

❖ **Research Collaboration :- (PAT Exam.)**

1. Dr. R. B. Ahirrao Uttamrao Patil College, Dahivel, Tal.; Sakri
2. Dr. Jaydeep V. Sali, Department of Physics KBCNMU Jalgaon

➤ **MOU with KBCNMU Jalgaon :-**



महाराष्ट्र MAHARASHTRA

2021

9/2/2022
YW 000720

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श्री. व्हा. एस. सानवण
स्टॅण्डिंग वेडर, साक्री जि. धुळे
क्या. नं. - १७/२००१

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२२/०२/२०२२
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उत्तमराव सानवण
स्टॅण्डिंग वेडर, साक्री जि. धुळे
- 2 FEB 2022
उत्तमराव सानवण
स्टॅण्डिंग वेडर, साक्री जि. धुळे

MEMORANDUM OF UNDERSTANDING
between
UTTAMRAO PATIL ARTS AND SCIENCE
COLLEGE, DAHIWEL, TAL. -SAKRI, DIST-
DHULE
and
DEPARTMENT OF PHYSICS, KBC NORTH MAHARASHTRA UNIVERSITY
JALGAON

1.0 PURPOSE

The purpose of this MOU is to develop academic cooperation on the basis of equality and reciprocity and to promote sustainable partnerships and mutual understanding between the Department of Physics, Kavayitri Bahinabai Chaudhary North Maharashtra University, Jalgaon and Navoday Shaikshanik Sanstha Dhule's, Uttamrao Patil Arts and Science College, Dahiwel, Tal. -Sakri, Dist-Dhule.

2.0 SCOPE OF ACTIVITIES

❖ Programs proposed under this MOU

The MOU aims to undertake cooperation in areas that may include, but are not restricted to, the following domain:

Sr. No.	Details of the program	Target Participation
1	Conduction of Physics Aptitude Test (PAT) in online mode on 28 th February (National Science Day)	First /Second /Third Year B.Sc. Physics students in all affiliated colleges under KBC NMU Jalgaon.
2	Career counselling programs	Science students

3.0 ACTIVITY AGREEMENT

- ❖ Elaboration of the responsibilities of both institution for the agreed upon activity:
 1. PAT: Management of the event and drafting of question paper will be done by both the parties.
- ❖ Specific schedules for the activity:
 1. The PAT will be conducted on 28th February on every year.
 2. Career counselling programs may be conducted as and when necessary, by mutual understanding.
- ❖ Sources of finances for the activity:

It is proposed to conduct the activities free of cost for the students. The activities will be carried out in online mode using available free online tools for conduction of the examination and lectures, so, we do not expect any financial burden on both the parties.
- ❖ Any other items deemed necessary for the efficient management of the activity:

Both the parties agree to use the name and logo of the Institutes on the advertisement page of the activity and the certificates given to the participants.


4.0 COORDINATORS


From Uttamrao Patil arts and Science College, Dahiwel Dr. Rajendrakumar Banshilal Ahirrao of Department of physics will act as coordinator and from Department of Physics, K B C North Maharashtra University Jalgaon Prof. (Dr.) Jaydeep V. Sali will act as the coordinator for the activities proposed in this MOU. Coordinators shall notify their counterparts should a new person be named to the position.

5.0 RENEWAL, TERMINATION AND AMENDMENT

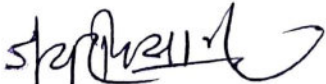
- 5.1 This MOU shall remain in force for a period of five years from the date of the last signature. This MOU may be extended by the written consent of the institutions.
- 5.2 This MOU may be terminated by either institution giving written notice to the other institution at least 180 days in advance of the stated termination date. Termination of this MOU shall not affect activities in progress pursuant to specific activity agreements, which shall continue until concluded by the institutions in accordance with their terms or as otherwise agreed to by the institution in writing.
- 5.3 This MOU may be amended only by the written consent of the institutions.

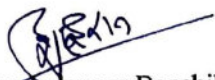
In witness thereof, the institution has offered their signatures hereto:


(Director)
School of Physical Sciences
K B C North Maharashtra University,
Jalgaon


Dr. Suresh Chintaman Ahire
(Principal)
NSS Dhule's, Uttamrao Patil College,
Dahiwel.

Signature of Coordinators :


Prof. (Dr.) Jaydeep V. Sali,
Head, Department of Physics,
School Physical Sciences,
KBC North Maharashtra University,
Jalgaon.


Dr. Rajendrakumar Banshilal Ahirrao
Department of physics,
Uttamrao Patil arts and Science College,
Dahiwel.

❖ Research Collaboration :- (PAT Exam.)

1. Dr. R. B. Ahirrao Uttamrao Patil College, Dahivel, Tal.; Sakri
2. Dr. Jaydeep V. Sali, Department of Physics KBCNMU Jalgaon

➤ PAT Exam...(Snaps):-



PHYSICS APTITUDE TEST (PAT) -2022
Department of Physics, Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon and Uttamrao Patil College, Dahivel are jointly organizing.

The objectives of this test are to create interest in minds of students through challenging questions in Physics, to motivate the students to pursue their study in Physics more seriously and of course, to boost their confidence. The test also provides a chance to the students to judge themselves and identify their strong and weak areas in the subject.

Students studying in F.Y. B.Sc. and S.Y. B.Sc. can appear for the PAT-2022

- ❖ Date: 28th February 2022; Monday
- ❖ Time: 11:00 am to 12:00 Noon
- ❖ Mode: Online
- ❖ No of Questions: 15 Questions
- ❖ Scheme of marking: +4 marks for each correct response, -1 mark for each incorrect response.
- ❖ Device required: Android Mobile Phone with WhatsApp & Telegram installed.
- ❖ Last date of application: 26th February 2022.
- ❖ Fee: ₹ 00.00 (No Fee!)
- ❖ Syllabus: Physics at 11th, 12th and First year of B.Sc
- ❖ Awards: Certificate of Merit to top-five candidates in the merit list.

Link for participation: <https://forms.gle/rfRvJ6o5Zvq2v1Gv7> OR

Coordinator:
Dr. R. B. Ahirrao
Dept. of Physics,
Uttamrao Patil Arts & Science College,
Dahivel.
Mob. 9422895374;9834138511
Email id: ahirraorb@gmail.com

Co-coordinator:
Prof. J. V. Sali
Head, Dept. of Physics,
School of Physical Sciences,
Kavayitri Bahinabai Chaudhari
North Maharashtra University, Jalgaon.
Mob. 9403451667,9421605270
Email id: jvsali@nmu.ac.in

NOTE: The PAT-2022 link will be provided on Telegram/Whatsapp group to all the participants who registered for this event using the above link (or Scanning).



PHYSICS APTITUDE TEST (PAT) -2023

Department of Physics, School of Physical Sciences, Kavayitri Bahinabai Chaudhari North Maharashtra University Jalgaon and Uttamrao Patil College, Dahiwel are jointly organizing **PHYSICS APTITUDE TEST (PAT) -2023** on 28th February 2023 (Tuesday) on the occasion of National Science Day to commemorate and mark the discovery of the Raman Effect by Sir C.V. Raman.

The objectives of this test are to make Physics exciting through challenging questions, to motivate the students to pursue their study in Physics more seriously and boost their confidence. Talented students identified through this test will be guided for their journey in the field of Physics.

Students studying in F.Y. B.Sc. and S.Y. B.Sc. can appear for the PAT-2023.

- 1.Date 28th February 2023; Tuesday (National Science Day)
- 2.Time 11:00 am to 12:00 noon
- 3.Mode Online
- 4.No of Questions 20 Questions
- 5.Scheme of marking: +4 marks for each correct response and -1 mark for each incorrect response.
- 6.Last date of application: 26th February 2023
- 7.Fee: ₹ 00.00 (No Fee!)
- 8.Syllabus Physics at 11th, 12th and First year of B.Sc.
- 9.Awards Certificate of Merit to top-five candidates in the merit list.
- 10.LINK FOR REGISTRAITON: <https://forms.gle/EczMnWw4bTGEfdTq9>

OR SCAN:



The PAT-2023 link will be provided on Telegram/WhatsApp group to all the participants registered for this event.

Coordinators

Prof. (Dr.) Jaydeep V. Sali
Head, Department of Physics,
KBC North Maharashtra University,
Jalgaon (Maharashtra)
jvsali@nmu.ac.in

Dr. Rajendrakumar B. Ahirrao
Department of physics,
Uttamrao Patil arts and
Science College, Dahiwel.
ahirraorb@gmail.com



DEPT.OF PHYSICS,KBCNMU,JALGAON & DEPT.OF PHYSICS,U.P.COLLEGE,DAHIWEL.



Physics Aptitude Test (PAT) 2022

*This is to certify that, Mr/Miss.....from.....
Participated actively/Securedrank in the Physics Aptitude Test (PAT) 2022, conducted jointly by
Department of Physics, K B C North Maharashtra University, Jalgaon (Maharashtra) and Department of Physics,
Uttamrao Patil Arts and Science College, Dahiwel, (Maharashtra) on the occasion of National Science Day, (28th
February, 2022) to commemorate and mark the discovery of the Raman Effect (Scattering of Light) by Indian
Scientist sir C.V. Raman.*

*(Dr. R.B. Mishrao)
Coordinator
Dept. of physics,
Uttamrao Patil College,
Dahiwel.*

*(Dr. S. C. Mishra)
Principal
NSS Dahiwel,
Uttamrao Patil College,
Dahiwel.*

*(Prof.(Dr.) J.V. Sali)
Co-Coordinator
Head, Dept. of Physics,
School Physical Sciences,
KBC North Maharashtra University, Jalgaon.*

*(Prof.(Dr.) D.S. Patil)
Director of Physical Sciences
KBC North Maharashtra University,
Jalgaon.*



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Navoday Shaikshanik Sanstha, Dhule's

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

Prin. S.C.Ahire (M.Sc.M.Phil.Ph.D)

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 28th 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 28th, 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 15th of February every year through google form link thought country. The last date of registration was up to 25th 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:

Sr. No.	Year	Organiser	Mode Exam	Students Appeared
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

