

20VC028 – IMAGE PROCESSING WITH MATLAB

L	T	P	Credit
2	0	1	2

Preamble	This course explores set of techniques and workflow for image processing, analysis and visualization	
Unit - I	MATLAB Onramp and Fundamentals:	10
MATLAB Desktop and Editor – Commands – Vectors and Matrices – Indexing and modifying arrays – Array Calculations – Calling Functions – Plotting and importing data – Logical arrays – Programming – Creating, manipulating and accessing data in arrays – Mathematical and statistical operations in array – Visualizing data – Conditional data selection		
Unit - II	Data Preprocessing and Analysis:	10
Import and organize tabular data – Data types – Data preprocessing tasks – Data Analysis – Programming constructs – Automation with functions – Troubleshooting code		
Unit - III	Image Processing:	10
Working with Image data – Preprocessing – Segmentation – Detecting and analyzing texture – Improving segmentations – Finding and analyzing objects – Detecting edges and shapes – Batch processing – Aligning images		
List of Exercises / Experiments:		
1. MATLAB commands to perform calculations and create variables		
2. Running scripts in MATLAB editor		
3. Perform mathematical and statistical operations with arrays		
4. Extract, analyze and visualize data		
5. Perform data preprocessing and analysis tasks in MATLAB		
6. Import, visualize, and extract information from different image types and image data types		
7. Perform preprocessing in images		
8. Perform segmentation and analyze texture, overlapping in images		
9. Detect edges of objects		
10. Identify lines and circles in an image		
11. Process large numbers of files using the Image Batch Processor app and image datastores		
12. Aligning images using phase correlation, control points, and feature matching		

REFERENCES:

Lecture:30, Practical:20, Total: 50

1. <https://matlabacademy.mathworks.com>
2. Rafael C. Gonzalez, Richard E. Woods, Steven L Eddins, "Digital Image Processing using MATLAB", 3rd Edition, Gatesmark Publishing, 2020
3. P.K.Thiruvikraman, "A Course on Digital Image Processing with MATLAB", IOP Publishing, 2019

COURSE OUTCOMES:

On completion of the course, the students will be able to

- | | |
|-----|--|
| CO1 | explore MATLAB commands, scripts and perform various operations |
| CO2 | apply MATLAB functions to perform preprocessing and analyze data |
| CO3 | perform various image processing and segmentation techniques |
| CO4 | find, analyze, detect and align objects in images |

BT Mapped
(Highest Level)

Applying (K3),
Manipulation (S2)

Applying (K3),
Precision (S3)

Applying (K3),
Precision (S3)

Applying (K3),
Precision (S3)

Mapping of COs with POs and PSOs

COs/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	1	1	1								3	1
CO2	3	2	1	1	1								3	1
CO3	3	2	1	1	1								3	1
CO4	3	2	1	1	1								3	1

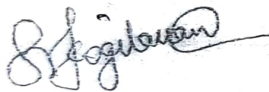
1 – Slight, 2 – Moderate, 3 – Substantial, BT- Bloom's Taxonomy

ASSESSMENT PATTERN

Test / Bloom's Category*	Remembering (K1) %	Understanding (K2) %	Applying (K3) %	Analyzing (K4) %	Evaluating (K5) %	Creating (K6) %	Total %
(MATLAB Certification Exam) (75 marks)	20	30	50				100
Application Development (25 marks)	-	-	100				100


Signature of the Chairman
Head of Studies - CSE







KONGU ENGINEERING COLLEGE
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PERUNDURAI 638060
INTERNAL QUALITY ASSURANCE CELL



CERT No. 99-100-20788
ISO 9001 : 2015

Approval for Value Added Course (One / Two Credits)

Academic Year: 2021-2022 EVEN Semester
DEPARTMENT OF CSE

Date: 10.03.2022

1	Academic Year	:	2021-2022	Semester : EVEN
2	Course Title	:	Image Processing with MATLAB	Credit(s): One / Two
3	Type of Course	:	Already Offered Course / Updated Course / New Course	
	• If "Already offered course"	:	Course Code: -	Version:-
4	Course Coordinator(s)	:	1. Ms.S.Ramya 2. Mr.S.Selvaraj	
5	Course offered by	:	Internal faculty	
6	Name and designation of external resource persons	:		
7	Details about external organization	:	NA	
8	Course fee for external experts		Max. number of students/Batch	Course fee / student
			50	-
9	No. of days	Period		No. of hours
		From	To	Lecture Practical Total
	20	11.04.2022	31.05.2022	30 20 50
				Venue/ Meet ID
				CC11
10	Pre-requisites for offering the course	:		
11	Course offered to	:	Programme	Branch
		:	BE/BTech	All branches
		:		Year/Semester
		:		II/IV
12	Course Main Contents	:	Day 1	MATLAB Desktop and Editor
		:	Day 2	Commands
		:	Day 3	Vectors and Matrices
		:	Day 4	Indexing and modifying arrays
		:	Day 5	Array Calculations
		:	Day 6	Calling Functions
		:	Day 7	Plotting and importing data
		:	Day 8	Logical arrays
		:	Day 9	Programming
		:	Day 10	Creating and manipulating data in arrays
		:	Day 11	Accessing data in arrays

Day 12	Mathematical and statistical operations in array
Day 13	Visualizing data
Day 14	Conditional data selection
Day 15	Working with data types
Day 16	Data preprocessing tasks
Day 17	Data analysis
Day 18	Automation with functions
Day 19	Working with Image data
Day 20	Preprocessing and segmentation of images
Day 21	Detecting and analyzing texture of images
Day 22	Improving segmentations
Day 23	Finding and analyzing objects
Day 24	Detecting edges and shapes
Day 25	Batch processing and Aligning images

Assignment / Project /
Case Study/Others: (if any)

13. Course Outcomes

After completing the course, the student will be able to:

- explore MATLAB commands, scripts and perform various operations
- apply MATLAB functions to perform preprocessing and analyze data
- perform various image processing and segmentation techniques
- find, analyze, detect and align objects in images

14. Course Assessment
(Min. 2)

S. No.	Type	Max. Marks
1	MATLAB Certification Exam	75
2	Application Development	25
Total		100 Marks

15. Verified that the content of this course is not offered to students partially/fully in regular curriculum of respective programme of the student.

Certify that the course content, credits and grade are approved in the BOS meeting or approved by internal BOS members and will be ratified in the next BOS meeting

(Signature of the HoD
after verification)

16. Any other details

The above proposal may kindly be approved.

S. Ramya
Course co-ordinator(s)
[S. RAMYA]

HOD

Chief Coordinator/Academic

Encl:

1. Copy of the syllabus of the course
2. Financial proposal from the external organization (if any)

18VACXX – Image Processing with MATLAB

L	T	P	Credit
2	0	1	2

Preamble

This course explores set of techniques and workflow for image processing, analysis and visualization

Unit - I	MATLAB Onramp and Fundamentals	10
MATLAB Desktop and Editor – Commands – Vectors and Matrices – Indexing and modifying arrays – Array Calculations – Calling Functions – Plotting and importing data – Logical arrays – Programming – Creating, manipulating and accessing data in arrays – Mathematical and statistical operations in array – Visualizing data – Conditional data selection		
Unit - II	Data Preprocessing and Analysis	10
Import and organize tabular data – Data types – Data preprocessing tasks – Data Analysis – Programming constructs – Automation with functions – Troubleshooting code		
Unit - III	Image Processing	10

Working with Image data – Preprocessing – Segmentation – Detecting and analyzing texture – Improving segmentations – Finding and analyzing objects – Detecting edges and shapes – Batch processing – Aligning images

List of Exercises / Experiments:

1. MATLAB commands to perform calculations and create variables
2. Running scripts in MATLAB editor
3. Perform mathematical and statistical operations with arrays
4. Extract, analyze and visualize data
5. Perform data preprocessing and analysis tasks in MATLAB
6. Import, visualize, and extract information from different image types and image data types
7. Perform preprocessing in images
8. Perform segmentation and analyze texture, overlapping in images
9. Detect edges of objects
10. Identify lines and circles in an image
11. Process large numbers of files using the Image Batch Processor app and image datstores
12. Aligning images using phase correlation, control points, and feature matching

Lecture:30, Practical:20, Total: 50

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1. <https://matlabacademy.mathworks.com>
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3. P.K.Thiruvikraman, “A Course on Digital Image Processing with MATLAB”, IOP Publishing, 2019

COURSE OBJECTIVES:

- On completion of the course, the students will be able to
- CO1 explore MATLAB AB commands, scripts and perform various operations
- CO2 apply MATLAB AB functions to perform preprocessing and analyze data
- CO3 perform various image processing and segmentation techniques
- CO4 find, analyze, detect and align objects in images

BT Mapped
(Highest Level)

Applying (K3),
Manipulation (S2)
Applying (K3),
Precision (S3)
Applying (K3),
Precision (S3)
Applying (K3),
Precision (S3)

Mapping of COs with POs and PSOs

CO/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	1	1	1								3	1
CO2	3	2	1	1	1								3	1
CO3	3	2	1	1	1								3	1
CO4	3	2	1	1	1								3	1

1 – Slight, 2 – Moderate, 3 – Substantial, BT-Bloom's Taxonomy

ASSESSMENT PATTERN

Test / Bloom's Category*	Remembering (K1) %	Understanding (K2) %	Applying (K3) %	Analyzing (K4) %	Evaluating (K5) %	Creating (K6) %	Total %
Assessment1 (MATLAB Certification Exam) (75 marks)	20	30	50				100
Assessment2 Application Development (25 marks)			100				100

KONGU ENGINEERING COLLEGE, PERUNDURAI - 638060
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
TWO CREDIT COURSE ON "IMAGE PROCESSING WITH MATLAB"

STUDENT LIST

S.NO.	ROLL NO.	NAME OF THE STUDENT	DEPARTMENT	YEAR/SEM/SECTION
1.	20CSL257	NISHANTH J	CSE	II/IV/C
2.	20CSR066	GOWTHAM S	CSE	II/IV/B
3.	20CSR069	GUGHAN R	CSE	II/IV/B
4.	20CSR070	HAARISH D A	CSE	II/IV/B
5.	20CSR087	KARTHIKHEYAN A V	CSE	II/IV/B
6.	20CSR090	KAVIN KUMAR S	CSE	II/IV/B
7.	20CSR118	MATHIALAGAN M	CSE	II/IV/B
8.	20CSR129	MUKILAN T	CSE	II/IV/C
9.	20CSR131	NAGUL K S	CSE	II/IV/C
10.	20CSR150	PRAKATESH B	CSE	II/IV/C
11.	20CSR159	RAGUL K	CSE	II/IV/C
12.	20CSR167	RANJITH KUMAR E	CSE	II/IV/C
13.	20CSR173	SABAREESH A H	CSE	II/IV/C
14.	20CSR174	SABARISH K	CSE	II/IV/C
15.	20ECR061	S.M.JEEVANAA	ECE	II/IV/B
16.	20ECR068	S.KALIGA DEVI	ECE	II/IV/B
17.	20MER061	P.KATHIRESAN	MECH	II/IV/B
18.	20MER082	A.NEDUNCHEZHIAN	MECH	II/IV/C
19.	20MER084	A.NEWTON	MECH	II/IV/C
20.	20MER085	A.NIRUTHISHKUMAR	MECH	II/IV/C
21.	20MER089	PRABAKARAN AB	MECH	II/IV/C
22.	20MER092	P.PRAVEENSABARI	MECH	II/IV/C
23.	20MER102	SABARI THANUSH S	MECH	II/IV/C
24.	20MER103	SABARISH M R	MECH	II/IV/C
25.	20MER105	R.SAKTHI SARAVAN KUMAR	MECH	II/IV/C
26.	20MER115	A.SARAVANA KUMAR	MECH	II/IV/C
27.	20MER119	R. SATTANATHAN	MECH	II/IV/C
28.	20MER131	SUDEEP R	MECH	II/IV/D

S. SECURAS *[Signature]*
S. RAMYA S. *[Signature]*
Faculty In-Charge

[Signature]
HOD/CSE

KONGU ENGINEERING COLLEGE, PERUNDURAI - 638060
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TWO CREDIT COURSE ON "IMAGE PROCESSING WITH MATLAB"

PROJECT REVIEW ATTENDANCE on 09.07.2022

S.NO.	ROLL NO.	NAME OF THE STUDENT	DEPARTMENT	YEAR/SEM/ SECTION	ATTENDANCE
1.	20CSE1257	NISHANTH J	CSE	II/IV/C	PRESENT
2.	20CSR066	GOWTHAM S	CSE	II/IV/B	PRESENT
3.	20CSR069	GUGHAN R	CSE	II/IV/B	PRESENT
4.	20CSR070	HAARISH D A	CSE	II/IV/B	PRESENT
5.	20CSR087	KARTHIKEYAN A V	CSE	II/IV/B	PRESENT
6.	20CSR090	KAVIN KUMAR S	CSE	II/IV/B	PRESENT
7.	20CSR118	MATHIALAGAN M	CSE	II/IV/B	PRESENT
8.	20CSR129	MUKILAN T	CSE	II/IV/C	PRESENT
9.	20CSR131	NAGUL K S	CSE	II/IV/C	PRESENT
10.	20CSR150	PRAKATESH B	CSE	II/IV/C	PRESENT
11.	20CSR159	RAGUL K	CSE	II/IV/C	PRESENT
12.	20CSR167	RANJITH KUMARE	CSE	II/IV/C	PRESENT
13.	20CSR173	SABAREESH A H	CSE	II/IV/C	PRESENT
14.	20CSR174	SABARISH K	CSE	II/IV/C	PRESENT
15.	20ECR061	S.MJEEVANA A	ECE	II/IV/B	PRESENT
16.	20ECR068	S.KALIGA DEVI	ECE	II/IV/B	PRESENT
17.	20MER061	P.KATHIRESAN	MECH	II/IV/B	PRESENT
18.	20MER082	A.NEDUNCHEZHIVAN	MECH	II/IV/C	PRESENT
19.	20MER084	A.NEWTON	MECH	II/IV/C	PRESENT
20.	20MER085	A.NIRUTHISHKUMAR	MECH	II/IV/C	PRESENT
21.	20MER089	PRABAKARAN AB	MECH	II/IV/C	PRESENT
22.	20MER092	P.PRAVEENSABARI	MECH	II/IV/C	PRESENT
23.	20MER102	SABARI THANUSH S	MECH	II/IV/C	PRESENT
24.	20MER103	SABARISH M R	MECH	II/IV/C	PRESENT
25.	20MER105	R.SAKTHI SARAVAN KUMAR	MECH	II/IV/C	PRESENT
26.	20MER115	A.SARAVANA KUMAR	MECH	II/IV/C	PRESENT
27.	20MER119	R. SATTANATHAN	MECH	II/IV/C	PRESENT
28.	20MER131	SUDEEP R	MECH	II/IV/D	PRESENT

S. Selvaraj
8/2/18/19
Faculty In-Charge

09/07/2022
HOD/CSE

KONGU ENGINEERING COLLEGE, PERUNDURAI - 638060
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
TWO CREDIT COURSE ON "IMAGE PROCESSING WITH MATLAB"

Mark Statement

S.NO.	ROLL NO.	NAME OF THE STUDENT	YEAR/ SEM/ SECTION	MATLAB CERTIFICATE EXAM (75 Marks)	APPLICATION DEVELOPMENT (25 Marks)	TOTAL (100 Marks)
1.	20CSL257	NISHANTH J	II/IV/C	75	15	90
2.	20CSRO66	GOWTHAM S	II/IV/B	75	14	89
3.	20CSRO69	GUGHAN R	II/IV/B	75	25	100
4.	20CSRO70	HAARISH D A	II/IV/B	75	14	89
5.	20CSRO87	KARTHIKEYAN A V	II/IV/B	75	23	98
6.	20CSRO90	KAVIN KUMAR S	II/IV/B	75	18	93
7.	20CSRI18	MATHYALAGAN M	II/IV/B	75	17	92
8.	20CSRI29	MUKILAN T	II/IV/C	75	18	93
9.	20CSRI31	NAGUL K S	II/IV/C	75	25	100
10.	20CSRI50	PRAKATESH B	II/IV/C	75	14	89
11.	20CSRI59	RAGUL K	II/IV/C	75	24	99
12.	20CSRI67	RANJITH KUMAR E	II/IV/C	75	25	100
13.	20CSRI73	SABARESH A H	II/IV/C	75	12	87
14.	20CSRI74	SABARISH K	II/IV/C	75	17	92
15.	20ECRO61	S.M.JEEVANAA	II/IV/B	75	23	98
16.	20ECRO68	S.KALIGA DEVI	II/IV/B	75	19	94
17.	20MER061	P.KATHIRESAN	II/IV/B	75	11	86
18.	20MER082	A.NEDUNCHEZHIAN	II/IV/C	75	13	88
19.	20MER084	A.NEWTON	II/IV/C	75	18	93
20.	20MER085	A.NIRUTHISHKUMAR	II/IV/C	75	25	100
21.	20MER089	P.RABAKARAN AB	II/IV/C	75	12	87
22.	20MER092	P.PRAVEENSABARI	II/IV/C	75	18	93
23.	20MER102	SABARI THANUSH S	II/IV/C	75	12	87
24.	20MER103	SABARISH M R	II/IV/C	75	23	98
25.	20MER105	R.SAKTHI SARAVAN KUMAR	II/IV/C	75		92
26.	20MER115	A.SARAVANA KUMAR	II/IV/C	75	11	86
27.	20MER119	R.SATTANATHAN	II/IV/C	75	12	87
28.	20MER131	SUDEEP R	II/IV/D	75	12	87

S. SETHURAJ
 3/8/19
 Faculty In-Charge

HOD/CSE

KONGU ENGINEERING COLLEGE, PERUNDURAI - 638060
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
TWO CREDIT COURSE ON "IMAGE PROCESSING WITH MATLAB"

MATLAB CERTIFICATE EXAM

BAT CH	ROLL NO.	NAME OF THE STUDENT	MATLAB Onamp (10Marks)	MATLAB Fundamental Is (25 Marks)	Image Processing Onamp (10 Marks)	Image Processing with MATLAB (30 Marks)	TOTAL MARKS (75 Marks)
I	20CSR069	GUGHAN R	10	25	10	30	75
	20CSR066	GOWTHAM S	10	25	10	30	75
	20CSR070	HAARISH D A	10	25	10	30	75
II	20CSL257	NISHANTH J	10	25	10	30	75
	20CSR129	MUKILAN T	10	25	10	30	75
	20CSR167	RANJITH KUMAR E	10	25	10	30	75
III	20CSR159	RAGUL K	10	25	10	30	75
	20CSR173	SABARESH A H	10	25	10	30	75
	20CSR174	SABARISH K	10	25	10	30	75
IV	20CSR131	NAGUL K S	10	25	10	30	75
	20CSR150	PRAKATESH B	10	25	10	30	75
	20MER131	SUDEEP R	10	25	10	30	75
V	20CSR087	KARTHIKHEYAN A V	10	25	10	30	75
	20CSR090	KAVIN KUMAR S	10	25	10	30	75
	20CSR118	MATHIVALAGAN M	10	25	10	30	75
VI	20MER085	A.NIRUTHISHKUMAR	10	25	10	30	75
	20MER082	A.NEDUNCHEZHIAN	10	25	10	30	75
	20MER102	SABARI THANUSH S	10	25	10	30	75
VII	20MER103	SABARISH M R	10	25	10	30	75
	20MER105	R.SAKTHI SARAVAN KUMAR	10	25	10	30	75
	20MER115	A.SARAVANA KUMAR	10	25	10	30	75
VIII	20ECR068	S.KALIGA DEVI	10	25	10	30	75
	20MER061	P.KATHIRESAN	10	25	10	30	75
	20ECR061	S.M.JEEVANAA	10	25	10	30	75
IX	20MER092	P.PRAVEENSABARI	10	25	10	30	75
	20MER084	A.NEWTON	10	25	10	30	75
	20MER089	PRABAKARAN AB	10	25	10	30	75
	20MER119	R.SATTANATHAN	10	25	10	30	75

S. SELLARAS
8/6/2021/8/10
S. RAMYA B. P.
2/8/21
 Faculty In-Charge

S. S. SELLARAS
 HOD/CSE

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TWO CREDIT COURSE ON "IMAGE PROCESSING WITH MATLAB"

Application Development Mark Splitup

BATCH	ROLL NO.	NAME OF THE STUDENT	IMPLEMENTATION (15 Marks)	PRESENTATION (5 Marks)	VIVA (5 Marks)	TOTAL (25 Marks)	TITLE OF THE PROJECT
I	20CSR069	GLUGHAN R	15	5	5	25	Text Recognition From Roadsigns
	20CSR066	GOWTHAM S	10	2	2	14	
	20CSR070	HAARISH D A	9	3	2	14	
II	20CSL257	NISHANTH J	9	3	3	15	Vehicle Number Plate Recognition
	20CSR129	MUKILAN T	11	4	3	18	
	20CSR167	RANJITH KUMARE	15	4	4	23	
III	20CSR159	RAJUL K	15	5	4	24	Face Recognition Using MATLAB
	20CSR173	SABAREESH A H	8	2	2	12	
	20CSR174	SABARISH K	10	4	3	17	
IV	20CSR131	NAGUL K S	15	5	5	25	Image Filtering Using Median Filter
	20CSR150	PRAKATESH B	9	3	2	14	
	20MER131	SUDEEP R	8	2	2	12	
V	20CSR087	KARTHIKEYAN A V	15	4	4	23	Image To Audio Converter
	20CSR090	KAVIN KUMAR S	12	4	2	18	
	20CSR118	MATHIYALAGAN M	12	3	2	17	
VI	20MER085	A.NIRUTHISHKUMAR	15	5	5	25	Count Checking System
	20MER082	A.NEDUNCHEZHIAN	8	3	2	13	
	20MER102	SABARI THANUSH S	8	2	2	12	
VII	20MER103	SABARISH M R	15	4	4	23	Cracks And Pores Deduction
	20MER105	RSAKTHI SARAVAN KUMAR	12	3	2	17	
	20MER115	A.SARAVANA KUMAR	7	2	2	11	
VIII	20ECCR068	S.KALIGA DEVI	13	3	3	19	Noise Reduction and Image Deblurring
	20MER061	P.KATHIRESAN	7	2	2	11	
	20ECCR061	S.M.JEEVANAA	15	4	4	23	
IX	20MEK092	P.PRAVEENSABARI	13	3	2	18	Merging Two Images Using Matlab Image Processing
	20MEK084	A.NEWTON	13	3	2	18	
	20MEK089	PRABAKARAN AB	8	2	2	12	
	20MEK119	R. SATTANATHAN	7	3	2	12	

S. SEETHARAN
 21/8/22
 Faculty In-Charge

HOD/CSE



KONGU ENGINEERING COLLEGE
(Autonomous)
PERUNDURAI – 638060
INTERNAL QUALITY ASSURANCE CELL

Department of CSE
DAY WISE ATTENDANCE



Title of the Course: IMAGE PROCESSING WITH MATLAB

Date: From 18.04.2022 to 15.06.2022

S.No.	Roll No.	Name of the Student	18.04.22	19.04.22	21.04.22	22.4.22	23.4.22	25.04.22	26.04.22	27.04.22	28.04.22	29.04.22	04.05.22	05.05.22	06.05.22	08.05.22
			(1hr)	(1hr)	(1hr)	(1hr)	(1hr)	(1hr)	(1hr)	(1hr)	(1hr)	(1hr)	(1hr)	(1hr)	(1hr)	(6hrs)
1.	20CSL257	NISHANTH J	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2.	20CSR066	GOWTHAM S	/	/	/	/	a	a	/	/	/	/	a	/	a	/
3.	20CSR069	GUGHAN R	/	/	a	a	/	/	/	/	/	/	/	/	/	/
4.	20CSR070	HAARISH D A	/	/	/	/	/	/	/	/	/	/	/	a	a	/
5.	20CSR087	KARTHIKEYAN A V	/	/	/	/	/	/	/	/	/	/	/	/	a	/
6.	20CSR090	KAVIN KUMAR S	/	/	/	/	a	/	/	/	/	/	/	/	/	/
7.	20CSR118	MATHIYALAGAN M	/	/	/	/	a	/	/	/	/	/	/	/	/	/
8.	20CSR129	MUKILAN T	/	/	/	/	a	/	/	/	/	/	/	/	/	/
9.	20CSR131	NAGUL K S	/	/	/	/	/	/	/	/	a	/	/	/	/	/
10.	20CSR150	PRAKATESH B	/	/	/	/	a	/	/	/	/	/	/	/	/	/
11.	20CSR159	RAGUL K	/	/	/	/	a	/	/	/	/	/	/	/	/	/
12.	20CSR167	RANJITH KUMARE	/	/	/	/	a	/	/	/	/	/	/	/	/	/
13.	20CSR173	SABAREESH A H	/	/	/	/	a	/	/	/	/	/	/	/	/	/
14.	20CSR174	SABARISH K	/	/	/	/	a	/	/	/	/	/	/	/	/	/
15.	20ECR061	S.M.JEEVANAA	/	/	/	/	/	/;	/	/	/	/	/	/	/	/

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