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SASURIE COLLEGE OF ENGINEERING

Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai

Near NH544, Coimbatore Bypass, Near Vijayamangalam Tollgate,Tirupur 638056

NAAC DOCUMENTS

QUALITY INDICATOR FRAME WORK

CRITERION - 1

CURRICULAR ASPECTS

SUBMITTED BY

IQAC

INTERNAL QUALITY ASSURANCE CELL

SASURIE COLLEGE OF ENGINEERING

SASURIE COLLEGE OF ENGINEERING
Vijayamangalam, Tiruppur.

1.2 AcademicFlexibility(30)

1.2.1 Number of Certificate/Value added courses offered and online courses of MOOCs, SWAYAM, NPTEL etc. (where the students of the institution have enrolled and successfully completed during the last five years)

AND

1.2.2 Percentage of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

VAC Title:	**RENEWABLE ENERGY INTEGRATION AND GRID STABILITY**				
Resource Person:	Ajay kumar, Manager, KLG systel limited, Chennai-600014.		K.R.Giridhary, CEO, KLG systel limited, Chennai-600014.		
Dat e of conduct from:	**18.06.2018**	**To:**	**22.06.2018**	**Duration:**	**30Hours**
Organized Department:	**ELECTRICAL AND ELECTRONICS ENGINEERING**				
Participant Year:	**2/3/4**	**Semester:**	**ODD**	**No. of Students Registered:**	**53**
Venue:	**Lecture hall of II & III year EEE**				

TABLE OF CONTENT

SASURIE COLLEGE OF ENGINEERING
Approved by AICTE, New Delhi
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Ref: SCE / EEE /Students / VAC / 2018 – 2019 / ODD 11.06.2018

CIRCULAR

In order to bridge the curricular gap between the Academic Syllabus and Industry requirements, Department of Electrical and Electronics Engineering and IQAC of our Institution in association with KLG systel limited, is organizing a **Value Added Course (VAC)** for the students of II, III and IV year of EEE on the title **"Renewable Energy Integration and Grid Stability"** from **18.06.2018** to **22.06.2018**. At the end of the VAC, course completion certificates will be issued to the eligible participants as per the following norms.

- Students, who are securing **more than 70% on total score in the VAC test** and secured more than 75% in VAC attendance is eligible to receive the course completion certificate for the VAC attended.

Resource Person Details	Ajay kumar, Manager, KLG systel limited, Chennai-600014.	K.R.Giridhary, CEO, KLG systel limited, Chennai-600014.
Venue	**Lecture hall of II & III year EEE**	

HoD/EEE **PRINCIPAL**

Copy to:

1. Chairman & Secretary for information
2. Principal office
3. IQAC Co-Ordinator
4. Class In charges - II, III & IV-Year EEE
5. II, III & IV-Year EEE Students
6. EEE Notice Board
7. Department File

Dr.M.VIJAYAKUMAR ME., Ph.D.,
PRINCIPAL
SASURIE COLLEGE OF ENGINEERING,
Vijayamangalam - 638 056, Tirupur (Dt).

SASURIE INSTITUTIONS

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Ref: SCE / EEE /Students / VAC / 2018 – 2019 / ODD 11.06.2018

SYLLABUS - VALUE ADDED COURSE

"Renewable Energy Integration and Grid Stability"

From 18.06.2018 to 22.06.2018 (5 days)

Duration : 30 Hours **Academic Year : 2018 -2019 / ODD**

S.No.	Topics Covered	Duration (In Hours)	Date
1	Introduction to Renewable Energy Sources	3	18.06.2018
2	Grid Integration Challenges	3	18.06.2018
3	Smart Grid Technologies	3	19.06.2018
4	Energy Storage Solutions	3	19.06.2018
5	Intermittency and Forecasting	3	20.06.2018
6	Grid Modeling and Simulation	3	20.06.2018
7	Grid Resilience and Reliability	3	21.06.2018
8	Policy and Regulatory Framework	3	21.06.2018
9	Microgrids and Decentralized Energy Systems	3	22.06.2018
10	Case Studies and Best Practices	3	22.06.2018
	Total Hours	30	-

After successful completion of 30 Hours VAC, the assessment test for the VAC titled "Renewable Energy Integration and Grid Stability" will be conducted on 22.06.2018.

VAC Coordinator

HoD/EEE

Dr.M.VIJAYAKUMAR ME., Ph.D.,
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

STUDENTS PARTICIPATION LIST - VALUE ADDED COURSE

"Renewable Energy Integration and Grid Stability"

From 18.06.2018 to 22.06.2018 (5 days)

Duration : 30 Hours **Academic Year : 2018 -2019 / ODD**

S.No.	Reg No.	Name of the Student	Year / Branch
1.	732417105002	ANJANA S	II/EEE
2.	732417105004	BARANIDHARAN P	II/EEE
3.	732417105006	KALEESWARAN P	II/EEE
4.	732417105007	KEERTHANA G	II/EEE
5.	732417105008	MALATHI S R	II/EEE
6.	732417105009	MARIA AROCKIYAM D	II/EEE
7.	732417105010	PRAKASH M	II/EEE
8.	732417105011	RAMESH KUMAR T	II/EEE
9.	732417105012	SATHISHKUMAR R	II/EEE
10.	732417105013	SEDHUMADHAVAN A	II/EEE
11.	732417105014	SHANMUGAM S	II/EEE
12.	732417105015	SOUNDARYA T	II/EEE
13.	732417105016	SREEVENI S	II/EEE
14.	732417105019	VIGNESH S	II/EEE
15.	732417105701	SEVVANDHI D	II/EEE
16.	732417105702	RANJITH C	II/EEE
17.	732416105001	AMSAVENI S	III/EEE
18.	732416105002	ARIHARAN P	III/EEE
19.	732416105003	BASKAR S	III/EEE
20.	732416105004	BOOPATHI S	III/EEE
21.	732416105005	DHARANI D	III/EEE
22.	732416105006	HARISH D	III/EEE
23.	732416105007	KALLALAHAR K S	III/EEE
24.	732416105009	KARTHIKEYAN V	III/EEE
25.	732416105010	KIRUBHAKARAN R	III/EEE
26.	732416105011	NAVEENKUMAR M	III/EEE
27.	732416105012	NAVEENKUMAR R	III/EEE
28.	732416105013	PAVITHRA M	III/EEE
29.	732416105014	RAJESHKUMAR M	III/EEE
30.	732416105015	TAMILSELVAM G	III/EEE

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STUDENTS PARTICIPATION LIST - VALUE ADDED COURSE

S.No.	Reg No.	Name of the Student	Year / Branch
31.	732416105016	VANMATHI P	III/EEE
32.	732416105017	VIDHYA V	III/EEE
33.	732416105301	AJITH M	III/EEE
34.	732416105302	GUNASEKARAN S	III/EEE
35.	732416105501	CHANDHRAKUMAR M	III/EEE
36.	732415105001	ATHIRA K S	IV/EEE
37.	732415105002	BHUVANESHWARI S	IV/EEE
38.	732415105003	DEEPA S	IV/EEE
39.	732415105004	DEVARAJ K R	IV/EEE
40.	732415105005	GOWSSIKKUMAR A	IV/EEE
41.	732415105006	JANAKI PRIYA M	IV/EEE
42.	732415105007	MANIKANDAN S	IV/EEE
43.	732415105008	MANIMEGALAI S	IV/EEE
44.	732415105009	OVIYA S	IV/EEE
45.	732415105010	PAVITHRA B	IV/EEE
46.	732415105011	PAVITHRA V	IV/EEE
47.	732415105012	RAGU P	IV/EEE
48.	732415105013	RAJADURAI T	IV/EEE
49.	732415105014	RAMYA S	IV/EEE
50.	732415105015	SUGANYA R	IV/EEE
51.	732415105016	VALLINAYAKI K	IV/EEE
52.	732415105304	SHANMUGA SUNDARAM S	IV/EEE
53.	732415105501	MANIKANDAN K	IV/EEE

VAC Coordinator

HoD/EEE

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

STUDENTS ATTENDANCE LIST - VALUE ADDED COURSE

"Renewable Energy Integration and Grid Stability"

From 18.06.2018 to 22.06.2018 (5 days)

Duration : 30 Hours **Academic Year : 2018 -2019/ ODD**

S.No	Reg No.	Name of the Student	Year/ Branch	18.06.2018		19.06.2018		20.06.2018		21.06.2018		22.06.2018		No. of Hours Attended	Signature of the Student
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
1.	732417105002	ANJANA S	II/EEE	/	/	/	/	/	/	/	/	/	/	30	
2.	732417105004	BARANIDHARAN P	II/EEE	/	a	/	/	/	/	/	/	/	/	27	
3.	732417105006	KALEESWARAN P	II/EEE	/	/	/	/	/	/	a	a	/	/	24	
4.	732417105007	KEERTHANA G	II/EEE	/	/	/	/	/	/	/	/	/	/	30	
5.	732417105008	MALATHI S R	II/EEE	/	/	/	/	/	/	a	a	/	/	24	
6.	732417105009	MARIA AROCKIYAM D	II/EEE	/	/	/	/	/	/	/	/	/	/	30	
7.	732417105010	PRAKASH M	II/EEE	/	/	/	/	/	/	/	/	/	/	30	
8.	732417105011	RAMESH KUMAR T	II/EEE	/	/	/	/	/	/	/	/	/	/	30	
9.	732417105012	SATHISHKUMAR R	II/EEE	/	/	/	a	/	/	/	/	/	/	27	
10.	732417105013	SEDHUMADHAVAN A	II/EEE	/	/	/	/	/	/	/	/	/	/	30	
11.	732417105014	SHANMUGAM S	II/EEE	/	/	a	a	/	/	/	/	/	/	24	
12.	732417105015	SOUNDARYA T	II/EEE	/	/	/	/	/	/	/	/	/	/	30	
13.	732417105016	SREEVENI S	II/EEE	/	/	/	/	a	a	/	/	/	/	24	

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S.No	Reg No.	Name of the Student	Year/ Branch	18.06.2018		19.06.2018		20.06.2018		21.06.2018		22.06.2018		No. of Hours Attended	Signature of the Student
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
14.	732417105019	VIGNESH S	II/EEE	1	1	1	1	1	1	1	a	1	1	27	S.Vignesh
15.	732417105701	SEVVANDHI D	II/EEE	1	1	1	1	1	1	1	1	1	1	30	D.Sevvandhi
16.	732417105702	RANJITH C	II/EEE	1	1	a	a	1	1	1	1	1	1	24	Ranjith.C
17.	732416105001	AMSAVENI S	III/EEE	1	a	1	1	1	1	1	1	1	1	27	
18.	732416105002	ARIHARAN P	III/EEE	1	1	1	1	1	1	1	1	1	1	30	A.Hari
19.	732416105003	BASKAR S	III/EEE	a	1	1	1	1	1	1	1	1	1	27	Baskar.S
20	732416105004	BOOPATHI S	III/EEE	1	1	1	1	1	1	1	1	1	1	30	S.Boopathi
21.	732416105005	DHARANI D	III/EEE	1	1	1	1	1	1	1	1	1	1	30	Dharani.D
22.	732416105006	HARISH D	III/EEE	1	1	1	1	1	a	1	1	1	1	27	D.Harish
23.	732416105007	KALLALAHAR K S	III/EEE	1	1	1	1	1	1	1	1	1	1	30	Kallalahar
24.	732416105009	KARTHIKEYAN V	III/EEE	1	1	1	1	1	1	a	a	1	1	24	V.Karthikeyan
25.	732416105010	KIRUBHAKARAN R	III/EEE	1	1	1	a	1	1	1	1	1	1	27	Ravisankar
26.	732416105011	NAVEENKUMAR M	III/EEE	1	1	1	1	1	1	1	1	1	1	30	
27.	732416105012	NAVEENKUMAR R	III/EEE	1	a	1	1	1	1	1	1	1	1	27	M.Pavithra
28.	732416105013	PAVITHRA M	III/EEE	1	1	1	1	1	1	1	1	1	1	30	Pavithra.M
29.	732416105014	RAJESHKUMAR M	III/EEE	1	1	1	1	1	1	1	1	1	1	30	Rajeshkumar
30.	732416105015	TAMILSELVAM G	III/EEE	1	1	1	a	1	1	1	1	1	1	27	Tamilselvam.G
31.	732416105016	VANMATHI P	III/EEE	1	1	1	1	1	1	1	1	1	1	30	Vanmathi P

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STUDENTS ATTENDANCE LIST - VALUE ADDED COURSE

S.No	Reg No.	Name of the Student	Year/ Branch	18.06.2018		19.06.2018		20.06.2018		21.06.2018		22.06.2018		No. of Hours Attended	Signature of the Student
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
32.	732416105017	VIDHYA V	III/EEE	/	/	/	/	/	/	/	/	/	/	30	Vidhya V
33.	732416105301	AJITH M	III/EEE	/	a	/	/	/	/	/	/	/	/	27	Ajith.M
34.	732416105302	GUNASEKARAN S	III/EEE	/	/	/	/	/	/	/	/	/	/	30	Guna.S
35.	732416105501	CHANDHRAKUMAR M	III/EEE	/	/	a	a	/	/	/	/	/	/	24	Chandhru.M
36.	732415105001	ATHIRA K S	IV/EEE	/	/	/	/	/	/	a	/	/	/	27	Athira.S
37.	732415105002	BHUVANESHWARI S	IV/EEE	/	/	/	/	/	/	/	/	/	/	30	Bhuvaneshwari.S
38.	732415105003	DEEPA S	IV/EEE	/	/	/	/	a	/	/	/	/	/	27	Deepa.S
39.	732415105004	DEVARAJ K R	IV/EEE	/	/	/	/	/	/	/	/	/	/	30	Devaraj.KR
40.	732415105005	GOWSSIKKUMAR A	IV/EEE	/	/	/	/	/	/	/	/	/	/	30	Gowsskku.
41.	732415105006	JANAKI PRIYA M	IV/EEE	/	/	/	/	/	/	/	/	/	/	30	Janaki priya.
42.	732415105007	MANIKANDAN S	IV/EEE	/	/	/	/	/	/	/	/	/	/	30	Manikandan.S
43.	732415105008	MANIMEGALAI S	IV/EEE	/	/	/	/	/	/	/	/	/	/	30	Manimegalai
44.	732415105009	OVIYA S	IV/EEE	/	/	/	/	/	/	a	/	/	/	27	Oviya.S
45.	732415105010	PAVITHRA B	IV/EEE	/	/	/	/	/	/	/	/	/	/	30	Pavithra
46.	732415105011	PAVITHRA V	IV/EEE	a	a	/	/	/	/	/	/	/	/	24	Pavithra
47.	732415105012	RAGU P	IV/EEE	/	/	/	/	/	/	/	/	/	/	30	Ragu.P
48.	732415105013	RAJADURAI T	IV/EEE	/	/	/	/	a	a	/	/	/	/	24	Rajadurai.T
49.	732415105014	RAMYA S	IV/EEE	/	/	/	/	/	/	/	/	/	/	30	Ramya.S

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STUDENTS ATTENDANCE LIST - VALUE ADDED COURSE

S.No	Reg No.	Name of the Student	Year/ Branch	18.06.2018		19.06.2018		20.06.2018		21.06.2018		22.06.2018		No. of Hours Attenced	Signature of the Student
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
50.	732415105015	SUGANYA R	IV/EEE	1	1	1	1	1	1	1	1	1	1	30	Suganya R
51.	732415105016	VALLINAYAKI K	IV/EEE	1	1	a	a	1	1	1	1	1	1	24	Vallinayaki
52.	732415105304	SHANMUGA SUNDARAM S	IV/EEE	1	1	1	1	a	1	1	1	1	1	27	Shanmugam
53.	732415105501	MANIKANDAN K	IV/EEE	1	1	1	1	1	1	1	1	1	1	30	Manikandan.K

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IVAC Coordinator

HoD/EEE

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SASURIE INSTITUTIONS

Report on Value Added Course

Title:	**Renewable Energy Integration and Grid Stability**				
Resource Person:	**Ajay kumar, Manager, KLG systel limited, Chennai-600014.**		**K.R.Giridhary, CEO, KLG systel limited, Chennai-600014.**		
Date of conduct from :	**18.06.2018**	To:	**22.06.2018**	Duration:	**30 Hours**
Organized by :	**ELECTRICAL AND ELECTRONICS ENGINEERING and IQAC in association with KLG systel limited**				
Academic Year:	**2018 – 2019**		Semester:		**ODD**
Participant Year:	**II, III, IV Year EEE**		No. of Students Participated :		**53**
Venue:	**Lecture hall of II & III year EEE**				

Outcome of Value Added Course (VAC)

At the end of the Course, Students can be able to

- Develop a comprehensive understanding of various renewable energy sources, their characteristics, and potential contributions to the energy mix.
- Assess different energy storage technologies and determine their suitability for addressing intermittency issues and stabilizing renewable energy grids.
- Acquire hands-on experience with grid modeling and simulation tools to assess the impact of renewable energy integration on grid stability and propose optimization strategies.
- Apply knowledge of microgrids and decentralized energy systems to design and implement solutions that contribute to improved grid stability in the context of renewable energy.
- Analyze real-world case studies and apply best practices to design and implement effective strategies for renewable energy integration, drawing insights from successful projects worldwide.

Assessment Process

- Students, who are securing **more than 70% on total score in the VAC test** and secured more than 75% in VAC attendance is eligible to receive the course completion certificate for the VAC attended
- Total Score = (0.5 *Attendance in VAC out of 100 percentage + 0.5 *Test mark in VAC out of 100 marks)

No. of students successfully completed the VAC course is **53 Students** based on the above assessment process.

VAC Co-ordinator **HoD/ EEE** **Principal**

Dr.M.VIJAYAKUMAR ME., Ph.D.,
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Vijayamangalam, Tiruppur.

DEPARTMENT OF OF ELECTRICAL AND ELECTRONICS ENGINEERING

Certificate of Participation

This is to certify that **Mr./Ms** PRAKASH . M II/EEE has successfully completed the **Value Added Course** titled "**Renewable Energy Integration and Grid Stability**" Organized by the *Department of Electrical and Electronics Engineering* **in association with IQAC of Sasurie College of Engineering and KLG Systel Limited, Chennai** from **18.06.2018to 22.06.2018**(5 Days).

Co-ordinator

Head of the Department

Principal

Dr.M.VIJAYAKUMAR ME., Ph.D.,
PRINCIPAL
SASURIE COLLEGE OF ENGINEERING.

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DEPARTMENT OF OF ELECTRICAL AND ELECTRONICS ENGINEERING

Certificate of Participation

This is to certify that **Mr./Ms** SOUNDARYA T II/EEE has successfully completed the **Value Added Course** titled "**Renewable Energy Integration and Grid Stability**" Organized by the *Department of Electrical and Electronics Engineering* in association with IQAC of Sasurie College of Engineering and KLG **Systel Limited, Chennai** from **18.06.2018 to 22.06.2018**(5 Days).

Co-ordinator

Head of the Department

Principal

Dr.M.VIJAYAKUMAR ME., Ph.D.
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Vijayamangalam - 638 056, Tirupur (Dt)

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Vijayamangalam, Tiruppur.

DEPARTMENT OF OF ELECTRICAL AND ELECTRONICS ENGINEERING

Certificate of Participation

This is to certify that **Mr./Ms** DHARANI D III / EEE has successfully completed the **Value Added Course** titled "**Renewable Energy Integration and Grid Stability**" Organized by the *Department of Electrical and Electronics Engineering* **in association with IQAC of Sasurie College of Engineering and KLG Systel Limited,Chennai** from **18.06.2018 to 22.06.2018**(5 Days).

Co-ordinator

Head of the Department

Principal

Dr.M.VIJAYAKUMAR ME., Ph.D.,
PRINCIPAL
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Vijayamangalam, Tiruppur.

DEPARTMENT OF OF ELECTRICAL AND ELECTRONICS ENGINEERING

Certificate of Participation

This is to certify that **Mr./Ms** RAJESKUMAR III/EEE has successfully completed the **Value Added Course** titled "**Renewable Energy Integration and Grid Stability**" Organized by the ***Department of Electrical and Electronics Engineering*** **in association with IQAC of Sasurie College of Engineering and KLG Systel Limited,Chennai** from **18.06.2018 to 22.06.2018**(5 Days).

Co-ordinator

Head of the Department

Principal

Dr.M.VIJAYAKUMAR ME., Ph.D.,
PRINCIPAL
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COLLEGE OF ENGINEERING

Vijayamangalam, Tirupur

DEPARTMENT OF OF ELECTRICAL AND ELECTRONICS ENGINEERING

Certificate of Participation

This is to certify that Mr./Ms JAYAPRIYA R IV/EEE has successfully completed the Value Added Course titled "Renewable Energy Integration and Grid Stability" Organized by the *Department of Electrical and Electronics Engineering* in association with IQAC of Sasurie College of Engineering and KLG Systel limited, Chennai from 18.06.2018 to 22.06.2018(5 Days).

Co-ordinator

Head of the Department

Principal

Dr.M.VIJAYAKUMAR ME., Ph D.,
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Affiliated to Anna University, Chennai

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

TEST QUESTION PAPER - VALUE ADDED COURSE

"Renewable Energy Integration and Grid Stability"

From 18.06.2018 to 22.06.2018 (5 days)

Duration : 30 Hours **Academic Year : 2018 -2019 / ODD**

Date of Test : 22.06.2018

MULTIPLE CHOICE QUESTIONS (25 X 1 = 25 Marks)

Name of the Student: **Year/Sem:**

AU Register Number:

Answer all the questions:

1. What is the primary goal of integrating renewable energy into power grids?
   a) Increase energy costs
   b) Reduce grid stability
   c) Enhance sustainability
   d) Ignore environmental concerns

2. Which of the following is NOT a renewable energy source?
   a) Wind
   b) Coal
   c) Solar
   d) Geothermal

3. What challenges are associated with integrating renewable energy into existing power grids?
   a) Decreased grid stability
   b) Increased reliability
   c) Lower costs
   d) Simplified operations

4. What role do smart grid technologies play in grid stability with renewable energy integration?
   a) Increase inefficiency
   b) Decrease reliability
   c) Enhance efficiency and stability
   d) No impact

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5. What is the purpose of energy storage solutions in the context of renewable energy integration?
   a) Increase intermittency
   b) Decrease grid stability
   c) Store excess energy
   d) Ignore energy fluctuations

6. What is the main factor contributing to the intermittent nature of renewable energy sources?
   a) Consistency
   b) Predictability
   c) Weather conditions
   d) Grid reliability

7. Which tool is commonly used for modeling and simulating the impact of renewable energy on grid stability?
   a) Spreadsheet software
   b) Social media platforms
   c) Grid modeling tools
   d) Email applications

8. How do microgrids contribute to grid stability in the context of renewable energy?
   a) Increase centralization
   b) Decrease reliability
   c) Provide decentralized solutions
   d) Ignore energy fluctuations

9. What is a key consideration for enhancing grid resilience with renewable energy integration?
   a) Ignoring weather conditions
   b) Overlooking regulatory frameworks
   c) Balancing technical and operational aspects
   d) Reducing energy storage

10. What is the purpose of forecasting in renewable energy integration?
   a) Increase unpredictability
   b) Decrease grid stability
   c) Predict energy generation patterns
   d) Ignore energy fluctuations

11. Which regulatory factor is essential for promoting renewable energy integration?
   a) Encouraging fossil fuels
   b) Ignoring environmental policies
   c) Supportive policies and regulations
   d) Reducing renewable energy incentives

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12. How do decentralized energy systems contribute to grid stability?
a) Increase centralization
b) Decrease reliability
c) Provide localized solutions
d) Ignore energy fluctuations

13. What is the primary goal of grid modeling and simulation tools in the context of renewable energy integration?
a) Increase uncertainty
b) Decrease grid stability
c) Assess impact and optimize strategies
d) Ignore energy fluctuations

14. What technology is commonly used for energy storage in grid stability applications?
a) Refrigerators
b) Batteries
c) Television sets
d) Microwave ovens

15. How does intermittency impact the reliability of power grids with renewable energy?
a) Improves reliability
b) Decreases reliability
c) No impact
d) Increases predictability

16. Which of the following is a benefit of a well-designed regulatory framework for renewable energy integration?
a) Increased unpredictability
b) Decreased compliance
c) Fostering sustainable practices
d) Ignoring environmental concerns

17. What is the primary purpose of analyzing case studies in the context of renewable energy integration?
a) Increase confusion
b) Decrease grid stability
c) Draw insights and implement best practices
d) Ignore energy fluctuations

18. What factor is crucial for the success of microgrid implementations in renewable energy integration?
a) Centralization
b) Increased complexity
c) Supportive policies
d) Ignoring technical aspects

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19. How do energy storage solutions contribute to mitigating the impact of renewable energy intermittency?
a) Increase unpredictability
b) Decrease grid stability
c) Store excess energy for later use
d) Ignore energy fluctuations

20. What is the significance of resilience in power grids with a high share of renewable energy?
a) Decreases grid stability
b) Increases vulnerability
c) Enhances the ability to withstand disruptions
d) Ignore energy fluctuations

21. Why is accurate forecasting essential for managing renewable energy integration?
a) Decreases uncertainty
b) Increases grid stability
c) Predicts energy generation patterns
d) Ignoring energy fluctuations

22. What role do policies and regulations play in promoting grid stability with renewable energy integration?
a) Hinder progress
b) Facilitate compliance and sustainable practices
c) Increase unpredictability
d) Ignore environmental concerns

23. How does grid modeling contribute to understanding the impact of renewable energy on power grids?
a) Increases predictability
b) Decreases grid stability
c) Assesses and optimizes strategies
d) Ignores energy fluctuations

24. Which of the following is a decentralized energy source?
a) Nuclear power plants
b) Wind turbines
c) Large-scale hydroelectric dams
d) Ignoring renewable options

25. What is the primary purpose of implementing best practices in renewable energy integration?
a) Increase confusion
b) Decrease grid stability
c) Improve project success and outcomes
d) Ignore energy fluctuations

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TEST QUESTION ANSWER KEY - VALUE ADDED COURSE

"Renewable Energy Integration and Grid Stability"

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Date of Test : 22.06.2018

1	c	6	c	11	c	16	c	21	c
2	b	7	c	12	c	17	c	22	b
3	a	8	c	13	c	18	c	23	c
4	c	9	c	14	b	19	c	24	b
5	c	10	c	15	b	20	c	25	c

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"Renewable Energy Integration and Grid Stability"

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Duration : 30 Hours **Academic Year : 2018 -2019 / ODD**

Date of Test : 22.06.2018

MULTIPLE CHOICE QUESTIONS (25 X 1 = 25 Marks)

Name of the Student: AJITH . M **Year/Sem:** III / V

AU Register Number: 732416105301

Answer all the questions:

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Academic Year : 2018 -2019/ ODD

S.No	Reg No.	Name of the Student	Year/ Branch	Attendance Details		VAC-MCQ TEST		OVERALL Score (100) (50% of A + 50% of B)
				No. of Hours Attended	Attendance Score (100) (A)	No. of Correct Answers	MCQ Score (100) (B)	
1.	732417105002	ANJANA S	II/EEE	30	100	19	76	88
2.	732417105004	BARANIDHARAN P	II/EEE	27	90	19	76	83
3.	732417105006	KALEESWARAN P	II/EEE	24	80	21	84	82
4.	732417105007	KEERTHANA G	II/EEE	30	100	18	72	86
5.	732417105008	MALATHI S R	II/EEE	24	80	20	80	80
6.	732417105009	MARIA AROCKIYAM D	II/EEE	30	100	19	76	88
7.	732417105010	PRAKASH M	II/EEE	30	100	19	76	88
8.	732417105011	RAMESH KUMAR T	II/EEE	30	100	18	72	86
9.	732417105012	SATHISHKUMAR R	II/EEE	27	90	19	76	83
10.	732417105013	SEDHUMADHAVAN A	II/EEE	30	100	19	76	88
11.	732417105014	SHANMUGAM S	II/EEE	24	80	20	80	80
12.	732417105015	SOUNDARYA T	II/EEE	30	100	19	76	88
13.	732417105016	SREEVENI S	II/EEE	24	80	21	84	82

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				No. of Hours Attended	Attendance Score (100) (A)	No. of Correct Answers	MCQ Score (100) (B)	
14.	732417105019	VIGNESH S	II/EEE	27	90	19	76	83
15.	732417105701	SEVVANDHI D	II/EEE	30	100	20	80	90
16.	732417105702	RANJITH C	II/EEE	24	80	21	84	82
17.	732416105001	AMSAVENI S	III/EEE	27	90	18	72	81
18.	732416105002	ARIHARAN P	III/EEE	30	100	21	84	92
19.	732416105003	BASKAR S	III/EEE	27	90	19	76	83
20.	732416105004	BOOPATHI S	III/EEE	30	100	19	76	88
21.	732416105005	DHARANI D	III/EEE	30	100	21	84	92
22.	732416105006	HARISH D	III/EEE	27	90	19	76	83
23.	732416105007	KALLALAHAR K S	III/EEE	30	100	20	80	90
24.	732416105009	KARTHIKEYAN V	III/EEE	24	80	21	84	82
25.	732416105010	KIRUBHAKARAN R	III/EEE	27	90	18	72	81
26.	732416105011	NAVEENKUMAR M	III/EEE	30	100	21	84	92
27.	732416105012	NAVEENKUMAR R	III/EEE	27	90	19	76	83
28.	732416105013	PAVITHRA M	III/EEE	30	100	19	76	88
29.	732416105014	RAJESHKUMAR M	III/EEE	30	100	21	84	92
30.	732416105015	TAMILSELVAM G	III/EEE	27	90	19	76	83
31.	732416105016	VANMATHI P	III/EEE	30	100	19	76	88
32.	732416105017	VIDHYA V	III/EEE	30	100	18	72	86

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33.	732416105301	AJITH M	III/EEE	27	90	19	76	83
34.	732416105302	GUNASEKARAN S	III/EEE	30	100	20	80	90
35.	732416105501	CHANDHRAKUMAR M	III/EEE	24	80	21	84	82
36.	732415105001	ATHIRA K S	IV/EEE	27	90	18	72	81
37.	732415105002	BHUVANESHWARI S	IV/EEE	30	100	21	84	92
38.	732415105003	DEEPA S	IV/EEE	27	90	19	76	83
39.	732415105004	DEVARAJ K R	IV/EEE	30	100	19	76	88
40.	732415105005	GOWSSIKKUMAR A	IV/EEE	30	100	21	84	92
41.	732415105006	JANAKI PRIYA M	IV/EEE	30	100	19	76	88
42.	732415105007	MANIKANDAN S	IV/EEE	30	100	19	76	88
43.	732415105008	MANIMEGALAI S	IV/EEE	30	100	18	72	86
44.	732415105009	OVIYA S	IV/EEE	27	90	19	76	83
45.	732415105010	PAVITHRA B	IV/EEE	30	100	19	76	88
46.	732415105011	PAVITHRA V	IV/EEE	24	80	20	80	80
47.	732415105012	RAGU P	IV/EEE	30	100	19	76	88
48.	732415105013	RAJADURAI T	IV/EEE	24	80	21	84	82
49.	732415105014	RAMYA S	IV/EEE	30	100	19	76	88

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50	732415105015	SUGANYA R	IV/EEE	30	100	20	80	90
51	732415105016	VALLINAYAKI K	IV/EEE	24	80	21	84	82
52	732415105304	SHANMUGA SUNDARAM S	IV/EEE	27	90	19	76	83
53	732415105501	MANIKANDAN K	IV/EEE	30	100	19	76	88

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HOD/EEE