भौतिकशास्त्र विभाग दिनांक :- १३/०१/२०२३

प्रति,

मा प्राचार्य,

तुळजाराम चतुरचंद कला, विज्ञान आणि वाणिज्य महाविद्यालय, बारामती

विषय : अभ्यास सहलीस परवानगी मिळणे बाबत.....

महोदय,

एम.एस्सी.भाग- २ (भौतिकशास्त्र) या वर्गाच्या अभ्यासक्रमात शैक्षणिक सहलीचा समावेश आहे. त्यानुसार या वर्गातील विद्यार्थ्यांची सहा दिवसांची अभ्यास सहल रेल्वेमार्गे (दौंड - कन्याकुमारी एक्सप्रेस) दि.२०.०२.२०२३ ते दि.२६.०२.२०२३ या कालावधीमध्ये केरळ येथील IISER, CSIR-NIST, Vikram Sarabhai Space Center IIST या राष्ट्रीय स्तरावरील संशोधन संस्थाना भेट देण्यासाठी आयोजीत करावयाची आहे. सदर सहली मध्ये एकूण २४ विद्यार्थी (मुले ०९ + मुली १५) तसेच चार प्राध्यापक सहभागी होणार आहेत. तरी या सहलीस परवानगी मिळावी. तसेच RUSA अंतर्गत सदर सहलीस विद्यार्थ्याना अर्थसाहाय्य मिळावे. ही नम्र विनंती.

सोबत सहलीची पूर्ण माहिती जोडलेली आहे .

कळावे ,

पी.जी. समन्वयक

भौतिकशास्त्र विभाग

विद्यार्थ्यासोबत खालील प्राध्यापक जाणार आहेत.

?. Prof. Dr. P. C. Pingale
?. Mr. S. B. Kakade
3. Miss. N. A. Jagtap
*. Miss. K. C. Kale

Recommended under RUSH Ptscolar 1311/2023 Alliver

Anekant Education Society's Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati Department of Physics Study Tour Report of M.Sc. II Physics

Date: 02/03/2023

To, The Principal, Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati.

Respected Sir,

The Department of Physics had organized a study tour of M.Sc. Physics students to visit Space Museum in Vikram Sarabhai Space Research Center (VSSC) ISRO, Indian Institute of Space Science and Technology (IIST), Indian Institute of Science Education and Research (IISER) at Thiruvanathapuram, Kerala. This study tour was planned from 20th February to 26th February 2023 with your prior permission.

We started a journey on 20th February at 01.00 am from Daund railway station and reached Kanyakumari on 22nd February at 11.30 am. On 22nd February we visited Vivekananda rock memorial, exhibition on Swami Vivekananda in Kanyakumari and we went to Vivekananda Kendra for stay.

On 23rd February we visited Space Museum in Vikram Sarabhai Space Research Center (VSSC). In the space museum, a theatre which projects a video show, opens the cases of the history and achievements of Indian Space Programme to all the students. The space museum premises showcase a full-scale model of Polar satellite launch vehicle (PSLV), its heat shield and the fourth stage solid motor of ASLV. The scaled down models of launch vehicles PSLV, GSLV, GSLV Mk III and ATV are also erected in Space Museum premises. Information about the history, evolution, current scenario and future road map of ISRO is well described using static models, working models and information panels. The students also observed one of the chief attractions of VSSC Space Museum that it houses the original recovered capsule of Space Capsule Recovery Experiment (SRE-1) – the actual module which has returned to earth after a few days in orbit. In the afternoon session students attended half-day outreach program conducted by Indian Institute of Science Education and Research (IISER) at Thiruvanathapuram, Kerala. Under this outreach program one introductory lecture was conducted by Dr Chandrakala Meena to introduce our

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students about IISER system with the list of opportunities available across Indian institutions. Our PG students also got an opportunity to directly experience the sophisticated instruments with demonstration and visit to research laboratories. Students observed these live demonstrations of sophisticated instruments like Single crystal and powder XRD, Nuclear Magnetic Resonance Spectroscopy (NMR) etc. All students captured the demonstrations in cameras and we went to government youth hostel for Stay.

On 24th February we visited Indian Institute of Space Science and Technology (IIST). As a part of outreach program, we visited to Advanced Propulsion Dynamics and Diagnostic facility lab (APLD), Electronic Materials and Devices Lab (EMERALD), Space Technology Innovations and Characterization Lab (STIC). Prof. Jinesh K.B. and Umesh R. Kadhane, from IIST guided our students about opportunities in research program in IIST. Both of them invited and assured us about guidance to our PG students and faculties for training program in future through proper channel. The outreach program on 24th February was concluded with a visits and demonstrations in 4 different research laboratories. In the evening we visited Padmanabhswami Temple from Thiruvanathapuram.

On 25th February, we started our return journey at 10.40 am by train and reached in our college campus at 11.00 pm in night on 26th February 2023.

There were 25 students participated in the study tour, 4 faculty members accompanied them. The total distance travelled was about 4000 kms. The trip concluded safely without any disturbance.

We are very much thankful to you for allowing us for this study tour.

With Regards,

Mr. Sandip Kakade Study Tour Coordinator

Dr. Pandurang Pingale Head Department of Physics

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, THIRUVANANTHAPURAM (An Autonomous Institution under MHRD, Govt. of India)

(An Autonomous Institution under MHRD, Govt. of India) Vithrua, Thiruvananthapuram-695551, Kerala, India



Certificate of participation

This is to certify that

A total number of 25 students from Tuljaram Chaturchand College of Arts Science and Commerce Baramati, Maharashtra, India actively participated in the half-day outreach program conducted by IISER Thiruvananthapuram. The students were introduced to the IISER system with the list of opportunities available across Indian institutions. As a part of the program, they were taken to the sophisticated instrumentation facility at IISER-TVM where they had an opportunity to directly experience the sophisticated instruments with a demonstration and the tour was concluded with a visit to research laboratories.

Date of Visit: 23-Feb-2023 Institute Name: Tuljaram Chaturchand College of Arts Science and Commerce Baramati, Maharashtra, India District: Pune State: Maharashtra

Number of Students: 25 Students discipline: M.Sc Physics Number of Teachers: 5 Convener Name: Mr. Sandip Kakade Convener Email: physicspgcoordinator@gmail.com Convener Mobile: 9881414192

IISER Convener: Subin S. Introduction Lecture: Dr Chandrakala Meena

Best regards,

Dr. Ramesh Rasappan Outreach Coordinator IISER-Trivandrum

डॉ. रमेष रासप्पन Dr. RAMESH RASAPPAN महायक प्रोफेसर/Assistant Professor सहायक प्रोफेसर/Assistant Professor

भारतीय अंतरिक्ष विज्ञान एवं प्रौद्योगिकी संस्थान Indian Institute of Space Science and Technology वलियमला पोस्ट / Valiamala PO, तिरुवनंतपुरम / Thiruvananthapuram- 695 547 (दूरभाष/Telephone: +91 0471-2568458, 2568400)

Certificate of Participation

This is to certify that,

a total number of 25 students from Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati, Maharashtra, India actively participated in the half-day outreach program conducted by IIST Thiruvananthapuram. The students were introduced to the IIST system with the opportunities available in IIST campus. As a part of program, they were taken to the Advanced Propulsion Dynamics and Diagnostic facility lab (APLD), Electronic Material and Devices Lab (EMERALD), Space Technology Innovations and Characterization Lab (STIC), Sophisticated instrumentation facility at IIST-TVM where they had an opportunity to directly experience the sophisticated instruments with a demonstration and the tour was concluded with a visit to research laboratories.

Date of Visit: 24/02/2023 Institute Name: Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati, District: Pune State: Maharashtra

Number of Students: 25 Students discipline: M.Sc. Physics Number of Teacher: Convener Name: Mr. Sandip Kakade Convener Name: physicspgcoordinator@gmail.com Convener Mobile: 9881414192

Best Regards,

Abdunnasar. A Library Officer-E Indian Institute of Space Science and Technology Valiamala, Thiruvananthpauram



IMPORTANT INSTRUCTIONS Only visitors holding valid entry pass will be allowed inside the Space Museum. Entry passes can be obtained on request from the Administrative Officer, Public Relations, VSSC. Request should contain information like visitors' name, age, address, occupation etc. Requests for passes may be sent well in advance directly by ordinary post or Speed post. Online registration is available in the website www.vssc.gov.in. There is NO ENTRY FEE to visit VSSC Space Museum. Visitors of Foreign Nations should obtain the Special entry permit directly from Public Relations, subject to the approval of the Director, VSSC. Space Museum visitors are requested to enter / exit through Canal Gate near Stationkadavu only. Limited number of vehicles may be allowed up to Space Museum. Mobile phones, Cameras, CDs, pen drives & other Electronics Gadgets etc, are strictly prohibited inside the campus. A visit to the Space Museum will take more than one hour. Entry will be allowed from 09:30 hrs to 15:30 hrs on all VSSC working days and Saturdays. There will be regular film shows on all days. Special shows will be arranged for groups with not less than 40 visitors, if required. VSSC will not be responsible for any loss / damage or accident to the visitors during their visit to VSSC or to any of its facilities or while witnessing the rocket launch. For further details and entry passes, please contact: Administrative Officer. Telephone Numbers: Public Relations, VSSC, ISRO P.O. Public Relations : 0471-256 42 92, 256 42 64 Space Museum : 0471-256 22 75, 256 27 17 Thiruvananthapuram 695 022 E-mail ao_pro@vssc.gov.in Government of India Department of Space Vikram Sarabhai Space Centre Thiruvananthapuram - 695 022 SPACE MUSEUM / WITNESSING ROCKET LAUNCH SS SECTION (Entry through Canal Gate) CIST 302208 23-02-2023 Pass No. Mr. Kakade Sandip Bhimrao Name A/P: PHALTAN; MANGALWAR PETH; NEAR AMBEDKAR SMRUTI BHAWAN PHALTAN: SATARA Address Maharashtra 415523 30 No. of Persons KL01 BX-8006 Vehicle No if any 23-02-2023 9:30 AM Date of visit rated entry pass Holder's signature ture of the approving authority. (Seal) Administrative Officer **Public Relations** Can be retained by the visitor Visitors Pass Timing: 09.30 Hrs to 15.30 Hrs Phone: 2562275 / 2562717 www.vssc.gov.in

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M.Sc. Physics Study Tour Photos

1. IISER VISIT





2. IIST VISIT



3. SPACE MUSEUM VISIT

