KALASALINGAM
ACADEMY OF RESEARCH AND EDUCATION
(DEEMED TO BE UNIVERSITY)
Under sec. 3 of UGC Act 1956. Accredited by NAAC with "A" Grade

Anand Nagar, Krishnankoil - 626126, Srivilliputtur (via), Virudhunagar District, Tamilnadu.

APPLICATION FOR ADMISSION TO Ph.D. PROGRAMMES

Date of Application:05-07-2021

Department	ELECTRICAL AND ELECTRONICS ENGINEERING	Application No.	202110139
Area of Research	POWER SYSTEM	Research Mode	PART TIME

Name :VIGNESH E

Date of Birth / Age :03-12-1996 / 24 Years

Gender :MALE

Category :BC

e-Mail ID :vigneshe03121996@gmail.com

Mobile :9865341618

Father's/Husband's Name	ELANCHELIAN M	Father's/Husband's Occupation	CENTRAL GOVERNMENT EMPLOYEE
Family Income	90000	Residental Type	RURAL
Birth Place	CHENNAI	Mother Tongue	TAMIL
Religion	HINDU	Martial Status	SINGLE
Aadhaar No.	901711101930	PAN No.	BCQPV8082E
Physically Challenged	NO	Type of Disability	-

Address for Communication:
2B-1
MUHAVUR RASTA KEELPURAM, MUHAVUR
RAJAPALAYAM
VIRUDHUNAGAR DISTRICT
TAMIL NADU
INDIA
Pin-626111

Permenant Address:
2B-1
MUHAVUR RASTA KEELPURAM, MUHAVUR
RAJAPALAYAM
VIRUDHUNAGAR DISTRICT
TAMIL NADU
INDIA
Pin-626111

Qualification						
Degree	Discipline	College/university	Year Passed	AVG/CGPA	Class	Mode
M.E.	POWER SYSTEM ENGINEERING	THIAGARAJAR COLLEGE OF ENGINEERING	2020	7.2	FIRST	REGULAR
B.E.	EEE	KALASALINGAM INSTITUTE OF TECHNOLOGY	2018	6.3	SECOND	REGULAR

Experience				
Organization	Designation	Experience From	Experience TO	Work Nature

Payment Details				
Transaction ID	Reference	Date of transaction	Amount	Status
202110139_210705165342	VSBI0091308469	05-07-2021	600	SUCCESS

Transmission constrained generation expansion planning using soft computing techniques

Generation Expansion Planning (GEP) problem is an important problem for the decision planners in the power utilities. The growth of population and increasing consumption of electricity expose countries to build additional power units. Because of technical and economical differences of the energy sources, generation expansion planning is used to determine the best unit type for the additional capacity. Costs have always been a very important factor in decision making, in particular for choices between alternative energy sources and electricity generation technologies. Eventually, costs, risks and benefits of an energy source need to be analyzed in comparison with those of other energy sources and options. GEP in fact defines when, where and which new generating unit should be commissioned online in the long term of planning horizon. The main goal of GEP is to minimize the total investment, operating and maintenance and interruption costs associated with the addition of new power generating units in the planning horizon subject to constraints such as, forecasted demand, transmission, acceptable level of reliability, fuel mix and environmental criterions.

The Transmission constrained generation expansion planning (TC-GEP) problem is a large scale and challenging problem for the decision makers (to decide upon site, capacity, type of fuel, etc.) as there exist a large number of combinations. Normally the TC-GEP problem has an objective and a set of constraints. The main objective is the minimization of total system cost with transmission and reliability are the constraints. Nowadays, there is growing interest in renewable energy generation projects due to environmental and sustainability concerns. The rising coal cost, pollution impacts associated with conventional plants make the renewable sources as an attractive proposition for development.

In this research work distributed generators such as wind and solar and other renewables are considered as the expansion candidates in addition to the conventional plants. In this work, a slandered test system will be considered to analyze the

i)   GEP with conventional resources with and without transmission constraints.

ii)   ii) GEP with renewable in addition to conventional resources with and without transmission constraints

iii)   iii) GEP with renewable in addition to conventional resources with and without reliability constraints

iv)   iv) GEP with renewable in addition to conventional resources with and without transmission and reliability constraints

by using soft computing techniques.

Anna University

Reg.No. 951514105025/RG

The Syndicate of the Anna University hereby makes known that **VIGNESH E** has been admitted to the **DEGREE OF BACHELOR OF ENGINEERING** in **ELECTRICAL AND ELECTRONICS ENGINEERING** under the Faculty of Electrical Engineering, having completed the prescribed programme of study and having been certified by the duly appointed examiners to be qualified to receive the same, and has been placed in **SECOND CLASS** at the Examination held in **APRIL 2018** .
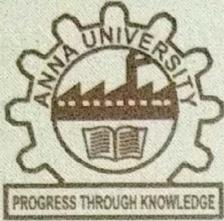
Given under the Seal of the University

Chennai 600 025
India
December 2018

Controller of Examinations

Registrar

Vice-Chancellor

ANNA UNIVERSITY

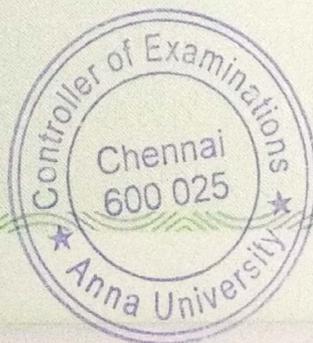## CHENNAI - 600 025

PROVISIONAL CERTIFICATE

Folio No. : 1501881

This is to certify that the undermentioned candidate has qualified for the award of Degree through:

THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI

an autonomous college affiliated to Anna University as detailed below :

Name	: VIGNESH E
Register No.	: 18K020
Degree	: M.E.
Branch/ Specialization	: POWER SYSTEMS ENGINEERING
Month & Year of Passing	: APRIL 2020
Classification	: FIRST CLASS

Chennai - 600 025.
Date : 23 OCT 2020

for **Controller of Examinations**

THIAGARAJAR COLLEGE OF ENGINEERING

(An Autonomous Institution Affiliated to Anna University)

MADURAI - 625 015, TAMILNADU, INDIA

GRADE CARD

M.E. DEGREE EXAMINATION

SL.NO:00183274-C

CANDIDATE NAME	: VIGNESH E
REG.NO. / ROLL NO.	: 18K020 / 61PS019
BRANCH	: POWER SYSTEMS ENGINEERING

DATE OF PUBLICATION	: 05-10-2020
EXAM YEAR	: APRIL-2020

CODE	NAME	CREDITS	GRADE	PASS YEAR
18PS110	OPTIMIZATION & APPLIED MATHEMATICS	3	D	NOV/2018
18PS130	DESIGN OF RENEWABLE ENERGY SYSTEMS	3	C	NOV/2018
18PS160	ANALYSIS OF MODERN POWER SYSTEM	3	C	NOV/2018
18PS170	POWER SYSTEM LABORATORY	2	D	NOV/2018
18ISGA0	DATA ANALYTIC TECHNIQUES	2	D	APR/2019
18PS210	POWER SYSTEM SECURITY AND CONTROL	3	C	APR/2019
18PS260	POWER SYSTEM PROTECTION	3	C	APR/2019
18PS270	ENERGY MANAGEMENT SYSTEM LABORATORY	2	S	APR/2019
18PS280	MINI PROJECT	2	B	APR/2019
18PSPB0	SMART POWER GRID	3	C	APR/2019
18PSPQ0	SOFT COMPUTING TECHNIQUES	3	B	APR/2019
18PSPS0	ELECTRIC AND HYBRID VEHICLES	3	B	APR/2019
18PG250	RESEARCH METHODOLOGY AND IPR	2	C	NOV/2019
*18PGAA0	PROFESSIONAL AUTHORING	2	C	NOV/2019
*18PGAB0	VALUE EDUCATION	2	C	NOV/2019
18PS120	POWER SYSTEM DYNAMICS AND STABILITY	3	D	NOV/2019
18PS380	DISSERTATION PHASE I	10	B	NOV/2019
18PSPA0	SYSTEMS THEORY	3	D	NOV/2019
18PSPE0	ELECTRICAL TRANSIENTS IN POWER SYSTEM	3	D	NOV/2019
18PS480	DISSERTATION PHASE II	15	C	APR/2020
****	*** END OF STATEMENT ***	***	***	***

Semester	ODD.Jr (N18)	EVEN (A19)	ODD (N19)	EVEN (A20)
GPA	4.24	5.48	7.04	7.00
Credits Registered	17	29	25	15
Credits Earned	11	21	25	15
Total Credits Earned	68			
CGPA	7.12			
Class Obtained	First Class			

* Not Considered for CGPA

MEDIUM OF INSTRUCTION: ENGLISH

CONDITIONS

1. Any alteration or overwriting make this statement of marks invalid

2. Any discrepancy in the above entries must be brought to the notice of the CONTROLLER OF EXAMINATIONS immediately

CONTROLLER OF EXAMINATIONS

Date:14-10-2020

ANNA UNIVERSITY, CHENNAI - 600 025

B.E. DEGREE EXAMINATIONS
CONSOLIDATED STATEMENT OF GRADES

Folio No. **AUS1574276**
V111388911056E

NAME OF THE CANDIDATE	VIGNESH E	
COLLEGE OF STUDY	KALASALINGAM INSTITUTE OF TECHNOLOGY	
PROGRAMME & BRANCH	B.E. Electrical and Electronics Engineering	

REGISTER NO.	951514105025	
GENDER	MALE	
MONTH & YEAR OF LAST APPEARANCE	April 2018	
REGULATIONS	2013	
DATE OF BIRTH	03-DEC-96	
MEDIUM OF INSTRUCTION	English	

SEM	COURSE CODE	COURSE TITLE	C	LG	GP	MONTH & YEAR OF PASSING
01	CY6151	Engineering Chemistry - I	3	C	7	NOV 2014
01	GE6151	Computer Programming	3	C	7	NOV 2014
01	GE6152	Engineering Graphics	4	E	5	NOV 2014
01	HS6151	Technical English - I	4	B	8	NOV 2014
01	MA6151	Mathematics - I	4	E	5	NOV 2014
01	PH6151	Engineering Physics - I	3	E	5	NOV 2014
01	GE6161	Computer Practices Laboratory	2	S	10	NOV 2014
01	GE6162	Engineering Practices Laboratory	2	C	7	NOV 2014
01	GE6163	Physics and Chemistry Laboratory - I	1	S	10	NOV 2014
02	CY6251	Engineering Chemistry - II	3	E	5	APR 2016
02	EE6201	Circuit Theory	4	C	7	APR 2015
02	GE6251	Basic Civil and Mechanical Engineering	4	E	5	NOV 2015
02	HS6251	Technical English - II	4	B	8	APR 2015
02	MA6251	Mathematics - II	4	E	5	APR 2015
02	PH6251	Engineering Physics - II	3	E	5	NOV 2015
02	EE6211	Electric Circuits Laboratory	2	B	8	APR 2015
02	GE6262	Physics and Chemistry Laboratory - II	1	S	10	APR 2015
02	GE6263	Computer Programming Laboratory	2	S	10	APR 2015
03	EC6202	Electronic Devices and Circuits	4	E	5	APR 2016
03	EE6301	Digital Logic Circuits	4	E	5	NOV 2015
03	EE6302	Electromagnetic Theory	4	E	5	NOV 2017
03	EE6303	Linear Integrated Circuits and Applications	3	E	5	NOV 2016
03	GE6351	Environmental Science and Engineering	3	E	5	NOV 2015
03	MA6351	Transforms and Partial Differential Equations	4	E	5	NOV 2017
03	EC6361	Electronics Laboratory	2	B	8	NOV 2015
03	EE6311	Linear and Digital Integrated Circuits Laboratory	2	B	8	NOV 2015
04	CS6456	Object Oriented Programming	3	E	5	NOV 2016
04	EE6401	Electrical Machines - I	4	E	5	NOV 2016
04	EE6402	Transmission and Distribution	3	E	5	APR 2017
04	EE6403	Discrete Time Systems and Signal Processing	3	E	5	APR 2016
04	EE6404	Measurements and Instrumentation	3	E	5	APR 2016
04	MA6459	Numerical Methods	4	E	5	APR 2016
04	CS6461	Object Oriented Programming Laboratory	2	A	9	APR 2016
04	EE6411	Electrical Machines Laboratory - I	2	A	9	APR 2016
05	EE6501	Power System Analysis	3	E	5	NOV 2016
05	EE6502	Microprocessors And Microcontrollers	3	D	6	NOV 2016
05	EE6503	Power Electronics	3	E	5	NOV 2016
05	EE6504	Electrical Machines - II	4	E	5	NOV 2016
05	IC6501	Control Systems	4	E	5	NOV 2016
05	ME6701	Power Plant Engineering	3	C	7	NOV 2016
05	EE6511	Control and Instrumentation Laboratory	2	C	7	NOV 2016
05	EE6512	Electrical Machines Laboratory - II	2	E	5	NOV 2016
05	GE6674	Communication and Soft Skills - Laboratory Based	2	A	9	NOV 2016
06	EC6651	Communication Engineering	3	C	7	APR 2017
06	EE6601	Solid State Drives	3	E	5	NOV 2017
06	EE6602	Embedded Systems	3	C	7	APR 2017
06	EE6603	Power System Operation and Control	3	E	5	APR 2017
06	EE6604	Design of Electrical Machines	4	D	6	APR 2017
06	EE6002	Power System Transients	3	E	5	APR 2017
06	EE6611	Power Electronics and Drives Laboratory	2	A	9	APR 2017
06	EE6612	Microprocessors and Microcontrollers Laboratory	2	C	7	APR 2017
06	EE6613	Presentation Skills and Technical Seminar	1	A	9	APR 2017
07	EE6701	High Voltage Engineering	3	E	5	APR 2018
07	EE6702	Protection and Switchgear	3	E	5	NOV 2017
07	EE6703	Special Electrical Machines	3	E	5	NOV 2017
07	MG6851	Principles of Management	3	B	8	NOV 2017
07	EE6004	Flexible AC Transmission Systems	3	D	6	NOV 2017
07	EE6008	Microcontroller Based System Design	3	C	7	NOV 2017
07	EE6711	Power System Simulation Laboratory	2	S	10	NOV 2017
07	EE6712	Comprehension	1	A	9	NOV 2017
08	EE6801	Electric Energy Generation, Utilization and Conservation	3	C	7	APR 2018
08	EE6010	High Voltage Direct Current Transmission	3	C	7	APR 2018
08	GE6075	Professional Ethics in Engineering	3	D	6	APR 2018
08	EE6811	Project Work	6	S	10	APR 2018

*** End of Statement ***

Cumulative Grade Point Average : 6.28

Classification : SECOND CLASS

SEM - Semester, C- Credits, LG - Letter Grade, GP - Grade Point

Range of Marks	91 - 100	81 - 90	71 - 80	61 - 70	57 - 60	50 - 56	< 50
Letter Grade	S	A	B	C	D	E	U
Grade Point	10	9	8	7	6	5	0

$$CGPA = \frac{\sum_{i=1}^{n} C_i GP_i}{\sum_{i=1}^{n} C_i}$$

where
C_i - is the credits assigned to the course
GP_i - is the point corresponding to the grade obtained for each course
n - is number of all courses successfully cleared during all the semesters

Chennai - 600 025
Date : 30/08/2018

SIGNATURE OF THE STUDENT

CONTROLLER OF EXAMINATIONS i/c

THIAGARAJAR COLLEGE OF ENGINEERING
(An Autonomous Institution Affiliated to Anna University)
MADURAI - 625 015 (INDIA)

Sl.No : 2020/19   **TRANSFER CERTIFICATE**   Roll No : 61PS019

Regr.No. 18K020

1.	Name of the Student	:	VIGNESH E
2.	Nationality, Religion	:	Indian, Hindu.
3.	Community & Caste	:	BC - Saliyar.
4.	Date of Birth as entered in Admission Register		03 - 12 - 1996 (Third December Nineteen Ninety Six)
5.	Class in which the student was studying at the time of leaving		M.E. - Power Systems Engineering- IV Semester.
6.	Date of admission or promotion to that Class		06 - 09 - 2018.
7.	Whether qualified for promotion to a higher class		Refer to Mark Sheet.
8.	Date on which the student actually left the college		13 - 06 - 2020.
9.	Date on which application for Transfer Certificate was made by the student or Parent / Guardian		13 - 06 - 2020.
10.	Reason for his leaving	:	Course Completed.
11.	Medium of Instruction	:	English.
12.	Date of Transfer Certificate	:	13 - 06 - 2020.
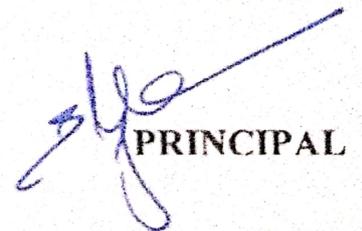
PRINCIPAL

आयकर विभाग भारत सरकार
INCOME TAX DEPARTMENT GOVT. OF INDIA

स्थायी लेखा संख्या कार्ड
Permanent Account Number Card

BCQPV8082E

नाम/ Name
VIGNESH E

पिता का नाम/ Father's Name
ELANCHELIAN

जन्म की तारीख / Date of Birth
03/12/1996

हस्ताक्षर/ Signature

29012017

இந்திய அரசாங்கம்
Unique Identification Authority of India
Government of India

பதிவு அடையாளம் / Enrollment No. : 2040/60442/09667

To
Vignesh E
விக்னேஷ் இ
S/O: Elanchelian
2b/1
muhavoor rastha keelpuram
Muthusamiyapuram
Muhavur, Virudhunagar
Tamil Nadu - 626111
9865341618

24/01/2016

KH632836913FT

63283691

உங்கள் ஆதார் எண் / Your Aadhaar No. :

9017 1110 1930

எனது ஆதார், எனது அடையாளம்

விக்னேஷ் இ
Vignesh E

பிறந்த நாள் / DOB: 03/12/1996
ஆண்பால் / Male

9017 1110 1930

எனது ஆதார், எனது அடையாளம்

தகவல்

- ஆதார் அடையாளத்திற்கான சான்று குடியுரிமைக்கு அல்ல.
- அடையாள சான்றை இணையதளம் மூலம் உறுதிப்படுத்திக் கொள்ளவும்.

INFORMATION

- Aadhaar is proof of identity, not of citizenship.
- To establish identity, authenticate online.

- ஆதார் நாடு முழுவதிலும் செல்லுபடியாகும்.
- வருங்காலத்தில் அரசு மற்றும் அரசு சாரா சேவைகளை பயன்படுத்திக் கொள்ள ஆதார் உதவிகரமாக இருக்கும்.
- Aadhaar is valid throughout the country.
- Aadhaar will be helpful in availing Government and Non-Government services in future.

ஆதார்
இந்திய தனித்துவ அடையாள ஆணைய அமைப்பு
Unique Identification Authority of India

முகவரி: தந்தை / தாய் பெயர்:
இளஞ்செழியன், 2பி/1
முகவூர் ரஸ்தா கீழ்புறம்
முத்துசாமியாபுரம், முகவூர
விருதுநகர், தமிழ் நாடு, 626111

Address: S/O: Elanchelian,
2b/1, muhavoor rastha
keelpuram
Muthusamiyapuram,
Virudhunagar, Muhavur,
Tamil Nadu, 626111

9017 1110 1930

☎ 1947   ✉ help@uidai.gov.in   www www.uidai.gov.in

PS-019

C.NO: 516 /2012
R.Dis.

GCP—374-1—13,28,000 Cps.—13-06-2011 [Acer-1]

Dated 2/5/2012

மாவட்டக் குறியீடு எண் :
District Code : | 1 | 7 |

வட்டக் குறியீடு எண் :
Taluk Code | 0 | 2 |

கிராமக் குறியீடு எண் :
Village Code : | 0 | 0 | 9 |

BC

சான்றிதழ் எண் :
Certificate No. :

10731173

வகுப்புச் சான்றிதழ்
COMMUNITY CERTIFICATE

விருதுநகர் மாவட்டம் இராசபாளையம் வட்டம்

சேத்தூர் கிராமம்/நகரம், திரு/திருமதி/செல்வன்/செல்வி

சாக்கேசி தகப்பனார்/கணவர் பெயர்

கொங்குதமிழியன் / இந்து சா.எ.xxx வகுப்பைச் சார்ந்தவர்.

அரசு ஆணை நிலை எண் 28, பிற்பட்ட மற்றும் மிகவும் பிற்பட்ட பிரிவின் நலத் துறை,

நாள் 19-7-1994 வரிசை எண்......111...... படி பிற்பட்ட பிரிவினைச் சார்ந்தவர் எனச்

சான்றளிக்கப்படுகிறது.

This is to certify that...Son / Daughter of

Thiru....................................of...

Village / Town...........................Taluk...

District of the State of Tamil Nadu belongs to...

.................................Community, which is recognised as a

Backward Class as per Government Order (Ms.) No. 28, Backward Classes

and Most Backward Classes Welfare, dated 19th July 1994

vide Serial No...

2. திரு / திருமதி / செல்வன் / செல்வி ...சாக்கேசி...

என்பவரும் அவருடைய குடும்பத்தினரும் தமிழ்நாட்டில்

மாவட்டத்தில்.........இராசபாளையம்......வட்டத்தில் மகாசி ரிஸ்தா-சேத்தூள்

கிராமத்தில் / நகரத்தில் வசித்து வருகிறார்கள் எனச் சான்றளிக்கப்படுகிறது.

2. It is certified that Thiru/Tmt./Selvan/Selvi.................................and

his/her family ordinarily reside(s) at ....Village/Town

.................................Taluk ....District of

Tamil Nadu.

முத்திரை
Seal

கையொப்பம் :
Signature

Zonal Deputy Tahsildar
Rajapalayam.

நாள் :
Date
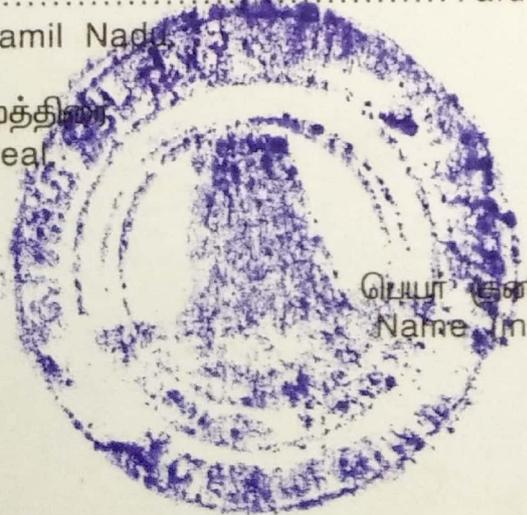
பெயர் (தனி எழுத்துக்களில்) :
Name (in Capital Letters)

பதவி :
Designation

2.5.12

ANNEXURE-I

CERTIFICATE FROM THE ORGANISATION WHERE THE CANDIDATE IS EMPLOYED

Certified that Mr./Ms./Mrs. _E. VIGNESH_ is

employed as _ATL lab Technician_ (Designation) in the

Electrical and Electronics (Department/Division Name)

of _GHSS Chokkanathanputhur, Virudhunagar district_

(Institution/Industry Name).

We have no objection in forwarding his/her application for the Ph.D. Research Programme.

FOR FULL TIME:

The candidate will be sanctioned leave for the duration of the research programme and will be relieved from duty from _____to _____to undertake the full time research work in the University.

FOR PART TIME:

The candidate will be permitted to undertake part time study in the University/College and will be allowed to be present for discussions with the supervisor, attending course works, conduct of experiments and participations in seminars and related presentations. Further the required facilities at our organization will also be provided to the candidate for doing research.

Date:
03|6|21

Signature of the Head of Organization with office seal

க. தனசேகா   3|6|21

தலைமை ஆசிரியர்
அரசு மேல்நிலைப்பள்ளி
சொக்கநாதன்புத்தூர் - 626 121
இராஜபாளையம் தாலுகா
விருதுநகர் மாவட்டம்