



भारत सरकार  
Government of India  
केन्द्रीय जल आयोग  
CENTRAL WATER COMMISSION  
प्रशिक्षण निदेशालय  
Training Directorate

No. 5/ 101/2017-Trg/ 8134-8258


Dt. 13.12.2017

विषय: Training Course on "Role of Laboratory Investigation in Rock Engineering" at CSMRS, New Delhi during 18<sup>th</sup> & 19<sup>th</sup> January, 2018- reg.

Please find enclosed herewith a copy of the letter/ brochure on the above subject. It is requested that nominations if any, may be forwarded to this office with the approval of the Concerned Member/ Chief Engineer (HRM) in respect of HRM Unit/ Chief Engineer, NWA, CWC, Pune in respect of NWA Unit positively by **22.12.2017**. A copy of the Bio data of the nominated officers may also be enclosed along with the nominations indicating the number of events so far attended by them.

It is for information that nominations received after the stipulated date will not be considered and also nominations once approved by Chairman, CWC, will not be allowed to be withdrawn.

संलग्नक : यथोक्त

  
13-12-2017  
(रमेश कुमार)  
निदेशक (प्रशिक्षण)

1. PPS to Chairman, CWC, New Delhi.
2. PPS to Member D&R/RM/WP&P, CWC, New Delhi.
3. All Chief Engineers, Central Water Commission.
4. Director, D&RC, RMCD, WP&PC CWC, New Delhi.
5. Secretary/ Director (TC), CWC, New Delhi.
6. All Directors/ Superintending Engineers, Central Water Commission.
7. J.E.(Trg), CWC, New Delhi to upload this circular on CWC website [www.cwc.nic.in/intranet](http://www.cwc.nic.in/intranet) portal.

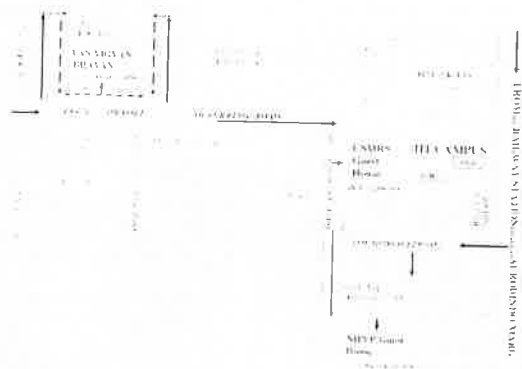
## ADDRESS FOR CORRESPONDENCE

### Course Coordinators

P. S. K. Murthy  
Dhirendra Kumar

Central Soil and Materials Research Station,  
Olof Palme Marg, Near IIT Hostel,  
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Email: [sm.pullela@nic.in](mailto:sm.pullela@nic.in)  
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## LOCATION MAP



## COURSE FEE

Course fee of Rs 5000/- shall be charged per person for the training course. The fee shall be paid through Cheque/Demand Draft in favour of "PAO, CSMRS" payable at New Delhi or E-payment in Challan Account PAO, CSMRS, State Bank of India, R.K.Puram, New Delhi Account No.10933100681 (IFSC Code: SBIN0001076; MICR code: 110002106). The transaction details may please be intimated.

## ACCOMMODATION

Participants may avail the CSMRS hostel facilities located within the CSMRS campus. Meals are also available on payment basis in the hostel. For trainees, special rate of room is Rs.300/- per day (on twin sharing basis). Request may be forwarded to the coordinator by 15<sup>th</sup> January 2018. However, the payment can be made while checking in.

## NOMINATIONS

The nominations are invited from Engineers and geologists, who are interested in gaining in-depth understanding and also practical exposure to laboratory investigation of rock.

The nominations should reach the course coordinator by 15<sup>th</sup> January 2018. Nominations may be confirmed through E-mail. For best possible exposure to practical demonstrations and optimal interaction during lecture sessions, the number of participants will be restricted. It is therefore suggested to register at the earliest.

सूचना विवरणिका  
INFORMATION BULLETIN

प्रशिक्षण पाठ्यक्रम  
"शिला यांत्रिकी में प्रयोगशाला जाँच की भूमिका"

TRAINING COURSE ON  
"ROLE OF  
LABORATORY INVESTIGATIONS  
IN ROCK ENGINEERING"

18 - 19 January 2018

स्थल / VENUE  
केन्द्रीय मृदा एवं सामग्री अनुसंधानशाला  
Central Soil and Materials Research Station

आयोजक / ORGANISED BY



केन्द्रीय मृदा एवं सामग्री अनुसंधानशाला,  
ओलोफ पालमे मार्ग, हौज़ खास, नई दिल्ली-110016

Central Soil and Materials Research Station  
Olof Palme Marg, Hauz Khas, New Delhi-110016

## INTRODUCTION

With passing time, there has been substantial increase in construction activity; and because of increasing pressure on land, the underground construction activity – in various sectors – has seen tremendous increase in recent times. Because of paucity of land, the taller structures have become increasingly common resulting in deeper foundations resting on rock. And all this and more, including exploitation of hydro potential for generation of renewable energy, has resulted in enhanced interest in rock.

For the countries like India, the importance of infra-structure projects cannot be overemphasized. And, be it the projects in water resources sector, road sector, construction activities in mountainous areas, or underground structures and storage projects, mining, or nuclear power plants, virtually any sector involving structures or construction activity, the rock invariably plays a crucial role.

Several hydropower projects have been constructed and more are under construction in our country as also neighboring countries like Bhutan, Nepal, Afghanistan and Myanmar etc., where Central Soil and Materials Research Station (CSMRS), New Delhi has been involved.

Many of these projects are being constructed or are envisaged in unfavourable geological conditions. And that makes the knowledge of rock engineering vital to the satisfactory realization of these projects. In order to avoid unforeseen delays and cost over-runs, the exhaustive geological and geotechnical studies are essential for any major project.

CSMRS is organizing this training course for the benefit of engineers and geologists who wish to have an insight into the laboratory assessment of rock - so that they can better handle the geotechnical problems of different project sites.

## COURSE FACULTY

Faculty shall comprise experienced professionals from Rock Mechanics Laboratory of CSMRS. They shall share the knowledge and vast experience in dealing with rocks during the training course.

## OBJECTIVE

The objective of the training course is to familiarize the participants with the well-established practices in Rock Mechanics Laboratory investigations at CSMRS. The participants will be introduced to the subject through lectures and practical demonstrations.

## AREAS TO BE COVERED

The lectures, on the following topics are planned. In addition there shall be practical demonstration of the tests that are undertaken at CSMRS Rock Mechanics Laboratory:

- Role of Laboratory Investigations of Rock in Hydro Electric Projects.
- Strength Parameters of Rock.
- Estimation of Elastic Parameters of Rock.
- Investigation of Index Properties of Rock.
- Influence of Geological factors in Assessment of Rock.
- Demonstration of Laboratory Test Methods, including the following:  
Physical properties, Slake Durability Index test, Uniaxial Compressive Strength test with Deformability Characteristics, Triaxial Shear Test, Wave Velocity, Brazilian (Indirect Tensile Test), Point Load Strength Index Test.
- Analysis, Issues and Challenges in Laboratory Assessment of Rock

## VENUE AND DATES

The course will be held at Central Soil and Materials Research Station (CSMRS), New Delhi, on 18<sup>th</sup> & 19<sup>th</sup> January 2018 from 10:00 to 17:00 hrs.

## REGISTRATION FORM

### TRAINING COURSE ON

### “ROLE OF LABORATORY INVESTIGATIONS IN ROCK ENGINEERING”

18<sup>th</sup> & 19<sup>th</sup> January 2018

*One form to be filled per delegate: photocopy of this form may be used for additional requirement.*

Name: .....

Mr./Ms./Dr. ....

Designation: .....

Organization: .....

.....Phone.....

Address for Communication:

.....Phone.....

E-mail.....

Fax: .....

Educational Background: .....

DD No.....Dated.....

Amount: Rs.5000/- Name of Bank.....

Accommodation: Yes/No

Date

Signature