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**UTTAMRAO PATIL ARTS & SCIENCE COLLEGE, DAHIWEL, TAL- SAKRI, DIST -DHULE**

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### **PHYSICS APTITUDE TEST(PAT)**

Aptitude is a special ability or a cluster of abilities. Aim of this test to investigate how does each of the factors among aptitude in physics, different dimensions of deep approach to study; Deep Processing, Relating Ideas, Use of Evidence, and Intrinsic Motivation and also to study how do these factors predict achievement in physics in a multivariate perspective. So to induce spirit for physics in them and inculcate knowledge about physics in them, conducting such exams provide confidence to the students. These quizzes not only provides brief knowledge of various fields in Physics but also makes them aware about various weak aspects in the view of the subject and inspires them to work up on the same accordingly. Also the main aim of this test is to make students know their strong aspects and help them further to make them better. These kinds of tests not only help students in their academic career but also help them apply laws in Physics in various daily instances and surge humanity towards betterment.

#### **Why Study Physics?**

Physics students learn how the laws of nature can be used to explain the many phenomena of our world. Most students are excited to find that elementary principles, many of which are learned in introductory physics courses, may be used to solve seemingly complex problems. This ability to apply the simple principles that underlie complex problems will serve students well in the interests and careers they pursue after graduation.

Physics helps us to **understand how the world around us works**, from can openers, light bulbs and cell phones to muscles, lungs and brains; from paints, piccolos and pirouettes to cameras, cars and cathedrals; from earthquakes, tsunamis and hurricanes to quarks, DNA and black holes. From the prosaic . . . to the profound . . . to the poetic. . .

**In one word Raman effect is the inelastic scattering of photons by matter, meaning that there is an exchange of energy and a change in the light's direction.**



### **National Science Day:**

The National Science Day is celebrated to encourage and recognize outstanding efforts in the area of science and technology and inculcating scientific temper among the masses. The National Council for Science and Technology Communication (NCSTC) requested the Central Government to designate 28 February as National Science Day (NSD) in 1986. Ever since 1987, our country has been celebrating the National Science Day on 28<sup>th</sup> February to commemorate the discovery of the 'Raman Effect' a phenomenon in spectroscopy by one of the renowned Physicist of India- Sir CV Raman (Chandrashekhara Venkata Raman ). Sir CV Raman discovered the Raman Effect in 1928 while working in the laboratory of the Indian Association for the Cultivation of Science, Kolkata, which helped him in winning the prestigious Nobel Prize in 1930. The discovery was announced on February 28<sup>th</sup>, 1928.

As a part of its enterprise to conduct a PAT to sensitize the students on Physics knowledge.

**Department of physics, Uttamrao Patil Arts and Science college** commence to celebrate this day (National Science Day) by conducting the Physics Aptitude Test (PAT) since 2018. The under graduate students (First and Second Year Science) had participated enthusiastically in these events.

### **Venue of PAT:**

PAT is jointly conducted by **Department of Physics ,Uttamrao Patil Arts and Science College Dahivel and Department of Physical Sciences, Kavayitri Bahinabai Chaudhari North Maharashtra University Jalgaon**. The minimum qualification of the test is undergraduate students from first and second year science, aimed to measure a wide range of skills and abilities in physics for further study in physics. PAT is **Mobile Base Test (MBT)**, formerly it was conducted (2018-2019) by Department of Physics ,Uttamrao Patil Arts and Science College Dahivel alone manually in offline mode.

### **Registration Process:**

The process of test is very simple and smooth. The notification brochure was released by 15<sup>th</sup> of February every year through google form link thought country. The last date of registration was up to 25<sup>th</sup> February. It is Free of cost examination. The whats App and telegram groups were formed from registered mobile numbers for further instructions. Then the examination link (question paper) was provided on these groups one hour before commencing the test. To maintain standard of test, it was taken care, that the questions paper includes the questions which are not search on google probably. Further instructions are given in the information brochure.

### **PAT can be used to help an individual:**

1. Chose among educational and career options based on strengths and weakness
2. Help an individual understand why they do well or poorly in physics.



3. Can suggest new career options not previously considered.
4. Change or raise educational and career aspirations.

**Future Improvements:**

We use the area of PAT in affiliated colleges of KBC North Maharashtra University, Jalgaon. Formerly few responses from out of state were found. In future we use the college website to conduct the PAT to increase the spectrum through the country for increasing beneficiary students.

**Year-wise Statistical Data:**

<b>Sr. No.</b>	<b>Year</b>	<b>Organiser</b>	<b>Mode Exam</b>	<b>Students Apeared</b>
1	2019	NSS'S, Uttamrao Patil.College, Dahivel.	Offline	123
2	2020	NSS'S,Uttamrao Patil.College, Dahivel.	Offline	165
3	2021	NSS'S,Uttamrao Patil.College, Dahivel.	Online	171
4	2022	KBC North Maharashtra University, Jalgaon and Uttamrao Patil.College, Dahivel.	Online	184
5	2023	KBC North Maharashtra University, Jalgaon and Uttamrao Patil.College, Dahivel.	Online	353

