

K.S. RANGASAMY COLLEGE OF ARTS AND SCIENCE

(Autonomous)

K.S.R Kalvi Nagar, Tiruchengode– 637 215 Namakkal Dt, Tamil Nadu, India

Department of Electronics and Communication Value Added Course

Academic Year 2019-2020

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(Autonomous)
TIRUCHENGODE - 637 215
Vamakkal-Dt. Tamil Nadu. INDIA

K.S.Rangasamy College of Arts and Science (Autonomous) NAAC Reaccredited and an ISO Certified Institution

NAAC Reaccredited and an ISO Certified Institution Affiliated to Periyar University, Salem Included Under 2(f) & 12(B) of UGC Act, 1956 KSR Kalvi Nagar; Tiruchengode - 637 215; Namakkal Dist, Tamil Nadu, India

VALUE ADDED COURSES (CERTIFICATE COURSES) OFFERED BY THE COLLEGE ACADEMIC YEAR 2019 - 2020

S.no	Offering Department	Name of Courses	Semester	Durations of the Courses
1	Commerce and Management	Personality Development	Odd/Even	30 Hours
2	Computer Science	3D Animation	Odd/Even	30 Hours
3	Electronics and Communication	Cell Phone Servicing	Odd/Even	30 Hours
4	Mathematics	MATLAB	Odd/Even	30 Hours
5	Life Science	Basics of Biotechnology	Odd	30 Hours
	PRINCIPAL	Understanding Immunity and Vaccination	Even	30 Hours

Tiruchengode - 637 215

Department of Electronics and Communication

CIRCULAR

From The Head Department of Electronics & Communication

To All HODs Students of all Departments

Date: 19-08-2019

Sub: Certificate Course- Cell Phone Servicing-reg

Our Department has planned to conduct certificate course on "Cell Phone Servicing" in this semester. Total duration of the course is 30 hours, course starts from September. Students who are all interested may enroll their names to the course coordinator. The Certificate course will be conducted after the class hours 4.15pm to 5.15pm. At the end of this course, certificate will be issued.

Students are advised to meet following staff for registration.

Mr.L.Dhatchinamurthy Course Coordinator Department of Electronics and Communication KSRCAS

Head of the Department Br. K.M. PRABUSANKARLAL, M.Sc., M.PTW., M.S. Associate Professor & Head, Dept. of Electronics & Communication K.S. Rengesamy College of Arts & Science (Autonomous) Tiruchengode - 637 215. Namakkal Dt. T.N.

18UEC	CC01	CERTIFICATE COURSE: CELL PHONE SERVICING	ODD/E	VEN			
Course	Objectives:						
The Co	urse aims						
Lear	n the Basic	generation and spectrum process					
		operating systems and principle of handset					
• Und	erstand the	basic repairing and troubleshooting the handset					
			Duratio	n: 30H			
UNIT		CONTENTS		CO			
I	Introduction: Introduction to mobile phones-Generations of mobile phones-FHSS networks-GSM-Spread spectrum-CDMA-TDMA-Fourth Generation (4G)- Fifth Generation (5G) - Basic electronics components.						
п	Handsets: Handset Specific operating systems-Handset features & applications- working principle of mobile handset -Components used in mobile handsets.						
Ш	Maintenan	Troubleshooting: Tools & Equipment used for repaire of mobile handsets-Types of Power Supply & Battery-Trouble shooting basics.	iring - atteries-	CO3			
IV	Network Troubleshooting: Network problems-Power failure (dead)- Mobile phone hardware troubleshooting (water damage, hanging, charging & keypad problems)- Handsets Assembly& Disassembly-Soldering & Desoldering -SMD rework station.						
v	Mobile s display- troubleshood Transmitte	oftware: Mobile software's-Data cable-Card reader-	rdware nission-	CO5			
ext Boo		*					
1 (Chukky Oper	andu. 2014. Mobile Phones and Tablets Repairs: A Con	mlete Cu	ide fo			
		ad Professionals [First Edition] Mondrain Nic Limited	prete Gt	iiuc It			

Beginners and Professionals. [First Edition]. Mondraim Nig Limited

Reference Books .

- Sajal Kumar Das. 2013. Mobile handset Design. Wiley Publication. 1
- Chukky Operandu. 2014. Smart Phones and Tablets Repairs: A Complete Guide for 2 Beginners and Professionals. [First Edition]. Mondraim Nig Limited



COURSE OUTCOMES (CO)

After the completion of the course, the student will be able to

CO1	Establish and run a Mobile Handset Repairing unit
CO2	Repair and Diagnose the Problem of all kinds of faults in Mobile Phone handsets in
	Hardware as well Software. and
CO3	Use appropriate tools, spares and software updates, conduct test for repairs,
CO4	Ensure admittance of faulty handsets, prioritize and conduct repair activities.
CO5	Rectify the faults using tools, equipments, and softwares

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K. S. Rangasamy College of Arts & Science (Autonomous)
TIRUCHENGODE - 637 215
Namakkal-Dt. Tamil Nadu, INDIA

Work Plan Schedule

Faculty Name: Ms.K.Shanthikala

Department

: B.Sc. ELEC

Class

: II UG

Subject

: CERTIFICATE COURSE: CELL

erio	od	: ODD/EVEN 2019-2020 PHONE SERVICING (18UEC	CC01
S No	Unit		No Of Hours
1	1	Introduction to mobile phones-Generations of mobile phones	2
2	1	FHSS networks-GSM-Spread spectrum-CDMA-TDMA	2
3	1	Fourth Generation (4G)- Fifth Generation (5G) -Basic electronics components.	2
4	11	Handset Specific operating systems-Handset features & applications	2
5	11	Working principle of mobile handset	2,
6	11	Components used in mobile handsets.	2
7	111	Tools & Equipment used for repairing - Maintenance of mobile handsets	2
8	111	Types of Power Supply & Batteries	2
9	111	Boosting a Battery-Trouble shooting basics.	2
10	IV	Network problems-Power failure (dead)-Mobile phone hardware troubleshooting (water damage, hanging, charging & keypad problems)	2
11	IV	Handsets Assembly& Disassembly	2
12	IV	Soldering & Desoldering -SMD rework station.	2
13	٧	Mobile software's-Data cable-Card reader-Mobile display- Remove/replace Component	2
14	٧	Mobile phone hardware troubleshooting-Troubleshooting through circuit diagram- Transmission-Transmitter filter	2
15	V	Microphone- Reception- Antenna-RF power amplifier-Local oscillator-Audio IC-speaker-charger	2
16	Others	Revision	2
		Total No of Hours	32

HOD Sonature with Date [Dr.K.M.PRABUSANKARLAL] Faculty Signature with Date [Ms.K.Shanthikala]

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TIRUCHENGODE - 637 215

DEPARTMENT OF ELECTRONICS AND COMMUNICATION CERTIFICATE COURSE STUDENTS NAME LIST Academic Year 2019-2020

Course Code: 18UECCC01

Batch: 2018-2021

Course Name: Cell Phone Servicing

S. No	Register No	Student Name	STUDENTS SIGNATURE
1	18UTA013	GOKULKRISHNAN M	Chikal H
2	18UTA023	KARTHIKRAJA R	R: 1851 A 1
3	18UCO037	PANNEERSELVAM S	120
4	18UCO039	PRABAKARAN S	DIE
5	18UCC039	GOWTHAM V	csa:
6	18UCC042	GUNAL M	a l
7	18UCC075	KRISHNARAJ K	Krishne. R.
8	18UCC077	LOGESWARAN A	logethwar on A
9	18UCH022	NANDHAKUMAR S	Nandhakumar S.
10	18UCH039	VENUGOPAL K	Vendran. R.
11	18UMB002	ARUNA D	2-2-
12	18UMB003	BHUVANESHWARI S	Blank
13	18UMB020	MADHUMITHA M	May. M
14	18UCA006	ARUNKUMAR A	Arunjani.
15	18UCA009	BALAMURUGAN S	BoloMara
16	18UCA016	CHANDIRAN G	Ch. C
17	18UCA022	DHATCHANA MOORTHY S	Dod S
18	18UPH017	GOWTHAM S	Export.
19	18UPH053	SAMITHRA S	5,82.
20	18UPH063	SATHISH KUMAR T	T.S. K
21	18UPH064	SELVAM S	Selva
22	18UPH069	SUNDAR T	Sura -
23	18UPH072	VASU S	Vertica . S

Dr. K.M. PRABUSANKARLAL, M.Sa, M.Phil, M.E., Ph.D.,
Associate Professor & Head,
Dept. of Electronics & Communication
K.S. Rangasamy College of Arts & Science (Autonomous)
Thuchengode - 637 215. Namakkal Dt. T.N.

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TIRUCHENGODE - 637 215

DEPARTMENT OF ELECTRONICS AND COMMUNICATION CERTIFICATE COURSE NAME LIST 2019 - 2020

Batch: 2018-2021

S. No	Register No	Student Name	13/6	14		18	19	20	H 19901125-140	Qh	25	26
1	18UTA013	GOKULKRISHNAN M	1	6	6	100	19	19	19	181	0	9
2	18UTA023	KARTHIKRAJA R	1	QL.	1	1	1	1	1	1	1	1
3	18UCO037	PANNEERSELVAM S	1	1	a	1	1	to.	,	-	A	1
4	18UCO039	PRABAKARAN S	1	1	1	1	1	1	1	1	1	1
5	18UCC039	GOWTHAM V	1	1	1	1	1	1	1	/	1	1
6	18UCC042	GUNAL M	1	1	a	1	1	1	,	1	1	1
7	18UCC075	KRISHNARAJ K	1	,	1	1	,	1	1	-	-	-
8	18UCC077	LOGESWARAN A	a	1	1	1	1	1	1	1.	-	1
9	THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO I	NANDHAKUMAR S	1	1	1	,	-	a	-	/	/	1
10	18UCH039	VENUGOPAL K	1	1	1	-	1	7	-	-	/	/
11	18UMB002	ARUNA D	1	a	1	1	-	1	1	-	1	/
12	18UMB003	BHUVANESHWARI S	a	4	1	1	1	à	1	-	-	9K
13	18UMB020	MADHUMITHA M	1	1	1	a	,	1	-	7	/	1
14	18UCA006	ARUNKUMAR A	1	1	1	1	-	1	1	qu 1	-	
15	18UCA009	BALAMURUGAN S	1	1.	,	-	-	-	1	1	-	Q /
16	18UCA016	CHANDIRAN G	1	1	1	1	1	1	1	-	a	1
17	18UCA022 -	S	1	1	1	1	1	,	1	-	4	/
18	18UPH017	GOWTHAM S	1	1	1	1	1	1	1	1	-/-	-
19	18UPH053	SAMITHRA S	1	1	a	/	1	1	a	-	/,	-
20	18UPH063	SATHISH KUMAR T	1	1	1	1	1	1	1	-	1	1
21	18UPH064	SELVAM S	1	1	a	1	1	,	a	-	· E.	-
22	18UPH069	SUNDAR T	1	1	7	1	,	/	ec	-	4	1
23	18UPH072	VASU S	1	1	1	1	1	/	1	1	-/-	1

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TIRUCHENGODE - 637 215

DEPARTMENT OF ELECTRONICS AND COMMUNICATION CERTIFICATE COURSE NAME LIST

Batch: 2018-2021

S. No	Register No	Student Name	27/4	28	14	3	九元	5	6/12	12/10	13/12	19,
1	18UTA013	GOKULKRISHNAN M	1	1	1	1	1	1	a		, 12	9
2	18UTA023	KARTHIKRAJA R	1	a	1	,	a	1	1	1	1	1
3	18UCO037	PANNEERSELVAM S	1	1	a	1	1	1	a	1	1	1
4	18UCO039	PRABAKARAN S	1	1	1	1	Qζ	1	,	1	1	1
5	18UCC039	GOWTHAM V	1	1	1	a	1	1	1	1	1	1
6	18UCC042	GUNAL M	1	1	1	/	1	1	1	1	,	1
7	18UCC075	KRISHNARAJ K	1	,	,	1	1	1	1	a	1	1
8	18UCC077	LOGESWARAN A	1	0	1	1	1	1	1.	1	-	
9	18UCH022	NANDHAKUMAR S	1	1	1	1	1	1	1	^	a	1
10	18UCH039	VENUGOPAL K	1	1	1	1	1	1	/	1	1	1
11	18UMB002	ARUNA D	1	1	1	1	a	1	1	1	1	1
12	18UMB003	BHUVANESHWARI S	1	a	1	1	1	1	a	1	1	A
13	18UMB020	MADHUMITHA M	1	1	1	1	1	1	1	1	,	1
14	18UCA006	ARUNKUMAR A	1	1	1	1	1	1	1	1	1	^
15	18UCA009	BALAMURUGAN S	1	1	a	1	1	1	a	1	,	^
16	18UCA016	CHANDIRAN G	a	1	1	(1	1	1	1	1	1
1100		S	1	1	1	1	1	1	1	1	a	1
18	18UPH017	GOWTHAM S	1	1	1	1	ØĹ	1	1	1	1	1
19	18UPH053	SAMITHRA S	1	1	a	1	1	,	1	a	,	1
20	18UPH063	SATHISH KUMAR T	1	1	1	1	1	1	^	1	1	-
21	18UPH064	SELVAM S	1	1	1	,	7	1	1	1	,	α
	The state of the s	SUNDAR T	1	5	1	1	1	1	1	1	a.	1
23	18UPH072	VASU S	a	1	1	1	,	1	1	a	7-	-

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TIRUCHENGODE - 637 215

DEPARTMENT OF ELECTRONICS AND COMMUNICATION CERTIFICATE COURSE NAME LIST

S. No	Register No	Student Name	20	2	3/	9	10	23	ay	39	31	مرا	27	28
1	18UTA013	GOKULKRISHNAN M	1	1	a	1	1	1	1	a	1	1	1	1
2	18UTA023	KARTHIKRAJA R	1-	1	1	1	1	1	1	1	1	1	.92	1
3	18UCO037	PANNEERSELVAM S	1	1	1	1	a	1	a	^	1	1	1	1
4	18UCO039	PRABAKARAN S	1	a	1	,	1	1	1	1	1	a	1	1
5	18UCC039	GOWTHAM V	1	1	1	1	1	1	1	,	1	1	1	1
6	18UCC042	GUNAL M	1	1	1	_	1	1	1	1	ab	1	1	1
7	18UCC075	KRISHNARAJ K	1	1	a	1	1	a	1	1	1	1	1	1
8	18UCC077	LOGESWARAN A	1	1	1	1	1	/	1	1	1	1	a	1
9	18UCH022	NANDHAKUMAR S	a	1	1	1	1	1	1	1	1	a	/	1
10	18UCH039	VENUGOPAL K	1	1	1	1	CL	1	1	1	. (1	(1
11	18UMB002	ARUNA D	1	1	1	a	1	1	1	1	1	1	1	a
12	18UMB003	BHUVANESHWARI S	1	1	1	1	1	a	1	1	1	1	1	1
13	18UMB020	MADHUMITHA M	1	1	1	1	1	1	1	1	OL	1	/	1
14	18UCA006	ARUNKUMAR A	1	1	a	1	1	1	1	1	1	1	1	1
15	18UCA009	BALAMURUGAN S	1	1	1	1	1	O(1	1	1	QL.	1	1
16	18UCA016	CHANDIRAN G	j	1	1	1	1	1	1	a	1	1	1	1
17	18UCA022	S	1	1	1	1	1	1	1	1	1	1	1	1
18	18UPH017	GOWTHAM S	1	1	1	1	1	1	1	/	1	1	QL	1
19	18UPH053	SAMITHRA S	a	1	1	1	1	1	1	1	1	1	1	1
20	18UPH063	SATHISH KUMAR T	1	/	1	1	a	1	1	a	1	1	,	1
21	18UPH064	SELVAM S	1	a	1	1	1	1	1	1	1	a	1	1
22	18UPH069	SUNDAR T	a	1	1	1.	1	1	a	1	1	1	/	pe
23	18UPH072	VASU S	1	1	1	a	1	1	1	1	1	a	1	1

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CERTIFICATE COURSE ! CELL PHONE

CLASS: TI - V G. 2019-2020 SUBJECT: SERVICINH (18DECCCOI)

Planned			Ext	ecuted	Signature		
Date	Hour	Topics Covered	Date	Hour	Faculty	HOD	
13/9	A.15 - 5.15	Introduction to mobile phone	1319	415-5.15	K.S	7	
1419		Generation of mobile phones	1	1			
1719	1	FHSS network - GISM - Spread		4.15-5.15	-	P	
18/9	1	Spectrum - CDMA - TDMA.	1819	4.15-5.15	k.5	100	
1919	I THE RESERVE	Fourth Generation (46)	1919	4.45-5.15	account and a second		
2019	4-15-5-15			4.15-5.15			
		electronics components.			,)	
2119	H.15-5.15		21/9	415-5.15	K.S.	No.	
2419	4.15 - 5.15					400	
21/2	H-15-7-16	applications	-11-	Lutye K		Vi	
25/9	415-5.15	working principle of	25/9	4.15-5.15	K.á	n	
2619	4.15-5.15	9	2619	415-5.15	K.6		
2719	4-15-5-15	components used in	27/4	415-5-15	K.d.		
819	4-15-5.15	mobile handset	2819	4-15-6-15	K. S.	No.	
1/70	4.15.5.15	Tools Equipment used for	1/10	4-15-5-15	KS	(20	
2140	4.15-5.15	repairing - Maintenance of	2/10	4.15-5.15			
		mobile handsets.	and the same of th		and the beauty of the second of the second		
4/10	4.15-5.15	Types of power supply &	4/10	4.15-5.15	KS	A STATE OF THE STA	
5/10	4.15-5.15	Batteries.		4.15-5.15	K.d.		
blio	4-15-6-15	Boosting a Battery - Trouble	6 10	4.15-5.15	K.ds.	100	
12/10		Shooting basics.		4 5-5.15	K.S.	100 d	
13/12	4.15-5.15	Network. Problems - Power		415-5.15	K.S.		
14/12		failure (doad) - Mobile phones		4.15-5.15	K.S.		
	The state of the s	handware troubleshooting				J	
		Counter dumage . hanging , Changing					
# 10 mile 1		Keypad Problems)	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
20/12	4.15 - 5.15	Handsets Pissembly &	20/12	4-15-5-15	K. L.	0	
211	4-15-5-15	Disassembly	211	4.15-5.15	K.S		
311	4-15-5-15	soldering & Desoldering	311	4.15-5.15	K.S.	(do	
411	415-5.15	SMD rowork station.		HIN - BRO	The state of the state of the state of		

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CERTIFILATE COURSE : CELL PHONE II - UG 2019-2020 SUBJECT: SERVICING LIEVECCCOI)

1	lanned	Topics Covered	F	xecuted	Signature		
Date	Hour	Topics Covered	Date	e Hour	Faculty	но	
1011	4.15-5.15	Mobile soltune Data cabl	0 101	1 405-50	5 K 0	1	
2311	4-15-5-15	Cand roader - Mobile display.	231	1		d	
-	*,	Remove / replace components.			D'de	5	
2H11	4.15-5.15	Mobile phones handware	24/1	4.15 - 5.15	12.0	1	
3011	4-15-5-15	Software -trouble shooting -	2011	H-15 3/15	K.S	1 K	
		Thoubleshooting through circuit	10011	N 13 3 3	K.d.	10	
	T.B. D.	diagram - Transmission -				- Constitution - Angelon	
		Transmitter filter		***************************************			
31/1	H-15- 5-15	Mitrophone - Reception -	31 1	H-15-5-15	1. 6	h	
21/2	4.15-5.15	Antonna - RF Power amplifier	21/2			100	
		toral as cillator - Audio 1c-	2112	H-16-3-3	K.d.	5-	
		Spotes Chargos				**************************************	
7/2	H-15-5-15	0	27/2	4.5-5.5		7	
8 2			28/2	- Anna Canada Ca	K.S.	100	
			2812	H. G - 5. B	KL	>	
		7					
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			***************************************	- Terum Manager			

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TIRUCHENGODE - 637 215

DEPARTMENT OF ELECTRONICS AND COMMUNICATION CERTIFICATE COURSE MARK LIST

Course Code: 18UECCC01

Course Name: Cell Phone Servicing

Batch : 2018-2021

Max Marks: 100

sattr	1:2018-2021		IVIAX IVIAI KS: 100							
S. No	Register No	Student Name	ASS 1 (10)	ASS 2 (10)	Test (75)	Att %	Att (5)	Total		
1	18UTA013	GOKULKRISHNAN M	9	8	74	92	5	96		
2	18UTA023	KARTHIKRAJA R	9	8	72	93	5	94		
3	18UCO037	PANNEERSELVAM S	9	7	70	90	5	91		
4	18UCO039	PRABAKARAN S	8	8	70	94	5	91		
5	18UCC039	GOWTHAM V	9	6	70	97	5	90		
6	18UCC042	GÜNAL M	7	9	72	96	5	93		
7	18UCC075	KRISHNARAJ K	8	7	73	93	5	93		
8	18UCC077	LOGESWARAN A	6	8	74	95	5	93		
9	18UCH022	NANDHAKUMAR S	9	9	73	94	5	96		
10	18UCH039	VENUGOPAL K	8	8	72	97	5	93		
11	18UMB002	ARUNA D	8	9	70	93	5	92		
12	18UMB003	BHUVANESHWARI S	7	8	71	92	5	91		
13	18UMB020	MADHUMITHA M	9	9	70	95	5	93		
14	18UCA006	ARUNKUMAR A	8	7	72	96.	5	92		
15	18UCA009	BALAMURUGAN S	6	7	72	92	5	90		
16	18UCA016	CHANDIRAN G	7	6	67	95	5	85		
17	18UCA022	DHATCHANA MOORTHY	8	6	70	97	5	89		
18	18UPH017	GOWTHAM S	9	8	70	96.	5	92		
19	18UPH053	SAMITHRA S	8	7	74	93	5	94		
20	18UPH063	SATHISH KUMAR T	7	6	73	92	5	£1		
21	18UPH064	SELVAM S	8	7	72	90	5	92		
22	18UPH069	SUNDAR T	7	9	71	90	5	92		
23	18UPH072	VASU S	9	8	71	92	5	93		

Staff Signature

(Ms.K.Shanthikala)

ala) (Dr.K.M.Prabusankarlal)

Or.K.M.PRABUSANKARLAL. M.S.C. MATHL, M.E.PILLI,

Associate Professor & Head, Dept. of Electronies & Communication K.S. Rangasamy Griege of Arts & Science (Autonomous Trushengade - 637 215, Namarkal Ot. T.M. PRINCIPAL

(Dr.V.Radhakrishnan)

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Certificate

This is to certify that <u>GOKULKRISHNAN M, (18UTA013)</u> of <u>II BA TAM</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Mr.L.Dhatchinamurthy

Dr. K.M.PrabusankarlalHead of the Department

Dr.V.RadhakrishnanPrincipal

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Certificate

This is to certify that <u>KARTHIKRAJA R</u>, (18UTA023) of <u>II BA TAM</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Mr.L.Dhatchinamurthy

Source Coordinator

Dr. K.M.PrabusankarlalHead of the Department

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N.S. Rangasa

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Certificate

This is to certify that <u>PANNEERSELVAM S</u>, (18UCO037) of <u>II B.COM</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

n.S. Rangasam

Dr. F.M. Probusanta

Dr. K.M.PrabusankarlalHead of the Department

Dr.V.RadhakrishnanPrincipal

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Certificate

This is to certify that <u>PRABAKARAN S</u>, (18UCO039) of <u>II B.COM</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Course Coordinator

Dr. K.M.Prabusankarlal Head of the Department

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Dr.V.RadhakrishnanPrincipal

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Certificate

This is to certify that <u>GOWTHAM V, (18UCC039)</u> of <u>II B.COM CA</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Mr.L.Dhatchinamurthy
Course Coordinator

Dr. K.M.PrabusankarlalHead of the Department

Dr.V.RadhakrishnanPrincipal

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This is to certify that <u>GUNAL M</u>, <u>(18UCC042)</u> of <u>II B.COM CA</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

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This is to certify that <u>KRISHNARAJ K, (18UCC075)</u> of <u>II B.COM CA</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Mr.L.Dhatchinamurthy Course Coordinator

Dr. K.M.PrabusankarlalHead of the Department

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Certificate

This is to certify that LOGESWARAN A, (18UCC077) of II B.COM CA has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

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Certificate

This is to certify that <u>NANDHAKUMAR S</u>, (18UCH022) of <u>II B.Sc.</u>, <u>CHE</u> has completed a Certificate Course in <u>Cell Phone Servicing</u> during the academic year 2019-2020, <u>ODD/EVEN</u> semester conducted by the Department of Electronics and Communication, <u>K.S.Rangasamy</u> College of Arts and Science (Autonomous), Tiruchengode-15

Mr.L.Dhatchinamurthy Course Coordinator Dr. K.M.Prabusankarlal
Head of the Department

Dr.V.RadhakrishnanPrincipal

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Certificate

This is to certify that <u>VENUGOPAL K, (18UCH039)</u> of <u>II B.Sc., CHE</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

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Certificate

This is to certify that <u>ARUNA D</u>, <u>(18UMB002)</u> of <u>II B.Sc.</u>, <u>MB</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Mr.L.Dhatchinamurthy
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This is to certify that <u>BHUVANESHWARI S</u>, (18UMB003) of <u>II B.Sc.</u>, <u>MB</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Mr.L.Dhatchinamurthy
Course Coordinator

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Dr.V.RadhakrishnanPrincipal

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Certificate

This is to certify that MADHUMITHA M, (18UMB020) of II B.Sc., MB has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Mr.L.Dhatchinamurth

Dr. K.M.PrabusankarlalHead of the Department

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Dr.V.RadhakrishnanPrincipal

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Certificate

This is to certify that <u>ARUNKUMAR A, (18UCA006)</u> of <u>II BCA</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Mr.L.Dhatchinamurthy
Sourse Coordinator

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Certificate

This is to certify that <u>BALAMURUGAN S</u>, (18UCA009) of <u>II BCA</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Mr.E. Chatchinamurthy

NOTE OF Course Goordinator

Dr. K.M.PrabusankarlalHead of the Department

Dr.V.RadhakrishnanPrincipal

K.S. Rangasa

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Certificate

This is to certify that <u>CHANDIRAN G, (18UCA016)</u> of <u>II BCA</u> has completed a Certificate Course in <u>Cell Phone Servicing</u> during the academic year <u>2019-2020</u>, <u>ODD/EVEN</u> semester conducted by the Department of Electronics and Communication, <u>K.S.Rangasamy College of Arts</u> and <u>Science (Autonomous)</u>, <u>Tiruchengode-15</u>

Mr.L.Dhatchinamurthy
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Dr.V.RadhakrishnanPrincipal

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This is to certify that <u>DHATCHANA MOORTHY S</u>, (18UCA022) of <u>II BCA</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Mr.L. Dhatchinamurthy

Sourse Coordinator

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L.S. Rangas

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This is to certify that GOWTHAM S, (18UPH017) of II B.Sc., PHY has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

MCIPAL Mr.L.Dhatchinamurthy
College of Course Coordinator

K.S.Rangasa,

Dr. K.M.PrabusankarlalHead of the Department

Dr.V.RadhakrishnanPrincipal

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This is to certify that <u>SAMITHRA S, (18UPH053)</u> of <u>II B.Sc., PHY</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

CIPA Mr.L.Dhatchinamurthy

She's Course Coordinator

Dr. K.M.PrabusankarlalHead of the Department

Dr V Radhakrichnan

Dr.V.RadhakrishnanPrincipal

K.S. Rangasar



Certificate

This is to certify that <u>SATHISH KUMAR T, (18UPH063)</u> of <u>II B.Sc., PHY</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Mr.L.Dhatchinamurthy

Dr. K.M.PrabusankarlalHead of the Department

Dr.V.RadhakrishnanPrincipal

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Certificate

This is to certify that <u>SELVAM S</u>, (18UPH064) of <u>II B.Sc.</u>, <u>PHY</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Mr. L. Dhatchinamurthy Course Coordinator

Dr. K.M.Prabusankarlal Head of the Department

Dr. V. Radhakrishnan Principal

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Certificate

This is to certify that <u>SUNDAR T, (18UPH069)</u> of <u>II B.Sc., PHY</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Mr.L.Dhatchinamurthy Course Coordinator

Dr. K.M.PrabusankarlalHead of the Department

Dr.V.RadhakrishnanPrincipal

K.S. Rangasan



Certificate

This is to certify that <u>VASU S</u>, <u>(18UPH072)</u> of <u>II B.Sc., PHY</u> has completed a Certificate Course in Cell Phone Servicing during the academic year 2019-2020, ODD/EVEN semester conducted by the Department of Electronics and Communication, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15

Mr.L.Dhatchinamurthy
Course Coordinator

Dr. K.M.PrabusankarlalHead of the Department

Dr.V.RadhakrishnanPrincipal

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