## **Application Form**

#### **AICTE SPONSORED**

Workshop on

# Grounding/ Earthing in Power System December – 11-12, 2017

Name of the Applicant (first, last):

Age :	Gender :
Designation:	
Qualification	:
Name and Po	stal Address of the
Organization	/Institute/college:
City/town:	
Email :	
Alternate em	ail (if any) :
Phone Numb	er:
Mobile Numl	per :
Do you need	accommodation? ( Yes / No )
Registration	details :
Cheque No.	Date
Name of the	Bank
Signature of	the Applicant Date
Signature an	d Seal of the Forwarding Authority
Name	Designation

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Dr. Maneesh Choubey, Group Director, Gyan Ganga Group of Institution

#### Co-convenor

Dr. Vinod Kapse - Principal, GGITS, Jabalpur Dr. R.K. Ranjan — Principal, GGCT, Jabalpur

#### Coordinator

Prof. S.K. Bajpai

#### **Co-Coordinators**

Prof. Rajeev Chauhan Email: rajeevchauhan@ggits.org, Mobile: 9424309409 Prof. Nidhi Misra Email: nidhimishra@ggits.org, Mobile: 9425153655

## **Organizing Committee**

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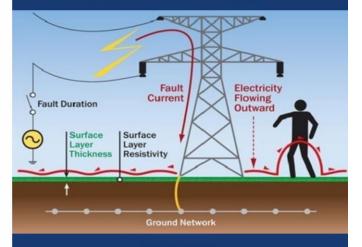
# **AICTE SPONSORED**



Workshop on

# Grounding/ Earthing in Power System

(Hands-on Experience Oriented and Skill Development Workshop)
December – 11-12, 2017



**ORGANIZED BY:** 

**Department of Electrical Engineering** 



Gyan Ganga Institute of Technology & Sciences, Jabalpur

Tilwara Ghat Road, Near Bargi Hills, Jabalpur (M.P.) Ph.No.-0761-2673051, 2673632, 2673634

#### **About AICTE**

All India Council for Technical Education (AICTE) is a national level Apex Advisory Body for facilitating technical education and to promote development in the country in a coordinated and integrated manner. Proper planning and co-ordinated development of a technical education system throughout the country is one of their objective. It is in this context AICTE have kindly sponsored this workshop on earthing/grounding in power systems.

#### **About GGITS Jabaipur**

Gyan Ganga Institute of Technology & Sciences, Jabalpur is a renowned institute that has carved a niche for itself in the field of technical education in a very short span of time, since its inception in 2003. GGITS is an ISO 9001:2008 Certified technical institution affiliated to State Technical University, RGPV, Bhopal runs UG courses B.E. in various discipline like EC, EE, EX, ME, CE, CS & IT and also nine PG M.Tech courses. To promote industry academics interaction for the working professionals, a Part Time M. Tech. course in Power System & Automation is also run in the institute with evening classes. Three department of the institute namely EC, EE & ME have been accredited by NBA.

#### **About EE Department**

Department of Electrical Engineering is established in the year 2003. Excellent infrastructure and state of art simulation software & equipments are provided in the laboratories not only to meet out curriculum needs but also to provide platform for research & developments.

The Electrical Engineering program was initially accredited by the NBA, in the year 2009 and has been reaccredited in 2015 valid upto 2018.

High voltage testing lab for testing of 11kV transformers as per IS-2026, has been designed & developed by the department with separate source 30 kV high voltage generation , HV measurement systems, double frequency double voltage setup, boosters for loss measurement, transformer oil breakdown strength setup etc. The full HV testing laboratory has been developed in house as minor /major project by the students.

Electrical engineering department has Industrial collaborations with as many as 8 manufacturing /service industries to fulfill the objective of interaction with the outside world and academics/industry interaction for both faculty members and students. These tie ups are bilateral i.e. to explore the solutions of identified technical problems in industries and also to carry out the minor and major projects accordingly. In order to contribute for the sake of environment, special efforts have been made for promotion of use or alternate source of energy. Installed roof top grid connected 250kW solar power plant, solar water pumping system, solar night lighting systems etc are operating successfully.

# Workshop on Grounding/Earthing in Power System

#### Preamble

Grounding/Earthing is of vital importance in design and operation of Electrical systems. Earthing is also necessarily required for human safety. Earthing is not only important from the point of view of fast and accurate protection but is also a legal requirement as per IE rules and Indian standards/code of practices.

As such for any electrical engineer, understanding of this subject is very relevant.

#### **Expected Outcome**

Workshop would provide an opportunity to see the developments and modern practices in the field of Earthing. This will open an area of knowledge enhancement in design of earth mats, earth pits etc. for different types of soils. Proper understanding of the subject will improve knowledge and practices of earthing/grounding from the point of view of human safety and power system protection. The faculty, budding engineers (UG and PG) will get acquainted with the practical issues & will be able to design proper earthing system and will be readu to handle field problems with confidence

#### **Course Objectives**

Workshop trainees shall / will be able to understand.

- Basics of grounding / earthing in Electrical Power System.
- Familiarize himself with the roles of earthing / grounding from the point of human safety & needs for protections etc.
- · Design earth mat, earth pits etc.
- · Test soil resistivity and earth resistance.
- · Adopt various possible tools used for earthling.

#### **Course Contents**

- Grounding / earthing in power system
- Difference between grounding & earthing
- Why grounding/earthing (safety and protection / relaying)
- · Neutral grounding.
- · What can happen in case of poor earthing.
- Threshold of safety fibrillation of heart
- Tolerable body current limits
- · Step potential & touch porential.
- Soil resistivity
- Types of soil, effect of moisture & salt on resistivity.
- · Earth resistivity and its measurement
- The limiting of earth resistance values
- · Types/methods of earthing
- Design of earth mats/pits and construction practices.
- Calculations of earth resistance for various type of earth electrodes.
- · Maintenance of earth pits.

#### Hands on practice

- Measurement of soil resistivity
- Construction of earth pit.
- Measurement of resistance of earth pit and verification with calculated values.

#### **Resource Persons**

The course will be conducted by the distinguished faculty of the reputed institute such as IIT, NIT and experts from Power Sector / industry.

### Workshop on: Grounding/Earthing in Power System

#### Who should attend?

The program is open to faculty, research scholars and students from all the colleges and universities. Industry personnel working in the concerned/allied discipline may also apply.

#### How to apply:

Soft/scanned copy of the filled registration form can be e-mailed to Head, Electrical Engineering Department "rajeevchauhan@ggits.org", online registration can be done through our website www.ggits.org. No travelling allowance will be paid to participants by the institute.

The Workshop registration fee (non-refundable) which includes the course materials, tea/snacks and lunch during the sessions. Participants will be selected on first-come-first serve basis.

#### Schedule of workshop:

There will be lecture sessions on day one followed by hands on practice of soil resistivity measurement, construction of earth pit and measurement of its earth resistances on the second day

Duration : 11 Dec to 12 Dec 2017 Timing : 10.00 am - 5.00 pm

# Important Dates: Registration:

Last date for submission of duly filled form along with fee, 04-12-2017 Spot Registration also available if seats are available.

Last date of intimation regarding confirmation: 05-12-2017

#### Registration Fee:

Students (PG/UG) : Rs. 250/-Faculty members : Rs. 500/-Industry delegates : Rs. 1000/-

#### Submission of Registration Fee:

Registration fee can be submitted through RTGS to account "Gyan Ganga Institute of Technology & Sciences, Jabalpur" in Punjab National Bank, A/C No. 0127002100073812 (IFSC Code-PUNB0021700) or by Cheque.

#### Accommodation (if needed):

Accommodations are available in the institute's Guest House and hostels on payment basis. Intimation of any such requirement may please be sent to Head, Electrical Engineering Department.

E-mail: "rajeevchauhan@qqits.orq".

#### Contact:

Prof. Rajeev Chauhan, Head, Electrical Engineering Department Email: rajeevchauhan@ggits.org | Mobile: 9424309409 | www.ggits.org

