SRI SRINIVASA EDUCATIONAL & CHARITABLE TRUST (R)

Sapthagiri College of Engineering

(Affiliated to Visvesvaraya Technological University, Belgaum & Approved by AICTE, New Delhi)

STUDENTS FEEDBACK ON CURRICULUM

This questionnaire is to collect information relating to your satisfaction towards curriculum for creating conducive atmosphere for teaching and learning. The information provided by you will be kept confidential and will be used as important feedback for quality improvement of the program of studies/institution.

Academic Year	2014-15
Branch	EEE
Name of the Student	Chaithra S
USN	1SG11EE008

Rate the curriculum/syllabus on the following Points

SL NO	Statements	Excellent	Very good	Good	Average	Below Average
		5	4	3	2	1
1	How do you rate the syllabus of the courses that you have studied in relation to the competencies expected out of the course?			✓		
2	How do you rate the allocation of the credits to the courses?		✓			
3	Relevance for implementation in projects			✓		
4	How do you rate the electives offered in relation to the technological advancements?			✓		
5	How do rate the evaluation scheme designed for each of the course?			✓		
6	How do you rate the percentage of courses having LAB components?				✓	
7	Curriculum is sufficient to make you analyze the engineering problems and its suitable solution		✓			

Suggestions: Introduce certificate course / Industrial visit in curriculum. Curriculum include mini project.

Signature Chaithra S

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

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STUDENTS FEEDBACK ON CURRICULUM

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Academic Year	2014-15
Branch	EEE
Name of the Student	Supreeth.S
USN	1SR11EE051

Rate the curriculum/syllabus on the following Points

SL NO	Statements	Excellent	Very good	Good	Average	Below Average
		5	4	3	2	1
1	How do you rate the syllabus of the courses that you have studied in relation to the competencies expected out of the course?		✓			
2	How do you rate the allocation of the credits to the courses?		✓			
3	Relevance for implementation in projects	✓				
4	How do you rate the electives offered in relation to the technological advancements?		✓			
5	How do rate the evaluation scheme designed for each of the course?			✓		
6	How do you rate the percentage of courses having LAB components?	✓				
7	Curriculum is sufficient to make you analyze the engineering problems and its suitable solution		✓			

Suggestions: Value added courses has to be included in curriculum - Industry/Joboriented

Signature

Principal
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STUDENTS FEEDBACK ON CURRICULUM

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Academic Year	2014-15
Branch	EEE
Name of the Student	Shaikh MD Ilyas
USN	1SQ11EE043

Rate the curriculum/syllabus on the following Points

SL NO	Statements	Excellent	Very good	Good	Average	Below Average
		5	4	3	2	1
1	How do you rate the syllabus of the courses that you have studied in relation to the competencies expected out of the course?		✓			
2	How do you rate the allocation of the credits to the courses?	✓				
3	Relevance for implementation in projects		✓			
4	How do you rate the electives offered in relation to the technological advancements?	✓				
5	How do rate the evaluation scheme designed for each of the course?		✓			
6	How do you rate the percentage of courses having LAB components?			✓		
7	Curriculum is sufficient to make you analyze the engineering problems and its suitable solution	✓				

Suggestions: No Suggestion, Certificate course is required related to Electrical domain

Signature

Principal
Sapthagiri College of Engineering
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STUDENTS FEEDBACK ON CURRICULUM

This questionnaire is to collect information relating to your satisfaction towards curriculum for creating conducive atmosphere for teaching and learning. The information provided by you will be kept confidential and will be used as important feedback for quality improvement of the program of studies/institution.

Academic Year	2014-15
Branch	EEE
Name of the Student	Kiran D
USN	1SG14EE035

Rate the curriculum/syllabus on the following Points

SL NO	Statements	Excellent	Very good	Good	Average	Below Average
		5	4	3	2	1
1	How do you rate the syllabus of the courses that you have studied in relation to the competencies expected out of the course?	✓				
2	How do you rate the allocation of the credits to the courses?		✓			
3	Relevance for implementation in projects	✓				
4	How do you rate the electives offered in relation to the technological advancements?	✓				
5	How do rate the evaluation scheme designed for each of the course?	✓				
6	How do you rate the percentage of courses having LAB components?	✓				
7	Curriculum is sufficient to make you analyze the engineering problems and its suitable solution		✓			

Suggestions: Logging in practical Knowledge please improve. Practical timings

Signature

Kiran

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

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FACULTY FEEDBACK ON CURRICULUM

This questionnaire is intended to collect information relating to your satisfaction towards the curriculum, teaching, learning and evaluation. The information provided by you will be kept confidential and will be used as important feedback for quality improvement of the program of studies/institution.

Academic Year	2014-15
Branch	E&E
Name of the Faculty	Ramya M.
Designation	Assistant Professor
Subject/Sub. code	Basic Electrical engg.

Rate the curriculum/syllabus on the following Points

SL NO	Statements	Excellent	Very good	Good	Average	Below Average
		5	4	3	2	1
1	Do you feel that the curriculum is defined in a way to clarify your teaching goals and what you expect your students to learn?	✓				
2	Is the curriculum suffcient to bridge the gap between industry standards /current global scenarios and academics?	✓				
3	Is the timely coverage of curriculum possible in the mentioned number of hours?		✓			
4	Suffcient reference material and books are available for the topics mentioned in the curriculum?	✓				
5	The evaluation methods mentioned in the curriculum are suffcient for providing proper assessment?	✓				
6	Curriculum is suitable to the course		✓			
7	The curriculum/course of this subject increased my knowledge and perspective in the subject area	✓				

Suggestions: Students they have less knowledge about transformers, industrial visit. if we conduct any course regarding above it will be useful for them

Signature: Ramya M.

Principal
Sapthagiri College of Engineering
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Bangalore-560 057

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FACULTY FEEDBACK ON CURRICULUM

This questionnaire is intended to collect information relating to your satisfaction towards the curriculum, teaching, learning and evaluation. The information provided by you will be kept confidential and will be used as important feedback for quality improvement of the program of studies/institution.

Academic Year	2014-15
Branch	E & E
Name of the Faculty	Rukmangada R.
Designation	Lecturer.
Subject/Sub. code	10EE34

Rate the curriculum/syllabus on the following Points

SL NO	Statements	Excellent	Very good	Good	Average	Below Average
		5	4	3	2	1
1	Do you feel that the curriculum is defined in a way to clarify your teaching goals and what you expect your students to learn?	✓				
2	Is the curriculum sufficient to bridge the gap between industry standards /current global scenarios and academics?		✓			
3	Is the timely coverage of curriculum possible in the mentioned number of hours?	✓				
4	Suffcient reference material and books are available for the topics mentioned in the curriculum?		✓			
5	The evaluation methods mentioned in the curriculum are suffcient for providing proper assessment?	✓				
6	Curriculum is suitable to the course		✓			
7	The curriculum/course of this subject increased my knowledge and perspective in the subject area	✓				

Suggestions: They require industrical visit for better understand of knowlege.

Signature: Rukmangada R.

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FACULTY FEEDBACK ON CURRICULUM

This questionnaire is intended to collect information relating to your satisfaction towards the curriculum, teaching, learning and evaluation. The information provided by you will be kept confidential and will be used as important feedback for quality improvement of the program of studies/institution.

Academic Year	2014-15
Branch	EEE
Name of the Faculty	Jhansi.K
Designation	Asst professor
Subject/Sub. code	10EE54 Signal & Systems

Rate the curriculum/syllabus on the following Points

SL NO	Statements	Excel ent	Very good	Good	Average	Below Average
		5	4	3	2	1
1	Do you feel that the curriculum is defined in a way to clarify your teaching goals and what you expect your students to learn?		✓			
2	Is the curriculum suffcient to bridge the gap between industry standards /current global scenarios and academics?	✓				
3	Is the timely coverage of curriculum possible in the mentioned number of hours?		✓			
4	Suffcient reference material and books are available for the topics mentioned in the curriculum?			✓		
5	The evaluation methods mentioned in the curriculum are suffcient for providing proper assessment?		✓			
6	Curriculum is suitable to the course		✓			
7	The curriculum/course of this subject increased my knowledge and perspective in the subject area			✓		

Suggestions: Problem on each chapter should be depth of coverage. Syllabus is to be updated

Signature Jhansi.K

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

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FACULTY FEEDBACK ON CURRICULUM

This questionnaire is intended to collect information relating to your satisfaction towards the curriculum, teaching, learning and evaluation. The information provided by you will be kept confidential and will be used as important feedback for quality improvement of the program of studies/institution.

Academic Year	2014-15
Branch	EEE
Name of the Faculty	Mrs. Rekha S.N
Designation	Associate Professor
Subject/Sub. code	10EE63 - Electrical Machine Design

Rate the curriculum/syllabus on the following Points

SL NO	Statements	Excellent	Very good	Good	Average	Below Average
		5	4	3	2	1
1	Do you feel that the curriculum is defined in a way to clarify your teaching goals and what you expect your students to learn?		✓			
2	Is the curriculum sufficient to bridge the gap between industry standards /current global scenarios and academics?		✓			
3	Is the timely coverage of curriculum possible in the mentioned number of hours?	✓				
4	Suffcient reference material and books are available for the topics mentioned in the curriculum?	✓				
5	The evaluation methods mentioned in the curriculum are sufficient for providing proper assessment?		✓			
6	Curriculum is suitable to the course		✓			
7	The curriculum/course of this subject increased my knowledge and perspective in the subject area		✓			

Suggestions: Curriculum is good. No comments

Signature RekhaSN

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

SRI SRINIVASA EDUCATIONAL & CHARITABLE TRUST (R)

Sapthagiri College of Engineering

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ALUMNI FEEDBACK ON CURRICULUM

We are glad that you have spent valuable years pursuing courses of your choice at SCE. We shall be thankful if you can spare some of your valuable time to fill up this feedback form and give us valuable suggestions for further improvement of the College. Your valuable inputs will be of great use to improve the quality of our academic programs and enhance the credibility of our Institution. Rate the adequacy of following as they were during your tenure as a student

Year of Passing	2014
Branch	eee
Name	Adharsh. K.
Status : Work/Study	Walwork
Phone no	9845235835

Rate the curriculum/syllabus on the following Points

SL NO	Statements	Excellent	Very good	Good	Average	Below Average
		5	4	3	2	1
1	When you compare yourself with other counterparts from other Institution, you feel that you got most of all the facilities which is not available in other Institution			✓		
2	Learning value (in terms of skills, concepts, knowledge, analytical abilities or broadening perspectives)	✓				
3	Curriculum is sufficient to make you analyze the engineering problems and its suitable solution		✓			
4	How do you rate the learning experience in terms of their relevance to the real life application	✓				
5	Ability to work in teams		✓			
6	Ability to link theory to practice		✓			
7	How do you rate the course/curriculum content that you have learnt in relation to your current job		✓			
8	Compatibility with industry standards			✓		

Suggestions: Industrial Training need in Curriculum.

Signature Adharsh K

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
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Year of Passing	2014
Branch	ECE
Name	Tejaswini HJ
Status : Work/Study	Reliance
Phone no	8453025417

Rate the curriculum/syllabus on the following Points

SL NO	Statements	Excellent	Very good	Good	Average	Below Average
		5	4	3	2	1
1	When you compare yourself with other counterparts from other Institution, you feel that you got most of all the facilities which is not available in other Institution		✓			
2	Learning value (in terms of skills, concepts, knowledge, analytical abilities or broadening perspectives)			✓		
3	Curriculum is sufficient to make you analyze the engineering problems and its suitable solution	✓				
4	How do you rate the learning experience in terms of their relevance to the real life application		✓			
5	Ability to work in teams		✓			
6	Ability to link theory to practice			✓		
7	How do you rate the course/curriculum content that you have learnt in relation to your current job		✓			
8	Compatibility with industry standards		✓			

Suggestions: No suggestions. Certificate course need to be added mandatory for students during semester holidays.

Signature Tejaswini HJ

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

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Year of Passing	2014.
Branch	E&C
Name	Soumya N.
Status : Work/Study	Work — Tech Mahindra
Phone no	8027722443.

Rate the curriculum/syllabus on the following Points

SL NO	Statements	Excellent	Very good	Good	Average	Below Average
		5	4	3	2	1
1	When you compare yourself with other counterparts from other Institution, you feel that you got most of all the facilities which is not available in other Institution	✓				
2	Learning value (in terms of skills, concepts, knowledge, analytical abilities or broadening perspectives)		✓			
3	Curriculum is sufficient to make you analyze the engineering problems and its suitable solution	✓				
4	How do you rate the learning experience in terms of their relevance to the real life application	✓				
5	Ability to work in teams		✓			
6	Ability to link theory to practice	✓				
7	How do you rate the course/curriculum content that you have learnt in relation to your current job	✓				
8	Compatibility with industry standards		✓			

Suggestions: Expecting to conduct workshop on Substation design and its components.

Signature Soumya N

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

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ALUMNI FEEDBACK ON CURRICULUM

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Year of Passing	2014.
Branch	EEE
Name	Jyaswini H.J
Status : Work/Study	Reliance com
Phone no	9845302541 7

Rate the curriculum/syllabus on the following Points

SL NO	Statements	Excellent	Very good	Good	Average	Below Average
		5	4	3	2	1
1	When you compare yourself with other counterparts from other Institution, you feel that you got most of all the facilities which is not available in other Institution	✓				
2	Learning value (in terms of skills, concepts, knowledge, analytical abilities or broadening perspectives)	✓				
3	Curriculum is sufficient to make you analyze the engineering problems and its suitable solution		✓			
4	How do you rate the learning experience in terms of their relevance to the real life application	✓				
5	Ability to work in teams		✓			
6	Ability to link theory to practice	✓				
7	How do you rate the course/curriculum content that you have learnt in relation to your current job	✓	✓			
8	Compatibility with industry standards	✓				

Suggestions: More certification courses are required regarding syllabus

Signature J H J.

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
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Sapthagiri College of Engineering

#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru – 560057

Department of Electrical & Electronics Engineering

26-05-2015

CIRCULAR

This is to inform that the following Curriculum Board members are requested to attend the meeting on 27/05/2015 at 10.30AM in the HODs chamber to discuss about the analyzing of curriculum syllabus of academic year 2015-16.

Sl No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	
2	Prof. Rekha S N	Associate Professor	
3	Prof. Leela A M	Associate Professor	
4	Prof. Damodaran A	Assistant Professor	
5	Prof. Ashwini C	Assistant Professor	

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

HOD,EEE
PROF & HOD
Department of Electrical & Electronics Engineering
Sapthagiri College of Engineering
Bangalore - 560057.

Sapthagiri College of Engineering

(Affiliated to Visvesvaraya Technological University, Belagavi& Approved by AICTE, New Delhi)
#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru – 560057
Phone:080-28372800/1/2 www.sapthagiri.edu.in Fax: 080-28372797

Department of Electrical & Electronics Engineering

Minutes of Meeting

With reference to above circular dated 26.05.2015 the curriculum board members assembled in HODs chamber for the following agenda.

AGENDA:

- Reviewing the department curriculum syllabus of academic year 2015-16.
- Reviewing the feedback analysis of various stakeholders for the academic year 2014-15.
- Identifying the gaps.
- Action to be taken for identifying the gaps.

- **The following Curriculum board members were present**

Sl No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	
2	Prof. Rekha SN	Associate Professor	
3	Prof. Leela AM	Associate Professor	
4	Prof. Damodaran A	Assistant Professor	
5	Prof. Ashwini C	Assistant Professor	

Sl No.	SEM	Course Title	Identified Gap
1	VI	CAED	Lack of knowledge about Design of Substation

Principal
Sapthagiri College of Engineering
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Bengaluru - 560 057

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Department of Electrical & Electronics Engineering

The following points are discussed in the meeting

- The committee members reviewed the department curriculum syllabus.
- The committee members discussed about the feedback of department curriculum syllabus.
- The members identified the gaps based on the syllabus.
- The following action were taken for identifying the gaps.

ACTION TAKEN:

Based on the Feedback obtained from the students, faculties alumini and analysis of syllabus by academic committee members it was decided to conduct certification course on "Substation Design (Control Protection and Facility Planning)" to overcome the gaps identified in the curriculum/syllabus.

Sl No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	
2	Prof. Rekha SN	Associate Professor	
3	Prof. Leela AM	Associate Professor	
4	Prof. Dhamodaran A	Assistant Professor	
5	Prof. Ashwini C	Assistant Professor	

Principal
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HOD,EEE

PROF & HOD
Department of Electrical & Electronics Engineering
Sapthagiri College of Engineering
Bangalore - 560057.

Sapthagiri College of Engineering

#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru – 560057

Department of Electrical & Electronics Engineering

Date: 02.06.2015

To

IQAC Coordinator

Sapthagiri College of Engineer ng
Bangalore-560057

Respected Sir

Subject: "Requisition for conduction of certification course and approval from governing council".

With respect to the academic committee members meeting was held for analyzing department curriculum syllabus for the academic year 2015-16.The committee members identified few gaps

After analyzing the syllabus and feedback from the stake holders. To bridge the gaps identified in the curriculum the committee members decided to conduct a certification course for the academic year 2015-16.So I request you to forward and get the approval from governing council for the same.

Thanking you

Enclosure: Budget Proposal.

HOD,EEE
PROF & HOD
Department of Electrical & Electronics Engineering
Sapthagiri College of Engineering
Bangalore - 560057.

forwarded for the GC approval & ratification

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore- 560 057

Sapthagiri College of Engineering

#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru – 560057

Department of Electrical & Electronics Engineering

Date: 02.06.2015

To,

IQAC Coordinator
Sapthagiri College of Engineering
Bangalore - 560057.

Respected Sir,

Subject: "Budget proposal for conduction of certification program on Substation Design (Control Protection And Facility Planning)"

With reference to above subject, I undersigned would like to bring the following for your kind information and consideration. As a part of programming skill development for EEE students, department of Electrical and Electronics Engineering would like to conduct 5 days Certification Course on "Substation Design (Control Protection And Facility Planning)" from 27-Jul-2015 to 31-Jul-2015.

In this regard, I request you to kindly grant permission for the conduction of the course the above specified event for Please grant permission for the sanction of Rs.5320 for the conduction of the above mentioned program and oblige.

Estimated Budget

Sl. No.	Item	Quantity	Unit Cost in Rs.	Total cost in Rs.
1	Certificates	144	30	4320
2	Course Material and others			1000
Grand Total				**5320**

Thanking You,

HOD,EEE

PROF & HOD
Department of Electrical & Electronics Engineering
Sapthagiri College of Engineering
Bangalore - 560057.

Forwarded for the kind approval & satisfaction

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore- 560 057

Sapthagiri College of Engineering

#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru – 560057

Department of Electrical & Electronics Engineering

15-07-2015

CIRCULAR

This is to inform that the following Curriculum Board members are requested to attend the meeting on 15/07/2015 at 11.30AM in the HODs chamber to discuss about the certification course.

Sl No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	
2	Prof. Rekha SN	Associate Professor	
3	Prof. Leela AM	Associate Professor	
4	Prof. Dhamodaran A	Assistant Professor	
5	Prof. Ashwin C	Assistant Professor	

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

HOD,EEE
PROF & HOD
Department of Electrical & Electronics Engineering
Sapthagiri College of Engineering
Bangalore - 560057.

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Sapthagiri College of Engineering
#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru – 560057
Department of Electrical & Electronics Engineering

Date: 15-07-2015

To,

Dr Shivakumar Aradya
Professor
Dept. of EEE
Acharya Institute of Technology
Bangalore - 560107.

Respected Sir,

Subject: Invitation as a "Guest Speaker" in certification program and to attend meeting to discuss about the certification program

Department of Electrical & Electronics Engineering have planned to conduct a certification program titled "Substation Design (Control Protection and Facility Planning)"for EEE students from 27-07-2015 to 31-07-2015. In this connection, we are privileged to invite you as a guest speaker on the above mentioned topic.

Thanking you for your kind acceptance to our request on phone. We request you to attend the meeting to discuss about the conduction of certification course on 16/07/2015 11.30AM, we look forward to welcome you at SCE.

Thanking you

Yours faithfully

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

HOD, EEE
PROF & HOD
Department of Electrical & Electronics Engineering
Sapthagiri College of Engineering
Bangalore - 560057.

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#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru – 560057

Department of Electrical & Electronics Engineering

Minutes of Meeting

A meeting was conducted on 16-Jul-2015 in EEE HOD's Chamber to discuss and approve the following about the 5 days Certification Course for EEE Students.

- **Course Title :** "Substation Design (Control Protection And Facility Planning)"
- **Resource Personnel:** Dr Shiva Kumar Aradya, Professor, Dept. EEE, Acharya Institute of Technology, Bangalore - 560107.
- **Course Duration & Date:** 5 Days from 27-Jul-2015 to 31-Jul-2015

Course Content

Dates	SESSION 1 (9.00am-10.30am)	SESSION 2 (11.00am-12.30pm)	SESSION 3 Hands-on Session (1.30pm-4.30pm)
27-7-2015 Monday	• Basics of functional and protective earthing Touch • step voltages in substations	• Design of earth grid-basic considerations in conductor sizing • mesh spacing Safety mesh at operating points	• Hands on Design the lightning protection of a typical HV switchyard
28-7-2015 Tuesday	• Basics of lightning and hazards • Role of shield wire and lightning mast	• Role of gravel layer in safety Transferred voltage hazard • planning isolation of outgoing services to avoid transfer voltage.	• Hands on Collections Developing a layout for the mesh and show the other connections
29-7-2015 Wednesday	• PLCC applications in protection • Communication • PLCC hardware	• Explore use of PLCC for line protection • communication Prepare an ordering specification for protection equipment	• Hands on protection schemes for all the feeders of the switchyard, • handling Connections

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30-7-2015 Thursday	• DC power requirements for switchyard equipment • DC equipment configuration and specifications	• Using the data/SLD of a typical HV outdoor switchyard, work out the following: • Suggested protection schemes for all the feeders of the switchyard, its bus bars and transformers	• Hands on Battery calculations basis Space planning
31-7-2015 Friday	• Busbar protection • Feeder protection • Equipment requirements for substation automation	• Protection coordination checking • Explore substation protection	• Hands on Transformer protection Test Conduction

The following Curriculum board members were present

Sl No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	
2	Prof. Rekha SN	Associate Professor	
3	Prof. Leela AM	Associate Professor	
4	Prof. Dhamodaran A	Assistant Professor	
5	Prof. Ashwini C	Assistant Professor	
6	Dr Shivakumar Aradya	Guest Speaker	

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Bangalore - 560057.

Sapthagiri College of Engineering
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Department of Electrical & Electronics Engineering

NOTICE

As a part of programming skill development Department of Electrical and Electronics Engineering is conducting Five days Certification Course on "Substation Design (Control Protection And Facility Planning)"from 27-July-2015 to 31-July-2015

All the EEE students must attend the course compulsorily.

Signature of HOD

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Department of Electrical & Electronics Engineering

Certification Program: "Substation Design (Control Protection and Facility Planning)"

Lesson Planner

Dates	SESSION 1 (9.00am-10.30am)	SESSION 2 (11.00am-12.30pm)	SESSION 3 Hands-on Session (1.30pm-4.30pm)	No. of Hours
27-7-2015 Monday	• Basics of functional and protective earthing Touch • step voltages in substations	• Design of earth grid-basic considerations in conductor sizing • mesh spacing Safety mesh at operating points	• Hands on Design the lightning protection of a typical HV switchyard	6
28-7-2015 Tuesday	• Basics of lightning and hazards • Role of shield wire and lightning masts	• Role of gravel layer in safety Transferred voltage hazard • Planning isolation of outgoing services to avoid transfer voltage.	• Hands on Collections Developing a layout for the mesh and show the other connections	5
29-7-2015 Wednesday	• PLCC applications in protection • Communication • PLCC hardware	• Explore use of PLCC for line protection • communication Prepare an ordering specification for protection equipment	• Hands on protection schemes for all the feeders of the switchyard, • handling Connections	6
30-7-2015 Thursday	• DC power requirements for switchyard equipment • DC equipment configuration and specifications	• Using the data/SLD of a typical HV outdoor switchyard, work out the following: • Suggested protection schemes for all the feeders of the switchyard, its bus bars and transformers	• Hands on Battery calculations basis Space planning	6

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31-7-2015 Friday	• Busbar protection • Feeder protection • Equipment requirements for substation automation	• Protection coordination checking • Explore substation protection	• Hands on Transformer protection and Test Conduction	6
			Total	30

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GUEST SPEAKER

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Department of Electrical and Electronics Engineering

5 days Certification Program on

"Substation Design(Control Protection and Facility Planning)"

Students Enrollment

Academic Year(2015-16)

SL.No	USN	Student Name	Signature
1	1SG14EE002	ABHISHEK B	
2	1SG14EE003	ABHISHEK KEMBHAVI	
3	1SG14EE004	AKASH PANDEY	
4	1SG14EE005	AMAN KUMAR	
5	1SG14EE006	AMIT KUMAR SAH	
6	1SG14EE007	AMRIT RAJ	
7	1SG14EE008	ANITHA B	
8	1SG14EE009	ANJAL SHARMA	
9	1SG14EE010	ANKIT JHA	
10	1SG14EE011	ANKIT PRAKASH	
11	1SG14EE012	ANKUR JAYARAJ	
12	1SG14EE013	ANSHUMAN PANDEY	
13	1SG14EE014	ANUSHA T S	
14	1SG14EE015	ARCHANA S	
15	1SG14EE017	ARPITHA M J	
16	1SG14EE018	ARVIND B R	
17	1SG14EE020	BIJITH K B	
18	1SG14EE021	BISHAL KUMAR	
19	1SG14EE022	BLESSY PHILIP M	
20	1SG14EE023	CHANDAN KUMAR	
21	1SG14EE024	DANAYYA	
22	1SG14EE025	DILIP M	
23	1SG14EE026	DIVYA M	
24	1SG14EE027	DIVYANSHU MISHRA	
25	1SG14EE028	GANESH KUMAR T C	
26	1SG14EE029	GEETHAANJALI K	
27	1SG14EE030	HEMALATHA H G	
28	1SG14EE031	ISHANI SHARMA	
29	1SG14EE032	JYOTHI M	
30	1SG14EE033	KAUSHIK CHANDRAN	
31	1SG14EE034	KAVYA I R	
32	1SG14EE035	KIRAN D	
33	1SG14EE036	KRUPA H R	
34	1SG14EE037	KRUTHIKA K	
35	1SG14EE038	KUSHAL N	
36	1SG14EE039	MADHUSHREE S	
37	1SG14EE040	MAHESH KUMAR K	
38	1SG14EE041	MANJUNATH	
39	1SG14EE042	MANJUNATH T	
40	1SG14EE043	MANOJ M G	

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Department of Electrical and Electronics Engineering

SL.No	USN	Student Name	Signature
41	1SG14EE044	MANOJ R	
42	1SG14EE045	MEGHANA G V	
43	1SG14EE047	MITHUN H V	
44	1SG14EE048	NAVEEN KUMAR	
45	1SG14EE049	NAYAB MOHAMMAD	
46	1SG14EE050	NETHRAVATHI K	
47	1SG14EE051	NIKHIL M G	
48	1SG14EE052	PADMINI R	
49	1SG14EE053	PALLAVI S	
50	1SG14EE054	PAVAN KUMAR D V	
51	1SG14EE055	PAVAN KUMAR H D	
52	1SG14EE056	PAVITHRA C	
53	1SG14EE057	PAVITHRA N M	
54	1SG14EE058	POORVA H	
55	1SG14EE059	PRAGATHI S	
56	1SG14EE061	RAKSHITH S	
57	1SG14EE062	RAMKUMAR R P	
58	1SG14EE064	RANJITHA K	
59	1SG14EE065	RAVIKIRAN H	
60	1SG14EE066	RITU KUMARI	
61	1SG14EE067	SADAM HUSSAIN K A	
62	1SG14EE068	SANIYA ANJUM P	
63	1SG14EE070	SHILPA H S	
64	1SG14EE072	SNEHA S	
65	1SG14EE073	SOWBHAGYA S	
66	1SG14EE074	SRINIVAS I	
67	1SG14EE075	SUMANRAI	
68	1SG14EE076	SUMATHI G	
69	1SG14EE077	SUSHMA R	
70	1SG14EE078	SUSHMITHA L	
71	1SG14EE080	TEJAS S	
72	1SG14EE081	UPENDRA R	
73	1SG14EE083	VADDIREDDY	
74	1SG14EE084	VIKRANT KUMAR	
75	1SG14EE085	VISHAL TRIPATHY	
76	1SG14EE086	VISHWANATH M	

Co-ordinator

HOD

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Department of Electrical and Electronics Engineering

5 days Certification Program on

"Substation Design(Control Protection and Facility Planning)"

Students Enrollment Academic Year(2015-16)

SL.No	USN	Student Name	Signature
1	1SG12EE011	BALRAM KUMAR CHAUDHARY	
2	1SG12EE018	GHANSHYAM CHOUDHARY	
3	1SG12EE026	MANOJ R M	
4	1SG13EE001	A T GURUPRASATH	
5	1SG13EE002	ABDUL RAZAK H S	
6	1SG13EE003	ABHIMANYU KUMAR	
7	1SG13EE005	AKSHAY P I	
8	1SG13EE006	ALKA YAGNI	
9	1SG13EE008	AMRITA KAUR	
10	1SG13EE009	ARCHANA M	
11	1SG13EE012	BHAVYA B	
12	1SG13EE013	BHAVYALAKSHMI R	
13	1SG13EE014	CHANDAN K	
14	1SG13EE016	CHIRANJEEVI SRINIVAS I	
15	1SG13EE017	DEEPAK A PATIL	
16	1SG13EE018	DEEPAK KANT	
17	1SG13EE020	FAIZ AHMAD	
18	1SG13EE021	G PRABHATH	
19	1SG13EE023	HEMANTH KUMAR K	
20	1SG13EE024	KANISHKA	
21	1SG13EE025	KAVYA	
22	1SG13EE026	KAVYASHREE A	
23	1SG13EE027	KIRTHAN REDDY G K	
24	1SG13EE028	KIRAN KUMAR K	
25	1SG13EE029	M YUVARAJ	
26	1SG13EE031	MEGHANA K	
27	1SG13EE032	MEGHANA K L	
28	1SG13EE033	MITHUN GOWDA B	
29	1SG13EE034	MUKUND KUMAR	
30	1SG13EE035	NARAYAN JEE	
31	1SG13EE036	NEHA P J	
32	1SG13EE037	NIKITA KISHORE	
33	1SG13EE038	PALLAVI MAZUMDER	
34	1SG13EE039	PRAMOD KUMAR MISHRA	
35	1SG13EE040	PRASHANT GAURAV	
36	1SG13EE041	RAJ SUMAN	
37	1SG13EE042	RAJARSHI DAS GUPTA	

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SL.No	USN	Student Name	Signature
38	1SG13EE043	RAMYA M	
39	1SG13EE044	RISHAV MOHAN	
40	1SG13EE045	RITESH KUMAR	
41	1SG13EE046	ROHIT RANJAN	
42	1SG13EE047	SAMPATH KUMAR SHETTY	
43	1SG13EE049	SANGEETHA P	
44	1SG13EE050	SATHYAM	
45	1SG13EE055	SHASHI KUMAR	
46	1SG13EE056	SHILPA I	
47	1SG13EE057	SHUSHANTH KUMAR	
48	1SG13EE058	SOWNDARYA P	
49	1SG13EE059	SUBRAHMANYA H S	
50	1SG13EE060	TANAY KANAUJIA	
51	1SG13EE061	VAISHNAVI S KULKARNI	
52	1SG13EE062	VIPIN RAJ R	
53	1SG13EE063	YATEESH H	
54	1SG13EE064	JEEVITHA P	
55	1SG13EE401	BASAVARAJA K M	
56	1SG13EE409	PUNEETH T K	
57	1SG14EE400	ANIL	
58	1SG14EE401	BHAVYA Y F	
59	1SG14EE402	CHAITHRA D	
60	1SG14EE403	GIRISH N	
61	1SG14EE404	K PRAKASH	
62	1SG14EE405	KANTHRAJU V	
63	1SG14EE406	KIRAN T S	
64	1SG14EE407	RANJITHA C	
65	1SG14EE408	SATHISHA G S	
66	1SG14EE409	SHANTAPPA UTAGI	
67	1SG14EE410	SHARATH S	
68	1SG14EE411	UMESH T P	

Co-ordinator

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Department of Electrical and Engineering

5 days Certification Program on

"Substation Design(Control Protection and Facility Planning)"

Attendance

Sl. No	USN	Student Name	27-07-2015		28-07-2015		29-07-2015		30-07-2015		31-07-2015		
			MS	AS	MS	AS	MS	AS	MS	AS	MS	AS	Test
1	1SG14EE002	ABHISHEK B REVANKAR	1	2	3	4	5	6	7	A	8	9	10
2	1SG14EE003	ABHISHEK KEMBHAVI	1	2	3	4	5	6	7	8	9	10	11
3	1SG14EE004	AKASH PANDEY	1	2	3	4	5	6	A	7	8	9	10
4	1SG14EE005	AMAN KUMAR	1	2	3	A	4	5	6	7	8	9	10
5	1SG14EE006	AMIT KUMAR SAH	1	2	3	4	5	6	7	8	9	10	11
6	1SG14EE007	AMRIT RAJ	1	2	3	4	5	6	7	8	9	10	11
7	1SG14EE008	ANITHA B	1	2	3	4	5	6	7	8	9	10	11
8	1SG14EE009	ANJAL SHARVA	1	A	2	3	4	5	6	7	8	9	10
9	1SG14EE010	ANKIT JHA	1	2	3	4	5	6	7	8	9	A	10
10	1SG14EE011	ANKIT PRAKASH	1	2	3	4	5	6	7	8	9	10	11
11	1SG14EE012	ANKUR JAYARAJ	1	2	3	4	5	6	7	8	9	A	10
12	1SG14EE013	ANSHUMAN PANDEY	1	2	3	4	5	A	6	7	8	9	10
13	1SG14EE014	ANUSHA T S	1	2	3	A	4	5	6	7	A	8	9
14	1SG14EE015	ARCHANA S	1	2	3	4	5	6	7	8	9	10	11
15	1SG14EE017	ARPITHA M.I	1	2	3	4	5	6	7	A	8	9	10
16	1SG14EE018	ARVIND B R	1	2	3	4	5	6	7	8	9	10	11
17	1SG14EE020	BIJITH K B	1	2	3	4	F	6	7	8	9	A	10
18	1SG14EE021	BISHAL KUMAR GUPTHA	1	2	3	4	5	6	7	8	9	10	11
19	1SG14EE022	BLESSY PHILIP V	1	2	3	4	5	6	7	8	9	10	11
20	1SG14EE023	CHANDAN KUMAR JAISWAL	1	2	3	A	4	5	6	7	8	9	10
21	1SG14EE024	DANAYYA CHANNAYYA	1	2	3	4	5	6	7	A	8	9	10
22	1SG14EE025	DILIP M	1	A	2	3	4	5	6	7	8	9	10
23	1SG14EE026	DIVYA M	1	2	3	4	5	6	7	8	9	10	11
24	1SG14EE027	DIVYANSHU MISHRA	1	2	3	4	5	6	7	8	9	10	11
25	1SG14EE028	GANESH KUMAR T C	1	2	3	4	5	6	7	8	A	9	10
26	1SG14EE029	GEETHAANJALI K	1	2	3	4	5	6	7	8	9	10	11
27	1SG14EE030	HEMALATHA H.G.	1	2	3	4	5	6	7	A	8	9	10
28	1SG14EE031	ISHANI SHARMA	1	2	3	4	5	6	7	8	9	10	11
29	1SG14EE032	JYOTHI M	1	A	2	3	4	5	6	7	8	9	10
30	1SG14EE033	KAUSHIK CHANDRAN M	1	2	3	4	5	6	7	8	9	10	11
31	1SG14EE034	KAVYA I.R	1	2	3	4	5	6	7	8	9	10	11
32	1SG14EE035	KIRAN D	1	2	3	4	A	5	6	7	8	9	10
33	1SG14EE036	KRUPA H R	1	2	3	4	5	6	A	7	8	9	10
34	1SG14EE037	KRUTHIKA K	1	2	3	4	5	6	7	8	9	10	11
35	1SG14EE038	KUSHAL N	1	2	3	4	5	6	7	8	9	10	11
36	1SG14EE039	MADHUSHREE S	1	2	3	A	4	5	6	7	8	9	10
37	1SG14EE040	MAHESH KUMAR K	1	2	3	4	A	5	6	7	8	9	10
38	1SG14EE041	MANJUNATH	1	2	3	4	A	5	6	7	8	9	10
39	1SG14EE042	MANJUNATH T	1	2	3	4	5	6	7	8	9	10	11
40	1SG14EE043	MANOJ M.G	1	2	3	4	5	6	7	A	8	9	10
41	1SG14EE044	MANOJ R	1	2	3	4	5	6	7	8	9	10	11

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Department of Electrical and Engineering

Sl. No	USN	Student Name	27-07-2015		28-07-2015		29-07-2015		30-07-2015		31-07-2015		
			MS	AS	MS	AS	MS	AS	MS	AS	MS	AS	Test
42	1SG14EE045	MEGHANA G V	1	2	3	A	4	5	6	7	8	9	10
43	1SG14EE047	MITHUN H V	1	2	3	4	5	6	7	8	9	10	11
44	1SG14EE048	NAVEEN KUMAR SHANKAR NAIK	1	2	3	4	A	5	6	7	8	9	10
45	1SG14EE049	NAYAB MOHAMMAD AMEER JAN	1	2	3	4	5	6	7	8	9	10	11
46	1SG14EE050	NETHRAVATHI K	1	2	3	4	5	6	7	8	9	10	11
47	1SG14EE051	NIKHIL M G	1	2	3	4	5	A	6	7	8	9	10
48	1SG14EE052	PADMINI R	1	2	A	3	4	5	6	7	8	9	10
49	1SG14EE053	PALLAVI S	1	2	3	4	5	6	7	8	9	10	11
50	1SG14EE054	PAVAN KUMAR D V	1	2	3	4	5	6	7	8	A	9	10
51	1SG14EE055	PAVAN KUMAR H D	1	2	3	4	5	6	7	8	9	10	11
52	1SG14EE056	PAVITHRA C	1	2	3	4	5	A	6	7	8	9	10
53	1SG14EE057	PAVITHRA N M	1	2	3	4	5	6	7	8	A	9	10
54	1SG14EE058	POORVA H	1	2	3	4	5	6	7	8	9	10	11
55	1SG14EE059	PRAGATHI S	1	2	3	4	5	6	7	8	9	10	11
56	1SG14EE061	RAKSHITH S	1	2	3	4	5	6	7	A	8	9	10
57	1SG14EE062	RAMKUMAR R P	1	2	3	4	5	6	7	A	8	9	10
58	1SG14EE064	RANJITHA K	1	2	3	4	5	6	7	8	9	A	10
59	1SG14EE065	RAVIKIRAN H	1	2	3	4	5	6	7	8	9	10	11
60	1SG14EE066	RITU KUMARI	1	2	3	4	5	A	6	7	8	9	10
61	1SG14EE067	SADAM HUSSAIN K A	1	2	3	4	5	6	7	8	9	10	11
62	1SG14EE068	SANIYA ANJUM F	1	2	3	4	5	6	7	8	9	10	11
63	1SG14EE070	SHILPA H S	1	2	3	4	A	5	6	7	8	9	10
64	1SG14EE072	SNEHA S	1	2	3	4	5	6	7	8	9	10	11
65	1SG14EE073	SOWBHAGYA S	1	2	3	A	4	5	6	7	8	9	10
66	1SG14EE074	SRINIVAS J	1	2	3	4	5	6	7	8	9	10	11
67	1SG14EE075	SUMANRAJ	1	2	3	4	5	6	7	8	9	10	11
68	1SG14EE076	SUMATHI G	1	A	2	3	4	5	6	7	8	9	10
69	1SG14EE077	SUSHMA R	1	2	3	4	5	6	7	8	9	10	11
70	1SG14EE078	SUSHMITHA L	1	2	3	4	5	6	7	8	A	9	10
71	1SG14EE080	TEJAS S	1	2	3	4	5	6	7	8	9	10	11
72	1SG14EE081	UPENDRA R	1	2	3	4	5	A	6	7	8	9	10
73	1SG14EE083	VADDIREDDY	1	2	3	4	5	6	7	8	9	10	11
74	1SG14EE084	VIKRANT KUMAR PANDEY	1	2	3	4	5	6	7	8	9	10	11
75	1SG14EE085	VISHAL TRIPATHY	1	2	A	3	4	5	6	7	8	9	10
76	1SG14EE086	VISHWANATH M	1	2	3	4	5	6	A	7	8	9	10
		Signature											

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Department of Electrical & Electronics Engineering
Sapthagiri College of Engineering
Bangalore - 560057.

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Department of Electrical and Engineering

5 days Certification Program on "Substation Design(Control Protection and Facility Planning)" Attendance

Sl. No	USN	Student Name	27-07-2015		28-07-2015		29-07-2015		30-07-2015		31-07-2015		
			MS	AS	MS	AS	MS	AS	MS	AS	MS	AS	Test
1	1SG12EE011	BALRAM KUMAR	1	2	3	4	5	6	7	8	9	10	11
2	1SG12EE018	GHANSHYAM CHOUDHARY	1	2	A	3	4	5	6	7	8	9	10
3	1SG12EE026	MANOJ R M	A	1	2	3	4	5	6	7	8	9	10
4	1SG13EE001	A T GURUPRASATH	1	2	3	4	5	6	7	8	9	10	11
5	1SG13EE002	ABDUL RAZAK H S	1	2	A	3	4	5	6	7	8	9	10
6	1SG13EE003	ABHIMANYU KUMAR	1	2	3	4	5	A	6	7	8	9	10
7	1SG13EE005	AKSHAY P L	A	1	2	3	4	5	6	7	8	9	10
8	1SG13EE006	ALKA YAGNI	1	2	3	4	5	6	7	8	9	10	11
9	1SG13EE008	AMRITA KAUR	1	2	3	4	5	6	7	8	9	10	11
10	1SG13EE009	ARCHANA M	A	1	2	3	4	5	6	7	8	9	10
11	1SG13EE012	BHAVYA B	1	2	3	4	A	5	6	7	8	9	10
12	1SG13EE013	BHAVYALAKSHMI R	1	2	3	4	A	5	6	7	8	9	10
13	1SG13EE014	CHANDAN K	1	2	3	4	5	6	7	8	A	9	10
14	1SG13EE016	CHIRANJEEVI SRINIVAS L	1	2	3	4	5	6	7	8	9	10	11
15	1SG13EE017	DEEPAK A PATIL	1	2	3	4	5	6	7	8	9	10	11
16	1SG13EE018	DEEPAK KANT	1	2	3	4	5	6	7	8	9	10	11
17	1SG13EE020	FAIZ AHMAD	1	2	3	4	5	6	7	8	9	10	11
18	1SG13EE021	G PRABHATH	1	2	3	4	5	6	7	8	9	10	11
19	1SG13EE023	HEMANTH KUMAR K	1	2	3	4	5	6	7	8	9	10	11
20	1SG13EE024	KANISHKA	A	1	2	3	4	A	5	6	7	8	9
21	1SG13EE025	KAVYA	1	2	3	4	5	6	7	8	9	10	11
22	1SG13EE026	KAVYASHREE A	1	2	3	4	5	6	7	8	9	10	11
23	1SG13EE027	KIRTHAN REDDY G K	1	2	3	4	5	6	7	8	9	10	11
24	1SG13EE028	KIRAN KUMAR K	1	2	3	4	5	6	7	8	9	10	11
25	1SG13EE029	M YUVARAJ	1	2	3	4	5	6	7	8	9	10	11
26	1SG13EE031	MEGHANA K	1	2	3	4	5	6	7	8	9	10	11
27	1SG13EE032	MEGHANA K L	1	2	3	4	5	6	7	8	9	10	11
28	1SG13EE033	MITHUN GOWDA B	1	2	3	4	5	6	7	8	9	10	11

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Department of Electrical and Engineering

Sl. No	USN	Student Name	27-07-2015		28-07-2015		29-07-2015		30-07-2015		31-07-2015		
			MS	AS	MS	AS	MS	AS	MS	AS	MS	AS	Test
29	1SG13EE034	MUKUND KUMAR	1	2	3	4	5	6	7	8	9	10	11
30	1SG13EE035	NARAYAN JEE	1	2	3	4	5	6	7	8	9	10	11
31	1SG13EE036	NEHA P J	1	2	3	4	5	6	7	8	A	9	10
32	1SG13EE037	NIKITA KISHORE	1	2	3	4	5	A	6	7	8	9	10
33	1SG13EE038	PALLAVI MAZUMDER	1	2	3	4	5	6	7	8	9	10	11
34	1SG13EE039	PRAMOD KUMAR MISHRA	1	2	3	A	5	6	7	8	9	10	11
35	1SG13EE040	PRASHANT GAURAV	1	2	3	4	5	6	7	8	9	10	11
36	1SG13EE041	RAJ SUMAN	1	2	3	4	5	6	7	8	9	10	11
37	1SG13EE042	RAJARSHI DAS GUPTA	A	1	2	4	5	6	7	8	9	10	11
38	1SG13EE043	RAMYA M	1	2	3	4	5	6	7	8	9	10	11
39	1SG13EE044	RISHAV MOHAN	1	2	3	4	5	6	7	8	9	10	11
40	1SG13EE045	RITESH KUMAR	1	2	3	4	5	A	6	7	8	9	10
41	1SG13EE046	ROHIT RANJAN	1	2	3	4	5	6	7	8	9	10	11
42	1SG13EE047	SAMPATH KUMAR SHETTY	1	2	3	A	A	6	6	7	8	9	10
43	1SG13EE049	SANGEETHA P	1	2	3	4	5	6	7	8	9	10	11
44	1SG13EE050	SATHYAM	1	2	3	4	5	6	7	8	9	10	11
45	1SG13EE055	SHASHI KUMAR	1	2	3	4	5	6	7	8	9	10	11
46	1SG13EE056	SHILPA L	1	2	3	4	5	6	7	8	9	10	11
47	1SG13EE057	SHUSHANTH KUMAR	1	2	3	4	5	6	7	8	9	10	11
48	1SG13EE058	SOWNDARYA P	1	2	3	4	5	6	7	8	9	10	11
49	1SG13EE059	SUBRAHMANYA H S	1	2	3	4	5	6	7	8	9	10	11
50	1SG13EE060	TANAY KANAUJIA	1	2	3	4	5	6	7	8	9	10	11
51	1SG13EE061	VAISHNAVI S KULKARNI	1	2	3	4	5	6	7	8	9	10	11
52	1SG13EE062	VIPIN RAJ R	1	2	3	4	5	6	7	8	9	10	11
53	1SG13EE063	YATEESH H	1	2	3	4	5	6	7	8	9	10	11
54	1SG13EE064	JEEVITHA P	1	2	3	4	5	6	7	8	9	10	11
55	1SG13EE401	BASAVARAJA K M	1	2	3	4	5	6	7	8	9	10	11
56	1SG13EE409	PUNEETH T K	1	2	3	4	5	6	7	8	9	10	11
57	1SG14EE400	ANIL	1	2	3	4	5	6	7	8	9	10	11
58	1SG14EE401	BHAVYA Y E	1	2	3	4	5	6	7	8	9	10	11
59	1SG14EE402	CHAITHRA D	1	2	3	4	5	6	7	8	9	10	11

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Department of Electrical and Engineering

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			MS	AS	MS	AS	MS	AS	MS	AS	MS	AS	Test
60	1SG14EE403	GIRISH N	1	2	3	4	5	AB	6	7	8	9	10
61	1SG14EE404	K PRAKASH	A	1	2	3	4	5	6	7	8	9	10
62	1SG14EE405	KANTHRAJ L V	1	2	3	4	5	A	6	7	8	9	10
63	1SG14EE406	KIRAN T S	1	2	3	4	A	5	6	7	8	9	10
64	1SG14EE407	RANJITHA C	1	2	3	A	4	5	6	7	8	9	10
65	1SG14EE408	SATHISHA G S	1	2	A	3	4	5	6	7	8	9	10
66	1SG14EE409	SHANTAPPA UTAGI	1	A	2	3	4	5	6	7	8	9	10
67	1SG14EE410	SHARATH S	A	1	2	3	4	5	6	7	8	9	10
68	1SG14EE411	UMESH T P	1	A	2	3	4	5	6	7	8	9	10
Signature													

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Department of Electrical & Electronics Engineering

5-days Certification Course on

"Substation Design (Control Protection and Facility Planning)"

Test Time Table

Sl. No.	DATE	DAY	TIMINGS
1	31-07-2015	Friday	4.30PM-5.30PM

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Department of Electrical & Electronics Engineering

5 days Certification Course on

"Substation Design (Control Protection and Facility Planning)"

Question Paper

Duration : 1hr **Maximum marks :** 40

Note: Question number 1-10(1M each)

Question number 11 & 20(3M each)

Answer all the Questions:

1.Stones are provided in the substation to:
a) To avoid fire accident by draining oil from transformer if leaks
b) To avoid growing of weeds and plants
c) To provide insulation
d) All the above

2. In order to improve the power factor ___ device is employed in the substation
a) Synchronous condenser
b) Synchronous reactor
c) Series Capacitors
d) None of the above

3. What is the minimum phase to phase clearance required for 400kV conductors in substation:
a) 3500 mm
b) 4200 mm
c) 5000 mm
d) 4500 mm

4. In substation which of the device is a carrier communication device:
a) CVT
b) Earth conductor
c) Wave trap
d) Lightning arrestor

5. Which of the device is employed in substation to limit the short circuit current in the power system:
a) Shunt condenser
b) Reactor
c) Series capacitor
d) Shunt capacitor

6. Which of the following busbar arrangement is generally employed in distribution system:
a) One-and-half breaker arrangement
b) Main and transfer arrangement
c) Ring main distribution system
d) Single busbar arrangement system

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7. Earthing conductivity is affected by:
a) Moisture content in the soil
b) Chemical composition
c) Concentration of salts in the soil
d) All the above

8. Emulsifier protection is associated with:
a) Grounding protection
b) Dielectric strength protection of cables and conductors
c) Lightning protection
d) Fire protection

9. The size of Gas Insulated Substation is significantly small compared to conventional substation because:
a) High electronegative property of SF6 gas
b) High dielectric property of SF6 gas
c) High Insulation property of SF6 gas
d) All the above

10. What is Marshalling Kiosk in power transformer:
a) It provides alarms, trips, controls and indications from main transformer
b) It is the base on which transformer rail is provided to pull and push transformer
c) It is the pressure device ruptures when temperature inside transformer increases
d) None of the above

11.What Is Called A Substation?

12. What Are The Classifications Of The Substations According To The Design?

13. What Are The Factors To Be Considered For Selection Of Site Of An Outdoor Type

14. What Are The Advantages And Disadvantages Of An Outdoor Type Substation Over An Indoor Type Substation?

15. What Is Called Underground Substation?

16. What Are The Classification Of The Substation According To Their Location In The Power System Networks?

17. What Is Called Primary Grid Substation?

18. What Is The Location Of Step Up Substation?

19. What Is Called Primary Grid Substation?

20. What Is Secondary Substation?

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Department of Electrical & Electronics Engineering

Approved by Academic Committee Members & HOD

Sl No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	
2	Prof. Rekha SN	Associate Professor	
3	Prof. Leela AM	Associate Professor	
4	Prof. Dhamodaran A	Assistant Professor	
5	Prof. Ashwini C	Assistant Professor	
6	Dr Shivakumar Aradya	Guest Speaker	

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Department of Electrical & Electronics Engineering

5 days Certification Course on

"Substation Design(Control Protection and Facility Planning)"

Solutions for the Questions

Duration :1hr **Maximum marks :**40

Note: Question number 1-10(1M each)
Question number 11 & 20(3M each)

Answer all the Questions:

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b) To avoid growing of weeds and plants
c) To provide insulation
d) All the above

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a) Synchronous condenser
b) Synchronous reactor
c) Series Capacitors
d) None of the above

3. What is the minimum phase to phase clearance required for 400kV conductors in substation:
a) 3500 mm
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b) It is the base on which transformer rail is provided to pull and push transformer
c) It is the pressure device ruptures when temperature inside transformer increases
d) None of the above

SOLUTIONS EXAMINATION (ODD SEM. 2015-16)

1 .Option d

2 .Option a

3. Option b

4.Option c

5.Option b

6.Option c

7.Option d

8.Option d

9.Option d

10.Option a

11.What Is Called A Substation?

A Substation is an intermediate switching, transforming or converting station between the generating station and the low tension distribution network situated generally at the consumer's load centre.

12. **What Are The Classifications Of The Substations According To The Design?**

1. Indoor substation
2. Outdoor substation
3. Pole mounted substation
4. Underground substation.

13. **What Are The Factors To Be Considered For Selection Of Site Of An Outdoor Type Substation?**

The following factors are to be considered in selection the site of an outdoor type substation
The site should be located closed to the centre of its supply area.

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- Sufficient land is to be available at a reasonable cost and without much difficulty for the construction of substation and the accommodation of the operating staff.
- The site should be away from the densely populated locality.
- The site should have easy access for having transport.

14. What Are The Advantages And Disadvantages Of An Outdoor Type Substation Over An Indoor Type Substation?

The outdoor type substation has the following advantages over indoor sub-station :-

1. All equipments are within sight and accessible ; faults and defects can therefore, be easily located and rectified.
2. The substation equipments can be spaced sufficiently apart.
3. The effect of fault in one section do not affect the healthy section.
4. The cost of erected is comparatively less as no large buildings are required to be erected to house the substation equipments.
5. The time required for erected is lesser.
6. Future extensions and alterations can be made without much difficulty.

The disadvantages of outdoor type substation are as follows :

1. As the equipments are open to atmosphere the influence of rapid fluctuation in ambient temperature, dust and dirt deposited on the equipments makes it necessary to install specially designed equipments which are costlier.
2. More space is required for the outdoor substation as buses and other live parts are bare and more clearance is necessary.
3. The various switching operations, fault repair and maintenance become difficult in rough and inclement weather.

15. What Is Called Underground Substation?

In thickly populated areas where the available space for substation equipment and building is limited and cost of land is high, the substation equipment are placed under ground and then it is said to be underground substation which requires more careful consideration than other types of substation.

16. What Are The Classification Of The Substation According To Their Location In The Power System Networks?

1. Step up substation,
2. Primary grid substation,
3. Secondary substation,
4. Distribution substation,
5. Bulk supply and industrial substation,
6. Mining substation
7. Mobile substation.

17. What Is Called Primary Grid Substation?

The substation created at suitable load centres along the primary transmission line, in which the primary transmission voltage is stepped down to a number of suitable secondary transmission voltages, is called primary grid substation.

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18. What Is The Location Of Step Up Substation?

The step up substation is associated with the power station where the generation voltage is stepped up to the primary transmission voltage.

19. What Is Called Primary Grid Substation?

The substation created at suitable load centres along the primary transmission line, in which the primary transmission voltage is stepped down to a number of suitable secondary transmission voltages, is called primary grid substation.

20. What Is Secondary Substation?

The substation created at actual load point along the secondary transmission lines, where the voltage, is further stepped down to sub-transmission or primary distribution voltage, is called secondary substation.

Approved by Academic Committee Members & HOD
The following are the Faculty members:

Sl No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	
2	Prof Leela A M	Associate Professor	
3	Prof. Rekha SN	Associate Professor	
4	Prof. Dhamodaran A	Assistant Professor	
5	Prof. Ashwini C	Assistant Professor	
6	Dr Shivakumar Aradya	Guest Speaker	

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Department of Electrical and Electronics Engineering

5 days Certification Course on "Substation Design (Control Protection and Facility Planning)"

Participant Feedback

1. How was the overall organization of the Certification Course ?

   a) Poor b) Satisfactory c) Good d) Excellent

2. How appropriate were the facilities provided ?

   a) Poor b) Satisfactory c) Good d) Excellent

3. Opportunity to ask questions for clarification and interaction with presenters

   a) Poor b) Satisfactory c) Good d) Excellent

4. Effectiveness of the Hands-on Sessions

   a) Poor b) Satisfactory c) Good d) Excellent

5. Topic and contents of the Certification Course

   a) Poor b) Satisfactory c) Good d) Excellent

6. How do you rate the Certification Course compared to other workshops that you have attended ?

   a) Poor b) Satisfactory c) Good d) Excellent

7. Generally how was your overall experience during the Certification Course

   a) Poor b) Satisfactory c) Good d) Excellent

8. Any Suggestions:

Program is understandable for average students. I learned a basics of substation design, functions of protection equipment used in substation.

Student Name: Tejas.S

Student Signature: Tejas.

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6. How do you rate the Certification Course compared to other workshops that you have attended ?

   a) Poor b) Satisfactory c) Good d) Excellent

7. Generally how was your overall experience during the Certification Course

   a) Poor b) Satisfactory c) Good d) Excellent

8. Any Suggestions:

It was nice, all speakers are explained very well. Hands on Session i not get it, i hope its my fault (joined late).

Student Name : Nethravathi K **Student Signature:** Nethravathi K

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   a) Poor b) Satisfactory c) Good d) Excellent

7. Generally how was your overall experience during the Certification Course

   a) Poor b) Satisfactory c) Good d) Excellent

8. Any Suggestions:

Topics of Substation Design, protection equipment functions & planning was explained very well.

Student Name : Mahesh Kumar .K **Student Signature:** K Mahesh kumar

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7. Generally how was your overall experience during the Certification Course

   a) Poor b) Satisfactory c) Good d) Excellent

8. Any Suggestions:

The certificate program is usefull for me, topic are explained at understanble manner for Average students.

Student Name : Manoj.G

Student Signature: Manoj. M G

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7. Generally how was your overall experience during the Certification Course

   a) Poor b) Satisfactory c) Good d) Excellent

8. Any Suggestions:

   I understand protection equipment function of substation, overall its good.

Student Name : Anusha T.S **Student Signature:** Anusha T.S

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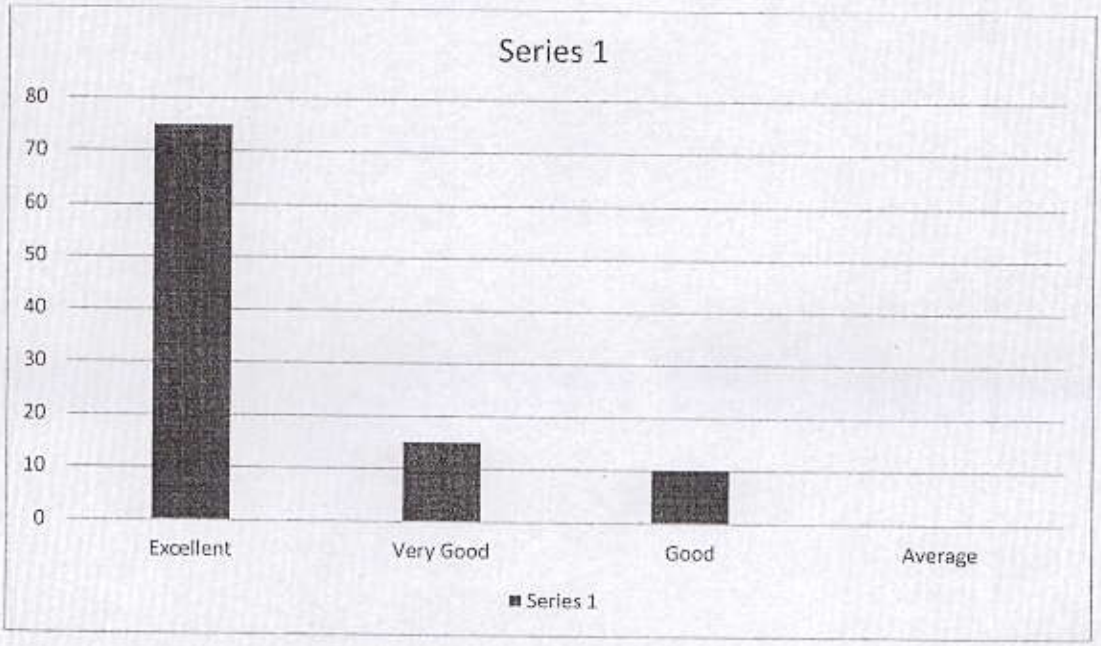
Department of Electrical & Electronics Engineering

FEEDBACK ANALYSIS

Certification Programme: **"Substation Design(Control Protection and Facility Planning)"**

No. of students participated	Student Feedback			
	Excellent	Very Good	Good	Average
144	75	15	10	0



Action Report:

75 % of students were completely happy with the certification program, 15 % of students felt it was a good program and remaining 10 % students were satisfied with the program an.

Action Taken:

The Feedback report which was collected from the students were sent to the principal and he would take necessary actions based on the comments and conduct more programs for the benefit of students.

Program Coordinator

HOD

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Bangalore-560057

Certificate

This is to certify that Mr. /Ms. BIJITH K B 1SJ14EE020

Of EEE has participated and successfully completed Five days Certification Course on ***"Substation Design (Control Protection and Facility Planning)"*** from 27th July, 2015 to 31st July, 2015 organized by the Department of Electrical & Electronics Engineering, Sapthagiri College of Engineering.

Principal
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Chikkasandra, Hesaraghatta Road,
Bangalore- 560 057

HOD, Dept of EEE

Principal

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Certificate

This is to certify that Mr. /Ms. DILIP M - 1SJ14EE025

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Department of Electrical & Electronics Engineering

Certificate Course Report

Department of EEE conducted Certificate Course: "Substation Design(Control Protection and Facility Planning)"

Guest Speaker: Dr Shiva Kumar Aradya, Professor, Dept. of EEE, Acharya Institute of technology, Bangalore - 560107.

Duration of the course: was for five days from July 27th 2015 to July 31st 2015

Course detail

Objective of the Course: The five day course made the students to be familiar with the topic The Line route should be so selected that the maintenance is easy and the line does not cause Obstruction to vehicular traffic and should be shortest, as well, consistent with engineering and economic principles. The transmission lines shall be routed, where ever possible to avoid difficult terrain and natural obstacles such as steep hills, dense forests, landslides, lakes, rivers, highly developed areas, etc. Transmission lines should not also cross school-yards.

The correct and accurate Survey results in speedy construction and saving of unnecessary alignment and realignment at the time of carrying out actual construction work. All measurements should be taken with utmost accuracy and similarly the line charts and the profiles should be prepared with great care and precaution. Where the lines are constructed over farm-land, structures and anchors shall be so located as to interfere as little as possible with farming operation. Wherever such structures and anchors become necessary, the same shall be located along fencing or in any uncultivated areas. While aligning for poles or for underground cabling, care should be exercised to determine the location of all underground services such as water mains, sewers, telephone cables, power cables, land drainage tiles, gas, and oil pipe lines etc. and adequate clearance should be provided to avoid damage.

The Transmission lines shall be routed to avoid buildings and build up areas wherever possible. The clearances of the various conductors from the ground and buildings should be taken well as per latest INDIAN ELECTRICITY RULES. Where Switchyard means collection of equipment where high voltage electricity is switched using of various components. Electrical Switchyard is usually a part of Substation where electricity is transferred from one Voltage to another for the Transmission and Distribution purpose.

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Department of Electrical & Electronics Engineering

Schedule of Certification Course

Dates	SESSION 1 (9.00am-10.30am)	SESSION 2 (11.00am-12.30pm)	SESSION 3 Hands-on Session (1.30pm-4.30pm)
27-7-2015 Monday	• Basics of functional and protective earthing Touch • step voltages in substations	• Design of earth grid-basic considerations in conductor sizing • mesh spacing Safety mesh at operating points	• Hands on Design the lightning protection of a typical HV switchyard
28-7-2015 Tuesday	• Basics of lightning and hazards • Role of shield wire and lightning masts	• Role of gravel layer in safety Transferred voltage hazard • planning isolation of outgoing services to avoid transfer voltage.	• Hands on Collections Developing a layout for the mesh and show the other connections
29-7-2015 Wednesday	• PLCC applications in protection • Communication • PLCC hardware	• Explore use of PLCC for line protection • communication Prepare an ordering specification for protection equipment	• Hands on protection schemes for all the feeders of the switchyard, • handling Connections
30-7-2015 Thursday	• DC power requirements for switchyard equipment • DC equipment configuration and specifications	• Using the data/SLD of a typical HV outdoor switchyard, work out the following: • Suggested protection schemes for all the feeders of the switchyard, its busbars and transformers	• Hands on Battery calculations basis Space planning
31-7-2015 Friday	• Busbar protection • Feeder protection • Equipment requirements for substation automation	• Protection coordination checking • Explore substation protection	• Hands on Transformer protection Test Conduction

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Conclusion: Certificate course made them comfortable with practical knowledge. Learning style adopted by students, which eventually is developed into a skill of their forte. Through this course, an ecstatic learning background paved way to a positive learning environment in the class where active participation was seen from every end. Faculty took the onus of interacting with the students personally to navigate them for the academic transition by becoming the guides by their side

It is a practice of the department to take care of any issues pertaining to the academics. In this connection department of EEE has conveyed meeting with Faculty members to discuss about any lapses with academic activities and felt the need to conduct a certificate Course. As part of Certificate course 4 faculty members were identified and assigned duties and responsibilities to carry out the Certificate course.

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