



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

APPLICATION FOR ADMISSION TO Ph.D. PROGRAMMES

Date of Application:19-07-2021

Department	CHEMISTRY	Application No.	202110227
Area of Research	HETEROCYCLIC COMPOUNDS	Research Mode	FULL TIME

Name :P.PAWEL
Date of Birth / Age :17-02-1998 / 23 Years
Gender :MALE
Category :OBC
e-Mail ID :pawelpandiyani1998.pp@gmail.com
Mobile :9894075071



Father's/Husband's Name	P.PANDIYAN	Father's/Husband's Occupation	COOLIE
Family Income	72000	Residential Type	URBAN
Birth Place	VIRUDHUNAGAR	Mother Tongue	TAMIL
Religion	HINDU	Marital Status	SINGLE
Aadhaar No.	5720 4527 7353	PAN No.	DOKPP2000C
Physically Challenged	NO	Type of Disability	-
Address for Communication: 272/FD SARASWATHI NAGAR, S.N PURAM ROAD THIRUTHANGAL SIVAKASI VIRUDHUNAGAR DISTRICT TAMILNADU INDIA Pin-626130		Permenant Address: 272/FD SARASWATHI NAGAR, S.N PURAM ROAD THIRUTHANGAL SIVAKASI VIRUDHUNAGAR DISTRICT TAMILNADU INDIA Pin-626130	

Qualification						
Degree	Discipline	College/university	Year Passed	AVG/CGPA	Class	Mode
B.SC	CHEMISTRY	THE AMERICAN COLLEGE	2018	53.9%	SECOND	REGULAR
M.SC	CHEMISTRY	ARUL ANANDAR COLLEGE	2020	72.59%	FIRST	REGULAR

Experience				
Organization	Designation	Experience From	Experience TO	Work Nature

Payment Details				
Transaction ID	Reference	Date of transaction	Amount	Status
202110227_210719185251	VHD40125860703	19-07-2021	600	SUCCESS

SYNTHESIS OF 3,7-DIBROMO-10-N,N-DIMETHYL PROPANAMINE-10H PHENOTHIAZINE AND TO SCREEN THEIR BIOLOGICAL ACTIVITIES

PhD Research Proposal
Submitted by
(P.PAWEL)

Abstract

Active research is always in progress in drug discovery for various human ailments. In the current pandemic situation, I wish to pursue my Ph.D in Medicinal Organic Chemistry, predominantly on heterocyclic compounds that have plenty of applications as drugs in pharmaceutical field. I plan to work on novel drugs taking phenothiazine as the starting material since its derivatives are highly bioactive. For example, **Methylene blue** a derivative of phenothiazine was one of the first **Antimalarial** drugs. Derivatives of heterocyclic compounds and their applications in pharmacy is an interesting research in Organic Chemistry. I aim to synthesize derivatives of phenothiazine particularly 3,7-dibromo-10-N,N-dimethylpropanamine-10-H-phenothiazine and study its medicinal values.

Introduction

Heterocyclic Compounds :

Heterocyclic chemistry is a branch of chemistry dealing with synthesis, properties, and applications of heterocycles. They occur naturally and also synthesized on commercial scale by dye and drug industries.

Synthesis of nitrogen and sulphur bearing heterocyclic derivatives has been the great interest of researchers for the past few decades, due to their potential use in the pharmaceutical and medicinal applications.

Aim

To do research on derivatives of heterocyclic compounds and their medicinal properties.

Objective

To prepare a novel phenothiazine derivative, 3,7-dibromo-10-N,N-dimethylpropanamine-10-H-phenothiazine from phenothiazine using different reagents and study its biological activities.

Methodology

The compound will be synthesized by using organic synthesis method. The starting material will be phenothiazine and the suitable reagents will be taken further. The reaction will be carried out in a reaction chamber. The synthesis of the compound may take up to 12 to 24 hours or more time according to the reagents taken. Then the resulted compound will be purified by chromatography. The structure of the synthesized derivatives will be confirmed by UV, IR, NMR, ¹³CMR and MASS spectroscopic techniques.

Results

In the results, spectral analysis confirming the structure of the synthesized derivatives and their percentage of antibacterial and antioxidant activity will be presented.

Time line

The time line will be 3-4 years.

References

1. Design, Synthesis and Biological Profiling of Novel Phenothiazine Derivatives as Potent Antitubercular Agents. *Anti-Infective Agents*, 2019, vol 17, 50-65
2. Recent progress in synthesis ,structure and biological activities of phenothiazine derivatives
Chandravadivelu gopi et al., *Review journal of chemistry*,2019,vol.9,No.2,pp 95-126
3. The Design and Synthesis of Novel Phenothiazine Derivatives as Potential Cytotoxic Agents . *Letters in Drug Design & Discovery*, 2020, 17, 57-67

CRA
40223997



அறிவியற் புலம்
FACULTY OF SCIENCE

மதுரை காமராசர் பல்கலைக்கழக ஆட்சிப்பேரவை

பாஸ்டர். பர. இப்பல்கலைக்கழகத்தில் இணைந்த

தன்னாட்சிக் கல்லூரியான அறிமரிக்கன் கல்லூரி, மதுரை

விதித்திருந்த பாடப் பயிற்சியினையும் தேர்வினையும் நன்கு முடித்த பின்னர் ஏப்பிரல் 2018 இல் நடைபெற்ற தேர்வில்

இரண்டாம் வகுப்பு பெற்று தேர்வுற்றார் எனக் கல்லூரித் தேர்வு ஏற்புக்குழு பரிந்துரைத்தவாறு.

வேதியியல் பிரிவில் அறிவியல் இளையர் பட்டம்

பெறுதற்கு உரியவர் ஆகின்றார் என இதன்வழி அறிவிக்கின்றது.

பல்கலைக்கழக இலச்சினையுடன் இது வழங்கப்படுகின்றது.

The Senate of the MADURAI KAMARAJ UNIVERSITY

hereby makes known that PAWEL P has been admitted to the

DEGREE OF BACHELOR OF SCIENCE IN CHEMISTRY

he/she having successfully completed the course of studies and examination prescribed therefor by the

THE AMERICAN COLLEGE, MADURAI

(an Autonomous College of this University) and upon the recommendation by the College Awards Committee and

having been placed by them in the SECOND CLASS

at the Examination held in APRIL 2018

Register No. : 15CHE39

Centre Code : 602



Given under the seal of the University

பல்கலைநகர், மதுரை - 625 021

Palkalainagar, Madurai - 625 021

நாள் Dated 11 February 2019

தேர்வாணையர்
Controller of Examinations

பதிவாளர்
Registrar

துணைவேந்தர்
Vice-Chancellor



ARUL ANANDAR COLLEGE (Autonomous)

Karumathur-625 514, Madurai District, Tamil Nadu, India
Affiliated to Madurai Kamaraj University
Reaccredited by NAAC at 'A' Grade with a CGPA of 3.66



CUMULATIVE GRADE & STATEMENT OF MARKS

Name : PAWEL P

Roll No. : 18CHE507

Course : M.Sc. CHEMISTRY

Month and Year : APRIL 2019

Gender : MALE

SEMESTER : II

Date of Publication : 14-05-2019

Part	Paper Code	Name of the Paper	CIA	SE	Final	Gr.	GP	Cr.	Res.
			Max*	Max*	Max*				
III	15PPYN12	Energy Physics	31	26	57	C+	5.70	4	PASS
III	17PCHC52	Conformational Analysis, Reagents and Organic Synthesis	41	30	71	B+	7.10	4	PASS
III	17PCHC62	Coordination, Organometallics and Bioinorganic Chemistry	35	33	68	B	6.80	4	PASS
III	17PCHC72	Principles of Molecular Spectroscopy	39	33	72	B+	7.20	4	PASS
III	17PCHE22	Medicinal Chemistry	41	24	65	B	6.50	4	PASS
III	17PCHP22	Inorganic Chemistry Practical	43	35	78	B+	7.80	5	PASS

RA => Reappear

*Maximum Marks ==> CIA=50 or 100; SE=50 or 100; Final=100 or 200

<< <<< <<< <<< <<< <<< <<< END OF STATEMENT >>> >>> >>> >>> >>> >>>

Semester	I	II	III	IV
Credits Registered	23	25		
Credits Earned	23	25		
Grade Points Earned	43.40	41.10		
Grade Point Average (GPA)	7.34	6.89		

Cumulative Credits Earned : 48

Cumulative Grade Point Average (CGPA) : 7.10

(Rev. Dr. S. BASIL XAVIER, S.J.)

Principal



(Dr. A. SUNDARARAJ)

Controller of Examinations



ARUL ANANDAR COLLEGE (Autonomous)

Karumathur-625 514, Madurai District, Tamil Nadu, India

Affiliated to Madurai Kamaraj University

Reaccredited by NAAC at 'A' Grade with a CGPA of 3.66

CUMULATIVE GRADE & STATEMENT OF MARKS



Name : PAWEL P

Roll No. : 18CHE507

Course : M.Sc. CHEMISTRY

Month and Year : NOVEMBER 2019

Gender : MALE

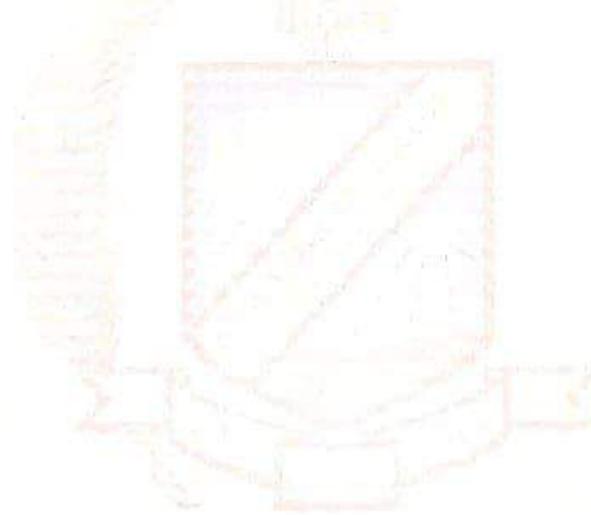
Semester : III

Part	Paper Code	Name of the Paper	CIA	SE	Final	Gr.	GP	Cr.	Res.
			Max*	Max*	Max*				
III	17PCHC83	Applications of Organic and Inorganic Spectroscopy	45	30	75	B+	7.50	4	PASS
III	17PCHC93	Natural Products	42	39	81	A	8.10	4	PASS
III	17PCHD03	Chemical Thermodynamics, Equilibria and Electrochemistry	40	27	67	B	6.70	4	PASS
III	17PCHE33	Biochemistry	39	33	72	B+	7.20	4	PASS
III	17PCHP33	Physical Chemistry Practical	46	48	94	A+	9.40	5	PASS

RA => Reappear

*Maximum Marks ==> CIA=50 or 100; SE=50 or 100; Final=100 or 200

<< <<< <<< <<< <<< <<< <<< END OF STATEMENT >> >> >> >> >> >> >>



Semester	I	II	III	IV
Credits Registered	23	25	21	
Credits Earned	23	25	21	
Grade Points Earned	43.40	41.10	38.90	
Grade Point Average (GPA)	7.34	6.89	7.86	

Cumulative Credits Earned : 69

Cumulative Grade Point Average (CGPA) : 7.33

Date of Publication : 13-12-2019

(Rev. Dr. S. BASIL XAVIER, S.J.)

Principal



(Dr. A. SUNDARARAJ)
Controller of Examinations



SINCE 1881

The American College, Madurai
(An Autonomous Institution Affiliated to Madurai Kamaraj University, India)
Re-accredited (2nd Cycle) by NAAC with Grade "A", CGPA - 3.46 on a 4-point scale
Transcript of Grade & Mark



180200

PAWEL.P
15CHE39B.Sc. Chemistry
June 2015 - April 2018

Part	Course Number	Course Title	C.A. %	Ext. %	Total	Max.	Gr.	Ex M Y	Part	Course Number	Course Title	C.A. %	Ext. %	Total	Max.	Gr.	Ex M Y
SEMESTER - I									SEMESTER - II								
I	TAM 1201	General Tamil - I	57	42	15	30	C	N15	I	TAM 1202	General Tamil - II	76	65	21	30	B+	A16
II	ENG 1201	Conversational Skills	76	65	21	30	B+	N15	II	ENG 1202	Reading & Writing Skills	72	48	18	30	B	A16
III	CHE 1325	Inorganic Quant. Analysis	63	-	28	45	B	N15	III	CHE 1326	Organic Analysis & Prepar	68	-	31	45	B	A16
III	CHE 1513	Inorganic Chemistry - I	39	41	30	75	C	N15	III (r)	CHE 1514	Inorganic Chemistry - II	57	41	37	75	C	J16
III	CHE 1521	Physical Chemistry - I	51	51	38	75	C+	N15	III	CHE 1522	Organic Chemistry - I	49	44	35	75	C	A16
III	PHY 1481	Physics for Chemistry - I	70	40	33	60	C+	N15	III	PHY 1482	Physics For Chemistry-II	55	45	30	60	C+	A16
IV	COM 1209	Creative Leadership	39	45	13	30	C	N15	IV	RPS 1232	Social Skills	55	53	16	30	C+	A16
IV	ENG 1221	Film Apperiation	51	52	15	30	C+	N15	IV	TAM 1212	Tamil Varalarum Panpadum	59	45	16	30	C+	A16
									V	NSS 1222	Nss - Theory	86	86	13	15	A	A16

SEMESTER - III									SEMESTER - IV								
I	TAM 2201	General Tamil - III	65	68	20	30	B	N16	I	TAM 2202	General Tamil - IV	66	72	21	30	B	A17
II	ENG 2201	Study Skills	72	55	19	30	B	N16	II	ENG 2202	Career Skills	43	42	13	30	C	A17
III	CHE 2431	Inorg. Qualitative Anal.	67	-	40	60	B	N16	III	CHE 2432	Organic Esti. & gravimet.	68	-	41	60	B	A17
III	CHE 2515	Physical Chemistry-II	50	47	36	75	C	N16	III	CHE 2512	Organic Chemistry - III	41	42	31	75	C	A17
III (r)	CHE 2521	Organic Chemistry -II	41	40	30	75	C	N17	III	CHE 2514	Inorganic Chemistry - IV	59	63	46	75	B	A17
III	CHE 2523	Inorganic Chemistry -III	56	48	39	75	C+	N16	III	CHE 2516	Physical Chemistry - III	51	46	36	75	C	A17
III	MAT 2431	Maths for Chemistry -I	45	40	26	60	C	N16	III	MAT 2432	Maths for Chemistry -II	40	41	24	60	C	A17
									V	NSS 2222	Nss - Practical	82	-	12	15	A	A17

SEMESTER - V									SEMESTER - VI								
III	CHE 3531	Physical Lab	71	-	53	75	B+	N17	III	CHE 3532	Special Lab Techniques	84	-	63	75	A	A18
III	CHE 3611	Organic Chemistry -IV	72	45	53	90	C+	N17	III	CHE 3612	Organic Chemistry -V	46	54	45	90	C+	A18
III	CHE 3613	Inorganic Chemistry - V	55	65	54	90	B	N17	III	CHE 3614	Applied Chemistry	50	48	44	90	C	A18
III	CHE 3615	Physical Chemistry - IV	59	63	55	90	B	N17	III	CHE 3616	Physical Chemistry - V	44	44	40	90	C	A18
IV	CHE 3200	Environmental Chemistry	49	48	15	30	C	N17	IV	BOT 3240	Biofertilizers & Biopest	59	58	18	30	C+	A18
IV	RPS 3231	Intro to Critical Think.	55	58	17	30	C+	N17	IV	VAL 3232	Social Iss. & Val. Stand	75	63	21	30	B	A18

Part - I			Part - II			Part - III			Part - IV		
Mark	77 / 120	64.2%	Mark	71 / 120	59.2%	Mark	1,018 / 1890	53.9%	Mark	131 / 240	54.6%
GPA	6.8	I Class	GPA	6.8	II Class	GPA	5.1	II Class	GPA	4.3	II Class
Credits Earned : 160						Date of issue : 13-06-2018					
Credits Required: 160						Last Appeared : April 2018					

Candidate declared Eligible for Degree In B.Sc. Chemistry

C.A - Continuous Assessment

r - Repeated after regular study

(r) - Passed on repeat attempt

A. Manickam
Controller of Examinations

Principal

Dr. M. DAVAMANI CHRISTOS
Principal & Secretary
The American College
Madurai-625 002



ARUL ANANDAR COLLEGE (Autonomous)

(Affiliated to Madurai Kamaraj University, Madurai)

Reaccredited by NAAC at 'A' Grade with a CGPA of 3.66

Karumathur - 625 514, Madurai District, Tamil Nadu, India

CONSOLIDATED STATEMENT OF MARKS AND GRADE



Name : PAWEL P

Course : M.Sc. CHEMISTRY

D.O.B. : 17-02-1998

Register Number : 18CHE507

Month and Year : APRIL 2020

Date of Publication : 28-10-2020

Course Code	Course Title	Month & Year	CIA Marks 50	SE Marks 50	Final Marks 100	Grade Point	Grade	Credit	Course Code	Course Title	Month & Year	CIA Marks 50	SE Marks 50	Final Marks 100	Grade Point	Grade	Credit
SEMESTER - I									SEMESTER - II								
17PCHC11	Organic Reaction Mechanism & Stereo Chemistry	NOV18	40	32	72	7.2	B+	4	15PPYN12	Energy Physics	APR19	31	26	57	5.7	C	4
17PCHC21	Group Theory and Solid State Chemistry	NOV18	47	35	82	8.2	A	4	17PCHC52	Conformational Analysis, Reagents and Organic Synthesis	APR19	41	30	71	7.1	B+	4
17PCHC31	Quantum Chemistry and Chemical Bonding	NOV18	43	32	75	7.5	B+	4	17PCHC62	Coordination, Organometallics and Bioinorganic Chemistry	APR19	35	33	68	6.8	B	4
17PCHC41	Research Methodology	NOV18	37	29	66	6.6	B	2	17PCHC72	Principles of Molecular Spectroscopy	APR19	39	33	72	7.2	B+	4
17PCHE11	Chemistry of Materials	NOV18	29	26	55	5.5	C	4	17PCHE22	Medicinal Chemistry	APR19	41	24	65	6.5	B	4
18PCHP11	Organic Chemistry Practical	NOV18	45	39	84	8.4	A	5	17PCHP22	Inorganic Chemistry Practical	APR19	43	35	78	7.8	B+	5
SEMESTER - III									SEMESTER - IV								
17PCHC83	Applications of Organic and Inorganic Spectroscopy	NOV19	45	30	75	7.5	B+	4	17PCHD14	Analytical Chemistry	APR20	48	41	89	8.9	A	4
17PCHC93	Natural Products	NOV19	42	39	81	8.1	A	4	17PCHD24	Nuclear Chemistry and Photochemistry	APR20	43	33	76	7.6	B+	4
17PCHD03	Chemical Thermodynamics, Equilibria and Electrochemistry	NOV19	40	27	67	6.7	B	4	17PCHD34	Chemical Kinetics, Surface Chemistry and Computational Chemistry	APR20	33	33	66	6.6	B	4
17PCHE33	Biochemistry	NOV19	39	33	72	7.2	B+	4	17PCHD44	Project	APR20	50	45	95	9.5	A+	5
17PCHP33	Physical Chemistry Practical	NOV19	46	48	94	9.4	A+	5	17PCHE44	Nanomaterials	APR20	32	32	64	6.4	B	4

MARK	PERCENTAGE (%)	CREDITS	CGPA	GRADE	CLASS	
1624/2200	73.82	90	7.46	B+	First Class	
AAC20E5071711		OVER ALL RESULT			PASS	Signature of the Candidate <i>P. Pawel</i>

(Rev. Fr. Godwin Rufus, S.J.)
Principal



(Dr. S. Arul Prasad)
Controller of Examinations



GOVERNMENT OF TAMIL NADU
Department of Collegiate Education
TRANSFER CERTIFICATE

Serial No.: 3263

Roll No.: 18CHE507

Admission No.: 1316

1. a) Name of the College - அ) கல்லூரியின் பெயர் : ARUL ANANDAR COLLEGE (Autonomous)
Karumathur - 625 514.
- b) Name of the District - ஆ) மாவட்டத்தின் பெயர் : Madurai District., South India
2. Name of the Student (in block letters) as in +2 or equivalent certificate - : PAWEL P
மாணவர் பெயர் (தனித்தனி எழுத்துக்களில்)
3. Name of the Father or Mother - : Pandiyan P
தந்தை அல்லது தாயின் பெயர்
4. Nationality and Religion - தேசிய இனம் மற்றும் சமயம் : Indian, Hindu
5. Caste and Community - சாதி மற்றும் இனம் : Refer the Community Certificate
6. SEX - பாலினம் : Male
7. Date of Birth (in figure and words) : 17-02-1998 (Seventeenth, February
Nineteen Ninety Eight)
பிறந்த தேதி (எண்ணிலும் எழுத்திலும்)
8. Personal Marks of Identification - உடலில் அமைந்த அடையாளக் குறிகள் :
a) ----
b) ----
9. Date of Admission and Class - கல்லூரியில் சேர்க்கப்பட்ட தேதி : 19-06-2018 - I M.Sc. Chemistry
மற்றும் சேர்க்கப்பட்ட வகுப்பு
10. a) Class studying at the time of leaving (in words) : II M.Sc. Chemistry
அ) மாணவர் கல்லூரியை விட்டு நீங்கும் காலத்தில்
பயிற்று வந்த வகுப்பு (எழுத்தால்)
b) The course offered Main - ஆ) தேர்ந்தெடுத்த பாடம் : Chemistry
c) Medium of Instructions - இ) பயிற்று மொழி : English
11. All the fees paid due to the college - கல்லூரிக்குச் செலுத்த வேண்டிய கட்டணத் தொகை அனைத்தையும் மாணவர் செலுத்தி விட்டாரா? : YES
12. Whether the student was in receipt of any scholarship or any educational concessions - மாணவர் படிப்புதவித் தொகை அல்லது கல்விச் சலுகை எதுவும் பெற்றவரா? : No
13. Whether the student has undergone medical inspection - மாணவர் கல்வியாண்டில் மருத்துவ ஆய்வுக்குச் சென்றாரா? : YES
14. Whether qualified for promotion to a higher class - மேல் வகுப்பிற்குச் செல்ல தகுதி பெற்றுள்ளாரா? : Refer to Mark Statement
15. Date of leaving the college - மாணவர் கல்லூரியை விட்டு விலகிய நாள் : 24-03-2020
16. Conduct and Character - மாணவரின் ஒழுக்கமும், பண்பும் : GOOD
17. Date of issue of Transfer Certificate - மாற்றுச் சான்றிதழ் வழங்கப்பட்ட நாள் : 24-03-2020
18. Course of Study - படிப்புக் காலம் : 2018-2020
19. Reason for leaving the college - கல்லூரி விட்டு வந்த காரணம் : Finished the Course



P. P.
PRINCIPAL
Principal

Note:

- a) Erasures and unauthenticated of fraudulent alterations in the certificate will lead to its cancellation. - இச்சான்றிதழில் அழித்தல்கள் மற்றும் அங்கீகரிக்கப்படாத அல்லது மோசடியான திருத்தங்கள் செய்வது சான்றிதழை ரத்து செய்ய வழி வகுப்பதாகும்.
- b) Should be signed in ink by the Head of the Institution who will be held responsible for the correctness of the entries. - கல்லூரி முதல்வரால் மையினால் கையொப்பமிட வேண்டும். பதிவு செய்யப்பட்ட விவரங்கள் சரியானவை என்பதற்கு அவரது பொறுப்பானவர்.

Declaration by the Parent of Guardian - பெற்றோர் அல்லது பாதுகாவலர் அளிக்கும் உறுதிமொழி

I hereby declare that the particulars recorded against items 2 to 8 are correct and that no change will be demanded by me in future. - மேலே 2 முதல் 8 வரையிலுள்ள இனங்களுக்கெனப் பதிவு செய்யப்பட்டுள்ள விவரங்கள் சரியானவை என்றும் எதிர் காலத்தில் அவற்றில் மாற்றம் எதுவும் கேட்க மாட்டேன் என்றும் நான் உறுதியளிக்கின்றேன்.

Date : 16.12.2020
நாள்

P. P.
Signature of the Student
மாணவர் கையொப்பம்

P. P.
Signature of the Parent/Guardian
பெற்றோர்/பாதுகாவலர் கையொப்பம்

आयकर विभाग

INCOME TAX DEPARTMENT



सत्यमेव जयते

भारत सरकार

GOVT. OF INDIA



स्थायी लेखा संख्या कार्ड
Permanent Account Number Card

DOKPP2000C



नाम/ Name

P PAWEL

पिता का नाम/ Father's Name

PANDIYAN

जन्म की तारीख/ Date of Birth

17/02/1998

P. Pawel

हस्ताक्षर/ Signature



05042017



இந்திய தேர்தல் ஆணையம்
Election Commission of India



வாக்காளர் புகைப்பட அடையாள அட்டை ELECTOR PHOTO IDENTITY CARD



IRG1544667



வாக்காளரின்
பெயர்

பாவெல்

Elector's :
Name

Pawel

உறவினரின்
பெயர்

பாண்டியன்

Relation's :
Name

Pandian

भारत निर्वाचन आयोग