kamp
KNOWLEDGE & AWARENESS MAPPING PLATFORM

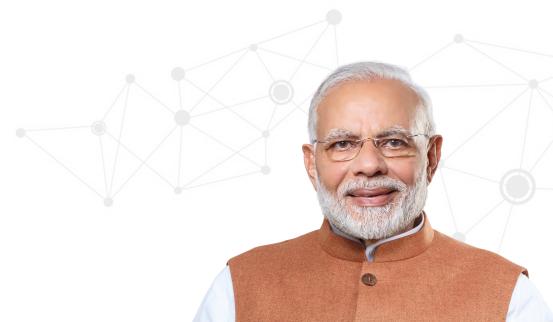# NATIONAL ASSESSMENT OF SPECIAL TALENT AND APTITUDE

NASTA

"युवाओं में अधिक से अधिक सीखने की भावना, वैज्ञानिक और तार्किक सोच, गणितीय सोच और वैज्ञानिक स्वभाव विकसित करना आवश्यक है"

"दुनिया को कुशल हाथों की जरूरत है और भारत में हमारे पास इन वैश्विक जरूरतों को पूरा करने के लिए प्रतिभा-बल है।"

"It is necessary to develop a greater learning spirit, scientific and logical thinking, mathematical thinking and scientific temperament among youngsters".

"The world needs skilled hands and we in India have the talent-force to cater to these global needs."

Shri Narendra Modi

Prime Minister of India

(Ref: 15.07.2020 and 11.09.2020)

Knowledge and Awareness Mapping Platform

Knowledge and Awareness Mapping Platform "KAMP" is an International intellect E-based assessment platform to evaluate cognizance of 21st century skills, awareness ,and knowledge of Science, Technology & Humanities among students.

VISION

"To identify and capture Scientific and Technological temperament in students to make "India -A Global Leader in the Field of Science, Technology & Humanities"

Director's Message

"CSIR-NISTADS is one of the premier institutes of the country to provide inputs to policymakers for formulating the policy of Science, Technology, Innovation (STI), and entrepreneurship. Knowledge and Awareness Mapping Platform (KAMP), aimed to develop and map the Scientific Temperament of children, will help nurture innovation and creativity from an early age. The analyses of the mapping data would be used to create inputs for S&T policy to the new generation of scientific leaders are produced in the country."

Prof. Ranjana Aggarwal
Director, CSIR-NISTADS

Knowledge and Awareness Mapping Platform (KAMP) is an initiative and Knowledge Alliance of CSIR - National Institute of Science Technology and Development Studies (NISTADS), a constituent laboratory of CSIR, Under the Department of Scientific and Industrial Research, Govt. of India with M/S, NYSA Communications Pvt. Ltd (NCPL), Noida, U.P. KAMP intends to develop creativity, meaningful learning, critical reading, and thinking skills that brings out the inherent abilities of students.

CSIR-NISTADS is devoted to research on policy, policy advisory and provides research support to national S&T agencies on science, technology, society, and innovation challenges. CSIR-NISTADS is a pioneering research organization in the realm of S&T policy research in the areas of Innovation systems, S&T Human resources, Rural development, MSME, Global governance, Climate change, Energy and Environment and other domains related to STI (Science, Technology, and Innovation) policy. One of the pressing issues of India is that young students are not attracted to opt science as a career, and therefore, there is a strong need to address this issue.
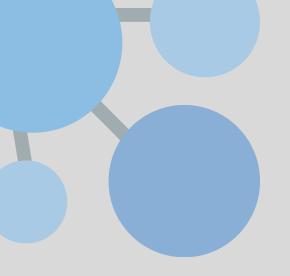
What is Aptitude and Skill?

Aptitude means inherent competence to undertake specific tasks. It is the potential, an intrinsic property in an individual and helps undertake particular types of tasks. It is also related to the natural ability to learn particular things. Aptitude is thought of as a natural tendency, special ability, or capacity or cluster of abilities. This natural tendency determines person's readiness to learn or acquire a skill or their suitability to pursue a particular career.

Aptitude in one specific ability or a combination of specific abilities such as verbal reasoning, numerical aptitude, abstract reasoning, etc. helps to make career choices. It helps the person to decode the career option that is best suited to one's capabilities. Knowledge of aptitude helps a person to make best fit choices about career related decisions. Students with the help of aptitude test can look forward for career guidance and counselling.

Skill is a term that encompasses the knowledge, competencies and abilities to perform operational tasks. Skills are developed through life and work experiences and they can also be learned through study. There are different types of skills and some may be easier to access for some people than others, based on things like dexterity, physical abilities and intelligence. Skills can also be measured, and levels determined by skill tests. Most workforce require multiple skills, and likewise, some skills will be more useful for certain professions than others.

Talent is an exceptional natural ability, especially in a particular activity, such as music etc. Talent is often thought of as the kind of ability that comes without training—something that you're born with. It is often contrasted with skill, which is an ability acquired and developed through practice.
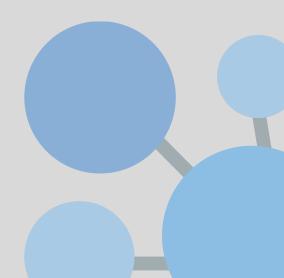
Therefore, NASTA is designed to provide information which gives ample time to the students to indulge in self-exploration and self-preparation in academics as well as in exploring the world of work so that they are able to make well-informed career/vocational choices and undertake new exploration as suited to her/his present ability profile.

NATIONAL ASSESSMENT ON

SPECIAL TALENT AND APTITUDE

NASTA

National Assessment on Special Talent & Aptitude [NASTA]

National Assessment on Special Talent and Aptitude (NASTA) is designed and developed to to help students to use aptitude test data to facilitate in career planning and choice. This is one of the primary initiatives under KAMP. It is an Attribute-Based assessment as against only Subject Based Assessment. NASTA provides educators, policymakers, and parents with a common measure of student achievement.

NEED OF NASTA

- NASTA assess a comprehensive, integrated approach in mapping aptitude, talent and skills.
- Building a concept to develop an understanding of the scientific aspects of nature.
- To help the student identify their hidden talent and provides a platform for self-assessment.
- Mapping and help nurturing the scientific aptitude among students.

OBJECTIVE

- Mapping and helping students/parents to identify scientific attitude & enable them to understand their inherent potential for different career choices.
- Awareness among students on the latest developments in emerging technologies.
- Map specific attributes essential to become a successful scientist or technologist.
- Infuse a healthy competitive spirit through rewards, based on performance levels.

IMPACT AND OUTCOME

- Identify learning outcome levels of students in India and abroad.
- Comprehensive advisory for students/parents which will help in identifying the areas of strength.
- Data and Analytics will support policymakers to analyze the current learner's level.
- Support schools to provide an enabling environment to identify students with unique skills.
- Help nurture their skills/talents by creating District KAMP - Junior Scientist Club.
- Helps policymakers to take necessary curricular reforms.

Assessment Overview

KAMP introduces the career advisory and aptitude assessment for senior students of schools and other institutions. NASTA assess the awareness and aptitude for senior students. Individuals differ from each other in terms of psychological dimensions such as ability, interest, aptitude, personality motivation, and emotions. Aptitude is one such dimension which refers to the ability to acquire skill or knowledge in a particular area. NASTA results help the students to revalidate their choices and interest areas to excel in the future. It gives ample time to the students to indulge ins elf-explanation and self-preparation in academics as well as in exploring the world.

Following are the assessment indicators of NASTA:

MECHANICAL REASONING

It is the ability to understand and apply mechanical concepts and principles to solve problems. It assesses the areas of acceleration, pressure, energy transformation, work, and power, levers, pulleys, screws, springs, tools, etc.

MATHEMATICAL REASONING

It refers to understanding numerical relationships and applying the same to the issue/problem. It also covers areas like ratio, percentage, square and square root, cube and cube root, number sequence, factorization, linear equation, work, and speed, etc.

DIGITAL LITERACY

Digital literacy refers to an individual's ability to find, evaluate, and compose clear information through writing and other media on various digital platforms.

SPATIAL APTITUDE

It is related to the capacity to mentally manipulate actual materials through imagining. This assesses how well a student understands words and their synonyms, spells the word correctly, and identifies the correct meaning of the given idioms/proverbs.

LANGUAGE APTITUDE

It is concerned with a person's ability to use and understand written language. This assess how well a student understand words and their synonyms, spell the word correctly and identifies the correct meaning of the given idioms/proverbs.

PERCEPTUAL APTITUDE

IIt refers to a person's ability to quickly, accurately, and meaningfully compare visual information like numbers, objects, pictures, or patterns. It assesses how students compare the paired groups of letters or numbers and identify the similarities or differences.

ABSTRACT REASONING

It is non-verbal and assesses how well students can reason and logically relate geometric shapes or designs. Series and sequences based questions.

VERBAL REASONING

It is the ability to understand and reason using concepts expressed in words. It evaluated a student's ability to think constructively with words.
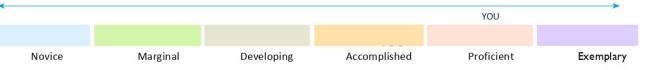
Assessment Report

NASTA 2020 ASSESSMENT REPORT

| Shubham Jain | National Assessment of Scientific Temperament & Aptitude | Course: | Dec 15, 2020 | College/University Name: Delhi University |

Your Overall Score: **85%**   National Rank: **120**   Grade Achieved: **A**

Congratulations! You have successfully completed your assessment. This is a tremendous accomplishment!

YOU

| Novice | Marginal | Developing | Accomplished | Proficient | **Exemplary** |

What Does this Diagram Mean?

The diagram uses six different performance rating categories to show your overall performance in the assessment. Each rating reflects the overall grade achieved by you.

Performance Rating Categories**

Exemplary: The Exemplary level signifies superior mastery of knowledge and skills. The learning shown by the student exceeds grade-level expectations in significant ways.

Proficient: The Proficient level represents solid mastery of knowledge and skills, indicating that the learning shown by the student meets grade-level expectations.

Accomplished: The Accomplished level denotes partial mastery of the knowledge and skills that are fundamental for satisfactory work.

Developing: The Developing level denotes developing stage mastery of the knowledge and skills. The learning shown by the student may be inconsistent, and meets grade-level expectations at a minimal level.

Marginal: The Marginal level indicates little or no mastery of fundamental knowledge and skills. The learning shown by the student does not meet grade-level expectations.

Novice: The Novice level indicates no mastery of fundamental knowledge and skills. The learning shown by the student does not meet grade-level expectations.

**The categories presented on this report were created to help you see where you may need additional preparation. They should not be used or interpreted for other purposes, such as career options, job decisions.

How is Your Score Determined?

KAMP uses subject matter experts—project professionals from around the world and from many different disciplines—to determine the grading categories and the ranking system. Each scored question in the assessment is worth one point; and your final score is calculated by totaling the points you have earned in the assessment. The number of questions you answer correctly places you within one of the performance rating categories you see on this report.

Your Performance by Domain:

Using the same categories (as above), your performance has been calculated within each domain. This will help you identify your strong areas—as well as those needing improvement—so that you can plan your future holistic development.

Mechanical Reasoning	Mathematical Reasoning	Language Aptitude	Abstract Reasoning	Digital Literacy	Perceptual Aptitude	Spatial Aptitude	Verbal Reasoning
A	A	B+	A	A+	A	B+	A

What Can You Do Next?

Celebrate your accomplishment and reward yourself for all your hard work! You should also:

- **Check your Student Login.** Look for more information on when your certificate will be delivered.

- **Start thinking about your future professional development.** Learning more about your exam performance is a great way to start. See our web page: http://kamp.nistads.res.in/info/KAMPJuniorScientist for more details on how you can be a part of Junior Scientist Club.

Steps of Implementation

The enrolment for KAMP – National Assessment of Scientific Temperament and Aptitude (NASTA) will be open to all the pre-graduate and non-collegiate students studying in various universities/institutions across the country. The implementation of KAMP will be held in following manner:

- **KAMP – NODAL OFFICER**

After signing of MOU, University/institution shall appoint a KAMP Nodal officer who will coordinate with KAMP team for coordination and implementation.

- **UNIVERSITY/INSTITUTION ENROLLMENT**

Registration will be done by KAMP team and login details will be shared with Nodal officer.

- **STUDENT REGISTRATION**

University/institution shall create facility for student registration with support from KAMP or upload data of registered students on KAMP portal through login panel.

- **REGISTRATION FEE**

Each participating student has to pay total Rs. 300/- "Registration Fee" to his/her university/institution. After deducting Rs. 30/- per student (towards expenditure for conducting examination in their University/institution), University/Institution has to pay total registration fee (i.e. Rs. 270/- * number of participating students) through online (Net Banking or Card Payments) or by generating payment deposit slip through university/institution panel to pay through bank Transfer (RTGS/NEFT).

- **ASSESSMENT/IMPLEMENTATION DETAILS**

Preparation tips for students, Syllabus for NASTA, Sample Questions, Exam Conduction Guidelines, Assessment Pattern details can be accessed through http:/kamp.nistads.res.in. Assessment will be conducted online/offline as per availability of exam centres.

- **ASSESSMENT REPORT**

Assessment Report will be posted to University/Institutions and also available online. All participants will receive a comprehensive assessment report with an advisory report. University/Institution Assessment Report will be available with various statistics and comparative analysis.

- **AWARDS & CERTIFICATES**

Post Assessment, awards and certificates will be awarded to the high performers. The Awards may be given by Eminent luminaries of the Nation. Details of awards are available on KAMP Portal.

For any further information or implementation, write us at info@kamp.res.in or KAMP Operations and Coordination Office on telephone no. + (91) 9319634387 , (91) 7303064387

KAMP Planning and Monitoring Committee (KPMC)

KPMC is a monitoring committee that includes representatives of CSIR laboratory (CSIR-NISTADS), NCPL & other members of Industry. KPMC monitors, provide direction, vision, advice, and road-map on the conduct, quality & upgrades of KAMP.

Prof. B. B. Dhar
Chairman - KPMC
Former Director, CSIR-CMRI

Mr. Puneet Kumar
Secretary - KPMC
Chairman, NCPL

Dr. Prashant Goswami
Member - KPMC
Former Director, CSIR-NISTADS

Dr. Naresh Kumar
Member - KPMC
Head-BDG, CSIR-NISTADS

Dr. Vipan Kumar
Member - KPMC
Head-PME, CSIR-NISTADS

Dr.(Mrs.) Kastiuri Mandal
Member - KPMC
Sr. Scientist, CSIR-NISTADS

Mr. Rajeev Gupta
Member - KPMC
Managing Director, RDI (India) Pvt. Ltd.

Mr. Ashish Kumar Mittal
Member - KPMC
Vice President, NCPL

Mr. Yadwinder Mittal
Member - KPMC
Vice President, NCPL

KAMP Advisory Committee (KAC)

KAMP Advisory Committee (KAC) is a panel of experts for guidance on various aspects like subjects, curriculum questions, evaluation parameters, etc. which will help KAMP evolve into a robust and credible Global Assessment Platform for building & recognizing Scientific Temperament & Innovation in students from an early age.

Prof. Ranjana Aggarwal
Director, CSIR-NISTADS

Prof. B. B. Dhar
Chairman - KPMC

Mr. Puneet Kumar
Secretary - KPMC

Prof. B. K. Khuthiala
Vice-Chancellor, Makhanlal Chaturvedi
National University of Journalism &
Communication, Bhopal

Shri. Mukul Kanitkar
National Organizing Secretary,
Bharatiya Shikshan Mandal

Dr. V. N. Ojha
Former Chief Scientist, CSIR-NPL,
New Delhi

Dr. Ram Boojh
CEO, Mobius Foundation
Former Programme Specialist
Environment, UNESCO New Delhi

Prof. Sudhir Kumar Sopory
Former Vice-Chancellor, Jawaharlal
Nehru University, New Delhi

Dr. Arvind Ranade
Scientist F, Astronomy and VIPNET Division,
Vigyan Prasar, New Delhi

Mrs. Meera Balachandran
Director – Education Quality
Foundation of India
Former Principal of Ramjas School,
New Delhi

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Physics,
University of Bangalore

Dr. Naresh Kumar
Senior Principal Scientist &
Head, Business Development
Group (BDG)

Prof. (Dr.) Syed Mohammad Akhtar
Professor - Faculty of Architecture
Ekistics, Jamia Millia Islamia, New Delhi

Prof. Umesh Chandra Kulshrestha
Former Scientist, CSIR-IICT, Hyderabad
Professor - School of Environmental
Sciences, Jawaharlal Nehru University,
Delhi

Prof. C. P. Kaushik
Former Dean and Chairman, Dept. of
Environmental Science and Engg.
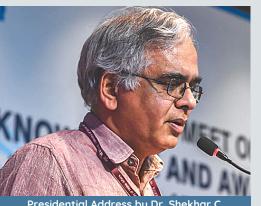G.J. University of S & T, Hisar, Haryana

Dr. Tabassum Jamal
Former Chief Scientist, CSIR-NISTADS

Dr. Mohammad Aslam Parvaiz
Former Vice-Chancellor, Maulana Azad
National Urdu University (Hyderabad)

Shri. Rakesh Kr. Upadhyay
Centennial Chair Professor, Bharat
Adhyayan Kendra, Banaras Hindu
University, Varanasi

Glimpse of NASTA 2019

Key Note Address by Prof. K. Vijay Raghavan, Principal Scientific Advisor to Govt. of India at Theme Meet

Student Felicitation Ceremony held at Delhi Public School, Greater Noida in presence of Prof. Ranjana Aggarwal, Director CSIR-NISTADS

Presidential Address by Dr. Shekhar C. Mande, DG CSIR at Theme Meet

Students appearing for NASTA 2019 held on 27th and 28th January, 2020

Prof. Ranjana Aggarwal (Director, CSIR-NISTADS) felicitated KAMP –Nodal Officer of DPS, Gr. Noida

Students visited CSIR-National Physical Laboratory (CSIR-NPL) on 18th Oct 2019

Prof. Ranjana Aggarwal (Director, CSIR-NISTADS), Mr. Puneet Kumar (Secretary-KPMC) felicitated KAMP Achievers

NASTA 2019 Assessment

Student Felicitation at CSIR-NPL, New Delhi

Students visit at CSIR-NPL, New Delhi

Unveiling KAMP Information Brochure by Dignitaries