

NATIONAL GRADUATE PHYSICS EXAMINATION – 2016 PART C

(An examination in experimental skill)

Department of Physics, Indian Institute of Engineering Science and Technology (IEST) Shibpur, Howrah

A Report

NGPE – 2016 Part C (An examination in experimental skill) was conducted this year at Department of Physics, Indian Institute of Engineering Science and Technology (IEST), Shibpur, Howrah (WB) on June 10, 2016. Dr Saiyad Minhaz Hossain was designated as Examination Superintendent and Prof Mita Choudhury, Secretary of RC-15 (West Bengal) from Asansol Girls' College, Asansol acted as the Local coordinator for the said examination. Out of the top twenty – eight students, (among 119 National Toppers) who qualified for this examination, only **fifteen** reported for the Part C. These National toppers are selected from about 750 students who were above cut off among over 11535 students who have enrolled for this examination all over the country. The theory examination (Parts A&B) was conducted on January 24, 2016 at all the 272 centers spread over the length and breadth of the country.



All the students and out station teachers were accommodated in the institute Guest House located in the campus. In the Inaugural session on June 9, Dr Bhupati Chakaraborty the General Secretary of IAPT acquainted the students and teachers all about the activities of IAPT and its aims and objectives. Prof. B.P. Tyagi, coordinator NGPE welcomed all the students, accompanying parents, teachers and all others involved in this activity. He described the NGPE and how it has evolved over the years, its scope and usefulness.



Examination Hall

This was followed by a motivational talk by Dr Saiyad Minhaz Hossain on the use of computerized video recording and video tracking of data of dynamical systems. The students were also exposed to the concepts of probability distribution by Dr Ananda Dasgupta of IISER, Kolkata by way of a fascinating quiz program. The session ended with a vote of thank by Prof Mita Chaudhury and was followed by tea/snacks.

On the afternoon of 9th June, the students were given some task of video-recording and tracking of the data of a real experiment: a simple pendulum with different bobs. Camera interfaced with a PC and stand, clamps etc. were provided along with Video recording software AMCAP and tracking software TRACKER installed in the given PC while the resource persons and examiners were busy in putting the finishing touches to the Lab setups and checking that everything was ok for the next day's examination. The experiments were fabricated with materials available in the lab and available locally. The examiners were Physics faculty members from local affiliated colleges of Kolkata University. The design and setting up of the experiments by Dr Saiyad Minhaz Hossain and his coworkers from Department of Physics were appreciated by Prof B P Tyagi. The team of the examiners and evaluators included Dr Subhas Samanta, Medinipur College, Dr Bhupati Chakraborty, City College, Dr Surajit Chakraborty, MMC College, Dr Jonaki Choudhury, and Prof Lachhima Gupta both from Lady Brabourne College, Dr Asit Chakraborty, Chakda College, Nadia Dr Manjusha Sinha Bera, Bethune College, Prof Sukla Chakraborty, Ananda Mohan College, Dr Lipika Santra, Bangabasi College, Kolkata and Dr Ananda Dasgupta, IISER, Kolkata. The laboratory staff and the research scholars of the Department of Physics, IEST cooperated for the successful conduct of the Examination. Their services are thankfully acknowledged. In view of the 28 students listed for the Part C examination, seven sets of each of the following

three experiments were set in three different well separated laboratories. Each student was expected to perform all the three experiments under identical environment. The experiments are:

1. Studies on damped oscillation: Video recording and tracking of the vertical oscillations of the spring mass system using the given three bobs Time 100 Min
2. Diffraction through Compact Disc used as Grating: Time 50 Min
3. Visualization of probability distribution in charging and discharging of capacitor by AC: Time 50 Min
(The question paper is published in the bulletin elsewhere)

All the students were divided in four groups to work on different experiments. There were two examiners for each of the three experiments to observe and evaluate to the students A break of 10 minutes was provided after the first 100 Minutes for Tea/Snacks in separate groups. Then students of each lab room were escorted to the other lab without either group meeting the other during transit. The students were then sent off to have lunch while the examiners started the evaluation and compilation work.

The students were asked to reassemble at 3.30 PM for payment of their TA/DA and award of certificates. The certificates of participation in NGPE – C were awarded to each student by Prof. Mita choudhury. Before declaring the names of the Gold Medalists Prof. B.P. Tyagi expressed that it is good to be the winner but it is more important to participate. On the basis of their performance, the following students are declared as the winner of **NGPE – 2016 GOLD MEDAL**. Because of a tie at fifth place there are six Gold Medal winner. They will be decorated with their gold medals in the XXXI Annual Convention of IAPT to be held on 20.10.2016 at Kadi Sarva Vishvavidyalaya Gandhinagar Gujrat.

1.	G-1102	16002	SAHIL CHADHA	B Sc III	SHIVAJI COLLEGE DELHI UNIVERSITY NEW DELHI
2.	G-1111	16020	SAURABH KUMAR	B Sc II	ST STEPHEN'S COLLEGE DELHI UNIVERSITY DELHI
3.	G-3120	16032	NITIN KUMAR	B Sc III	S S JAIN SUBODH PG COLLEGE JAIPUR
4.	G-4215	16033	ANIRUDDHA T V	B Sc III	UM DAE CBS KALINA CAMPUS MUMBAI
5.	G-7103	16061	SUKHENDU MAITY	B Sc III	MIDNAPORE COLLEGE MIDNAPORE (WB)
6.	G-7104	16051	RISHAV HUI	B Sc II	ST XAVIER'S COLLEGE KOLKATTA



Gold Medalists with IAPT General Secretary

Prof Mita Choudhury and Dr Saiyad Minhaz Hossain





