

Sapthagiri College of Engineering

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

STUDENTS FEEDBACK ON CURRICULUM

This question aire 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 in portant feedback for quality improvement of the program of studies/institution.

Academic Year	2015-14	
Branch	EEG	
Name of the Student	Canatakaha M.	THE REL
USN	1SC12EE054	

Rate the curriculum/syllabus on the following Points

SL	Statements	Excel ent		Very good	Good	Average	Below Average
NO			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?		<u>. </u>				
2	How do you rate the allocation of the credits to the courses?			_			
3	Relevance for implementation in projects		_		YAT.	T. M.	
4	How do you rate the electives offered in relation to the technological advancements?						
5	How do you rate the evaluation scheme designed for each of the course?	0					
6	How do you rate the percentage of courses having LAB components?			<u></u>			
7	Curriculum is sufficient to make you analyze the engineering problems and its suitable solution						
4	Suggestions (if any)						

Suggestions: Move wolkshop her to be conducted	Suggestions:	Moore	workstop	chan	6	be	conducted
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Signature Waraf alcer M

Principal
Sapthagiri Codege of Engineering
14/5, Chikkasandra, Hesaraghatta Main Read
Bengaluru - 560 057



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

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Academic Year	2015 -2016.	
Branch	FIF	
Name of the Student	WINAY. M	
USN	ISGIO FED 27	

SL	Statements	Ex	cellent	Very good	Good	Average	Below Average
NO			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 you rate the evaluation scheme designed for each of the course?			V			
6	How do you rate the percentage of courses having LAB components?				V		
7	Curriculum is sufficient to make you analyze the engineering problems and its suitable solution			/			
	Suggestions (if any)	G	rtifica	tion Co	rurse	le sem	red

Suggestions:

Signature (May)

Principal

Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 057



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Academic Year	15019 63015-2016.	
Branch	CBB.	
Name of the Student	Olardon Brakash Kurras	
USN	13912 6 5014.	

Rate the curriculum/syllabus on the following Points

SL	Statements	Excellent	Very good	Good	Average	Below Average
NO		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?		4			
3	Relevance for implementation in projects			L		
4	How do you rate the electives offered in relation to the technological advancements?		_			
5	How do you 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		_			
8	Suggestions (if any)	Dodukted	ansu	exally also.	Do 81	ucali

Suggestions:

Signature Judge Bolak

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	2015-16	
Branch	FFF	
Name of the Student	Ashutosh Kumar.	
USN	159 12 EE 009	

Rate the curriculum, syllabus on the following Points

SL NO	Statements	Excellent	Very good	Gooc	Average	Below Average
140		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 impl∋mentation in projects		-			
4	How do you rate the electives offered in relation to the technological advancements?					
5	How do you rate the evaluation scheme designed for each of the course?					
6	How do you rate the percentage of courses having LAB components?		1			
7	Curriculum is sufficient to make you analyze the engineering problems and its suitable solution		1			
8	Suggestions (if any)	Some & to usid	ubject erateno	ts are	Jied D	Ut redy

Suggestions:

Signature Ashulah kuna

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Sapthagiri College of Engineering

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

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	2015-16.	
Branch	F.F.F	
Name	Sumila	
Status : Work/Study	(Toway Harara)	GG FBSMan
Phone no	8128966505	IN THE BUILD

Rate the curriculum/syllabus on the following Points

SL NO	Statements	Excellent	Very good	Good	Average	Below Average
4	1771	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,		Trans.			
	knowledge, analytical abilities or broadening perspectives)		-			
3	Curriculum is sufficient to make you analyze the					
11/15	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	-			MENTH	
7	AND 4-3 (C) (2) - AND C 1 CO C C C C C C C C C C C C C C C C					DESCRIPTION OF THE PARTY OF THE
1	How do you rate the course/curriculum content that you have learnt in relation to your current job		~			MEN
8	Compatibility with industry standards					
1/15	Sundards	_				

Suggestions: Conduct hands

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Signature Sunt

Principal



Sapthagiri College of Engineering

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Year of Passing	2015-16
Branch	EEE
Name	Hosekelhore Mg
Status : Work/Study	hous
Phone no	8147402974

Rate the curriculum/syllabus on the following Points

5L NO	Statements	Excellent	Very good	Good	Average	Below Average
Transfer.		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 co you rate the learning experience in terms of their relevance to the real life application	-				
5	Ability to work in teams	West St	-			411
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: placement training should
Signature Hasekuhou.

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Year of Passing	2016
Branch	FET
Name	Rojer L Valentevan - Roser.
Status : Work/Study	Wary Tarry Harris?
Phone no	9035872165

Rate the curriculum/syllabus on the following Points

SL NO	Statements	Excellent	Very good	Good	Averag e	Below Averag e
140		5	4	3	2	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			
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		7151			
7	How do you rate the course/curriculum content that you have learnt in relation to your current job					
8	Compatibility with industry standards			<u></u>	ROLL	

	: Candu				
Signature	Pajul.	Varibe	rivetpal	Pair	



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Year of Passing	2016
Branch	EFF
Name	Pst. Krishna kiriti
Status : Work/Study	Wipso Technologies
Phone no	94492145 31

Rate the curriculum/syllabus on the following Points

SL NO	Statements		Very good	Good	Averag e	Below Averag e
		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 erms of skills, concepts, knowledge, analytical abilities or broadening perspectives)		1			
3	Curriculum is sufficent 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		1			
5	Ability to work in teams			/	MILLIE	
6	Ability to link theory to practice			1		
7	How do you rate the course/curriculum content that you have learnt in relation to your current job			1		
8	Compatibility with industry standards	/				

Suggestions:	Advised	consumits	1-10	Mened	Courtrans
ind	18tore (801)	ni) in each	18ge	91.	
	(alp)		/		

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Sapthagiri Cellege of Engineering Chikkasandra, Hesaraghatta Road,

Bangalore-560 057



Sapthagiri College of Engineering

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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	2016-15
Branch	EEE
Name of the Faculty	Jhansi K
Designation	Assistant Professor.
Subject/Sub. code	15EE42, Power Generation & Economics

Rate the curriculum/syllabus on the following Points

SL	Statements		ellent	Very good	Good	Average	Below Average
NO		lion.	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 star dards /current global scenarios and academics?			V			
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?	L	1				
5	The evaluation methods mentioned in the curriculum are sufficient for providing proper assessment?		/				
6	Curriculum is suitable to the course		V				
7	The curriculum, course of this subject increased my knowledge and perspective in the subject area		/				

Suggestions: Industrial Visit is negured to bordge gp between industrypt and dock & academics.

Signature Warner



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Academic Year	2016
Branch	FEE
Name of the Faculty	Ashwimi.c
Designation	Asst Prof
Subject/Sub. code	10EES3 Transmission & Distribution

Rate the curriculum/syl abus on the following Points

SL NO	Statements	Excellent	Very good	Good	Average	Below Average
NO		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 scenar os and academics?		w			
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?	V				
6	Curricu um is suitable to the course	1				III (143)
7	The curriculum/course of this subject increased my knowledge and perspective in the subject area	~				

Suggestions:	Indust	real 1	lisit v	segu	ied to	e the
stud	ents to	know	the	knowle	dge of Dt	sansmussin
Signature	EN OUTHER		19		O	

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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	2015-14	
Branch	EEE	
Name of the Faculty	Gum Pradanne	
Designation	Sr. Lecturer	
Subject/Sub. code	Electrical Meaburement	10000

Rate the curriculum/syllabus on the following Points

SL	Statements	Excellent	Very good	Good	Average	Below Average	
NO		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?	-	1				
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 nours?			~			
4	Suffcient reference material and books are available for the topics mentioned in the curriculum?	i					
5	The evaluation methods mentioned in the curriculum are suffcient for providing proper assessment?						
6	Curriculum is suitable to the course		THE R	/	desti	MALES IN	
7	The curriculum/course of this subject increased my knowledge and perspective in the subject area	V					

Suggestions;	
Apart from Sylabus,	additional expensions and
Cumpreson e	additional experiments are to be conducted in Lat to give better understanding
Signature Program 9	V C) Letter turner

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

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Sapthagiri College of Engineering

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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.

	156
Academic Year 20	2016
Branch	EEE
Name of the Faculty	Divya. N.S
Designation	Assistent professor.
Subject/Sub. code	15EE44, Electric Motors

Rate the curriculum/sy labus on the following Points

SL	Statements	Excellent	Very good	Good	Average	Below Average
NO		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 academ cs?	V				
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?	V				
5	The evaluation methods mentioned in the curriculum are suffcient for providing proper assessment?	~				
6	Curriculum is suitable to the course	~		THE	THE IS	di di pini
7	The curriculum/course of this subject increased my knowledge and perspective in the subject area	V				

Number of teaching house was to be incussed Suggestions:

Signature

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Bangalore- 560 057



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Phone:080-2£372800/1/2

www.sapthagiri.edu.in

Fax: 080-28372797

Department of Electrical & Electronics Engineering

06-06-2016

CIRCULAR

This is to inform that the following Curriculum Board members are requested to attend the meeting on 07/06/2016 at 10.30AM in the HODs chamber to discuss about the analyzing of curriculum syllabus of academic year 2016-17.

SI No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	Kal
2	Prof. Rekha S N	Associate Professor	Pet
3	Prof. Damodaran A	Assistant Professor	Aphor
4	Prcf. Ramya M	Assistant Professor	Range
5	Prof. Yousuf Madar	Assistant Professor	rill
6	Prof. Jhansi K	Assistant Professor	Thereile

Principal

Saptnagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Bangalore-560 057

HÓD-EEE

PROF & HOD

Department of Electrical & Electronics Engineers Sapithagini College of Engineering Bangalore - 560057



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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 06.06.2016 the curriculum board members assembled in HODs chamber for the following agenda.

AGENDA:

- Reviewing the department curriculum syllabus of academic year 2016-17.
- Reviewing the feedback analysis of various stakeholders for the academic year 2015-16.
- · Identifying the gaps.
- Action to be taken for identifying the gaps.
- The following Curriculum board members were present

SI No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	Kand
2	Prof. Rekha SN	Associate Professor	Dex
3	Prof. Ashwini C	Assistant Professor	Jehwin.c
4	Prof. Ramya M	Assistant Professor	Romit
5	Prof. Yousuf Madar	Assistant Professor	neu
6	Prof. Jhansi K	Assistant Professor	Theneile.

Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
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Department of Electrical & Electronics Engineering

SI No.	SEM	Course Title	Identified Gap
1	VII	"Power system operation and control	Lack of knowledge about Power Quality
2 VI		"Electric power	Lack of knowledge about locomotives

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 Feecback obtained from the students, faculties, alumini anc analysis of syllabus by academic committee members it was decided to conduct certification course on "Power Quality" and "Hybrid Electric Vehicle" to overcome the gaps identified in the curriculum/syllabus.

SI No.	Faculty Name	Designation	Signature
1	Dr. K N Revi	HOD	- fl
2	Prof. Rekha S N	Associate Professor	Dels
3	Prof. Dhamodaran A	Assistant Professor	John
4	Prof. Ramya M	Assistant Professor	P-mit
5	Prof. Yousuf Madar	Assistant Professor	rul
6	Prof. Jhansi K	Assistant Professor	Theneil

Principa

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

HOD, EEE

PROF & HOD Arimant of Electrical & Electronics Engineering Sapthagiri Codege of Engineering

Bangalore - 560057.



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Department of Electrical & Electronics Engineering

To

Date: 10.06.2016

IQAC Coordinator Sapthagiri College of Engineering 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 2016-17. 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 2016-17.So I request you to forward and get the approval from governing council for the same.

Thanking you,

Forwarded to Sur Osl Enclosure: Budget Proposal.

HOD ,EEE PROF & HOD

Department of Electrical & Electronics Engine Saphaghi College of Engines:

Bangainra - 560057

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Department of Electrical & Electronics Engineering

To,

IQAC Coordinator Sapthagiri College of Engineering Bangalore - 560057.

Respected Sir.

Subject: "Budget proposal for conduction of certification program Power Quality"

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 "Power Quality" from 25-Jul-2016 to 29-Jul-2016.

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.5800 for the conduction of the above mentioned program and oblige.

Estimated Budget

SI. No.	Item	Quantity	Unit Cost in Rs.	Total cost in Rs.
1	Certificates	160	30	4800
2	Course Material and others			1000
Grai	nd Total			5800

Frowarded the originalian arministration

Department of Electrical & Electronics Engineer Santhagiri College of Engineering Bangalore - 560057.



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Department of Electrical & Electronics Engineering

07-07-2016

CIRCULAR

This is to inform that the following Curriculum Board members are requested to attend the meeting on 08/07/2016 at 10.30AM in the HODs chamber to discuss about the certification course.

SI No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	Kari
2	Prof. Rekha SN	Associate Professor	Rek
3	Prof. Dhamodaran A	Assistant Professor	Solow
4	Prof. Ramya M	Assistant Professor	Runt
5	Prof. Yousuf Madar	Assistant Professor	TH
6	Prof. Jhansi K	Assistant Professor	thenery

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

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



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Phone:080-233728C0/1/2 www.sapthagiri.edu.in

Fax: 080-28372797

Department of Electrical & Electronics Engineering

Date: 07-07-2016

To,

Dr Dinesh Associate Professor, Department of EEE R V College Of Engineering, Bangalore-560059.

Respected Sir,

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

Department of Electrical and Electronics Engineering have planned to conduct a certification program titled "Power Quality" for EEE students from 25-07-2016 to 29-07-2016. 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 08/07/2016 10.30AM. We look forward to welcome you at SCE.

Thanking you

Frircipal

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Bangalose- 560 057

Department of Electrical & Electronics Engine --Sapthagiri Coilege of Engineering
Bangalore - 560057



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Department of Electrical & Electronics Engineering

Minutes of Meeting

A meeting was conducted on 08-Jul-2016 in EEE HOD's Chamber to discuss and approve the following about the 5 days Certification Course for EEE Students.

- · Course Title: "Power Quality"
- Resource Personnel: Dr Dinesh, Associate Professor, Dept. of EEE, R V College Of Engineering, Eangalore-560059.
- Course Duration & Date: 5 Days from 25-Jul-2016 to 29-Jul-2016
- Course Content

Dates	SESSION 1 (9.00am-10.30am)	SESSION 2 (11.00am-12.30pm)	SESSION 3 (1.30pm-4.30pm)
25-07-2016 Monday	Power quality – definition Common types of power quality	 Reliability indicators (SAIDI, SAIFI, and etc.) used by utilities, Measures to improve reliability. 	Hands on Voltage sag and examples—problems some reasons for these Voltage
26-07-2016 Tuesday	Unbalance in power systems Symmetrical components for quanticying the	Mitigation measures Definition of harmonics Fourier theorem for analysis	Hands on Collections Flicker and control by SVC equipment
27-07-2016 Wednesday	Analysis of power quality problems engine-based uninterrupted supplies	Power quality site studies types of studies Study using a power quality analyzer	Hands on measurement Recording the measurements Analysis of the
28-07-2016 Thursday	 Problems caused by unbalanced current/voltage 	Harmonic control at source. Use of automatic circuit reclosers.	Hands on Reason for harmonics Problems caused by harmonics
29-07-2016 Friday	Emergency power, electronic uninterrupted power supply equipment,	 Over-voltage and its effect Transient over-voltage and the role of surge 	Hands on Active and passive filters and comparison and TEST conduction

Principal



(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

The following Curriculum board members were present

SI No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	Kan
2	Prof. Rekha SN	Associate Professor	Par
3	Prof. Damodaran A	Assistant Professor	Aghan
4	Prof. Ramya M	Assistant Professor	Roma
5	Prof. Yousuf Madar	Assistant Professor	reul
6	Prof. Jhansi K	Assistant Professor	Thearth
7	Prof. Dr Dinesh	Guest Speaker	W.

PROF & HOL

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



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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 "POWER QUALITY" from 25-July-2016 to 29-July-2016

All the EEE students must attend the course compulsorily.

Signature of HOI

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



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Department of Electrical & Electronics Engineering

Certification Program: "Power Quality"

Lesson Planner

Dates	SESSION 1 (9.00am-10.30am)	SESSION 2 (11.00am-12.30pm)	SESSION 3 (1.30pm-4.30pm)	No. of Hours
25-07-2016 Monday	Power quality — definition Common types of power quality	 Reliability indicators (SAIDI, SAIFI, and etc.) used by utilities, Measures to improve reliability. 	Hands on Voltage sag and examples—problems some reasons for these Voltage	6
26-07-2016 Tuesday	systems Symmetrical components for quartifying the	Mitigation measures Definition of harmonics Fourier theorem for analysis	Hands on Collections Flicker and control by SVC equipment	6
27-07-2016 Wednesday	 Analysis o f power quality problems engine-based uninterrupted supplies 	Power quality site studies types of studies Study using a power quality analyzer	Hands on measurement Recording the measurements Analysis of the	6
Thursday	Problems caused by unbalanced current/voltage		Hands on Reason for harmonics	6
29-07-2016 Friday	Emergency power, electronic uninterrupted power supply equipment,	 Over-voltage and its effect Transient over-voltage and the role of surge protection 	Hands on Active and passive filters and comparison and TEST conduction	6
		TOTAL		30

HOD

PROF & HOD

Department of Electrical & Electronics Engineering Sapthagiri Collega of Eagineering Bangatore - 560067.



14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057

Department of Electrical and Electronics Engineering

5 days Certification Program on "Power Quality"

Students Enrollment

Academic Year -2016-17(ODD)

SL.No	USN	Student Name	Signature
1	1SG13EE010	ASHWINI KUMAR -	John kun
2	1SG13EE015	GHANDAN KUMAR	Chardy Fungy
3	1SG13EE048	SANDHYA C	Sandhyaic
4	1SG13FF051	SATYA SUNDAR	Entra Server
5	1SG13FE053	SHALINI MISHRA	Therein Mishru
6	1SG14FF002	ABHISHEK B REVANKAR	Apricial & lanto
7	1SG14FF004	AKASH PANDEY	Atompordey.
8	1SG-4FE005	AMAN KUMAR	
9	1SG*4FF006	AMIT KUMAR SAH	Frankener
10	1SG14FF007		they are
11	1SG14FE007	AMRIT RAJ	(A was tol)
12		ANITHA B	12 Arita
13	1SG14FF009	ANJAL SHARMA	Angelichman
14	1SG14EE010	ANKIT JHA	The
15	1SG14EF011	ANKIT PRAKASH	Angran.
16	1SG14EE012	ANKUR JAYARAJ	John July
17	1SG14EE013	ANSHUMAN PANDEY	thoupmany.
18	1SG14FF014	ANUSHA T.S	Amune V-5
19	1SG14FE015	AFCHANA S	A Archana \$
1.774	1SG14FF017	AFPITHA M .I	schritte Mit
20	1SG14FF018	ARVIND B R	Live & Janier
21	1SG14FE020	BL ITH K B	K. D. Bart
22	1SG14EE021	BISHAL KUMAR GUPTHA	Bob Snot
23	1SG14FE022	BLESSY PHILIP M	Sleegyphip M
24	1SG14EE023	CHANDAN KUMAR JAISWAL	Chuda hun Frian
25	1SG14FF024	DANAYYA CHANNAYYA	· Derman Chim
26	1SG14FF025	DILIPM	A Dr. P
27	1SG14FF026	DIVYA M	Armely
28	1SG14EE027	DIVYANSHU MISHRA	Limber Home
29	1SG14=E028	GANESH KUMAR T.C.	Gorest land-C
30	1SG14=F030	HEMALATHA H G	Hamelon MR
31	1SG14EE031	JSHANI SHARMA	1 Shunk ru
32	1SG14FE032	JYCTHI M	- Table
33			13 05.2
34	1SG14FF034	KANYA J.R	tanga.
35	1SG14EE035	KIRAN D	V WILL
16	1SG14FF037	KRUTHIKA K	Frathiralk.
37	1SG14FE038	KUSHAL N	Kenner N
18	1SG14EE039	MADHUSHREE S	Wardhiropoer &
39	1SG14EE040	MAHESH KUMAR M	Noter Kymi. M.
10	1SG14EE041	MANJUNATH /	Mensing
1	1SG14FE042	MANJUNATHY	mangund
	1SG14EE043	MANOJMG	Meeris ?



14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057

Department of Electrical and Electronics Engineering

USN	Student Name	Signature
1SG14FF044	MANOJ R	(R) Whani
1SG14EE045	MEGHANA G V	Romana.V
1SG14FEC47	MITHUN H V	A 1945.
1SG14EEC43	NAVEEN KUMAR SHANKAR	Harred Kungar hankar
1SG14EEC50		water
1SG14EEC51		Wikhilman
1SG14FE052		Padulie R
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1SG14EE070	SHILPA H.S.	
1SG14FF072	SNEHA S	12000
1SG14EE073	SOWBHAGYA S	Sandas.
1SG14EE074	SRINIVAS J	gratetise
1SG14EE075	SUMANRAJ	stopping ?
1SG14EE073	SUMATHLG	Suratte G
1SG14EE077	SUSHMA R	· Solunda
1SG14EE073	SUSHMITHA L	
1SG14FE083	TEJAS S	Ejass.
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1SG15EE403 1SG15EE408	DEEPIKA H.C.	34.6k
	1SG14EF044 1SG14EF045 1SG14EFC47 1SG14EFC43 1SG14EFC50 1SG14EFC51 1SG14EF052 1SG14EF053 1SG14EF054 1SG14EF055 1SG14EF056 1SG14EF055 1SG14EF055 1SG14EF065 1SG14EF065 1SG14EF066 1SG14EF066 1SG14EF066 1SG14EF067 1SG14EF070 1SG14EF070 1SG14EF073 1SG14EF073 1SG14EF074 1SG14EF075 1SG14EF073 1SG14EF083 1SG14EF084 1SG14EF084 1SG14EF086 1SG15EF400 1SG15EF400 1SG15EF401	1SG14EF044 MANOJ R 1SG14EF045 MEGHANA G V 1SG14EFC47 MITHUN H V 1SG14EFC43 NAVEEN KUMAR SHANKAR 1SG14EFC50 NETHRAVATHI K 1SG14EFC51 NIKHIL M G 1SG14EFC52 PADMINI R 1SG14EFC53 PALLAVI S 1SG14EFC55 PAVAN KUMAR D V 1SG14EFC56 PAVAN KUMAR H D 1SG14EFC56 PAVITHRA C 1SG14EFC57 PAVITHRA N M 1SG14EFC55 PAVAN KUMAR R P 1SG14EFC56 RAKSHITH S 1SG14EFC56 RAVIKIRAN H 1SG14EFC56 RAVIKIRAN H 1SG14EFC56 RAVIKIRAN H 1SG14EFC57 SADAM HUSSAIN K A 1SG14EFC72 SNEHA S 1SG14EFC73 SOWBHAGYA S 1SG14EFC74 SRINIVAS J 1SG14EFC75 SUMANRAJ 1SG14EFC75 SUMANRAJ 1SG14EFC76 SUMANRAJ 1SG14EFC77 SUSHMA R 1SG14EFC77 SUSHMA R 1SG14EFC78 SUMATHI G 1SG14EFC79 SUSHMITHA I 1SG14EFC79 VISHMA R 1SG14EFC79

(program coordinator)

PROF & HRODD

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



Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057

Department of Electrical and Electronics Engineering

5 days Certification Program on "Power Quality"

Students Enrollment

Academic Year-2016-17(ODD)

SLNo	USN	Student Name	Signature
1	1SG15EE409	DEVARAJA K	
2	1SG15EE412		M. P. TI COL
3	1SG15FF415	CONTRACTOR	H PV Thrishul
4	1SG15FF416	KIRAN KUMAR H	K
5	1SG15EF417		Kron-
6	1SG15FF418		Carlos 1 S
7	1SG15FF419	The state of the s	il aminan 2
٤	1SG15FF420	The state of the s	al mayer -
c	1SG15FF421	MANOHAR K	L'antable.
10	1SG15FF423		Victoria (
11	1SG15FF424	- MARIELLA GAININAR	youren Embor
12	1SG15FF425	NAGARAJUH	Meyony. 1
13	1SG15FF427	NAGENDRA R GOLITHAMAS	Named Suits
14		NANDEESH C	Manaerer C
15	1SG15FF428	NEHA	Nota.
100	1SG15FF432	SANDESHR	Ludward
16.	1SG15FF434	SANTHOSHA K N	Suntrant N:
17	1SG15FF436	SHANTHI PRIYA S.J.	Shut (miss.)
18	1SG15FF437	SHREF.IA T	Shreed
19	1SG15FF438	SINDHILK P	Sindlykit
20	1SG15FF439	SONU SAGAR K	Sonugaik
21	1SG15FF441	SILITH EREDRICK A	Sing &A
22	1SG15FF442	SUNIL R.G.	Smil Boy
23	1SG15FF443	SUSHMA K P	Sushmerk.P
24	1SG15FF444	TEJASH R N	1834 B.V
25	1SG15FF445	TEJASWINI K.C.	TEJOBL BL
26	1SG15FF448	LIMESHAKS	() medica Kis.
77	1SG15FF450	VARUN KUMAR G	Marun.
8	1SG15FF451	VARUN G	Clare.
9	1SG15EE005	ANNAPURNA SINGH	Aniepina.
30	1SG15EE006	ANTONY ROSHAN JOY D'SOUZA	Anthropolicy 2
1	1SG15FF007	ANUP H V	-Austra
12	1SG15EE008	ANUSHA B	Anusha B
13	1SG15EE009	ANUSHA K	Annela
4	1SG15FF010	AFOORVA K.G.	Appire LR
5	1SG15EE011	AFPITA SHARMA	stroit shive
6	1SG15EE012	AFPITHA SRINIVASA MURTHY	Agan Con. h to
7	1SG15EE013	AFUNA B P	America
8	1SG15FE014	ATHIYA MOHAMMADI	Ahra Ki
9	1SG15FF015	V	Dana 100
0	1SG15FE017	BALAJI VENKATESH KALKONDA C.S.MOHANA	Mohan Olende.



14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-550057

Department of Electrical and Electronics Engineering

SL.No	USN	Student Name	Signature
41	1SG15EE019	CHAITHRA S	Mulher
42	1SG15FF020		1000
43	1SG15EE021	1000000	11.21.2
44	1SG15FF022		Marcae.
45	1SG15FF023		innum,
46	1SG15FE024	CHARITHA M.C	
47	1SG15EF025		1000
48	1SG15EE026	D MANISH NAICKER	1 KNOWE
49	1SG15EE027	DARSHAN N	Davares
50	1SG15FF028	DHANUSH P	Q.C.
51	1SG15FF029	G TEJASHREE	Coroxi
52	1SG15FE030	GAJENDRA N	OR IN
53	1SG15EE031	GANESH RAO S	(d) 34 5
54	1SG15FF033	GIRISH V	acour V
55	1SG15EE034	GURURAJA D	Gun
56	1SG15FE035	HARSHITH GOWDA S	ens D
57	1SG15EE036	HARSHITHA V	Harry
58	1SG15FF037	IRENE JACOB	10000
59	1SG15FF038	LEEVITHA A	Raco
60	1SG15FF039	E LAVENYA	
61	1SG15FE040		The state of the s
62	1SG15FE041	KARTHIK B	The state of the s
63	1SG15FF042	KEERTHANA R	Keselhanio
64	1SG15FE042	LOHITH'S	Coto
65	1SG15FF046	WAHENDHAR K	Nukete
66	1SG15EE046	MANASA H	MA
67	1SG15EE047 1SG15EE048	MANISH MANJUNATH NARAYANA	98-
68	1SG15EE048	MANJULA S	- Borac
69	1SG15EE049 1SG15EE050	MANOHARA S	Munchales
70	1SG15EE050 1SG15EE051	MANOJBN	Mainel
71		NLONAN	Mouto
72	1SG15FE052	MEGHANA N	Muy Hera
73	1SG15FE053	MEGHANA S HULIKAI	Dickores Vitaniadas
		MOHAMED JAFFER SADDIO	parts 1
74	1SG15FF055	MONISH N G	2
7.5	1SG15FF056	MOUNIKA G.B.	Nowo- Fil
76		NAGARA.I	AL R.
		NAVYA S R	Marson
		NETHRA R	De
923		LITHYA.J.	De white!
n l	1SG15EE061	PAWAN KUMAR D	farones 5-

(program coordinator)

PROFTOD

spartment of Electrical & Electronics En-league Saptragirl College of Engineer. Bangalore - 560057.



Sapthagiri College of Engineering 14/5. Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 Department of Electrical and Engineering

5 days Certification Program on "Power Quality" Attendance

SI.	HPM	Children No.	25-07	-2016	26-07	7-2016	27-07	-2016	28-07	-2016	2	9-07-20	16
No	USN	Student Name	MS	AS	MS	AS	MS	AS	MS	AS	MS	AS	Tes
1	1SG15EE409	DEVARAJA K	1	5	3	Н	5	6	7	8	9	9	10
2	1SG15EE412	H P THRISHUL	1	5	3	Н	5	6	7	8	9	1.0	11
3	1SG15EE415	KEERTHANA A BAVASAR	1	2	3	Н	4	5	6	7	8	9	10
4	1SG15EE416	KIRAN KUMAR H	1	2	3	4	5	5	6	٦	8	9	10
5	1SG15EE417	KRISHNA REDDY	1	2	3	4	5	6	7	8	9	10	17
6	1SG15EE418	MANJUNATH S	1	2	3	4	5	6	7	+	8	9	10
7	1SG15EE419	MANJUNATH R	1	2	3	4	5	6	7	8	9	10	11
8	1SG15EE420	MANJUNATH S	1	2	3	4	5	6	7	8	9	10	11
9	1SG15EE421	MANOHAR K	1	2	3	Ч	5	6	1	8	9	10	11
10	1SG15EE423	MOUNESH A KAMBAR	1	2	3	3	4	5	6	٦	8	9	10
11	1SG15EE424	NAGARAJU H	1	5	3	H	5	6	6	1	8	9	10
12	1SG15EE425	NAGENDRA R GOUTHAMAS	1	2	3	4	5	5	6	1	8	9	10
13	1SG15EE427	NANDEESH C	1	2	3	4	5	6	1	8	9	10	1)
14	1SG15EE428	NEHA.	1	2	3	Н	5	6	1	8	9	10	11
15	1SG15EE432	SANCESHR	1	2	3	3	7	5	6	1	8	9	16
16	1SG15EE434	SANTHOSHA K N	1	2	2	3	4	5	6)	8	9	10
17	1SG15EE436	SHANTHI FRIYA S J	1	2	3	4	5	6	١	7	8	9	10
18	1SG15EE437	SHREEJA T	1	2	3	Н	6	6	1	8	8	9	10
19	1SG15EE438	SINDHU K P	1	2	3	Н	Н	5	6	٦	8	9	10
20	1SG15EE439	SONL SAGAR K	1	2	3	H	5	Ь	٦	8	9	10	1)
21	1SG15EE441	SUJITH FREDRICK A	1	2	3	4	5	6	ì	8	9	10	11
22	1SG15EE442	SUNIL B G	1	2	3	Н	5	5	.0	7	8	9	10
23	1SG-5EE443	SUSHMA K F	1	2	3	Н	H	5	ė)	8	9	10
24	1SG*5EE444	TEJASH B N	1	2	3	Ч	5	6	7	8	9	10	1
25	1SG15EE445	TEJASWINI K.C.	1	2	3	н	5	6	1	8	9	10	u
26	1SG15EE448	UMESHA K S	1	2	3	M	5	6	7	8	9	10))
27	1SG15EE450	VARUN KUMAR G	1	2	3	4	5	6	7	7	8	9	10
28	1SG15EE451	VARU1 G	1	2	3	4	5	ь	7	8	9	10	11
29	1SG15EE005	ANNAFJRNA SINGH	W	12	3	4	5	6	7	8	9	10	1,
30	1SG15EE006	ANTONY ROSHAN JOY D'SOUZA	1	1	3	4	5	Ь	7	8	9	10	11



Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 Department of Electrical and Engineering

SI.	USN	Student Name	25-0	7-2016	26-0	07-2016	27-	07-2016	28-	07-2016		29-07-2	016
No	5011	Suident Name	MS	AS	MS	AS	MS	AS	MS	AS	-		Test
31	1SG15EE007	ANJPHV	1	2	3	14	6	6	7	8	9	1t	11
32	1SG15EE008	ANUSHA B	1	2	3	H	5	6	7	8	9	10	1 300
33	1SG15EE009	ANJSHA K	1	2	3	H	5	6	7	8	9	10	11
34	1SG15EE010	APOORVA F. G	1	2	3		4	5	6	7	8	9	10
35	1SG15EE011	ARFITA SHARMA	ı	7	3	4	5	6	7	8	9	10	11
36	1SG15EE012	AFPITHA SFIN VASA MURTHY	1	2	3	H	5	6	7	8	8	9	10
37	1SG15EE013	ARUNA B P	1	2	3	4	5	6	7	8	9	10	The south
38	1SG15EE014	ATHIYA MOHAMMADI	1	2	3	4	5	6	7	8	9	10	17
39	1SG15EE015	BALSJI VENKATESH KALKONDA	1	2	3	4	5	6	+	8	9	10	11
40	1SG15EE017	C S MOHANA	1	2	3	Н	5	6	+	+	8	9	10
41	1SG15EE019	CHA THRA S	1	2	3	Н	5	6	ì	-	9	9	10
42	1SG15EE020	CHANDAN G	1	2	3	7	5	6	7	8	9	10	11
43	1SG15EE021	CHAILDAN GOWDA P	1	5	3	4	5	6	7	8	9	10	11
44	1SG15EE022	CHANDAN KUMAR	1	2	3	H	5	6	7	8	8	9	10
45	1SG15EE023	CHANIDANA B	1	2	3	4	5	6	7	8	9	10	10
46	1SG15EE024	CHAF. THA M C	1	2	3	4	5	6	7	8	9	10	
47	1SG15EE025	CHAYA K	1	2	3	н	5	6	7	8	9	10	1)
48	1SG15EE026	E MANISH NAIDKER	Ì	2	3	4	5	6	6	7	8	9	10
49	1SG15EE027	DARSHAN N	1	2	3	4	5	5	6	7	8	9	10
50	1SG15EE028	DHANJSH P	1	2	3	H	5	6	7-	8	a	10	1)
51	1SG15EE029	G TEJASHREE	1	2	3	H	5	6	7	8	9	10	1)
52	1SG15EE030	GAJENDRA N	1	2	3	4	5	Ь	7	8	9	10	11
53	1SG15EE031	GANESH RAO S	1	2	3	14	#1	5	6	7	8	9	10
54	1SG15EE033	GIRISH V	L	2	3	H	5	6	+	8	9	10	11
55	1SG15EE034	GURLPAJA D	1	2	3	4	5	6	+	8	9	10	11
56	1SG15EE035	HARSHITH GOV/DA S	1	2	3	H	5	6	+	8	o	10	1)
57	1SG15EE036	HARSHITHA V	1	2_	3	h	5	6	-	8	9	10	11
58	1SG15EE037	IRENE JACOB	١	2	3	Н	5	ь	+	3	9	10	11
59	1SG15EE038	JEEVITHA A	n	2	3	4	5	6	+	8	9	10	1)
60	1SG15EE039	K LAVENYA	V	2	2	3	Ч	6	6	7	8	9	10
61	1SG15EE040	KART-I-€B	1	/	3	4	5	6	7	8	9	10	11



Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 Department of Electrical and Engineering

SI.	USN	Student Name	25-0	07-2016	26-0	7-2016	27-0	7-2016	23-0	7-2016		29-07-2	016
No		Ottadent Name	MS	AS	MS	AS	MS	AS	MS	AS	MS	AS	Test
62	1SG15EE041	KEERTHANA R	1	2	3	h	5	6	7-	8	9	10	1)
63	1SG15EE042	LOHITH S	1	2	3	H	6	6	-	8	9	10	11
64	1SG15EE045	MAHENDHAR K	1	2	3	4	-	6	7	8	9	10	
65	1SG15EE046	MANASA H	1	2	3	4	5	6	7	8	9	10	111
66	1SG15EE047	MANISH MANJUNATH	1	2	3	14	5	Ь	7	8	9	7.00	
67	1SG15EE048	MANJULA S	1	2	2	3		5	6	7	9	10	
68	1SG15EE049	MANOHARA S	1	2	3	H	5	6	7	8	9	10	
69	1SG15EE050	MANOJ B N		2	3	4	5	6	7	8	8	9	17
70	1SG15EE051	MANOJ N	,	2	3	4	5	6	7	8	9	10	10
71	1SG15EE052	MEGHANA N	t	2	3	4	5	6	2.4		9		1)
72	1SG15EE053	MEGHANA S HULIKAL	i	2	3	4	5	6	7	8		10	1)
73	1SG15EE054	MOHAMED JAFFER SADDIQ	1	2	3	4	5	6	7	8	9	10	1)
74	1SG15EE055	MONISH N G	1	2	3	3	4	5	,	9281	8	10	100
75	1SG15EE056	MOUNIKA G B	1	2	3	4	5	6	4	7	9	-	10
76	1SG15EE057	NAGARAJ	1	2	3	4	5				9	10	11
77	1SG15EE058	NAVYA S R	1	2	3	4	6	6	7	8	9	10	
78	1SG15EE059	NETHRA R	1	2	3	4	5	6	+	8	9	1885 V 197	1)
79	1SG15EE060	NITHYA J	1	2	3	Ч	7	5	5	11571	8	9	11
30	1SG15EE061	PAWAN KUMAR D	1	2	3	4	5	6	4	8	9		10
		Signature	11	TH	SK.	14	it	St	1	J.	14	10 Th	gr.

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

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Bangalore-560 057



Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-56005? Department of Electrical and Engineering

5 days Certification Program on "Power Quality"

Attendance

SI	IICN	The state of the s	25	-07-2016	26	-07-2016	1	27 2212	1000	W 76-33			
No	,	Student Name	MS				-	-07-2016		7-2016		29-07-2	016
1	1SG13EE010	ASHWINI KLMAR	1	7	3		5	1,10	MS	AS	MS	AS	Tes
2	1SG13FF015		1	2	3	H	5	5	1	8	9	10	111
3	1SG13EE048	SANDHYA C	1	2	3	-	-	-	5 5	-	8	9	10
4	1SG13EE051		1	2	3	L			7	7	8	9	10
5	1SG13EE053	SHALINI M SHRA	1	12	3	4		6	7	8	9	10	-
6	1SG14EE002	ABHISHEK B REVANKAR	1	2	3	H	V 1000		7	8	9	10	11
7	1SG14EE004	AKASH PANDEY	1	2	3		5	-	2	-	9	10	11
8	1SG14EE005	AMAN KUMAR	1	12	3	H	5		7	3	9	9	10
9	1SG14FF006	AMIT KUMAR SAH	1	2	3	H	5	6	1	8	8	9	16
10	1SG14EE007	AMRIT RAJ	1	2	3	Н	5	6	+ }		9	10	11
11	1SG14FE008	ANITHA B	1	2	3	H	5	6	+	8	Of	10	11
12	1SG14EE009	ANJAL SHARMA	1	2	2	3	H	6	+	8	9	10	11
13	1SG14EE010	ANKIT JHA	1	2	3	14	-	5	6	>	8	9	10
14	1SG14FE011	ANKIT PRAKASH	1	2	3	4	-	6	+	8	9	10	11
15	1SG14FF012	ANKUR JAYAFA I	1	2		3	5	6	Ь	-	8	9	10
16	1SG14EE013	ANSHUMAN PANDEY	1	2	3	14	5	5	6	>	8_	9	10
17	1SG14EE014	ANUSHA T S	1	2			1	6	6	7	8	9	10
18	1SG14EE015	ARCHANA S	1	2	3	4	5	5	6	+	8	9	10
19	1SG14EF017	ARPITHA M.	1	2	3	4	5	6	7	+	8	9	10
20	1SG14FF018	ARVIND B.R.	1	2	3	4	5	6	7	8	9	1 6	11
21	1SG14EE020	BLIITH K B	1	2	3	4	5	6	7	8	9	10	U
22	1SG14EE021	BISHAL KUMAF GUPTHA	1	2	3		5	6	7	8	9	10	11
23	1SG14EE022	BLESSY PHILIP M	1	2	_	4	5	6	+	8	٩	70	11
24	1SG14FF023	CHANDAN KI MAR JAISWAI	1	2	3	4	5	6	7	8		10	11
25	1SG14FF024	DANAYYA CHANNAYYA HIREMAT	1	2	3	4	5	6	3	8	9	01	11
26	1SG14EE025	DILIP M	1	2		4		6	4	2	9	-	11
27	1SG14EE026	DIVYA M	1	2	3		5	Ь	7	8	9	9	16
28	1SG14EE027	DIVYANSHU MISHRA	1	2	3	4		6	_	3	9	The second second	11
29	1SG14EE028	GANESH KUMAR T.C.	1	2	3	4	5	6	6	+	-2		(0
30	1SG14EE030	HEMALATHA H.G	1		3	4	5	6	+	8		10	11
31	1SG14EE031	ISHANI SHARMA	1	2	-	4	5	6	7	3	9	10	11
32	1SG14EE032	JYOTHI M	1	2	3	4	5	6	+	-		10	11
33	1SG14EE034	KAVYAJR			3	4	F	6	7	8	9		11
34	1SG14FE035	KIRAN D	1	2	3	4	5	,6	+	9	-	transfer of the same	1)
35	1SG14EE037	KRUTHIKA K	1	2		H	5	6	6	7		9 11	D
36	1SG14EE038	KUSHAL N	-	2_	3	4	5	6			9	105)
37	1SG14EE039	MADHUSHREE S	1	2	3	H	5	6	7		91	~	1
38	1SG14FE040	MAHESH KUMAR N	,	2	3	4	5	6	100	8	-	-	11
39	1SG14EE041	MANJUNATH	-	_	3	4	5	5	7 .		-	1	10
40		MANJUNATH T	1	- 1 Total	3		5	ь				10	12
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SI.	HON	Student Name	25	-07-2016	3 26	-07-2016	27	-07-2016	28-	07-2016		29-07-2	010
No	The state of	Ottaent Hame	MS	S AS	MS	AS	-				MS	AS	-
44	1SG14EF047	MITHUN H V	1	2	3	4	5	6	7	8	9		
45	1SG14FF048	NAVEEN KUMAR SHANKAR NAIK	1	2		3	H	5	6	7	8	10	
46	1SG14EE050	NETHRAVATH K	1	2	3	14	5	6	1	8	9	9	10
47	1SG14FE051	NIKHIL M G	1	2	2	3	14		6	7	8	10	-
48	1SG14FF052	PADMINI R	4	2	3	14	5	6		8	9	9	10
49	1SG14EE053	PALLAVIS	1	2	3	4	5	6	7	8		100000	1000
50	1SG14EE054	PAVAN KUMAR D V	1	2	3	14	5	6	1	1	9	10	10
51	1SG14EE055	PAVAN KUMAR H D	1	2	3	4	5	6	1.1	8	9		
52	1SG14EE056	PAVITHRA C	1	2	3	140	5	B	17	8	9	10	И
53	1SG14EE057	PAVITHRA N M	1	2	3	4	3	6	1	8	a	10	111
54	1SG14EE058	POORVA H	1	2	3	4	5	6	7	8	q	10	1
55	1SG14EE059	PRAGATHI S	1	2	3	4	5	6	H	8	9	10	100000
56	1SG14EE361	RAKSHITH S	1	2	3	4	5	6	2	8	1	10	11
57	1SG14EE062	RAMKUMAR R P	1	2	3	4	5	6	7		9	10	11
58	1SG14FE064	RANJITHA K	1	2	3	3		5	5	7		9	10
59	1SG14EE065	RAVIKIRAN H	1	2	2	3	4	4	5	6	3	9	10
60	1SG14EE066	RITU KUMARI	1	2	3	4	5	6	1				9
61	1SG14EE067	SADAM HUSSAIN K A	1	2	3	4	5	6	7	8	9	10	11
62	1SG14EEC68	SANIYA ANJUM P	1	9	3	H	5	5	5	F-1773.	-	9	11
63	1SG14EEC70	SHILPA H S	1	2	3	3	4	5	6	7	8	-	10
64	1SG14EE072	SNEHA S	1	2	3	H	5	6	7	8	9	9	10
65	1SG14FF073	SOWBHAGYA S	1	9	3	4	5	6	7	8	a	10	4
66	1SG14EE074	SRINIVASJ	1	2	3	3	4	5	6	7	-1	10	11
67	1SG14EE075	SUMANRAJ	1	2	3	u	5	6	7	8	8	9	10
68	1SG14EE076	SUMATHI G	1	9	3	4	5	6	7	3	8	10	11
69	1SG14FE077	SUSHMA R	1	2	3	H	5	6	7	-		9	(0
70	1SG14EE078	SUSHMITHA L	1	2	3	4	5	6	7	8	9	10	11
71	1SG14EE080	TEJAS S	1	2	3	4	5	6	6	8	9	9	10
72	1SG14EE081	UPENDRA R	1	2	3	H	5	6	7				10
73	1SG14EE083	VADDIREDDY	1	2	3	4	5	6	7	8	9	10	11
74	1SG14FF084	VIKRANT KUMAR PANDEY	1	2	3	3	5	6		100000000000000000000000000000000000000	9	10	11
75	1SG14EE0E6	VISHWANATH M	1	1	3	4	2	0	7	8	9	10	11
76	1SG15EE400	AKHILESH B R	1	9	3	4	5	6	4			10	11
77	1SG15EE401	ARPITHA B.G	1_	1	3	3	5	6	7	g	9	10	11
78	1SG15EE402	ARUN S RAJ	1	2	3	4	5	6	7	8	9	10	11
	1SG15EE407	DARSHAN R	1,	2	3	u	6-	6	_			10	11
0	1SG15EE403	DEEPIKA H C	1	2	3	Y	5	6	7	8	100 march 100 ma	9	11
		Signature	(F)	P	200	(P)	(B)		10	-	B		11 D

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Principal



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Department of Electrical & Electronics Engineering

5 days Certification Course on "POWER QUALITY"

Test Time Table

SI. No.	DATE	DAY	TIMINGS
1	29-07-2016	FRIDAY	4.30PM-5.30PM

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

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5 days Certification Course on "POWER QUALITY"

Question Paper

Duration: 1hr Maximum marks: 40

Note: Question number 1-20 (1M each)

Question number 21-24 (5M each)

Answer all the Questions:

1. The capacitance of the transmission line will be affected if the distance between conductors and earth is varied.

- a) True
- b) False
- 2. The inductance of the transmission line will be affected if the distance between conductors an earth is varie
- a) True
- b) false
- 3. The sending end voltage of the transmission line controls the
- a) active power
- b) reactive power
- c) (a) and (b) beth
- d) None of the above
- 4. The frequency of the power system control the
- a) Active power
- b) Reactive power
- c) (a) and (b) both
- d) None of them

Pryneipal

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5. Em	merate three conditi	cas which have the	transient state	instability in the	power system
-------	----------------------	--------------------	-----------------	--------------------	--------------

- a) Switching operation on the transmission line
- b) Any short circuits
- c) Excitation loss in the generator
- 6. Which of the following equipment one will choose to study the stability of A.C. power system?
- a) Energy meter
- b) Network analyser
- c) Network synthesizer
- d) (b) or (c)
- 7. The breaking torque which plugging the machine at zero speed will be
- a) Zero
- b) High
- c) Small
- d) None of the above
- The dynamic breaking of the machine offers the highest breaking torque in comparison to other breaking methods.
- a) True
- b) False
- 9. The drop in the terminal voltage of the shunt generator on load may be attributed to
- a) Increase in armature resistance
- b) Drop in field current due to armature reaction
- c) Drop in field current due to drop in armature resistance
- d) (b) and (c) both

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- 10. If the load is not connected to the d.c. series motor then
- a) It will not build up the voltage
- b) It will build up very high voltage
- c) It will have very low speed (1) none of the above
- corona loss in the power lines is more in winter season than the summer season.
- a) True
- b) False
- 12. The single phasing relays are used for the protection of
- a) Single phase motor only
- b) Two-phase motors only
- c) Two single phase motor running in parallel
- d) Three phase motors
- 13. Two protection zone in the electrical transmission system is decided
- a) Location of PT
- b) Location of CT
- c) Relay's size
- d) Relay's sensitivity
- 14. Which of the following device will receive Voltage Surge first traveling on the transmission line
- a) Step-down transformer
- b) Relays
- c) Switchgear
- d) Lightning arresters
- 15. The fault impedance of the line is
- a) Less than the impedance of healthy line
- b) More than the impedance of healthy line
- c) Equal to the impedance of the healthy line
- d) None of the above
- 16. Which of the following parameter can be neglected for a short line?

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- a) Resistance
- b) Inductance
- c) Reactance
- d) Capacitance
- 17. The stability of a salient pole alternators is better than the stability of a non-salient pole alternators.
- a) True
- b) False
- 18. Series reactors should have
- a) High resistance
- b) Low resistance
- c) High impedance
- d) Low impedance
- 19. Which of the following requency variation for power frequency is as per IS?
- a) 2.5%
- b) 5%
- c) ±5%
- $d) \pm 2.5\%$
- 20. Which of the following device will be preferred to control the power system voltage?
- a) Transformers
- b) Shunt capacitors
- c) Series capacitors
- d) Electronic amplifiers
- 21. What is Power Quality?
- 22. What are the commonly used terms that describe the parameters of electrical power that describe or measure Power Quality?
- 23. What are the types of Power Quality solutions available on the market today?
- 24. How can Power Quality problems be detected?

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Approved by Academic Committee Members & HOD

Sl No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	Kon
2	Prof. Rekha S N	Associate Professor	Bopper
3	Prof. Damodaran A	Assistant Professor	What
4	Prof. Ramya M	Assistant Professor	Ranj
5	Prof. Yousuf Madar	Assistant Professor	rus '
6	Prof. Jhansi K	Assistant Professor	Thenery
7	Prof. Dr Dinesh	Guest Speaker	Div

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5 days Certification Course on "POWER QUALITY"

Solutions for the Questions

Duration :1hr Maximum marks :40

Note: Note: Question number 1-20 (1M each)

Question number 21-24 (5M each)

Answer all the Questions:

- The capacitance of the transmission line will be affected if the distance between conductors and earth is varied.
- a) True
- b) False

Ans: (a)

- The inductance of the transmission line will be affected if the distance between conductors an earth is varied.
- a) True
- b) false

Ans: (b)

- 3. The sending end voltage of the transmission line controls the
- a) active power
- b) reactive power
- c) (a) and (b) both
- d) None of the above

Ans: (b)

- 4. The frequency of the power system control the
- a) Active power
- b) Reactive power
- c) (a) and (b) both
- d) None of them

Ans: (a)

- 5. Enumerate three conditions which have the transient state instability in the power system
- a) Switching operation on the transmission line
- b) Any short circuits

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THE RESIDENCE OF THE PARTY OF T		
c) Excitation loss in the generator		

Ans: (c)

- 6. Which of the following equipment one will choose to study the stability of A.C. power system?
- a) Energy meter
- b) Network analyser
- c) Network synthesizer
- d) (b) or (c)

Ans: (b)

- 7. The breaking torque which plugging the machine at zero speed will be
- a) Zero
- b) High
- c) Small
- d) None of the above

Ans: (b)

- 8. The dynamic breaking of the machine offers the highest breaking torque in comparison to other breaking methods.
- a) True
- b) False

Ans: (b)

- 9. The drop in the terminal voltage of the shunt generator on load may be attributed to
- a) Increase in armature resistance
- b) Drop in field current due to armature reaction
- c) Drop in field current due to drop in armature resistance
- d) (b) and (c) both

Ans: (d)

- 10. If the load is not connected to the d.c. series motor then
- a) It will not build up the voltage
- b) It will build up very high voltage
- c) It will have very low speed (d) none of the above

Ans: (a)

- 11. corona loss in the power lines is more in winter season than the summer season.
- a) True
- b) False

Ans: (a)

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- 12. The single phasing relays are used for the protection of
- a) Single phase motor only
- b) Two-phase motors only
- c) Two single phase motor running in parallel
- d) Three phase motors

Ans: (d)

- 13. Two protection zone in the electrical transmission system is decided
- a) Location of PT
- b) Location of CT
- c) Relay's size
- d) Relay's sensitivity

Ans: (b)

- 14. Which of the following device will receive Voltage Surge first traveling on the transmission line
- a) Step-down transformer
- b) Relays
- c) Switchgear
- d) Lightning arresters

Ans: (d)

- 15. The fault impedance of the line is
- a) Less than the impedance of healthy line
- b) More than the impecance of healthy line
- c) Equal to the impedance of the healthy line
- d) None of the above

Ans: (a)

- 16. Which of the following parameter can be neglected for a short line?
- a) Resistance
- b) Inductance
- c) Reactance
- d) Capacitance

Ans: (d)

- 17. The stability of a salient pole alternators is better than the stability of a non-salient pole alternators.
- a) True
- b) False

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Ans: (a)

18. Series reactors should have

- a) High resistance
- b) Low resistance
- c) High impedance
- d) Low impedance

Ans: (b)

19. Which of the following frequency variation for power frequency is as per IS?

- a) 2.5%
- b) 5%
- c) ±5%
- d) ±2.5%

Ans: (c)

20. Which of the following device will be preferred to control the power system voltage?

- a) Transformers
- b) Shunt capacitors
- c) Series capacitors
- d) Electronic amplifiers
- e) Synchronous conductors

Ans: (e)

21. What is Power Quality?

Many answers apply to this simple question. They all depend on your perspective.

From the utility perspective, Power Quality has been defined as the parameters of the voltage that affect the customers supersensitive equipment.

From the power user perspective, Power Quality may be defined as any electrical parameter or connection that affects the operation of the equipment. This included all electrical parameters, connections and grounds, whether the source from the utility, local equipment or other users.

From the Power Quality market or industry perspective, it is any product or service that is supplied to users or utilities to measure, treat, remedy, educate engineers or prevent Power Quality issues, problems and related items.

Interesting note: A survey by Georgia Power in the mid 1990's revealed that utilities perception is 1% of the Power Quality problems are caused by the utility. The users perception is the utility is 17% of the cause. The utility perspective is the customer is 25% of the cause and users perspective is the customer is 12% of the cause.

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22. What are the commonly used terms that describe the parameters of electrical power that describe or measure Power Quality?

Voltage sags	Voltage variations	Interruptions	Swells	Brownouts
Blackouts	Voltage :mbalance	Distortion	Harmonic∈	Harmonic resonance
Interharmonics	Notching	Noise	Impulse	Spikes (Voltage)
Ground noise	Common mode noise	Critical load	Crest factor	Electrc magnetic comparibility
Dropout	Fault	Flicker	Ground	Raw power
Ground loops	Voltage fluctuations	Transient	Dirty power	Momentary interruption
Clean ground	Over voltage	Under voltage	Non-linear load	THD Total Harmonic Distort on
Triplens	Voltage dip	Voltage regulation	Blink	Oscilla ory transient
Outage	Power surge	Glitch	Isolation	Bump

23. What are the types of Power Quality solutions available on the market today?

There are hundreds of manufacturers making thousands of different Power Quality solutions today.

The categories of these solutions are:

- Utility based solutions for the substation level.
- User based solution for whole facility protection.
- · User load level solutions for specific loads
- Designed in solutions, built in by the equipment manufacturer to reduce the sensitivity to Power Quality problems.

24. How can Power Quality problems be detected?

Determining the exact problems requires sophisticated electronic test equipment. The following symptoms are indicators of Power Quality problems:

- 1. A piece of equipment misoperates at the same time of day.
- 2. Circuit breakers trip without being overloaded.
- 3. Equipment fails during a thunderstorm.
- Automated systems stop for no apparent reason.
- 5. Electronic systems fail or fail to operate on a frequent basis.
- 6. Electronic systems work in one location but not in another location.

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Department of Electrical & Electronics Engineering

Approved by Academic Committee Members & HOD

SI No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	from
2	Prof. Rekha SN	Associate Professor	Pok
3	Prof. Damodaran A	Assistant Professor	Apron
4	Prof. Ramya M	Assistant Professor	Ramit
5	Prof. Yousaf Madar	Assistant Professor	ren
6	Prof. Jhansi K	Assistant Professor	Thereis

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road.

Bangalore-560 057

PROF & HOD

Department of Electrical & Electronics English Sapthagiri College of Engineering Bangaiore - 560057.



Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-56005?

Department of Electrical and Electronics Engineering

5 days Certification Course on "POWER QUALITY"

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 5) 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:
	Topic went no per schedule. all topic
	explained very well & inderstanble for arroage students
	Student Name : No so hura . Student Signature: Principal Sapthagiri College of Engineering
	Daptinagii voiloga

Chikkasandra, Hesaraghatta Road, Bangalore-560 057



Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-550057

Department of Electrical and Electronics Engineering

5 days Certification Course on "POWER QUALITY"

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) Poer b) Sat.sfactory 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 attended?	have
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	
- Orienall its good. We insuffered several	power
quality terms of Maromenies minimized techni	wee .
Student Name: Marish Marginah Norayana : Marson Student Signature:	Maryen
Principal Sapthagiri College of Engineering	1

Chikkasandra, Hesaraghatta Road, Bangalore-560 057



Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057

Department of Electrical and Electronics Engineering

5 days Certification Course on "POWER QUALITY"

Participant Feedback

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

	a) Poor b) Satisfactory (Good d) Excellent
2.	How appropriate were the facilities provided?
	a) Poor b) Satisfactory Good d) Excellent
3.	Opportunity to ask questions for clarification and interaction with presenters
	a) Poor b) Satisfactory cyGood d) Excellent
4.	Effectiveness of the Fands-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:
	Bogines Basice very well. The test question whe made
	Bosines Basice very well. The test greation are made
	Student Name: Meghana S Hulikal Student Signature:
	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 and Electronics Engineering

5 days Certification Course on "POWER QUALITY"

	Farticipant 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 (Good d) Excellent
3.	Opportunity to ask questions for clarification and interaction with presenters
	a) Poor b) Satisfactory c) Good & 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 (a) 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 Certif cation Course
	a) Poor b) Satisfactory c) Good d) Excellent
8.	Any Suggestions:
	All topics explained near well. Hunde as segator
	nced to improve : Just inderestand this course well
	Student Name: Student Signature:

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Department of Electrical and Electronics Engineering

5 days Certification Course on "POWER QUALITY"

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:
	I understand all the topics werall its

Student Name: Ganesh Roa &

Student Signature:

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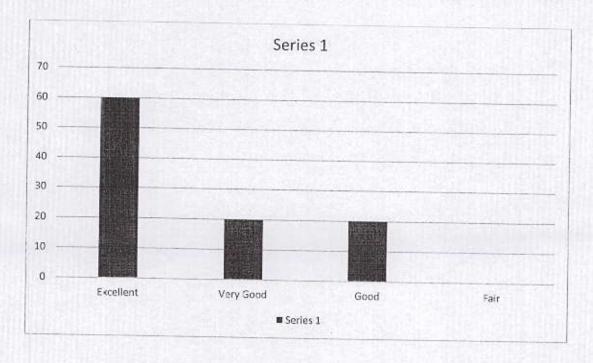
Fax: 080-28372797

Department of Electrical & Electronics Engineering

FEEDBACK ANALYSIS

Certification Programme: "Power Quality"

	Stu	ident Feedback	DESCRIPTION OF PERSONS
Excel ent	Very Good	Good	Average
60	20		n notage
	10	Excel ent Very Good	Excellent Very Good Good



Action Report:

60 % of students were completely happy with the certification program and 20 % of students felt it was a good program and remaining 20% students were satisfied with the program.

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

Department of Electrical & Electronics Engineering Sapthagiri College of Engineering Bangaiore - 560067.

Sapthagiri College of Engineering C-ikkasandra, Hesaraghatta Road, Bangalore-560 057



Sapthagiri College of Engineering

Bangalore-560057

Certificate

This is to Certify that Mr./Ms.	
Of	has participated
and successfully completed Five days Certification Course	on "Power Quality" from
July, 2016 to 29th July, 2016 organized by the	Department of Electrical &
Electronics Engineering, Sapthagiri College of Engineerin	ng.

HOD, Dept. of EEE

Principal

i College of Engineering

sandre, Hoseraghatta Main Road
Bengeluru - 580 857

PRINCIPAL



Sapthagiri College of Engineering

Certificate

and successfully completed Five days Certification Course on "Power Quality" of 25th July, 2016 to 29th July, 2016 organized by the Department of Electrical Electronics Engineering, Sapthagiri College of Engineering. Principal Sapthagiri College of Engineering	SAPTHAGIRI College of Englacering Creating Tommorow	Sapthag	írí College (Bangalore-56		ering
Of has participed and successfully completed Five days Certification Course on "Power Quality" if 25th July, 2016 to 29th July, 2016 organized by the Department of Electrical Electronics Engineering, Sapthagiri College of Engineering. Principal Sapthagiri College of Engineering		C	ertificat	te	
and successfully completed Five days Certification Course on "Power Quality" of 25th July, 2016 to 29th July, 2016 organized by the Department of Electrical Electronics Engineering, Sapthagiri College of Engineering. Principal Sapthagiri College of Engineering	This is to Certi	fy that Mr./Ms §	PANDESH R 1	SG15EE432	
25th July, 2016 to 29th July, 2016 organized by the Department of Electrical Electronics Engineering, Sapthagiri College of Engineering. Principal Sapthagiri College of Engineering	Of	EEE		has	participat
Electronics Engineering, Sapthagiri College of Engineering. Principal Sapthagiri College of Engineering	and successful	ly completed Five d	ays Certification Cour	se on "Power Que	ality" fro
Fracipal Sapthagiri College of Engineering	25th July, 20	16 to 29 th July,	2016 organized by t	he Department of	Electrical
Fractpal Sapthagiri College of Engineering		gineering, Sapthag	ri College of Engineer	ring.	
Sapthagiri College of Engineering					
HOD, Dept. of EEE Chikkasandra, Hestraghatta Road, PRINCIPA		N)	Principal		Km -



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Creating Tommorow		Bangalore-56		
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				11.00
	EFE		has	participated
Of		days Certification Cours		participated
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Of and successfully of 25 th July, 2016	completed Five of to 29th July,	2016 organized by the	se on "Power Que Department of	uality" from
Of and successfully of 25 th July, 2016	completed Five of to 29th July,		se on "Power Que Department of	uality" from
Of and successfully of 25 th July, 2016	completed Five of to 29th July,	2016 organized by the	se on "Power Que Department of	uality" from
Ofand successfully of 25 th July, 2016 Electronics Engin	completed Five of to 29th July,	2016 organized by the	se on "Power Que Department of ing.	uality" from



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Department of Electrical & Electronics Engineering

Certificate Course Report

Department of EEE conducted Certificate Course on "Power Quality"

Guest Speaker: Dr Dinesh, Associate Professor, Dept. Of EEE, R V College Of Engineering, Bangalore-560059.

Duration of the course: was for five days from July 25th 2016 to July 29th 2016 Course detail

Objective of the Course: Analyzing electrical parameters associated with distributing electricity is viewed by many as complex engineering work. Yet, for engineers, electricians, and technicians troubleshooting equipment problems these days and for contractors maintaining electrical systems they may have once installed measuring power quality is becoming as much of a necessity as using the clamp ammeter to find out why the overloaded circuits keep tripping. When any electrical system fails to meet its purpose, it is time to investigate the problem, find the cause, and initiate corrective action. The purpose of the electrical distribution system is to support proper operation of the loads. When a load does not operate properly, the quality of the electric power in the system should be suspected as one possible cause. Whether it's used for troubleshooting purposes or to obtain baseline data, measuring/analyzing electrical system parameters is called power quality analysis.

Schedule of Certification Course

Dates SESSION 1 (9.00am-10.30am)			
25-07-2016 Monday	Power quality — definition Common types of power quality problems encountered in a system	reliability. • Power interruptions —	Hands on Voltage sag and examples—problems some reasons for these Voltage regulation methods
26-07-2016 Tuesday	 Unbalance in power systems Symmetrical components for quantifying the unbalance 	Mitigation measures Definition of harmonics Fourier theorem for analysis	Hands on Collections Flicker and control by SVC equipment
27-07-2016 Wednesday	 Analysis c f power quality problems engine-based uninterrupted supplies 	Power quality site studies types of studies Study using a power quality analyzer	Hands on measurement Recording the measurements Analysis of the results Report preparation

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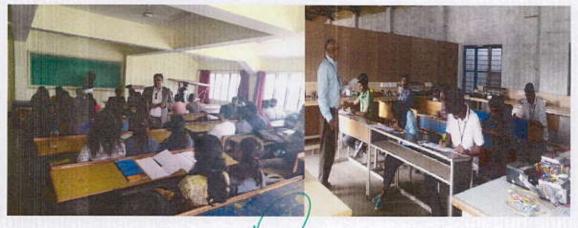
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Department of Electrical & Electronics Engineering

28-07-2016 Thursday	 Problems caused by unbalanced current/voltage 	 Harmonic control at source. Use of automatic carcuit reclosers. 	Hands on Reason for harmonics Problems caused by harmonics
29-07-2016 Friday	Emergency power, electronic uninterrupted power supply equipment,	Over-voltage and its effect Transient over-voltage and the role of surge protection	passive filters and comparison and

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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Department of Electrical & Electronics Engineering





HOD-EEE

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Department of Electrical & Electronics Engineering

To.

IQAC Coordinator Sapthagiri College of Engineering Bangalore - 560057.

Respected Sir,

Subject: "Budget proposal for conduction of certification program Hybrid Electric Vehicle"

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 "Hybrid Electric Vehicle" from 27-Jan-2017 to 01-Feb-2017.

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 3s.4200 for the conduction of the above mentioned program and oblige.

Estimated Budget

SI. No.	Item	Quantity	Unit Cost in Rs.	Total cost in Rs.
1	Certificates	160	20	3200
2	Course Material			1000
Gran	nd Total			4200

Provosaded to satisfication
approved & ratioscation

PROF & HOD

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

Principal



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Department of Electrical & Electronics Engineering

Date: 05/01/2017

CIRCULAR

This is to inform that the following Curriculum Board members are requested to attend the meeting on 06/01/2017 at 3.00PM in the HODs chamber to discuss about the certification course.

Sl No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	Kors
2	Prof. Rekha S N	Associate Professor	Pek
3	Prof. Dhamodaran A	Assistant Professor	Aphon
4	Prof. Ramya M	Assistant Professor	Ramy
5	Prof. Yousuf Madar	Assistant Professor	ren
6	Prcf. Jhansi K	Assistant Professor	Theres

HOD, EEE

PROF & HOD

Department of Electrical & Electronics Engineer
Septhagiri College of Engineering
Bangalore - 560057.



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Department of Electrical & Electronics Engineering

Date: 05-01-2017

To.

Mr JayaKumar Retired Joined Director, CPR., Bangalore-560012.

Respected Sir,

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

Department of Electrical and Electronics Engineering have planned to conduct a certification program titled "HYBRID ELECTRIC VEHICLE" for EEE students from 27-01-2017 to 01-02-2017. 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 6/01/2017 3PM, we look forward to welcome you at SCE.

Thanking you,

HOD, EEE

PROF & HOD

Department of Electrical & Electronics Engineering

Septhagini College of Engineering

Bangaiore - 560067.



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Department of Electrical & Electronics Engineering

Minutes of Meeting

A meeting was conducted on 06-Jan-2017 in EEE HOD's Chamber to discuss and approve the following about the 5 days Certification Course for EEE Students.

- Course Title: "HYBRID ELECTRIC VEHICLE"
- Resource Personnel: Mr. JayaKumar Retired Joined Director, CPRI, Bangalore-560012.
- Course Duration & Date: 5 Days from 27-Jan-2017 to 01-feb-2017
- · Course Content

Dates	SESSION 1 (9.00am-10.30am)	SESSION 2 (11.00am-12.30pm)	SESSION 3 (1.30pm-4.30pm)
27-01-2017 Friday	Micro grid with RE	Modelling of wind and solar	Hands on Modelling of wind and solar
28-01-2017 Saturday	EV and ES in India overview.	Electric storage system	Hands On Electric storage system
30-01-2017 Monday	Modeling of battery storage system.	Modeling of battery storage system	Hands on Battery designing.
31-01-2017 Tuesday	Modelling of EV charging system.	Modelling of EV charging system.	Hands on Micro grid with EV and storage
01-02-2017 Wednesday	IoT and data analytics in RE,EV and ES system	IoT and data analytics in RE,EV and ES system	Hand on session RE,EV and ES system, Test and Certificate issue and validation



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Department of Electrical & Electronics Engineering

The following Curriculum board members were present

SI No.	Faculty Name	Designation	Signature
1	Dr. K N Ravi	HOD	Land
2	Prof. Rekha S N	Associate Professor	Pek
3	Prof. Dhamodaran A	Assistant Professor	Aller
4	Prof. Ramya M	Assistant Professor	Ran 1
5	Prof. Yousuf Madar	Assistant Professor	ru
6	Prof. Jhansi K	Assistant Professor	Thereis
7	Mr JayaKumar	Guest Speaker	Jayakumae M

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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 "HYBRID ELECTRIC VEHICLE" from 27-Jan-2017 to 1-feb-2017

All the EEE students must attend the course compulsorily.

Signature of HOD

Department of Electrical & Electronics Engineeric PROF & HOD Sapthagiri College of Engineering
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Principal



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Department of Electrical & Electronics Engineering

Certification Program: "HYBRID ELECTRIC VEHICLE"

Lesson Planner

Dates	SESSION 1 (9.00am-10.30am)	SESSION 2 (11.00am-12.30pm)	SESSION 3 (1.30pm-4.36pm)	No.of Hours
27-01-2017 Friday	Microgrid with RE	Modelling of wind and solar	Hands on Mccelling of wind and solar	6
28-01-2017 Saturday	EV and ES in india overwiew.	Electric storage system	Hands On Electric storage system	6
30-01-2017 Monday	Modeling of battery storage system.	Modeling of battery storage system	Hands on Battery designing.	6
31-01-2017 Tuesday	Modelling of EV charging system.	Modelling of EV charging system.	Hands on Micro grid with EV and storage	6
01-02-2017 Wednesday	IoT and data analytics in RE,EV and ES system	IoT and data analytics in RE,EV and ES system	Hand on session RE,EV and ES system, Test and Certificate issue and validation	6
		TOTAL		30

Department of Electrical & Electronics Engineering

Sapthagiri College of Engineering

Bangalore - 560067.

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Department of Electrical and Electronics Engineering

5 days Certification Program on "Hybrid Electric Vehicle"

Students Enrollment

Academic Year _2016-17(EVEN)

SL.No	USN	Student Name	Signature
1	1SG15EE062	PRAJWAL S R	Projual:
2	1SG15FE064	PRARTHANA R PADMANABH	Prabhann
3	1SG15EE065	PRASHANT KUMAR	It tumou
4	1SG15EE067	PRIYA J SHANKAR	Chorya.
5	1SG15EE068	R ABHISHEK	Abhelle.
6	1SG15EE069	RACHANA M	- Chachana M
7	1SG15EE070	RAGHAVENDRA M	Dage vendes he
8	1SG15FE071	RAGHAVENDRA S	Ruselia
9	1SG15FE072	RAGLJAYA	@ nul
10	1SG15EE073	RAMACHANDRA	Chamarche.
11	1SG15EE074	RAMYA P	Range
12	1SG15FE075	RAVEESH VENKATESH	Quenn
13	1SG15FE076	RAVIPRAKASH H	Rousell.
14	1SG15EE077	ROHITH R	Robett a.
15	1SG15EE077	S DARSHAN	6 Brass
16	1SG15FF079	SACHIN Y	Suchin y
17	1SG15EE079	SANDESH V	OSua Jan
18	1SG15EF080	SATHISH R	Saltinh R.
19	1SG15EE082	SHANU	Shone !
20	1SG15EE082	SHARATH C	Shriere
21	1SG15EE084	SHRUJANA R KUMAR	Shrus'ana.
22	1SG15EE085	SOUNDARYA M	Boundarya m
23	1SG15FF086	SRIKANT KADGI	Systems beder
24	1SG15EF088	SUMANTH S	Simenth &
25	1SG15EE089	SUPRIYA P.R	Supriya PR.
26	1SG15EE089	SURABHI M	Surehlorn
27	1SG15FE091	SWATHI B.C	Swalti
28	1SG15EE091	UMESHKUMAR B R	amerh
29	1SG15FF093	VARUN K SHETTY	Marin
30	1SG15EE094	VIKAS KUMAR SINGH	. Vikal
31	1SG15FE095	VINITH KUMAR T	Birth
32	1SG15EE096	VINUTHA D	Clenet
33	1SG15EE097	VISHAL S PUJARI	Moute D
34	1SG16EE400	ABDUL RIYAZ	Apolul
35	1SG16EE401	ABHISHEK C.B.	Atshi
36	1SG16EE402	ABHISHEK GOWDA D.N.	Abh Bhek-
37	1SG16EE402	AJAY BHAVA S	A Blave 8.
38		AKHILESH V	diviter.
39	1SG16EE404	AKHILESH VINOD	archelich.
40	1SG16FF405	ANII KUMAR	Anil Kumas
41	1SG16EE406 1SG16EE407	ARUN KUMAR P	Arin Kumar P
42	1SG16EE407	CHAITANYAA A	chailenyaa.

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Department of Electrical and Electronics Engineering

SE:No	USN	Student Name	Signature
43	1SG16FF409	CHANDAN K	Chaudas
44	1SG16FF410		
45	1SG16FE411	DAKSHINA MURTHY N B	Wakes
46		GEETHA S	Creation -
47	1SG16EE412	GOVARDHAN G	Crousedbull
48	1SG16FF413	GURU H	Cownell
49	1SG16FF414	HARISH KUMAR M	(Hosurt
50	1SG16FE4-5	JAYANTH M V	- Sayenty
51	1SG16FF416	K SRIKANTH	Keni.
52	1SG16FE417	KARTHIK R	Kochible R
53	1SG16FE418	KAUSHITH GOWDA M	Comint
	1SG16FF419	KEERTHANKUMAR H N	Koutchuller
54	1SG16FF421	KIRAN KUMAR K	Kirap
55	1SG16FF421	KOTRESH P	120 PC100 H
56	1SG16FF422	KRANTHIKUMAR G S	500
57	1SG16FF423	LAKSHMANA H R	20004
58	15G16EE425	MANJUNATH GOWDA V	Manual
59	1SG16FF431	NAYANASHREE B	Maneria
60	1SG16EE432		Nayounhitte-B
61	0.41496-20.516	NILESH N GUNJIKAR	THE COURT
62	1SG16EE433	NIRANJAN K	Na Toro
63	1SG16FF434	NITHIN G	Nothers
64	15G16FF437	RAKESH B	Rapoque
65	1SG16FF438	RAKESH T	the cu
66	1SG16FF439	RAKESH S	de roedlher
67	1SG16FF440	RAKSHATH C U	Duine
68	1SG16FF441	RIJJU	As a so
69	1SG16FF442	SAGAR G	Sporchant R2
70	1SG16FF443	SHASHANK K S	Shiramous
10.00	1SG16FF444	SHIVAPRASAD D M	Staldeline.
71	1SG16FF445	SIDDESHA G	Stilly
72	1SG16FE446	SUHAS S R	(S) puro
73	1SG16EE447	SUPRITH L	Janua Ku
74	1SG16EE450	VARUN K M	Unod M
75	1SG16EE451	VINOD M	Mount of
76	1SG16EF452	YASHWANTH M L	(A-O) (I A A A
77	1SG13FE019	Control of the Contro	Donath
78	1SG14FE082	DEEPAK KUMAR	V. Comment
79		KANTHI KIRAN	Kuthi Kieri
30	1SG15EF422 1SG15EE426	MEGHANA M S	Maurtough

(Program Coordinater)

Department of Electrical & HOHOD

Saothagai College of Engineering

Bangalore - 560057.



14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057

Department of Electrical and Electronics Engineering

5 days Certification Program on "Hybrid Electric Vehicle"

Students Enrollment

Academic Year -2016-17(EVEN)

SL.No	USN	Student Name	Signature
1	1SG16EED01	A.R. GOUTAM	Conteni.
2	1SG16FE003	ABHISHEK HOLLA M	. O. Albha
3	1SG16E=004	ABHISHEK S	Atherhik S.
4	1SG16FF005	ADARSH K	Ad
5	1SG16FE006	AISHWARYA RAVI	dirneserya.
6	1SG16FF007	AISHWARYA S	, Aish
7	1SG16FFC08	AMITH SURA.	1 Anole
8	1SG16FF009	ANANYA V	inanya
q	1SG16FF010	ANJU P	Ap-0
10	1SG16FF011	ANUSHA M S	Anislan
11	1SG16FF012	ARPITHA G	Arrivatha. G
12	1SG16FF013	ARPITHA P	AZI
13	1SG16FF014	ASHEAQUE AHMED	Zisto -
14	1SG16FF015	ASHWINI N	ARKININ N.
15	1SG16FE0-6	BHANU PRATAP YADAV	- this
16	1SG16FF0*7	BHAVYA M	Blev.
17	1SG16FF018	BHOOMIKA VASANTH	Bhor-
18	1SG16FE019	BLBLAYESHA S	Ay_
19	1SG16FF020	CHANDAN S R	Chandanse.
20	1SG16EE022	CHIDANANDA C	ihi de
21	1SG16FFC23	CHIRAG S	Chros-
22	1SG16FF024	DEEPA T.S.	Delper.
23	1SG16FE025	DHANUSH S	Dhanuch:
24	1SG16FE026	DIXITH R	Dearle
25	1SG16FE027	FAIZA FATHIMA A	Faiza.
26		Ferozahmed M	118
27	1SG16FF02F	GAGAN H.J	Stagen.
28	1SG16FE03C	GAGAN KUMAR GANDHI K	Cost
29	1SG16FE031	GAGANA R	gagone R.
30	1SG16FF032	GANAVI C.A.	han
31	1SG16EE033	GOUTHAMLK	Coutani K.
32	1SG16EE034	HARSHITHA C GOWDA	11
33	1SG16FF035	HARSHITHA N	Harrista N.
34	1SG16FF036	HEMA S	Hema
35	1SG16FF037	JEEVAN KUMAR R	Tievan-
36	1SG16EE033	JYOTHLGADED	Tyolic
37	1SG16FE039	K KARTHIK DUBEY	Realli'k
3.8	1SG16FF040	KALAN	Cala N.
30	1SG16FF041	KARISHMA JAISWAI	Kasionna.
40	1SG16FF042	KAVYA B P	Verya RP
41	1SG16EE043	KAVYA SHREE R	Large Show R.



14/5, Chikkasandra, Hesaraghatta Main Road, Ber.galuru-560057

Department of Electrical and Electronics Engineering

SL.No	USN	Student Name	Signature
42	1SG16FF044	KAVYASHREE S	Known 5
43	1SG16FF045	T = 0.00 (0.	Khaw mirror
44	1SG16FF046		V. ha
45	1SG16FE047	The second secon	Kiden 4
46	1SG16EE048	M MONICA	AUAST
47	1SG16FF049	MADHUKAR K	Mo
48	1SG16EE051	MALATHLR	Mathewal
49	1SG16FF053	MANJUNATH T	MarylenthT
50	1SG16FF054	MONIKA N	This was
51	1SG16FE055	MOUNA M	Autworks
52	1SG16EE057	NANDA KUMAR J	Marall V
53	1SG16FE058	NEHA TOMAR	Mohn hum
54	1SG16FF059	NIKHIL NINGOLIDA PATIL	Mekyel incur Darl
55	1SG16FE060	NIKHIL TOMAR	
56	1SG16EE061	NIKITHA K	The Port
57	1SG16FF062	NIRANJAN K B	King
58	1SG16EE063	NIROSHA H V	1.00 0
59	1SG16FF064	NISHANTH M G	MARANA
60	1SG16EE065	PAVITHRA G	
61	1SG16FF066	PAVITHRA G	100
62	1SG16FF067		Mouther 62
63	1SG16FF068	POOVAIAH M K	loweast MY
34	1SG16EE069	PRAJWAL S	JAN 2
35	1SG16FF070	PRAKRUTHI JAIN Y S	Maulton SX
36	1SG16FF071	PRASHANTH NAYAKA T	SALE TO THE PARTY OF THE PARTY
37		PRAVEEN J	Denous)
38	1SG16FF072	FUNEETH N	Fitting !
19	1SG16FF073	FAJESH YADAV	Bicch Kadur
70	1SG16FE074	RAKESH G	Ruseyi,
0.00	1SG16EE075	REVAN KUMAR G K	Koran Kynan. 62K
1	1SG16FE078	S MANISH.	5 Mary 8
2	1SG16FE079	SANGMESH	10 11
3	1SG16FE081	SANTOSH KUMAR K S	Sungthus Run 12.
4	1SG16FF082	SANTOSH S G	Santhos: S.G.
5	1SG16EE098	SATYENDRA KUMAR YADAV	becc.
6		SLSHMA G R	South
7	1SG16FF099	SWATHI B	Ineath
8	1SG16FF100	VANDANA M	Vuradun
	1SG16EE101	VANDANA RAO J	FOR
0	1SG16EE098	S JSHMA G R	Sull & 12

(Program coordinator)

PROF & HOD

Department of Electrical & Electroridas Envineering

Sapulagiri College of Engineering

Bangalore - 590057.



5 days Certification Program on "Hybrid Electric Vehicle"

Attendance

SI.	USN	Student Name	27-0	27-01-2017		28-01-2017		1-2017	7 31-01-2017		01-02-2017		
		Ottident Name	MS	AS	MS	AS	MS	AS	MS	AS	MS	AS	Tes
1	1SG15EE062	PRAJWAL S R	1	2	3	4	5	6	7	A	8	9	10
2	1SG15EF064	PRARTHANA R PADMANABH		2	3	A	4	5	6	7	8	q	10
3	1SG15EE065	PRASHANT KUMAR	1	2	3	4	5	A	6	7	8	9	10
4	1SG15EE067	PRIYA J SHANKAR	1	2	3	4	5	6	7	8	9	10	111
5	1SG15FF068	R ABHISHEK	1	2	3	4	5	6	7	8	9	10	11
6	1SG15EE069	RACHANA M	1	2	3	4	5	6	7	8	9	10	11
7	1SG15EE070	RAGHAVENDRA M	i	2	3	4	5	6	7	8	9	10	11
8	1SG15EE071	RAGHAVENDRA S		2	3	4	5	A	6	7	8	9	10
9	1SG15EE072	RAGIJAYA	1	A	2	3	4	5	6	7	8	9	10
10	1SG15EE073	RAMACHANDRA	1	2	3	4	5	6	7	8	9	10	11
11	1SG15EE074	RAMYA P	1	2	A	A	3	4	5	6	7	8	9
12	1SG15EE075	RAVEESH VENKATESH SHET	1	2	3	4	5	6	7	A	8	9	10
13	1SG15EE076	RAVIPRAKASH H	-1	2	3	4	0	A	6	7	8	9) 0
14	*SG15EE077	ROHITH R	1	A	2	3	4	5	6	7	8	9	10
15	1SG15EE078	S DARSHAN		2	3	A	4	5	6	A	7	8	9
16	1SG15EE079	SACHINY		A	2	3	4	5	6	7	8	9	10
17	1SG15EE080	SANDESH V		2	A	3	4	5	6	7	8	9	10
18	15G15EE081	SATHISH R		2	3	4	F	6	7	8	9	10	11
19	13G15EE082	SHANU	li	A	2	3	4	A	5	6	7	3	9
20	1SG15FE083	SHARATH C	1	2	3	4	5	6	7	8	9	10	11
21	1SG15EE084	SHRUJANA P. KUMAR	1	2	3	A	4	5	6	7	8	9	10
22	1SG15EE085	SOUNDARYA M	1	2	3	4	5	6	7	8	9	10	1)
23	1SG15EE086	SRIKANT KADGI	l i	2	3	9	5	6	7	8	9	10	11
24	1SG15EE088	SUMANTH S	1	A	2	3	4	5	6	7	2	of	10
25	1SG15FF089	SUPRIYA P R	1	2	3	A	4	5	A	6	7	3	O,
26	1SG15EE090	SURABHI M	1	2	3	4	A	5	6	7	8	9	10
27	1SG15EE091	SWATHLB C	1	2	A	3	4	5	6	7	8	9	10
28	1SG15EE092	UMESHKUMAR B R	1	2	3	4	5	6	7	8	9	A	n
29	1SG15EE093	VARUN K SHETTY	1	2	3	4	e	5	6	7	8	9	10
30	1SG15EE094	VIKAS KUMAR SINGH	1	2	3	4	5	A	6	7	8	A-	A
31	1SG15EE095	VINITH KUMAR T	1	2	3	4	5	6	A	7	8	9	10
32	1SG15EE096	VINUTHA D	1	2	3	4	5	6	7	2	9	10	11
33	1SG15EE097	VISHAL S PUJARI	A	1	2	3	4	5	6	7	A	8	9
34	*SG16EE400	ABDUL RIYAZ	1	2	3	4	S	6	7	8	9	10	11
35	1SG16EE401	ABHISHEK C B	1	2	3	4	5	6	7	8	9	10	11
36	1SG16EE402	ABHISHEK GOWDA D N		2	3	4	A	5	6	7	8	9	10
37		AJAY BHAVA S	1	2	3	4	5	6	1	A	8	9	10
38	*SG16EE404	AKHILESH V	A	1	2	3	4	5	6	7	8	A	9
39	15G16EE405	AKHILESH VINOD KALGUTKAR	1	2	3	4	2	6	7	8	9	10	10
40	1SG16EE406	ANIL KUMAR	1	A	2	3	A	4	5	6	7	8	9
41	1SG16EE407	ARUN KUMAR P	1	2	3	4	5	6	2	8	9	10	11
42	1SG16EE408	CHAITANYAA A	VI	2	3	4	Ø	6	7	8	9	10	11
43	1SG16EE409	CHANDAN K	1 8	1	2	3	4	3	A	6	7	8	9.



SI.	USN	Student Name	27	27-01-2017		28-01-2017		7 30-01-2017		-01-2017		01-02-20	
44			MS	AS	MS	AS		-			MS	AS	Te
45	1SG16FE410	DAKSHINA MURTHY N B	1	2	3	4	5	6	A	7	8	9	
46	1SG16EE411	GEETHA S	1	2	3	4	5	6	7	8	9	1	10
47	1SG16EE412	GOVARDHAN G	1	2	3	4	5	6	7	8	19	10	11
48	1SG16EE413	GURU H		2	3	A	4	S	-				-
49	1SG16EE414	HARISH KUMAR M	1,	2	3	24	8	A	6	7	- A	9	10
50	1SG16EE415	JAYANTH M V	1	2	3	4	5		7	8	1 ./	8	0
51	1SG16EE416	K SRIKANTH	1	2	3	4	5	6	7	8	9	10	11
52	1SG16EE417	KARTHIK R	1	A	2	3	4	3		200	1	10	11
53	1SG16EE413	KAUSHITH GOWDA M	1	2	3	4	5	6	6	7	8	9	10
13	1SG16EE419	KEERTHANKUMAR H N	1	2	3	4	5	A	6	8	9	10	11
	1SG16FE420	KIRAN KUMAR K		2	3	4	5		1000	COLD III		1	10
5	1SG16EE421	KOTRESH P	1	2	3	4	5	6	7	8	9	10	11
6	1SG16EE422	KRANTHIKUMAR G S		2	3	4	5	6	7	8	9	10	11
7	1SG16EE423	LAKSHMANA H R	1	A	2	3	4	6	7	8	A	9	10
8	1SG16EE425	MANJUNATH GOWDA V		12	3	4		5	5	7	8	9	10
9	1SG16EE431	NAYANASHREE B		2		1	5	6	7	8	9	10	U
0	1SG16EE432	NILESH N GUNJIKAR	1	2	3	4	5	A	6	7	8	9	10
1	1SG16EE433	NIRANJAN K	1	2	3	4	5	6	7	8	9	10	11
2	1SG16EE434	NITHIN G	1	82		4	5	6	7	8	9	10	11
3	1SG16EE437	RAKESH B		2	3	4	5	6	7	8	9	10	11
1	A CONTRACTOR OF THE PARTY OF TH	RAKESH T	1	2		4	5	6	7	8	9	10	11
5	1SG16EE439	RAKESH S	1	100000	3	4	A	5	6	7	8	9	10
5		RAKSHATH C U	1	2	3	4	5	6	7	8	9	10	1)
,	400/	RIJJU		2	3	4	5	6	7	8	9	10	11
		SAGAR G		2	3	4	5	6	7	8	A	9	10
				2	3	4	5	6	7	8	9	10	11
		SHASHANK K S	- (A	2	3	4	5	6	7	8	7	10
		SHIVAPRASAD D M SIDDESHA G		2	3	4	5	6	7	8	9	10	11
		SUHAS S R	-	2	3	4	5	6	7	8	9	10	11
	1SG16FE447			2	3	4	5	A	6	7	8	A	A
	22200	SUPRITH L		2	3	4	5	6	7	8	9	10	11
		VARUN K M		2	3	4	5	6	7	8	9	10	11
	Control of the last of the las	VINOD M	1	2	3	4	5	6	7	8	9	10	ſ,
118	0.000	YASHWANTH M.L.	1	A	2	3	4	5	6	7	8	9	10
	The state of the s	DEEPAK KUMAR	1	2	3	4	5	6	7	A	8	9	10
- 5	AND THE PROPERTY OF STREET	SANTHI KIRAN	. 1	2	3	4	5	6	7	8		10	W. P. S. T.
		VEGHANA M.S.	1	2	3	4	5	6	7	8		v	11
		NANDEESH K.S.	1	2	3	4	5	6	7	8	-	10	11
		Signature	Mic	(DVD)	Alla	OUN	AND	(A)	pro	an	6240	Øn	100

PROGRAM COORDINATOR

HOD PROF & HOD

Department of Electrical & Electronics Engine Sapthagin College of Engineering Bangaiore - 560057.



5 days Certification Program on Hybrid Electric Vehicle"

Attendance

SI	LICAL		The same of	idanc		di v		106					
No	USN	Student Name	27 MS	-01-2017	-	01-2017	-	0-201	1000	01-2017		01-02-2	2017
1	1SG16EE001	A R GOUTAM	1	2	3	-		-	1	1.0		AS	Tes
2	1SG16EE003	ABHISHEK HOLLA M	1	2	3	L	5	16	7	-	19	11	11
3	1SG16EE004		1	2	3		1-	A	6	7	8	9	10
4	1SG16EE005	ADARSH K	1	2	3	4	15	6	1	2000	9	10	1)
5	1SG16EE006	AISHWARYA RAVI	A		2	3	1 A	5	6	17	8	19	10
6	1SG16EE007	AISHWARYA S	1	2	3	4	14	5	6	7	8	A	10
7	1SG16EE008	AMITH SURAJ	1	2	3		5	6	7	8	19	10	11
8	1SG16EE009	ANANYA V	(2	3	4	-	6	17	8	9	10	11
9	1SG16EE010	ANJU P	t	2	3	4	A	5	6	7	8	9	10
10	1SG16EE011	ANUSHA M S	1	2	3		5	6	7	8	9	10	1)
11	1SG16EE012	ARPITHA G	1	2	3	4		6	7	8	9	10	11
12	1SG16EE013	ARPITHA P	1	2	3	A	4	3	6	7	A	8	9
13	1SG16EE014	ASHFAQUE AHMED		2		4	5	6	7	8	9	10	11
14	1SG16EE015	ASHWINI N	1	A	3	4	5	6	7	8	9	10	1)
15	1SG16EE016	BHANU PRATAP YADAV		2	3	3	4	5	6	7	8	9	10
16	1SG16EE017	BHAVYA M	1	2	3	4	5	6	7	8	9	10	1)
17	1SG16EE018	BHOOMIKA VASANTH	1	2	3	4	5	5	7	8	9	10	11
8	1SG16EE019	BI BI AYESHA S	+	2	3	4	A 5		6	7	8	A	9
9	1SG16EE020	CHANDAN S R	1	2	3	4	5	6	2	8	9	10	10
0	1SG16EE022	CHIDANANDA C	1	2	3	10	5		7	8	9	10	11
1	1SG16EE023	CHIRAG S	1	2	3	4	5	6	100	8	9	10	11
2	1SG16EE024	DEEPA T S	A	1	2	3	4		7	8	9	A	9
3	1SG16EE025	DHANUSH S	1	2	3		5	A	5	6	7	8	di,
4	1SG16EE026	DIXITH R	1	2		4	5	6	7	8	9	2022	11
5	1SG16EE027	FAIZA FATHIMA A	1	2	3	4	5	6	7	8	9	10	11
3	1 Sg 166 to28	Fore Anned M	1	2	A	4		6	7 A	8	91	10	11
7	1SG16EE029	GAGAN HJ	1	6	-		4	5		6	7-	8	9
3	1SG16EE030	GAGAN KUMAR GANDHI K	1	2/	37		5	6	7	8	9	0.00	1
			1	N	/	4	5	6	2	8	9	A	17



SI. No	HOM	Student Name	27-	01-2017	28-01-20		2017 30-0		7 -	1.04.00	- 1		
29			MS	AS	-	-				1-01-201 5 AS		01-02 S A	-
10000	130,022001	S. JOAN CALL	1	2	3	4	5	6	7		9	10	
30	1001022002		1	2	A	3	4	5			8	9	11
31	ISG16EE033	GOUTHAMI K	1	2	3	4	5	6	ন	1			10
32	1SG16EE034	HARSHITHA C GOWDA	1	2	3	4	15	6			01	9	10
33	1SG16EE035	HARSHITHA N	1	2	A	3	14	5	7		1	10	11
34	13G16EE036	HEMA S	1	2	3	4	5	A				9	10
35	1SG16EE037	JEEVAN KUMAR R	1	2	3	4	5		-	7	8	19	10
36	1SG16EE038	JYOTHI GADED	1	2	3	The same		6	A	7	8	9	10
37	1SG16EE039	K KARTHIK DUBEY	A		2	3	5	6	7	8	9	10	11
38	1SG-6EE040	KALA N	1	2	3		A	5	6	17	8	9	10
39	1SG16EE041	KARISHMA JAISWAL	,	2		4	5	5	6	+7	8	9	10
40	1SG13EE042	KAVYA B P	1	2	3	4		6	7	A	8	9	10
41	1SG16EE043	KAVYA SHREE R	,			4	5	6	7	8	9	lo	11
42	1SG1EEE044	KAVYASHREE S		2	A	3	4	5	6	7	8	9	10
43	1SG16EE045	KIRAN KUMAR	-		3	4	5	6	7	3	9	to	1)
44	1SG16EE046	KUSHAL M P		2	3	4	5	6	7	8	A	4	10
45	1SG15EE047	KUSUMA H	1	2	3	4	5	6	7	3	9	10	11
46	1SG16EE048	M MONICA		2	А	3	4	A	5	6	7	8	9
47	1SG16EE049	MADHUKAR K	1	2	3	4	5	6	7	8	9	10	1)
48	1SG16EE051	MALATHI R)	2	3	4	5	6	7	8	٦	10),
19	1SG16EE053		1	2	3	4	5	6	7	8	9	10	11
50	1SG16EE054	MANJUNATH T	1	2	3	4	5	6	7	2	A	9	10
51	1SG16EE055	MONIKA N	1	2	3	4	5	6	7	8	9	10	11
52	A Company of the Comp	MOUNA M	1	2	3	4	5	6	7	8	9	10	11
	1SG16⊞057	NANDA KUMAR J	1	2	A	3	4	5	6	7	8	9	16
53	1SG16E E058	NEHA TOMAR	1	2	3	4	5	6	7	8	9	10	1)
54	1SG16EEC59	NIKHIL NINGOUDA PATIL	1	2	3	4	5	6	7	8	A	0]	10
55	1SG16EE030	NIKHIL TOMAR	1	2	3	4	5	6	7	8	9	10	11
6	1SG16EE061	NIKITHA K	1	2	3	4	5	6	7	8	9	10	10
7	1SG16EE0£2	NIRANJAN K B	1	2	3	4	5	6	7	8	9	10	11
8	1SG16EE063	NIROSHA H V	1	-	0	7	4	5	6	7	8	9	10
9	1SG16EEC64	NISHANTH M G		2	6 1	4	5		7	8	9	10	11



SI. No		04	27-01-2017		7 20	28-01-2017							
		Student Name	Ms		-	_		-01-201	-	-01-2017		01-02	2017
60	1SG16EE065	PAVITHRA G	1	2		- 1,0	-	- 1		100	-		
61	1SG16EE066	PAVITHRA R	1	0	2	3			V	-	9	10	1
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65	1SG16EE070	PRASHANTH NAYAKA T	1	2	3	4	5	0	6	7	8	9	10
66	1SG16EE071	PRAVEEN J	1	2	3	4	5	6	7	8	9	10	11
67	1SG16EE072	PUNEETH N	1	2	3	4	5	6		A	8	9	10
68	1SG16EE073	RAJESH YADAV	1	2	A	3		5	7	8	9	10	11
39	1SG16EE074	RAKESH G	1	2	3	4	4	6	9	7	8	9	10
70	1SG16EE075	REVAN KUMAF G K	1	2	3	4	5	A	6	7	-	10	11
71	1SG16EE078	S MANISH	1	2	3	4	5	6		100	8	9	10
72	1SG16EE079	SANGMESH	1	A	2	3	4	5	7	8	9	10	11
73	1SG16EE081	SANTOSH KUMAR K S	1	2	3	4	5	6	7	8	A	8	9
74	1SG16EE082	SANTOSH S G	1	2	3	4	5	6	7	8	9	10	11
75	1SG16EE083	SATYENDRA KUMAR YADAV	1	2	3	A	4	5	-			10	11
6	1SG16EE098	SUSHMA G R	1	2	3		5		6	7	8	9	10
7	1SG16EE099	SWATHI B		2	3	4	5	6	7	8	9	(0	11
8	1SG16EE100	VANDANA M	1	2	3	4	72	Co O	7	8	9	10	11
9	1SG16EE101	VANDANA RAO J	1	2	3	4	5	A 6	6	7	8	A	A
0	1SG16EE098	SUSHMA G R	1	2	3	4	5	6	7	8	9	10	11
	SALES TO PARTY.	Signature	A	(Da	(1)	4	(A)	\$W	7	AP	91	10	NO

(A-Dhanndaran)
PROGRAM COORDINATOR

PROHQD HOD

Santhania Calla & Electronics Engines Sapthagiri College of Engineering Sangalore - 560057

Principal



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Department of Electrical & Electronics Engineering

5 days Certification Course on

"HYBRID ELECTRIC VEHICLE"

Test Time Table

Sl. No.	DATE	DAY	TIMINGS		
1	01-02-2017	Wednesday	4.30PM-5.30PM		

HOD EEE

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Bangalore - 580057

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Department of Electrical & Electronics Engineering

5 days Certification Course on "HYBRID ELECTRIC VEHICLE"

Question Paper

Duration: 1hr Maximum marks: 20

Note: Question number 1-20 (1M each)

Answer all the Questions:

Question 1

Which vehicle has the smallest number of principle components?

- a)Traditional vehicle
- b)Hybrid vehicle
- c)Electric vehicle

Question 2

What purpose does a generator serve in a hybrid vehicle?

- a) It converts nuclear energy into more nuclear energy
- b) It converts mechanical energy into electrical energy.
- c) It converts chemical energy into electrical energy.
- d) It converts electrical energy into mechanical energy

Question 3

What are the two main types of hybrid vehicle?

- a) The series hybrid vehicle and the mild hybrid vehicle.
- b) The parallel hybrid vehicle and the full hybrid vehicle.
- c) The series hybrid vehic e and the parallel hybrid vehicle.
- d) The full hybrid vehicle and the empty hybrid vehicle.

Question 4

Which sentence best describes a parallel hybrid vehicle?

- a)The engine is directly connected to the transmission.
- b) The electric motor is directly connected to the transmission.
- c) Both of the above.
- d)None of the above.

Question 5

Which of these is a purpose of the power-split device?

- a)To split electrical energy into mechanical energy
- b)To allow both the eng ne and electric motor to propel the vehicle.
- c)To recharge the battery while braking.
- d)To recharge the brakes while driving.

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Department of Electrical & Electronics Engineering

Question 6

"In this system, the engine is used to supply electrical power to the motor, which then turns the wheels"

Select the type of Hybrid System according to above description.

- a) Series Hybrid
- b) Parallel Hybrid
- c) Plug-in Hybrid
- d) Series-parallel Hybrid

Question 7

which of the following is NOT the type of Hybrid Vehicle?

- a)Plug-in Hybrid
- b)Parallel Hybrid
- c)Natural Gas For Vehicles
- d) Series Hybrid

Question 8

The Hybrid Electric Vehicle consists of:

- a)Internal Combustion Engine + Electric Motor
- b) Motor Electric 1 + Motor electric 2
- c) NGV engine + Gasoline engine

Question 9

"In this system, the engine is used to supply electrical power to the motor, which then turns the wheels"

Select the type of Hybrid System according to above description.

- a)Series Hybrid
- b)Parallel Hybrid
- c)Plug-in Hybrid
- d)Series-parallel Hybrid

Question 10

"The wheels are driven by both the engine and the motor"

Select the type of Hybrid System according to above description.

- a)Series Hybrid
- b)Parallel Hybrid
- c)Plug-in Hybrid
- d)Series-parallel Hybrid

Question 11

Select the features of Hybrid Electric Vehicles

- a)Idle Stop
- b)EV Drive
- c)Motor Assist
- d) All

Question 12

The electric motor in a hybrid car can also act as :

- a)cooling fan
- b)fuel pump
- c)generator

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Question 13	建
Regenerative braking involves :	
a)Nano fibers that repair the surface of brake pads	
b)reducing the amount of friction necessary to slow a car	
c)reclaiming heat from the brakes and using it for power	
Question 14	
The benefits of a hybrid car include:	
a)reducing emissions	
b)improving gas mileage	
c)high fuel consumption	
d)high speed driving	
Question 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
is a vehicle that can run on j	not the employ lead the
batteries, or a combination of the two.	ust the engine, just the
a)Mild Hybrid	
b)Full Hybrid	
c)Fuel Cell	
d)Assist Hybrid	
Question 16	A Section of
A Toyota Prius C Hybrid has engine.	
a)1	
b)2	
c)half	
d)no	
Question 17	
Select the cycle use in a Hybrid Engine.	
a)Otto	
b)Diesel	
c)Atkinson	
d)Isentropic	
Question 18	
Select the WRONG statement.	
a)Toyota produced the Insight Hybrid	
b)Hybrid systems rely on very high voltages.	
c)All of the high-voltage cables are covered in orange sleeves	for easy icentification
d)To test high-voltage systems you need a Category 3 (CAT I	III) digital valt ohumeter
Question 19	m) digital voit diminietel
Select the CORRECT statement about Integrated Motor	Assist (IMA) hybrid system
a)Produced by Honda	assure (many applied aystem
b)This system is the basis for many series-parallel hybrid veh	icles.
c)This system is capable of instantaneously switching from or	ne power so ree to another or
combining the two.	i william of

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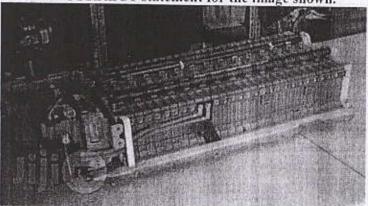


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Question 20

Select the CORRECT statement for the image shown.



- a)Inverter and por verter unit
- b)High voltage zable
- c)High voltage battery
- d)Motor Generator

Approved by Academic Committee Members & HOD

Sl No.	Faculty Name	Designation	Signature
1	Cr. K N Ravi	HOD	flore
2	Prof. Rekha S N	Associate Professor	Rue
3	Prof. Dhamodaran A	Assistant Professor	Aslow
4	Prof. Ramya M	Assistant Professor	Rant
5	Prof. Yousuf Madar	Assistant Professor	red
6	Prof Ihansi K	Assistant Professor	Thereig Jayalumar M
7	Mr JayaKumar	Guest Speaker	Jaya/wmar.M

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Sapthagiri College of Engineering
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Department of Electrical & Electronics Engineering

5 days Certification Course on

"HYBRID ELECTRIC VEHICLE"

Solutions for the Questions

Duration: 1hr

Maximum marks: 20

Note: Question rumber 1-20 (1M each)

- 1. Option C
- 2. Option B
- 3. Option C
- 4. Option C
- 5. Option C
- 6. Option B
- 7. Option C
- 8. Option A
- 9. Option A
- 10. Option B
- 11. Option D
- 12. Option C
- 13. Option C
- 14. Option A & B
- 15. Option B
- 16. Option A
- 17. Option C
- 18. Option A
- 19. Option A
- 20. Option C

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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	stars'		
2	Prof. Rekha S N	Associate Professo:	Per		
3	Prof. Dhamodaran A	Assistant Professor	Alam		
4	Prof. Ramya M	Assistant Professor	Range		
5	Prof. Yousuf Madar	Assistant Professor	and "		
6	Prof. Jhansi K	Assistant Professor	Theres		

PROF & HOD

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Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057

Department of Electrical and Electronics Engineering

5 days Certification Course on "HYBRID ELECTRIC VEHICLE"

Participant Feedback

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
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
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 good all topics explained
So well, I Worderstudlegg in Honde on RESEIN.
Student Name: A Sur Kuman P Student Signature:
Principal Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road 1 Bengaluru - 560 057



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Department of Electrical and Electronics Engineering

5 days Certification Course on "HYBRID ELECTRIC VEHICLE"

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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:
It was nice & explained very well
course ty brid electron vehicle.
Student Name: Su manth & Student Signature:
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Pendaina



14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057

Department of Electrical and Electronics Engineering

5 days Certification Course on "HYBRID ELECTRIC VEHICLE"

Participant Feedback

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

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

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

2. How appropriate were the facilities provided?

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

a) Poor 5) 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
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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:
Conducting Tost at the end of the course de issue contificate mas nice. All topic explano very well as per secredules
de l'Esuc contificate mas nice. All topic explano
very well as per servedule
Student Name: Nanderships Student Signature:
Principal Sapthagiri College of Engineering Sapthagiri College of Engineering Sapthagiri College of Engineering
Sapthagiri College of English Road 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 580 057



Bangalore-560057

Certificate

This is to certify that Mr. /Ms		
of	has	participated
and successfully completed Five days Certification Course on	"HYBRID	ELECTRIC
VEHICLE" from 27th Jan, 2017 to 1st Feb, 2017 organize	d by the D	epartment of
Electrical & Electronics Engineering, Sapthagiri College of Engi	ineering.	

HOD, Dept of EEE

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Department of Electrical and Electronics Engineering

5 days Certification Course on "HYBRID ELECTRIC VEHICLE"



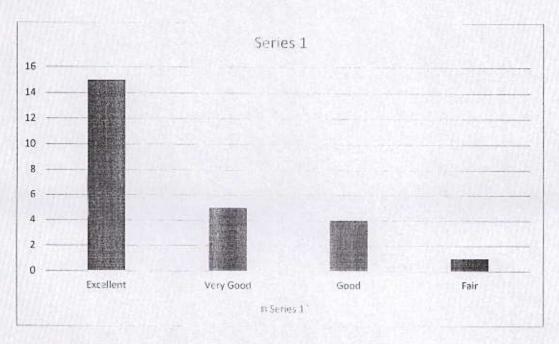
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Department of Electrical & Electronics Engineering

FEEDBACK ANALYSIS

Certification Programme "HYBRID ELECTRIC VEHICLE"

No. of students participated	Student Feedback					
participated	Excellent	Very Good	Good	Average		
160	70	20	5	5		



Action Report:

70 % of students were completely happy with the certification program and 20 % of students felt it was a good program remaining 5 % students were satisfied with the program and remaining 5 % students were average with the program.

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

PROPOR HOD

Department of Electrical & Electronics Engine: Sapthagiri College of Engineering Bangaiore - 580057.

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Certificate

This is to certi	ify that Mr. /	Ms_SHAN	u - 18915	SEE082.		
of	EEE				has	participated
and successfu	lly complete	d Five days Co	ertification C	Course on "	HYBRID	ELECTRIC
VEHICLE"	from 27 th	Jan, 2017 to 1	st Feb, 201'	7 organized	by the D	epartment of
Electrical & E	lectronics En	gineering, Sap	thagiri Colle	ge of Engin	eering.	

HOD, Dept of EEE

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Bangalore-560057

Certificate

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of	EEE					_ has	participated
and successfu	lly complete	d Five d	ays Certif	fication	Course on	"HYBRID	ELECTRIC
VEHICLE"	from 27 th	Jan, 201	7 to 1 st	Feb, 20)17 organiz	ed by the D	epartment of
Electrical & E	lectronics En	gineering	g, Sapthag	giri Co	llege of Eng	gineering.	
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of		has	participated
and successfully completed Five	days Certification Course on	"HYBRID	ELECTRIC
VEHICLE" from 27th Jan, 2	017 to 1st Feb, 2017 organize	ed by the D	epartment of
Electrical & Electronics Engineeri	ng, Sapthagiri College of Eng	ineering.	
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Department of Electrical & Electronics Engineering

Certificate Course Report

Department of EEE conducted Certificate Course on: "Hybrid Electrical Vehicle",

Guest Speaker: Mr JayaKumar, Retired Joined Director, CPRI, Bangalore-560012.

Duration of the course was for five days from Jan 27th 2017 to Feb 1st 2017.

Course detail:

Objective of the Course: Smart Hybrid is an advanced technology that helps increase fuel efficiency and enhances driving performance. The engine automatically stops when idle and silently starts when the optimal conditions are met in manual and automatic transmissions. It comes with a dual battery setup including a Lithium Ion Battery. These high capacity batteries store the energy generated during braking to assist the engine's idle start-stop and the torque assist functions. The energy stored in the Lithium-ion battery assists during acceleration which helps engine in providing optimal acceleration and performance.

The torque assist function supplements the engine's power during acceleration which reduces the load on engine and the brake energy regeneration function captures the energy lost during braking and deceleration of vehicle, eventually improving the engine life & performance. Modern HEVs make use of efficiency-improving technologies such as regenerative brakes which convert the vehicle's kinetic energy to electric energy, which is stored in a battery or super capacitor. Some varieties of HEV use an internal combustion engine to turn an electrical generator, which either recharges the vehicle's batteries or directly powers its electric drive motors; this combination is known as a motor–generator. Many HEVs reduce idle emissions by shutting down the engine at idle and restarting it when needed; this is known as a start-stop system.

Schedule of Certification Course

Dates	SESSION 1 (9.00am-10.30am)	SESSION 2 (11.00am-12.30pm)	SESSION 3 (1.30pm-4.30pm)	
27-01-2017 Friday	Micro grid with RE	Modelling of wind and solar	Hands on Modelling of wind and solar	
28-01-2017 Saturday	EV and ES in India overview.	Electric storage system	Hands On Electric storage system	
30-01-2017 Monday	Modeling of battery storage system.	Modeling of battery storage system	Hands on Battery designing.	
31-01-2017 Tuesday	Modelling of EV charging system.	Modelling of EV charging system.	Hands on Micro grid with EV and storage	
01-02-2017 Wednesday	IoT and data analytics in RE,EV and ES system	IoT and data analytics in RE,EV and ES system	Hand on session RE,EV and ES system, Test and Certificate issue and validation	

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Department of Electrical & Electronics Engineering

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.





Principal
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Department of Electrical & Electronics Engineering

for)





HOD, EEE

PROF & HOD

Department of Electrical & Electronics Engineer: Sapthagiri Coilega of Engineering Bangalore - 560057.

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