwards & September 10<sup>th</sup> 2020, 10.00 AM Onwards.

**HEAD OF THE DEPARTMENT**

**Annexure**  
**Syllabus for the PhD Written Test**

**Paper 1: Marine Structures**

**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 (Marine Structures) – Core Subject**

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

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**Paper 2: Water Resources Engineering**

**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 (Water Resources Engineering) – Core Subject**

**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.

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### **Paper 3: Remote Sensing & Geographic Information System (Rs & Gis)**

#### **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 (Remote Sensing & Geographic Information System (RS & GIS)) – Core Subject**

**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.

HEAD OF THE DEPARTMENT

**No. PhD/2020-21/E6**

**Date: 27-08-2020**

**Admit Card**

**Sub: Ph.D. Programme – Written Aptitude Test / Interview for the year 2020-21**

With reference to his/her application for admission to PhD programme, Mr./Ms.....  
..... is requested to appear for an online Written test/Interview.  
He/she has to produce all the original records such as Date of Birth Certificate, Degree Marks Cards, SC/ST/  
OBC/EWS certificate (if applicable as per proforma), Person with disability certificate (if applicable),  
Sponsorship letter (if applicable) and Conduct Certificate during the interview.

<b>Department</b>	: Department of Water Resources & Ocean Engineering (Formerly Dept. of Applied Mechanics & Hydraulics)
<b>Place of Reporting</b>	: Online
<b>Written Test Date and Time</b>	: September 9 <sup>th</sup> 2020, 8.00 AM – 9.00 AM
<b>Interview Date and Time</b>	: September 9 <sup>th</sup> 2020, 11.30 AM Onwards & September 10 <sup>th</sup> 2020, 10.00 AM Onwards

**NOTE:**

1. Candidates should be prepared to appear for an online written Aptitude Test before the interview. Fee Structure for PhD programme and Course syllabus for aptitude test are provided on Institute's website, i.e. [www.nitk.ac.in](http://www.nitk.ac.in). A copy of the syllabus for the aptitude test has been appended to this call letter. **The details on the access to the online test portal, the instructions on the online test and the link for the online interview will also be sent by email.**
2. Full-time/External Registrants - sponsored from Industry or other organizations including Educational Institutions, should have been serving in the sponsoring organisation for a period of at least 2 years after qualifying degree and have to produce a letter from their employer stating that the candidate is deputed for Research Programme (Full time /External Registrant) in the Institute on **full salary** during the study period. The employer should indicate that the candidate will not be withdrawn midway before the completion of the course. (Sponsorship letter should be in the format provided in the Application Form).
3. 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 **30.09.2020**
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 keep the Admit Card ready during the online test and interview. 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 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 **18.09.2020 – 25.09.2020**.

**To: Mr. /Ms. \_\_\_\_\_**

**S/d -  
Head of the Department**