



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

**APPLICATION FOR ADMISSION TO Ph.D. PROGRAMMES**

Date of Application:23-12-2020

Department	ELECTRICAL AND ELECTRONICS ENGINEERING	Application No.	202020180
Area of Research	GENERATION EXPANSION PLANNING	Research Mode	FULL TIME

Name :AISHWARIYA B

Date of Birth / Age :03-12-1989 / 31 Years

Gender :FEMALE

Category :BC

e-Mail ID :riya.pse@gmail.com

Mobile :8825569968



Father's/Husband's Name	MANIVANNAN J	Father's/Husband's Occupation	ASSISTANT PROFESSOR
Family Income	2 00000	Residential Type	RURAL
Birth Place	CHENNAI	Mother Tongue	TAMIL
Religion	HINDU	Martial Status	MARRIED
Aadhaar No.	497426203497	PAN No.	CSNPA5025L
Physically Challenged	NO	Type of Disability	-
Address for Communication: 505 KRISHNA NAGAR,GOVINDAN NAGAR COLONY SRIVILLIPUTHUR VIRUDHUNAGAR DISTRICT TAMILNADU INDIA Pin-626125		Permenant Address: 505 KRISHNA NAGAR,GOVINDAN NAGAR COLONY SRIVILLIPUTHUR VIRUDHUNAGAR DISTRICT TAMILNADU INDIA Pin-626125	

Qualification						
Degree	Discipline	College/university	Year Passed	AVG/CGPA	Class	Mode
ME	POWER SYSTEMS	ANNA UNIVERSITY	2013	7.91	FIRST CLASS	REGULAR
BE	EEE	ANNA UNIVERSITY	2011	72	FIRST CLASS	REGULAR

Experience				
Organization	Designation	Experience From	Experience TO	Work Nature

Payment Details				
Transaction ID	Reference	Date of transaction	Amount	Status
202020180_201225175820	VHD49594329643	25-12-2020	600	SUCCESS

## **Generation expansion planning using evolutionary computing technique**

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, forecast demand, transmission, acceptable level of reliability, fuel mix and environmental criterion.

In evolutionary computation, an initial set of candidate solutions is generated and iteratively updated. Each new generation is produced by stochastically removing less desired solutions, and introducing small random change. Evolutionary computation techniques can produce highly optimized solutions in a wide range of problem settings.

In this research renewable energies are considered as the expansion candidates in addition to the conventional plants by using evolutionary computing techniques.

## **Generation expansion planning using evolutionary computing technique**

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In this research renewable energies are considered as the expansion candidates in addition to the conventional plants by using evolutionary computing techniques.



**ANNA UNIVERSITY, CHENNAI - 25**  
**M.E. DEGREE EXAMINATIONS**  
**CONSOLIDATED STATEMENT OF GRADES**

A104040702537B

Folio No. AUCD303951



NAME OF THE CANDIDATE	AISHWARIYA B			REGISTER NO.	212611411001
DATE OF BIRTH	03-DEC-89	GENDER	FEMALE	MONTH & YEAR OF LAST APPEARANCE	JUN 2013
COLLEGE OF STUDY	SRI MUTHUKUMARAN INSTITUTE OF TECHNOLOGY			REGULATIONS	2009
PROGRAMME & SPECIALIZATION	M.E. Power Systems Engineering				

SEM. NO.	COURSE CODE	COURSE TITLE	CREDITS	LETTER GRADE	GRADE POINT	MONTH & YEAR OF PASSING
01	MA9216	Applied Mathematics for Electrical Engineers	4	C	7	JAN 2012
01	PS9211	Power System Analysis	4	C	7	JAN 2012
01	PS9212	Power System Operation and Control	3	C	7	JAN 2012
01	PS9213	Electrical Transients in Power Systems	3	C	7	JAN 2012
01	PS9214	System Theory	3	B	8	JAN 2012
01	PE9213	Analysis of Inverters	3	C	7	JAN 2012
01	PS9215	Power System Simulation Laboratory I	2	S	10	JAN 2012
02	PS9221	Power System Protection	3	C	7	JUN 2012
02	PS9222	Power System Dynamics	3	C	7	JUN 2012
02	PS9223	Flexible AC Transmission Systems	3	C	7	JUN 2012
02	PS9224	Restructured Power Systems	3	D	6	JUN 2012
02	PE9223	Special Electrical Machines	3	B	8	JUN 2012
02	PE9261	Power Quality	3	B	8	JUN 2012
02	PS9225	Power System Simulation Laboratory II	2	S	10	JUN 2012
03	PE9272	Power Electronics for Renewable Energy Systems	3	D	6	NOV 2012
03	PS9275	High Voltage Direct Current Transmission	3	B	8	NOV 2012
03	PS9276	Wind Energy Conversion Systems	3	B	8	NOV 2012
03	PS9231	Project Work (Phase I)	6	S	10	NOV 2012
04	PS9241	Project work (Phase II)	12	A	9	JUN 2013
*** End of Statement *** <b>Cumulative Grade Point Average : 7.91</b> <b>Classification : FIRST CLASS</b>						



Medium of Instruction : ENGLISH

Chennai - 25  
Date: 19/08/2013

SIGNATURE OF THE STUDENT



*(Handwritten Signature)*

CONTROLLER OF EXAMINATIONS



# ANNA UNIVERSITY CHENNAI, CHENNAI - 600 025

Folio No. L700470

B.E.-DEGREE EXAMINATIONS

A184978092108

## CONSOLIDATED STATEMENT OF MARKS

NAME OF THE CANDIDATE		REGISTER NO.											
AISHWARIYA B		10507105001											
COLLEGE OF STUDY		MONTH & YEAR OF LAST APPEARANCE											
105: J.A. Institute of Engineering and Technology		April 2011											
PROGRAMME & BRANCH		REGULATIONS											
B.E. Electrical and Electronics Engineering		2004											
SEM.	SUBJECT CODE	SUBJECT TITLE	MAX.	MIN.	MARKS SECURED	MONTH & YEAR OF PASSING	SEM.	SUBJECT CODE	SUBJECT TITLE	MAX.	MIN.	MARKS SECURED	MONTH & YEAR OF PASSING
01*	CE1X01	Solid and Fluid Mechanics	100	50	054	APR 2009	06	EE1303	Microprocessor and Microcontroller Laboratory	100	50	093	APR 2010
01*	CY1X01	Engineering Chemistry	100	50	056	APR 2008	06	EE1302	Measurements and Instrumentation Laboratory	100	50	089	APR 2010
01*	EE1X01	Electric Circuit Analysis	100	50	064	APR 2008	07	EE1001	Special Electrical Machines	100	50	059	NOV 2010
01*	QE1X01	Engineering Graphics	100	50	056	APR 2008	07	EE1401	Power System Operation and Control	100	50	079	NOV 2010
01*	QE1X02	Computer Programming	100	50	070	APR 2008	07	EE1402	High Voltage Engineering	100	50	063	NOV 2010
01*	HS1X01	Technical English	100	50	078	APR 2008	07	EE1403	Design of Electrical Apparatus	100	50	061	NOV 2010
01*	MA1X01	Engineering Mathematics - I	100	50	059	APR 2008	07	EE1251	Bio-Medical Instrumentation	100	50	057	NOV 2010
01*	PH1X01	Engineering Physics	100	50	096	APR 2008	07	OE1301	Professional Ethics and Human Values	100	50	062	NOV 2010
01*	QE1X03	Engineering Practice Laboratory	100	50	078	APR 2008	07	EE1404	Power System Simulation Laboratory	100	50	087	NOV 2010
01*	PC1X01	Physics and Chemistry Laboratory	100	50	084	APR 2008	08	EE1451	Electric Energy Generation, Utilization and Conservation	100	50	065	APR 2011
03	CS1211	Data Structures and Algorithms	100	50	072	NOV 2008	08	EE1451A	Mobile Communication	100	50	062	APR 2011
03	CV1201	Environmental Science and Engineering	100	50	054	NOV 2008	08	EE1004	Power Quality	100	50	059	APR 2011
03	EC1211	Electronic Devices	100	50	064	NOV 2008	08	EE1452	Project	200	100	187	APR 2011
03	EE1201	Electromagnetic Theory	100	50	072	NOV 2008							
03	EE1202	Electrical Machines - I	100	50	069	NOV 2008							
03	MA1201	Mathematics - III	100	50	054	NOV 2008							
03	CS1212	Data Structures and Algorithms Laboratory	100	50	096	NOV 2008							
03	EE1152	Electric Circuits Lab	100	50	093	NOV 2008							
03	EE1203	Electrical Machines Laboratory - I	100	50	093	NOV 2008							
04	EC1261	Electronic Circuits	100	50	069	APR 2009							
04	EE1251	Electrical Machines - II	100	50	058	APR 2009							
04	EE1252	Transmission and Distribution	100	50	065	APR 2009							
04	IC1251	Control Systems	100	50	057	APR 2009							
04	MA1251	Numerical Methods	100	50	063	APR 2009							
04	ME1211	Applied Thermodynamics	100	50	053	APR 2010							
04	EC1262	Electronic Devices and Circuits Laboratory	100	50	096	APR 2009							
04	EE1304	Electrical Machines Laboratory II	100	50	092	APR 2009							
04	IC1252	Control Systems Laboratory	100	50	091	APR 2009							
05	CS1261	Object Oriented Programming	100	50	060	NOV 2009							
05	EC1311	Communication Engineering	100	50	068	NOV 2009							
05	EC1312	Digital Logic Circuits	100	50	061	APR 2010							
05	EC1313	Linear Integrated Circuits	100	50	057	APR 2010							
05	EE1301	Power Electronics	100	50	072	NOV 2009							
05	EE1302	Protection and Switchgear	100	50	061	NOV 2009							
05	CS1262	Object Oriented Programming Laboratory (exercise on Application of C++)	100	50	095	NOV 2009							
05	EC1314	Integrated Circuits Laboratory	100	50	093	NOV 2009							
05	EE1303	Power Electronics Laboratory	100	50	093	NOV 2009							
05	GE1352	Communication Skills Laboratory	100	50	071	NOV 2009							
06	EC1361	Digital Signal Processing	100	50	061	APR 2010							
06	EC1362	Microprocessor and Microcontroller	100	50	063	APR 2010							
06	EE1351	Solid State Drives	100	50	067	APR 2010							
06	EE1352	Power Systems Analysis	100	50	082	NOV 2010							
06	EE1361	Measurements and Instrumentation	100	50	059	APR 2010							
06	MG1351	Principles of Management	100	50	054	APR 2010							

\* Annual Pattern is followed in the First Year of study and Semester Pattern is followed from Second Year onwards.  
 \*\*\*End of Statement\*\*\*  
**Classification : FIRST CLASS**  
 Total Marks (from 3rd to 8th semester): 3451 / 4500  
 Percentage (rounded to nearest integer): 72



Controller of Examinations

Medium of Instruction : ENGLISH

Chennai - 600 025.

Date : 01/03/2011

Controller of Examinations



# SRI MUTHUKUMARAN INSTITUTE OF TECHNOLOGY

(Managed By Sri Muthukumar Educational Trust)

(Affiliated to Anna University)

(Approved By All India Council for Technical Education and Government of Tamil Nadu)

Chikkarayapuram, Near Mangadu, Chennai - 600 069

## TRANSFER CERTIFICATE

Sl.No. 2013/1001/PG/ME/478

1. Name of the Student : MS. ASHWARIYA B
2. Name of the Parent or Guardian : BALASUBRAMANIYAM B
3. Nationality, Religion and Caste : INDIAN HINDU BC
4. Date of Birth( in words and figures as entered in the Admission Register) : 03.12.1989  
THIRD DECEMBER NINETEEN EIGHTY NINE
5. Date of Admission : 29.08.2011
6. Class / Course to which the student was admitted : FIRST YEAR M.E  
POWER SYSTEMS ENGG.
7. Whether the Course has been Completed or not : YES
8. Whether qualified for promotion to a higher class or not : REFER THE MARK SHEET
9. Whether the student has paid all the fees due to the College : YES
10. Date on which the Student Actually left the College : 15.07.2013
11. Reason for Leaving : COURSE COMPLETED
12. Date of Issue of Transfer Certificate : 17 SEP 2013
13. Conduct and Character : GOOD
14. Remarks : NIL

Place : Chennai

Date : 17 SEP 2013



  
Principal  
SRI MUTHUKUMARAN  
INSTITUTE OF TECHNOLOGY  
Chikkarayapuram, (Near Mangadu)  
Chennai - 600069



**KALASALINGAM**  
Academy of Research and Education  
**(DEEMED TO BE UNIVERSITY)**  
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Anand Nagar, Krishnankoll - 626 126  
Srivilliputtur (via), Virudhunagar (Dt.)  
Tamil Nadu, INDIA.  
Ph : 04563 289012 / 42 / 52  
e-mail : info@kalasalingam.ac.in  
web : www.kalasalingam.ac.in

"Kalivallal"  
**Thiru. T. Kalasalingam**  
Founder Chairman

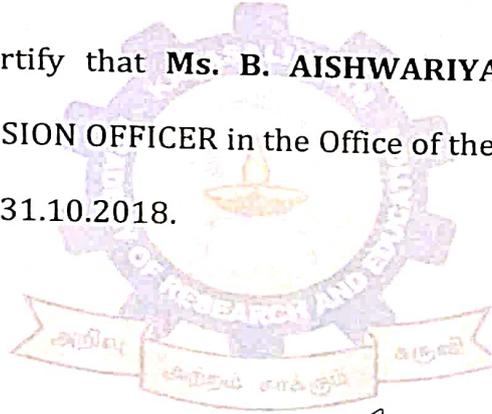
"Ilayavallal"  
**Dr. K. Sridharan**  
Chancellor

**Dr. R. Nagaraj**  
Vice-Chancellor

Date: 01.11.2018

**SERVICE CERTIFICATE**

This is to certify that **Ms. B. AISHWARIYA** has served in this University as **ADMISSION OFFICER** in the Office of the Director (Admission) from 10.09.2015 to 31.10.2018.



  
VICE CHANCELLOR





आयकर विभाग  
INCOME TAX DEPARTMENT



भारत सरकार  
GOVT. OF INDIA

स्थायी लेखा संख्या कार्ड  
Permanent Account Number Card

**CSNPA5025L**



नाम Name  
**AISHWARIYA B**

पिता का नाम / Father's Name  
**EALASUBRAMANIAM**

जन्म की तिथि / Date of Birth  
**03/12/1989**



*[Handwritten Signature]*



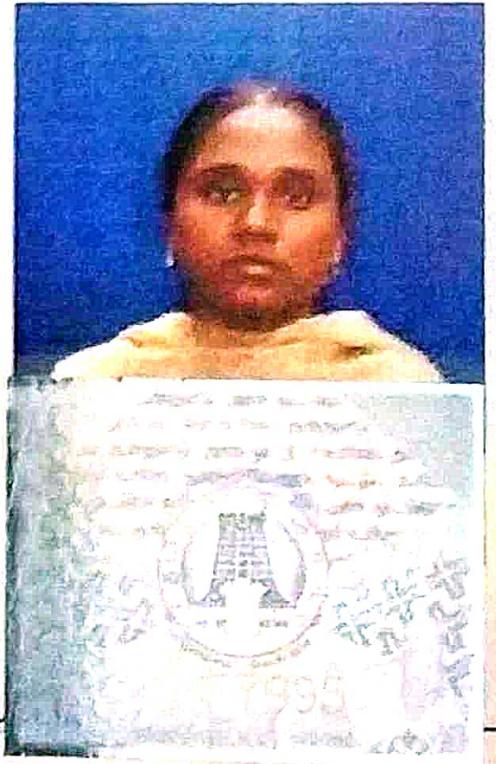
**India Driving Licence(Tamilnadu)**  
Form 7

DOI 27/08/2010

D.L.No : TN09 20100007646  
Name : AISHWARIYA B  
S/D/W of : R BALASUBRAMANIAM  
Address :  
25 RAILWAY BORDER ROAD  
KODAMBAKKAM  
CHENNAI 600024  
Temp.Addr:

D.O.B. : 03/12/1989 B.G. :

Punishments:



# Anna University



Reg.No. 212611411001/RG

*The Syndicate of the Anna University hereby makes known that **AISHWARIYA B** has been admitted to the **DEGREE OF MASTER OF ENGINEERING** in **POWER SYSTEMS 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 **FIRST CLASS** at the Examination held in **JUNE 2013**.*

*Given under the Seal of the University*

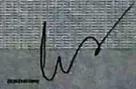


Chennai 600 025  
India

November 2013  
JPH/11/23/11/002/00

  
Controller of Examinations

  
Registrar

  
Vice-Chancellor

# Anna University



Reg. No.10507105001/RG

*The Syndicate of the Anna University hereby makes known that*  
**AISHWARIYA B** *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* **FIRST CLASS** *at the Examination held in* **APRIL 2011.**

*Given under the Seal of the University*



Chennai 600 025  
India  
January 2012  
10136374690071

  
Controller of Examinations

  
Registrar

  
Vice-Chancellor  
AISHWARIYA B

R Dis 12740 /19

dt.

BC

சான்றிதழ் எண்  
Certificate No

3348758

மாவட்டக் குறியீடு எண்  
District Codeவட்டக் குறியீடு எண்  
Taluk Codeகிராமக் குறியீடு எண்  
Village Code

0	1	
0	5	
1	0	7

சாதிச் சான்றிதழ்  
COMMUNITY CERTIFICATE

சென்னை மாவட்டம், மொழிபெயர்க்கப்பட்டம்  
திரு. நகர் கிராமம்/நகரம், திரு. / திருமதி / செல்வி/  
செல்வன் B. இம்வர்யா தகப்பனார்/எனவர்  
பெயர் N.R. பானசுப்ரமணியம் சாலை

வகுப்பைச் சார்ந்தவர், அரசு ஆணை நிலை எண் 28 பிற்பட்ட மற்றும்  
மிகவும் பிற்பட்ட பிரிவின் நலத்துறை நாள் 19-7-1994 வரிசை எண் 111 படி,  
பிற்பட்ட பிரிவினைச் சார்ந்தவர் எனச் சான்றளிக்கப்படுகிறது.

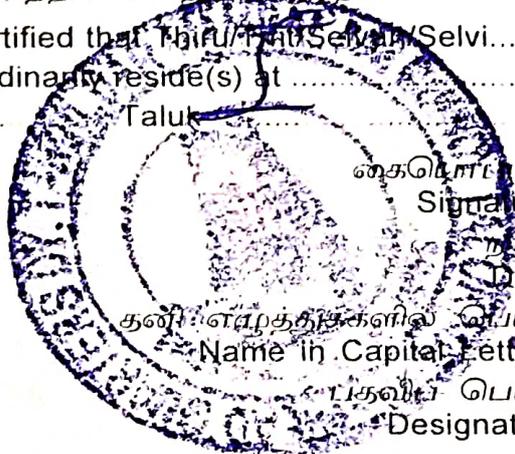
This is to certify that ..... Son / Daughter  
of Thiru ..... of .....

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

..... District of the State of Tamil Nadu belongs to  
..... Community, which is recognised as a  
Backward Class as per Government Order (Manuscript series) No. 28, Backward  
Classes and Most Backward Classes Welfare dated 19th July 1994.  
vide Serial No. ....

2. திரு / திருமதி / செல்வன் / செல்வி B. இம்வர்யா  
என்பவரும் அவருடைய குடும்பத்தினரும் தமிழ்நாட்டில்  
மாவட்டத்தில் மொகி வட்டத்தில் திரு. நகர்  
கிராமத்தில் / நகரத்தில் வசித்து வருகிறார்கள் எனச் சான்றளிக்கப்படுகிறது.

2. It is certified that Thiru/Mrs/Selvi/Selvi ..... and  
his/her family ordinarily reside(s) at ..... Village/Town  
..... Taluk ..... District of Tamil Nadu.

முத்திரை.  
Seal.கையொப்பம்  
Signatureநாள்  
Dateதனி எழுத்துக்களில் பெயர்  
Name in Capital Lettersபதவி பெயர்  
DesignationHead Quarters Deputy Welfare  
Mambalam-Gulindy Velsa  
Chennai - 600 090

26/5