INDEX

6.3.3 Percentage of teaching and non-teaching staff participating in Faculty development Programmes (FDP), professional development /administrative training programs during A Y 2017-2018

Dates (from-to) (DD-MM-YYYY)	Title of the FDP / professional development / administrative training program	No. of participants
04.12.2017 to 08.12.2017	STTP on Research trends Design and Analysis of Algorithms with R-Programming	30
6.06.2017 to 10.06 2017	Refresher Program "Discrete Mathematics and mathematical model	1
28.11.2017 20.12 .2017	Training Program(FDP) in Teaching Learning Centre, by IIT Mumbai	1
12.12.2017 to 12.12.2017	FDP on "System Programming and Operating System Laboratory", SITS,Pune	1
13.12.2017 to 15 .12.2017	FDP on Web Technology	2
18 .12. 2017 to 23.12.2017	FDP on Embedded Systems and IOT	1
27.1.2017 to 28.1.2017	2 Days FDP on "Emerging Research Trends in Computing,Communication and Storage" ZCOER,Pune	2
19.1.2018 to 20.1.2018	International seminar on"Intelligent Computing for Future Internet", Govt, COE,Karad	5
30.01.2018 to 30.01.2018	Participated in BE Computer Engineering Syllabus revision, APCOE, PUNE	2
5.2.2018 to 6.2.2018	2 Days National Level Workshop Cum Championship on "IOT Using Arduino" ZCOER,Pune	1
09.02.2018 to 10.02.2018	Workshop in Future of Data	1
23.2.2018 to 24.2.2018	2 DaysState Level Workshop on "Machine Learning & Data Science"	1
21.4.2018 to 21.4.2018	Participated in NPTEL Workshop, IIT Madras	1
22.6.2018 to 23.6.2018	2 Days FDP on Data Analytics, MMCOE, Pune	1
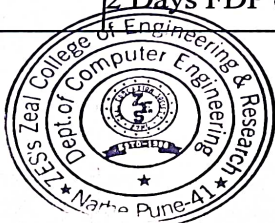
Head of the Department

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SHORT TERM TRAINING PROGRAM

in association with

STTP 2017

www.zealeducation.com/workshops

About STTP

The main purpose of the STTP is to train the participants in the concept of subject, its objectives and expected outcomes . Considering the vision, mission of the institute and requirements of student, we have designed a faculty-responsive STTP which will lead to positive transformation in teaching learning process. In educational institutes, everyone is aware about the gradual increase in classroom absenteeism of students has become the matter of concern. Students are reluctant to attend classes because Lectures content delivered by faculties are available in textbook or on internet in the form of videos/PPTs/MOOC, being one of the reasons. In order to address this issue, this STTP brings you an opportunity to pursue academic excellence during interactive sessions where eminent hardcore teachers will explain various topics of SPPU syllabus by giving us a better idea and what we should focus on syllabus wise so as to make your lecture more effective and interactive.

About Zeal College of Engineering

Zeal Education Society's Zeal College of Engineering and Research (Formally Known as Dnyanganga College of Engineering and Research) is established in June 2007 which symbolized the beginning of new era in technical education. The Institute has been approved by AICTE, DTE and affiliated to Savitribai Phule University, Pune. The Institute offers undergraduate and postgraduate Engineering degree programmes in information Technology, Computer, Electrical, Mechanical, Civil and Electronics & Telecommunication. The institute is also granted as PhD research center in Electronics & Telecommunication and Mechanical Engineering under Savitribai Phule Pune University, since 2013. Well qualified and experienced faculties with good research background are one of the key features of the institute. With state of art research, infrastructural, sports, cultural facilities the campus provides excellent academic ambience for the students.
Dedicated Training and Placement cell of the institute ensures a bright future to its students.

About Zeal Education Society

Zeal Education Society (ZES) is established in year 1996 under the able guidance of Hon. Shri S. M. Katkar to noble cause of education. During last few years, ZES has proved for being a well known organization in the field of education. Within the time span of 20 years, ZES has established Dnyanganga English Medium school, Dnyanganga Junior college, Dnyanganga college of education, Silver Crest School at Hingane Campus and Zeal College of Engineering and Research, Zeal Polytechnic, Zeal Institute of Business Administration, Computer Application & Research, Zeal Institute of Management of Computer Application at Narhe Campus.

COMPUTER ENGINEERING
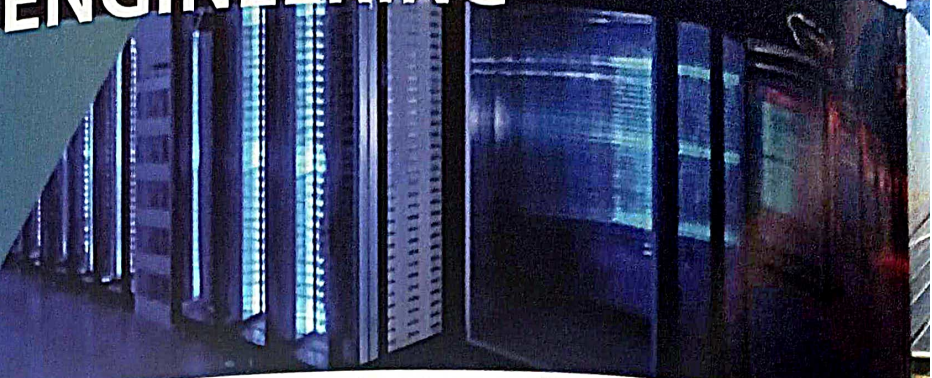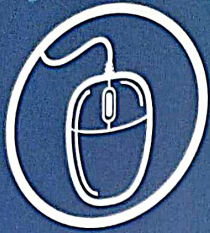
"RESEARCH TRENDS IN DESIGN AND ANALYSIS OF ALGORITHMS WITH R-PROGRAMMING"
December 04th to 08th, 2017

About Department:
Department of Computer Engineering is like prism reflecting the manifold shades of learning and co-curricular activities and determined towards the goal of providing innovative and quality education with high standard to achieve academic excellence. The Department is facilitated with state of the art infrastructure and well equipped laboratories. Thus we are confident that our students will emerge as assets not only to this institution and to the organization they belong, but also to the country at a large.

About STTP:
Design and Analysis of Algorithm is a systematic way of writing algorithms. It is increasingly being applied in the practical fields of mathematics and computer science. This STTP is intended to elaborate the fundamental concepts like Divide & Conquer, Greedy Algorithms, Dynamic Programming, Backtracking, Branch & Bound along with the tractable and intractable problems. This STTP is also focusing on various algorithms used in data analysis using R programming and Machine Learning.

Contents of STTP

Short Term Training Program is intended to explore the knowledge and techniques in following areas of Design and Analysis of Algorithms (DAA).

- DAA Fundamental
- Model and Abstract Algorithms
- Complexity Theory
- About R Programming
- Hands on R Programming
- Decision tree and Naive Bayes classifier
- Applications of Machine learning
- Pattern recognition and classification

Objectives

To provide new insights and knowledge on STTP topic by interacting with the senior Faculty Members/Scientists and Experts of the respective field.

- To study the fundamental concepts of Design and Analysis of Algorithms
- To discuss the problem solving abilities using mathematical theories
- To discuss the concepts of Computer algorithms to find the optimal solution
- To discuss the concepts of analyzing the performance of algorithms
- To discuss the concept of P & NP problems
- To study the implementation of innovative and effective teaching learning methodologies for imparting the course knowledge amongst the students/learners of the subject
- To formulate problems precisely, solve the problems, apply formal proof techniques, and explain the reasoning clearly
- To discuss applications of DAA, R-programming & Machine Learning

Resource Persons

Dr. P. J. Kulkarni
Deputy Director, WCE, Sangli

Dr. P. N. Mahalle
BoS (IT) Chairman,
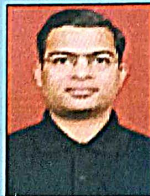BoS (Comp) Member, SPPU, Pune

Dr. Prachi Joshi
SPPU, Pune

Dr. A. C. Adamuthe
RIT, Sakarale

Mr. R. P. Kulkarni
Consultant, Corporate Trainer
Capgemini, Pune

Prof. Abhijit A. M.
COE, Pune

Prof. S. S. Shelke
PICT, Pune

Prof. S. P. Pundlik
MITCOE, Pune

Course Coordinators

Prof. Deepali Lokare
deepali.lokare@zealeducation.com
9763722185

Prof. Balaji A. Chaugule
balaji.chaugule@zealeducation.com
9552209907

AICTE - ISTE Approved STTP
Last Date of Registration 2nd December, 2017
Registration Fees : 1500/-

CHIEF PATRONS

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Founder
Zeal Education Society , Pune

Hon'ble Shri Jayesh S. Katkar
Executive Director
Zeal Education Society, Pune

PATRONS

Dr. Sanjay A. Deokar
Campus Director , ZES, Narhe, Pune.

Dr. Ajit M. Kate
Principal, ZCOER, Pune

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HOD
Information Technology

Dr. Pralhad P. Walvekar
HOD
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DIRECTION MAP
TO
ZEAL, NARHE CAMPUS

National Highway NH4
Pune City Road
Route 1
Route 2
Route 3
Route 4
PMPL Bus Stops
Important Landmarks

This information given in catalogue is indicative and is subject to change for betterment of the program.
Student should refer to prospectus or visit website for further details.

How to reach Zeal Education Society?
24.2 Kms. From Airport   13.7 Kms. From Pune Station   5.1 Kms From Katraj Bus Stand

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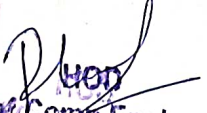
One week National level Short Term Training Program on **"RESEARCH TRENDS IN DESIGN AND ANALYSIS OF ALGORITHMS WITH R-PROGRAMMING"** was organized by Department of Computer Engineering of Zeal college of Engineering and research during 4th to 8th Dec 2017. Total 34 participants from various engineering institutes and industries across Maharashtra state had participated in this workshop.

The aim of this STTP was to bring active and emerging topics of Design of algorithms to describe our beliefs about how the world functions. In mathematical modeling, we translate those beliefs into the language of mathematics. There is a large element of compromise in mathematical modeling. The majority of interacting systems in the real world are far too complicated to model in their entirety. Mathematical modeling can be used for a number of different reasons.

Design and Analysis of algorithm is systematic way of writing algorithms. It increasingly being applied in the practical fields of mathematics and Computer Science. This STTP is intended to elaborate the fundamental concept like Divide & Conquer, Greedy Algorithm, Dynamic Programming, Backtracking, and Branch & Bound along with the tractable and intractable problems. This STTP is also focusing on various algorithms used in data analytics used in data analysis using R programming and Machine learning.

Objectives:

➤ To study the fundamental concept of Design and analysis of algorithm.
➤ To discuss problem salving abilities using mathematical theories.
➤ To discuss concept of computer algorithms to find the optimal solution.
➤ To discuss concept of analyzing the performance of algorithms.
➤ To discuss concept of P & NP problems.
➤ To study the implementation of innovative and effective teaching learning

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methodologies for imparting the course knowledge amongst the students /learners of the subject.

- To formulate problems precisely, salve the problems, apply formal proofs techniques and explain the reasoning clearly.
- To discuss applications of DAA, R programming Machine Learning.
- To explore the concepts of discrete mathematics with its Engineering Applications.
- To provide new insights and knowledge about the topic through close interactions/discussions with the senior Faculty Members/Scientists and Experts of the respective field.
- To study how discrete objects combine with one another.
- To understand how computer implementations are significant in applying ideas from discrete mathematics to real world problems.
- To learn appropriate use of set, function and relation models to understand practical examples, and interpret the associated operations and terminologies in context.
- To determine number of logical possibilities of events and to learn logic and proof techniques to expand mathematical maturity.
- Formulate problems precisely, solve the problems, apply formal proof techniques, and explain the reasoning clearly.

Various experts from industries and academic institutes had contributed to this workshop by their able guidance. Following topics get covered in this workshop.

1. DAA basics and advance. by **Dr . P. J. Kulkarni**, Deputy Director, WCE, Sangli,.

2. Optimization problems and Heuristic Algorithms by Dr.A.C. Admuthe.

3. Problem salving by using different methods by **Dr. Parikshit N. Mahalle BOS**, Chairman, IT, SPPU, Pune.

4. Genetic algorithms, Evalutionary algorithms and ANN **Prof. Abhijit A. M.**

5. Complexity theory by Sunil Shelke PICT Pune.

6. About R programing by Prof. S. P. Pundlik, , Pune.

7. Supervised learning by Dr. Prachi Joshi.

This Short term training program was inaugurated **by Dr . P. J. Kulkarni**, Deputy Director, WCE, Sangli,**Dr. Parikshit N. Mahalle** BOS, Chairman, IT, SPPU, Pune, **Dr.Prachi Joshi, SPPU, Pune,** Dr. Sanjay A. Deokar, Campus Director Zeal Education Society, **Dr. A.M.Kate** principal Zeal college of Engineering and Research, **Dr. Prasad S. Halgaonkar and Dr. S.A. Ubale** Head of Computer Engineering Department,ZCOER Shift-I and Shift-II respectively.

Day wise Session plan

Sr. no	Day	Session	Content	Resource Person
1	Day 1 4/12/2017	Morning	DAA basics and advance.	Dr. P.J . Kulkarni
		Evening	Optimization problems and Heuristic Algorithms, Algorithms to find Optimal solution, Applications of DAA, P and NP Problem. Effective Outcome based assessment methodology for Laboratory course in Engineering Education	Dr.A.C. Admuthe
2	Day 2 5/12/2017	Morning	Problem Solving using Models (Divide and Conquer, Greedy, Dynamic Programming, Branch and Bound), Dynamic Programming, Branch and Bound	Dr. P.N Mahalle
		Evening	Genetic Algorithms Evolutionary algorithms and ANN. Practical Approach of DAA	Prof. Abhijit A.M
3	Day 3 6/12/2017	Morning	Complexity theory: Operators, Growth rate, Bounds (upper/lower), Deterministic Polynomial and Non-Polynomial Problems	Prof. Sunil Shelke
		Evening	P, NP, NP-C and NP-H problems with Examples.	Prof. Sunil Shelke
4	Day4 7/12/2017	Morning	About R programming	Prof. S.P. Pundalik
		Evening	Hands on R programming	Prof. S.P. Pundalik
5	Day 5 8/12/2017	Morning	Hands on R programming	Prof. S.P. Pundalik
		Evening	Basic concepts, Supervised learning setup. LMS, Generative learning algorithms. Gaussian discriminant analysis. Naive Bayes.	Dr. Parchi Joshi

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Day-1 [06 Hours]

Resource Person: Dr. P. J. Kulkarni

Session:- Morning

Content:-

- Algorithms

- Problem Solving,

- Introduction to Algorithms,

- Complexity of algorithms

- Space complexity,

- Time complexity.

- Asymptotic notation- Big-O, Theta and Omega,

- Standard measures of efficiency

Day-1 [06 Hours]

Resource Person: Dr. A.C. Admuthe

Session:- Evening

Content:-

- Amortized analysis of algorithm

- Relationship among data, data structure, and algorithm, From Problem to Program.

- Algorithmic Strategies- Introduction to algorithm design strategies

- Algorithm design strategies- Divide and Conquer, and Greedy strategy

- Recurrence relation - Recurrence Relation, Linear Recurrence Relations

Day-2 [05 Hours]

Resource Person: Dr. P. N. Mahalle

Session :- Morning

Problem Soving using Model(Divide and Conquer, Greedy, Dynamic Programming, Branch and Bound)

Content:-

- Divide and Conquer Technique
- Greedy Algorithm
- How to create a Greedy Algorithm?
- Dynamic Programming
- Band and Bound
- How to Implement Algorithm

Day-2 [05 Hours]
Resource Person: Prof. Abhijit A. M.
Session - Evening
Content:-

Recursion, Loops, Functions and Proofs
- Introduction to Recursion
- How to write code?
- Problem Solving Using Recursion
- Hands on for problem solving
- Problems on Loops, Functions
- Given Proofs for every solution

Day-3 [06 Hours]
Resource Person: Prof. S. S. Shelke
Session – Morning/Evening
Content:-

Resource Person:
Session 2- Asymptotic Analysis in Algorithms
- Introduction to Algorithms
- History of algorithms
- Complexity in problem solving
- NP Hard, NP Complete
- Examples

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Day-4 [06 Hours]

Resource Person: Prof. S.P. Pundalik

Session:- Morning/Evening

Content:-

1) Origin of Computational Taught

2) Computability, Electronic Computer, Computational Complexity

3) Efficient Computation by abstract computational model compared to efficient computation in physical.

* Characteristics of Algorithm:

Computation:- It is one step to solve computational problem.

Examples: i) Numerical Computation

        ii) Word Processing

        iii) Physical Phenomena- like weather evolution, evolution of stars.

* Asymptotic Analysis in Algorithm

-What is Asymptotic Analysis?

-Notations in Asymptotic Analysis (Big oh, omega , theta etc)

-Examples, Trichotomy law followed?

-Why Asymptotic analysis of algorithm?

-Input instance set and time complexity depends on instance structure

* Finding limitation of our computer

-Turing Machine

-Von Neumann architecture and Turing Machine

-Turing Completeness

-Electronic Computers and turing completeness.

-Computability and complexity

-Algorithm performance in terms of TM operations.

* Formal definition of a computational problem.

-Types of problems:- Decision , search, Counting, Optimization, Function Problem.

Day-5 [06 Hours]

Resource Person: Prof. S.P. Pundalik

Session:- Morning

Content:-

* Why Decision Problem

* Moving from other problem types to decision version

Examples: Primarily Testing, Graphs Problem

*Difference/ similarity between language, Problem, algorithm, Turing Machine.

* Efficient Computation

-Drawing boundary between efficient and non-efficient computation.

-polynomial time vs super polynomial time functions.

-Coham-Edmonds thesis of characterizing. efficiency practically.

Determinism vs Non-Determinism

*Formal Definitions:-Time complexity

-Time complexity of a turing machine on an instance i of problem x

Day-5 [06 Hours]
Resource Person: Dr. Parchi Joshi

Session:- Evening

Content:-

- **Introduction to R programming**
- What is in R code?
- What is a factor in R?
- Basic Syntax
- Data types
- R Variables
- R operators
- R decision making
- Loops
- Functions
- R-Strings
- R- Vectors
- R- List
- R data Frames
- R – Packages
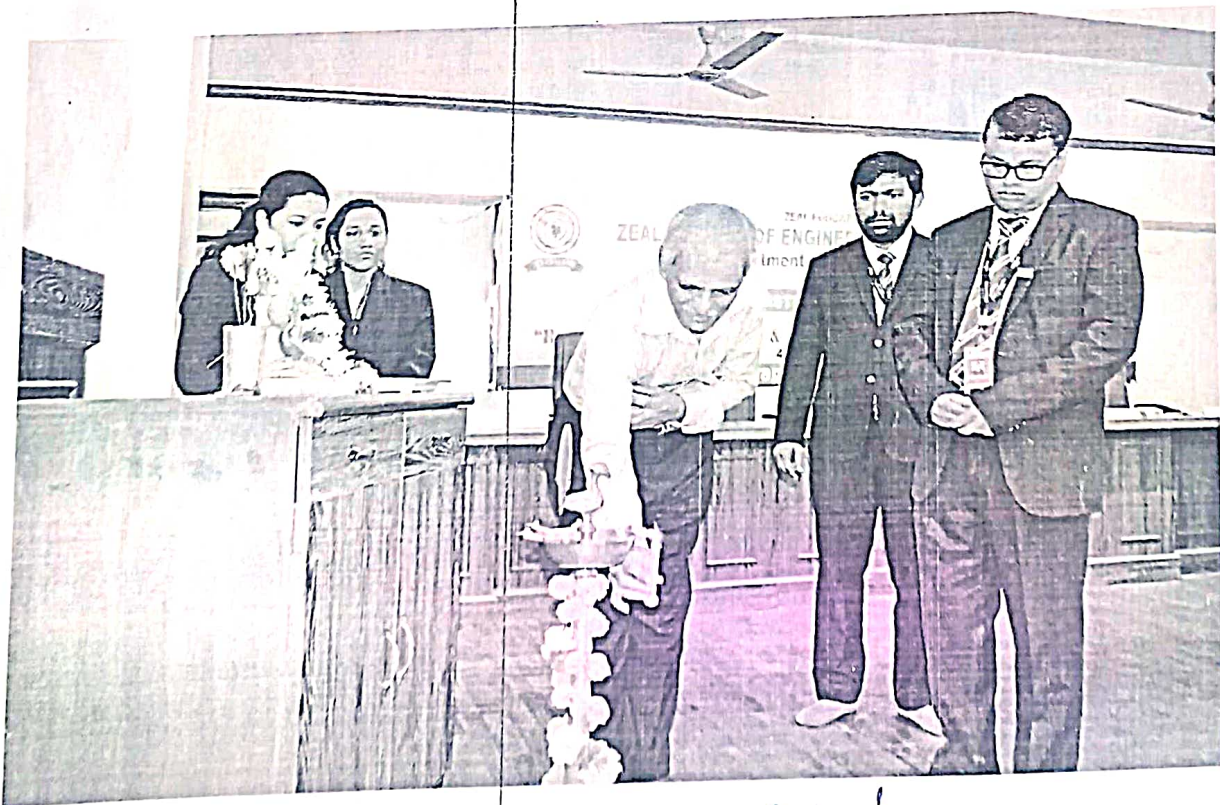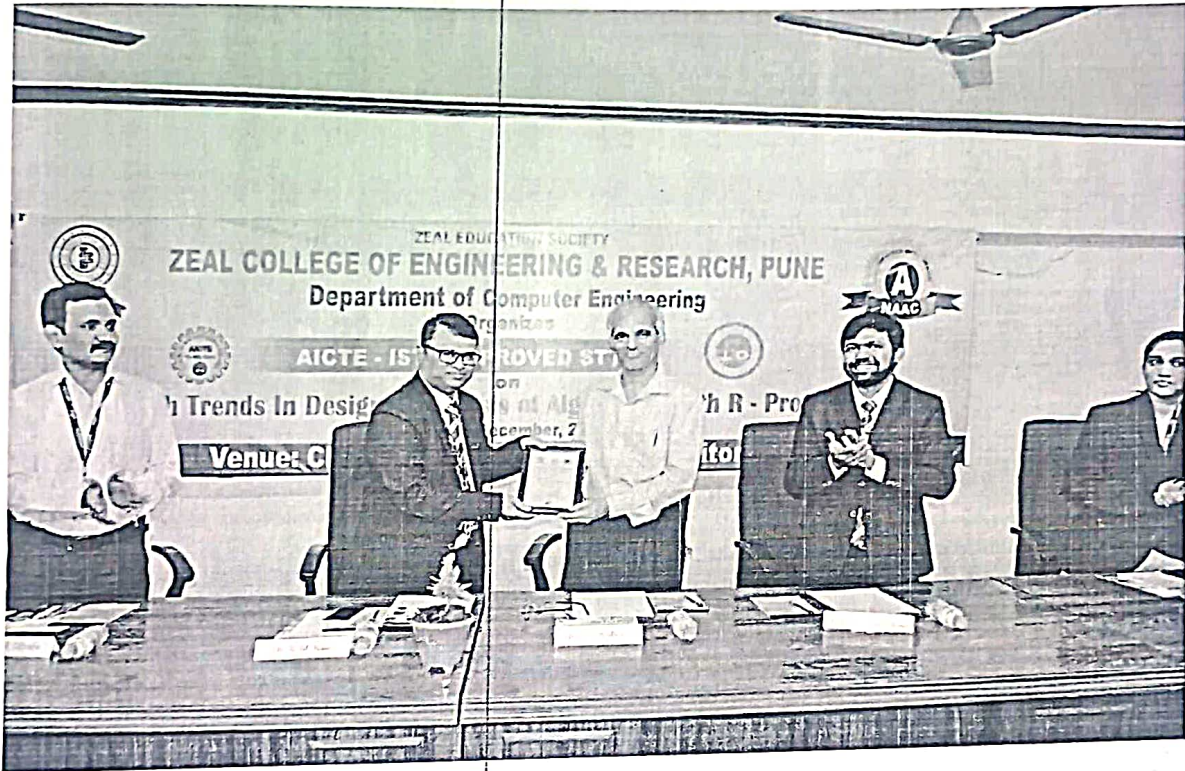- R –CSV files
- **R- Excel Files**
  - **R – JSON files**

PHOTO GALLARY OF RESEARCH TRENDS IN DESIGN AND ANALYSIS OF ALGORITHMS:

Algorithm Design

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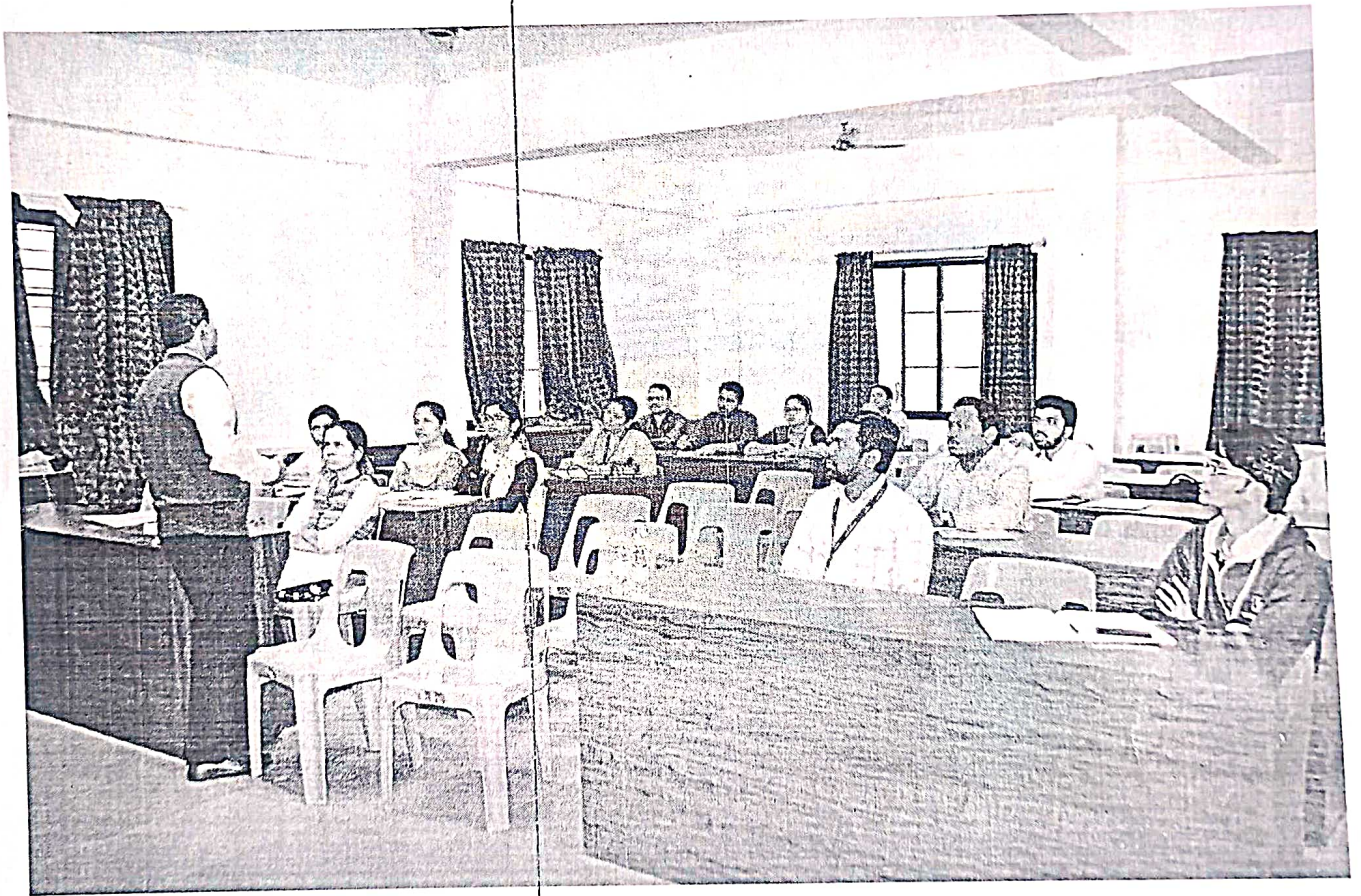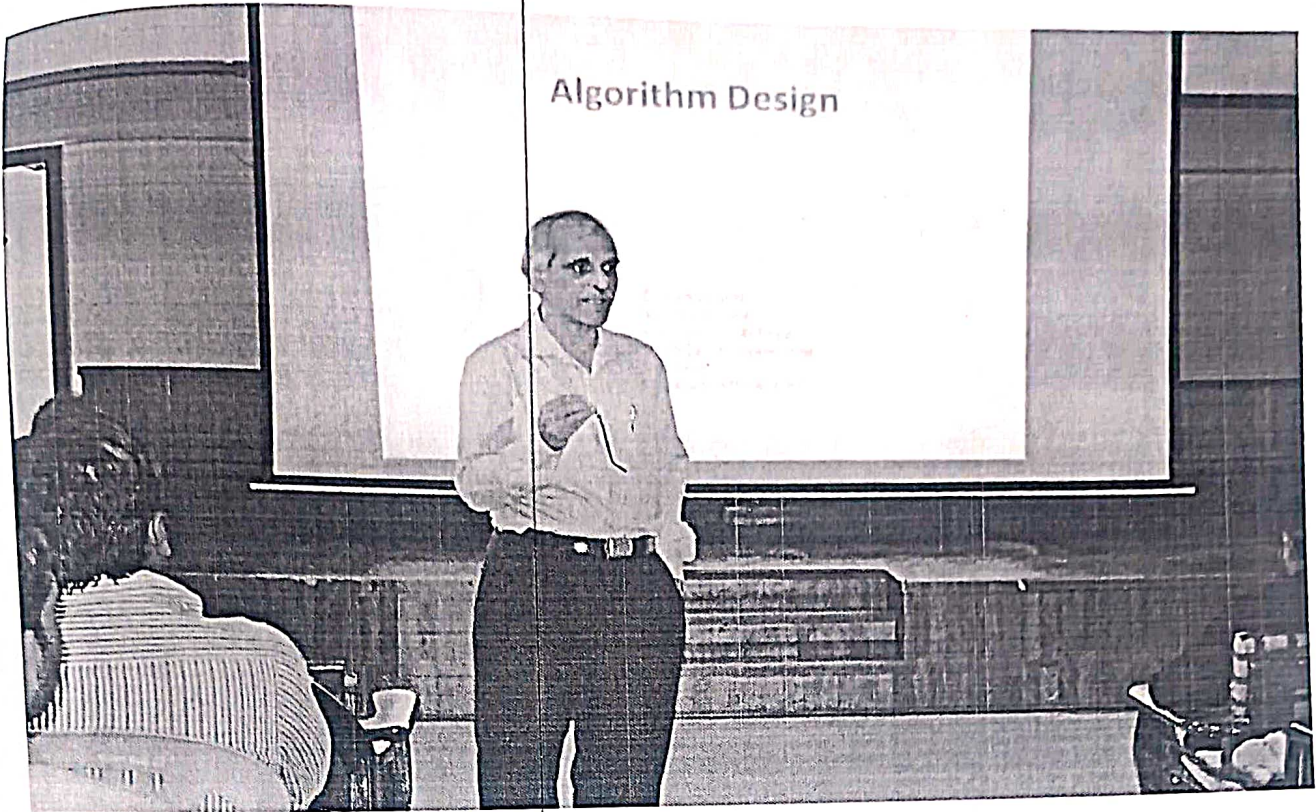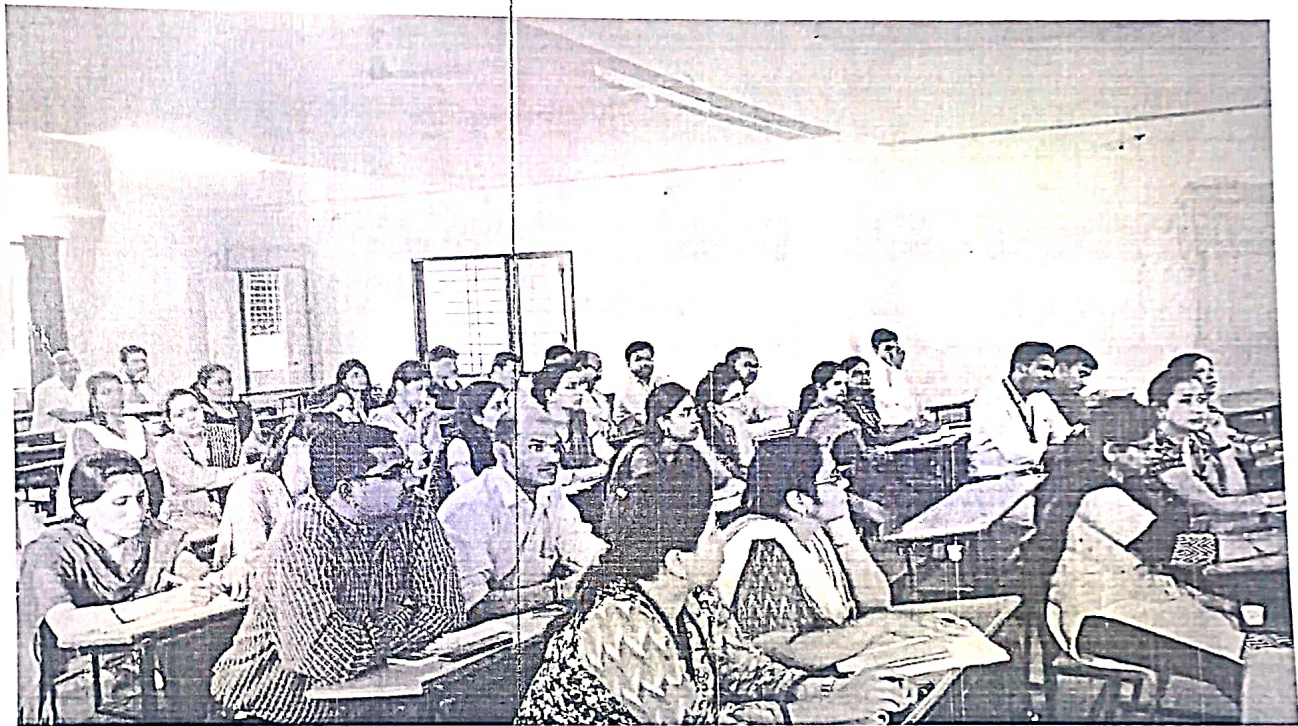ZES's Zeal College
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Department of Computer Engineering

STTP 2017
"Research Trends in Design and Analysis of Algorithms with

R-Programming"

(4th to 8th December 2017)

Attendance sheet

4th December 2017

Sr. No.	Name of Participant	Institute (Name and University)	Session 1	Session 2	Session 3
1.	Swati S. Narkhede	DPCOE, kharadi	*(signature)*	*(signature)*	*(signature)*
2.	Pawar Dipali B.	Zeal polytechnic	*(signature)*	*(signature)*	*(signature)*
3.	Anita N. Ligade	NMCOE	*(signature)*	*(signature)*	*(signature)*
4.	Anuja H. Todkar	NMCOE	*(signature)*	*(signature)*	*(signature)*
5.	Pradnya shinde	Zeal polytechnic	P.N shinde	P.N. shinde	P.N shinde

6.	Apacua V. Mote	ZCOER, Pune			
7)	Chavan Shitel V	AGCE, Satara			
8)	Gaikwad R B	APCOER, Pune			
9]	chavan A·A·	56 PMs CoE Baramati			
10)	Mane Sagar Sudhakar	Zeal Poly			
11)	D R. Gutne	KBTTOE Nashik			
12.	Chavan A·S·	SVERI's COE Pandharpur			
13)	Urmila P. Mane	ZCOER, Pune			
14)	Wagh Mangal V·	ZCOER, pune			

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15)	Ms Smita S. Bachal	ZCOER, Pune	*sign*	*sign*	*sign*
16)	Mrs. D.D. Ghatge	KBPCOE, Satara	*sign*		
17)	Mr. chandangole UR	ZCOER	*sign*	*sign*	
18)	Tamare G.G.	SVPM COE	*sign*	*sign*	
19	Pawar AH	—'—	*sign*	*sign*	*sign*
20	Pawasker JK	JCOER,pun	*sign*	*sign*	*sign*

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SCHEDULE OF SHORT TERM TRAINING PROGRAM
ON
"Research Trends in Design and Analysis of Algorithms with R-Programming"
(4th to 8th December 2017)

Attendence Sheet

5th Dec.2017

Sr.No.	Name of Participant	Name of Institute	Session1	Session 2
01.	Pawaskar S-R.	TCOER, Pune		
2.	Chavan A-S.	SVERI, COE		
3.	Pawar D.B.	zeal poly technic		
4.	Shinde P.N	" — " —	P.N.shinde	P.N.shinde
5.	Mane S.S.	— " —	Mane S.S	Mane.S.S.
6.	Smita S. Bachal	ZCOER	S.Bachal	
7.	Savita Kumbhare	ZCOER	Savita	Savita
8.	Swati Nauchede	DPCOE	Swati	
9.	Todkar Anuja H.	NMCOG	Anuja	
10	Ligade Anita N.	NMCOG		
11	Game Deepti R	HDMUP'S KBTCOE	Game	
12)	Shital Chavan	AGCE, Satara		
15)	R.T. Waghmode	ZCOER	RTW	
14)	Wagh M.V.	ZCOER	Wagh	Wagh
15)	P.S. Nawghare	— " —		
16)	P.S. Shinde	ZCOER		
17)	Lokhande V.R.	FIT, Pune	Rlokhande	Rlokhande
18.	O.A. Lokare	ZCOER.	Lokare	Lokare
19.	R.N. Lokhande	ZCOER		RNLokhande
20.	P.O. Chitmul	ZCOER		
21).	Tak. P.A	— " —	P	P
22.	V.M. Patil	ZCOER	University Exam	Dupatil
23	P.M. Mane	ZCOER		
24	chundangole	ZCOER		

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ON
"Research Trends in Design and Analysis of Algorithms with R-Programming"
(4th to 8th December 2017)

Attendence Sheet

5th Dec.2017

Sr.No.	Name of Participant	Name of Institute	Session1	Session 2
25	Aparna More	ZCOER	25ml	25ml
26	Priee M.Shendkar	ZCOER	Prete	Prete
27	Gaikwad R B	APCOER		
28	Tamare A.A.	srpms coe		
29	Chavan A A	SUPM COE		
30	Pawar A.A.	—"—		

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SCHEDULE OF SHORT TERM TRAINING PROGRAM
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(4th to 8th December 2017)

Attendance Sheet

6th Dec 2017

Sr.No.	Name of Participant	Name of Institute	Session1	Session 2
1	Mr. chavan A.S.	SVERI's COE		
2	Ms. Deepti Game	NDMVPS'S KBTCOE Nashik		
3	S.M. kolekar	ZCOER, Pune		
4.	A.M. Junghare	ZCOER, Pune		
5.	J.S. Nadaf	ZCOER, Pune		
6.	Ms. Smita S. Bachal	ZCOER, Pune		
7.	Savita Kumbhar	ZCOER, Pune		
8.	Pawar D.B.	Zeal Polytechnic		
9.	shinde P.N	— " —	P.N.shind	
10	Mane S.S	— " —	Mane S.S	
11	chavan A.A.	SVAMS COE		
12	Taware G.G	— " —	Gab	Gat
13	chandangole GR	ZCOER		
14	P. A-Tat	ZM		
15.	P.O. Chitnis	ZCOER		
16	S.A. Pawar	ZCOER		
17.	M.D. Umale	ZCOER, Pune.		
18.	S.S. Aware.	ZCOER, Pune		
19	U.P. Mane	ZCOER, Pune		
20	R.T. Waghmode	ZCOER, Pune		
21	D.A. Lolcane	ZCOER, Pune		
22	P.S. Shinde	ZCOER, Puse		
23	Apeksa More	ZCOER, Pune		
24	Pritee M. Shendkor	ZCOER, Pune		

ZEAL EDUCATION SOCIETY'S
ZEAL COLLEGE OF ENGINEERING & RESEARCH
DEPARTMENT OF COMPUTER ENGINEERING
Sr.NO. 39, Narhe, Pune-41. phone no. 020-67206127
Website:www.zcoer.in

SCHEDULE OF SHORT TERM TRAINING PROGRAM
ON
"Research Trends in Design and Analysis of Algorithms with R-Programming"
(4th to 8th December 2017)

Attendance Sheet

6th Dec 2017

Sr.No.	Name of Participant	Name of Institute	Session1	Session 2
25	More R. P.	ZCOER	P.Nolhande	P.Nolhande
26	Mr. Lokhande R.N.	ZCOER	BL	BL
27	Mr. Chaugule B.A	ZCOER	an	an
28	mr. A.B.Kathole	ZCOER		
29.	Ms. P.S. Nawghas	ZCOER	Awogh	Awogh
30.	wagh M.V.	ZOER, Pune.		
31)	Gaikwad R B	APCOER, Pune		
92	Pawar A.ty.	SVPM'COE, malegaon		
83	Panaskar Sil	TCOER, Pune		

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DEPARTMENT OF COMPUTER ENGINEERING
Sr.NO. 39, Narhe, Pune-41. phone no. 020-67206127
Website:www.zcoer.in

SCHEDULE OF SHORT TERM TRAINING PROGRAM
ON
"Research Trends in Design and Analysis of Algorithms with R-Programming"
(4th to 8th December 2017)

Attendance Sheet

7th Dec 2017

Sr.No.	Name of Participant	Name of Institute	Session1	Session 2
1)	Pawaskar S.K	TCOER, pune		
2)	chavan A.G.	SVERPI's COEP		
3)	A.m. Junghare	ZCOER, Pune	Afungs	Afunri
4)	R. S. Jagtap	ZCOER, Pune		
5)	P. A. Tak	ZCOER, Pune		
6)	P M. Mane	ZCOCR, pune		
7)	A.H. Pawar	SVPM's COE, malegao(BK)		
8)	A B. Kathole	ZCOER, pur		
9)	J.S. Nadaf	ZCOER, Pune		
10)	K. R. Pathak	ZCOER, Pune		
11)	Pritee M. Shendkar	ZCOER, Pun-	Ritee	Ritee
12)	Wagh Mangal V.	ZCOER, PUNE	Wwagh	Wagh
13)	Chavan S.V	AGCE, satara		
14)	Ligade A.N.	NMCOE, Peth		
15)	Todkar A. H.	NMCOE Peth		
16.	Pawar D.B	Zeal polytchni		
17.	Shinde P.N	— "	Shinde.P.N	Shinde P.N.
18.	Mane S.S	— "	Mane.S.S	Mane.S.
19.	Changule B.A.	ZCOER, PUNE		
20)	S. Kumbhar	ZCOER, Pune		
21.	P.S. shinde	ZCOER, Pune		
22.	Swati Nakhede	DPCOE, Pune		
23.	Deepali Lokare	ZCOER, Pune		
24	Deepti R. Game	NDMVP'S KBTCOE Nashik	Batu	

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DEPARTMENT OF COMPUTER ENGINEERING
Sr.NO. 39, Narhe, Pune-41. phone no. 020-67206127
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SCHEDULE OF SHORT TERM TRAINING PROGRAM
ON
"Research Trends in Design and Analysis of Algorithms with R-Programming"
(4th to 8th December 2017)

Attendance Sheet

7th Dec 2017

Sr.No.	Name of Participant	Name of Institute	Session1	Session 2
25	Aparna More	ZCOER	mgmt. supervision duty	7/9/17
26	Gopal chandangole	ZCOER		
27	Aniket Junghare	ZCOER	supervision duty	
27	P. O. Chitnis	ZCOER		
28	Gaikwad RB	APCOER		
29	Taware G.Y.	SVPM COE Malegan		
30	Chavan A A	~		

SCHEDULE OF SHORT TERM TRAINING PROGRAM
ON
"Research Trends in Design and Analysis of Algorithms with R-Programming"
(4th to 8th December 2017)

Attendance Sheet

8th Dec 2017

Sr.No.	Name of Participant	Name of Institute	Session 1	Session 2
1.	Swati Narkhede	DPCOE, Kharadi	Swati	
2.	Shinde Pravdnya	Zeal Polytechniz	ShindeP	ShindeM
3.	Pawar Dipali	—II—	Pawar D.R	Pawar D.P.
4.	Mane Sagar	—II—	Mane Sa	Mane In
5.	Shital Chavan	AGCE, Satara	S	S
6.	Anita Ligade	NMCOE, Peth	Alig	Alig
7	Anuja H. Todkar	NMCOE, Peth	Anuja	Anuja
8.	Savita Kumbhare	ZCOER, Pune	Savita	
9	Kishor Pathak	ZCOER, Pune	Pathak	
10	Atul B. Kathok	ZCOER, Pune	ABK	
11.	Pravin A. Tek.	ZCOER, Pune	PT	
12	Gopal Chandangole	ZCOER, Pune	Gopal	Gopal
13	Charpull B.A	—II—	BL	BL
14	Aniket Junghare	ZCOER, Pune	AJunghare	
15	R.S. Jagtap	ZCOER, Pune		
16	S.M. Kolekar	ZCOER, Pune		
17.	A.S. Chavan	SVERI's COEP		
18.	Pawar A.H.	SVPM'J COE, Malegaon(BK)		
19.	Pangare S.K.	JCOER, Pune		
20	Chavan A.A.	SVPM's COE Malegaon BK		
21	Taware G.L.	SVPM'S COE Malegaon BK	GT	GT
22	Pritee M. Shendkar	ZCOER, Pune	Pritee	
23	Gaikwad RB	APCOER Pune	Gwad	Gwad
24	Wagh M.V.	ZCOER, Pune		

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ZEAL COLLEGE OF ENGINEERING & RESEARCH
DEPARTMENT OF COMPUTER ENGINEERING
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Website:www.zcoer.in

SCHEDULE OF SHORT TERM TRAINING PROGRAM
ON
"Research Trends in Design and Analysis of Algorithms with R-Programming"
(4th to 8th December 2017)

Attendance Sheet

8th Dec 2017

Sr.No.	Name of Participant	Name of Institute	Session1	Session 2
25	Apatha More	ZCOER	mfml.	

3114

Certificate

This is to certify that Mr./Ms. _Rahul N. Lokhande_

has successfully completed AICTE-ISTE approved Induction/Refresher Programme

Research Trends in Design and Analysis of Algorithms with R-Programming held during

_4/12/2017_ to _8/12/2017_ Organized by _Zeal College of Engineering_

and Research, Pune, Maharashtra

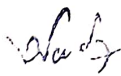| Advisor, AICTE | Executive Secretary, ISTE | Principal | Program Coordinator |

3115

Certificate

This is to certify that Mr./Ms. _Pranav O. Chitnis_

has successfully completed AICTE-ISTE approved Induction/Refresher Programme

Research Trends in Design and Analysis of Algorithms with R-Programming held during

_4/12/2017_ to _8/12/2017_ Organized by _Zeal College of Engineering_

and Research, Pune, Maharashtra

Advisor, AICTE   **Executive Secretary, ISTE**   **Principal**   **Program Coordinator**

3112

Certificate

This is to certify that Mr./Ms. _Shital Vishwas Chavan_

has successfully completed AICTE-ISTE approved Induction/Refresher Programme

" _Research Trends in Design and Analysis of Algorithms with R-Programming_ held during

_4/12/2017_ to _8/12/2017_ Organized by _Zeal College of Engineering_

and Research, Pune, Maharashtra

Advisor, AICTE   **Executive Secretary, ISTE**   -Principal   **Program Coordinator**

3113

Certificate

This is to certify that Mr./Ms. _Pawar Abhijit H._

has successfully completed AICTE-ISTE approved Induction/Refresher Programme

" _Research Trends in Design and Analysis of Algorithms with R-Programming_ held during

_4/12/2017_ to _8/12/2017_ Organized by _Zeal College of Engineering_

and Research, Pune, Maharashtra

Advisor, AICTE   **Executive Secretary, ISTE**   **Principal**   **Program Coordinator**

1268

Certificate

This is to certify that Mr./Ms.   P.S.Nawghare

has successfully completed AICTE-ISTE approved Induction Refresher Programme

Discrete Mathematics and Mathematical Modeling   held during

06/06/2017   to   10/06/2017   Organized by   Zeal College of Engineering and Research

Pune, Maharashtra

Advisor, AICTE   **Executive Secretary, ISTE**   **Principal**   **Program Coordinator**

Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching
Ministry of Human Resource Development, Government of India

Certificate of Participation

This is to certify that _Ms. Tejaswini Uttam Mane_

from _Zes's Zeal College Of Engineering and Research, Pune_

successfully completed the one month residential Induction Training Programme

conducted by Teaching Learning Centre, Indian Institute of Technology Bombay,

from 28 November 2017 to 20 December 2017.

P. Rao

Prof. Preeti Rao
Professor-in-Charge
Continuing Education (CE)
Quality Improvement Programmes (QIP), IIT Bombay

a9c78

Prof. Kannan M. Moudgalya
Project Coordinator
Teaching Learning Centre
PMMMNMTT, IIT Bombay

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Sinhgad Technical Education Society's

SMT. KASHIBAI NAVALE COLLEGE OF ENGINEERING, VADGAON(Bk), Pune -411041

Department of Computer Engineering

CERTIFICATE

THIS IS TO CERTIFY THAT _Prof Deepali Lokare_

of _Zeal College of Engg pune_ HAS SUCCESSFULLY PARTICIPATED IN ONE DAY FACULTY

DEVELOPMENT PROGRAM ON " SYSTEM PROGRAMMING & OPERATING SYSTEM LABORATORY " ORGANIZED

IN ASSOCIATION WITH BOARD OF STUDIES, COMPUTER ENGG.,SPPU, PUNE ON 12, DECEMBER 2017

Prof. A. M. Wade
Coordinator

Prof. S. J. Kulkarni
Coordinator

Dr. Varsha Patil
Coordinator, BOS
Computer Engg.,SPPU

Dr. P. N. Mahalle
Convener & Head
Computer Engg.,SPPU

Dr. K. R. Borole
Vice-Principal

Dr. A. V. Deshpande
Principal

Sinhgad Institutes

D. Y. Patil Institute of Engineering, Management and Research, Akurdi, Pune – 44

Department of Computer Engineering

Three Days Faculty Development Program

on

"Web Technology"

CERTIFICATE

This is to certify that Prof./Mr./Mrs./Ms. *Ranjeet Jagtap* of *Zeel College, Pune* participated in three days Faculty Development Program on "Web Technology" held on 13th December to 15th December 2017. The program was organized by Dr. D. Y. Patil Institute of Engineering, Management and Research, Pune in association with Board of Studies (BoS), Computer Engineering, Savitribai Phule Pune University, Pune.

Mr. Nareshkumar R. Mustary
Mrs. Suvarna A. Patil
Coordinator

Prof. Pratiksha P. Shevatekar
Dr Manisha Bhende
Convener

Dr. Anupama V. Patil
Principal

D. Y. Patil Institute of Engineering, Management and Research, Akurdi, Pune – 44
Department of Computer Engineering

Three Days Faculty Development Program
on
"Web Technology"
CERTIFICATE

This is to certify that Prof./Mr./Mrs./Ms. Jubber Salim Nadaf of ZCOE Narhe ....participated in three days Faculty Development Program on "Web Technology" held on 13th December to 15th December 2017. The program was organized by Dr. D. Y. Patil Institute of Engineering, Management and Research, Pune in association with Board of Studies (BoS), Computer Engineering, Savitribai Phule Pune University, Pune.

Mr. Nareshkumar R. Mustary
Mrs. Suvarna A. Patil
Coordinator

Prof. Pratiksha P. Shevutekar
Dr Manisha Bhende
Convener

Dr. Anupama V. Patil
Principal

Pimpri Chinchwad Education Trust's

PIMPRI CHINCHWAD COLLEGE OF ENGINEERING

Nigdi, Pune - 411044

DEPARTMENT OF COMPUTER ENGINEERING

One Week Faculty Development Program on

"EMBEDDED SYSTEM & INTERNET OF THINGS"

Certificate Of Participation

This is to certify that Mr./Ms. __Atul Kathole__ of __ZCOER, Pune__

_____ has participated in ONE WEEK FACULTY DEVELOPMENT PROGRAM ON "EMBEDDED

SYSTEM & INTERNET OF THINGS" (T. E. Computer Engineering 2015 Course) organized by Department of Computer

Engineering, Pimpri Chinchwad College of Engineering, Pune in Association with Board of Studies - Computer Engineering,

Savitribai Phule Pune University from 18th to 23rd December 2017.

Prof. S. S. Sambare
Convener
Dept. of Comp. Engg.

Prof. Dr. K. Rajeswari
Convener
HOD, Dept. of Comp. Engg.

Prof. Dr. V. H. Patil
& BoS Coordinator
Comp. Engg. SPPU

Prof. Dr. A. M. Fulambarkar
Principal

Zeal Education Society's
ZEAL COLLEGE OF ENGINEERING & RESEARCH, PUNE

Department of Information Technology & Computer Engineering
Two Days State Level Faculty Development Workshop
on

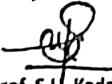## "Emerging Research Trends in Computing, Communication and Storage"
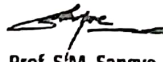
In Association with
SAVITRIBAI PHULE PUNE UNIVERSITY
January 27th - 28th, 2017

CERTIFICATE

This is to certify that, Dr. /Mr. /Ms. /Mrs. *NAWGHARE PUSHPMALA S.* has participated in Two Days State Level Faculty Development Workshop on "Emerging Research Trends in Computing, Communication and Storage" held at Zeal College of Engineering and Research, Pune- 411041 during January 27th-28th, 2017.

Prof. S.U. Kadam
Head
Information Technology

Prof. S.M. Sangve
Head
Computer Engineering

Dr. A.M. Kate
Principal

Dr. S.A. Deokar
Campus Director

www.zcoer.in

ERTCCS
2017

Zeal Education Society's

ZEAL COLLEGE OF ENGINEERING & RESEARCH, PUNE

Department of Information Technology & Computer Engineering
Two Days State Level Faculty Development Workshop
on

"Emerging Research Trends in Computing, Communication and Storage"

in Association with

SAVITRIBAI PHULE PUNE UNIVERSITY
January 27th – 28th, 2017

CERTIFICATE

This is to certify that, Dr./Mr./Ms./Mrs. __YUVRAJ. B. HEMBADE__ has participated

in Two Days State Level Faculty Development Workshop on **"Emerging Research Trends in Computing,**

Communication and Storage" held at Zeal College of Engineering and Research, Pune- 411041 during

January 27th-28th, 2017.

Prof. S.U. Kadam	Prof. S.M. Sangve	Dr. A.M. Kate	Dr. S.A. Deokar
Head	Head	Principal	Campus Director
Information Technology	Computer Engineering		

GOVERNMENT COLLEGE OF ENGINEERING, KARAD

(An Autonomous Institute of Government of Maharashtra)

CERTIFICATE

This is to certify that Dr. / Mr. / Ms **Kishor R. Pathak**

Zeal College of Engg, Pune

has attended International Seminar on
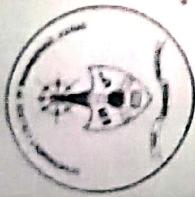
"Intelligent Computing For Future Internet (ICFI-2018)"

Sponsored by

All India Council for Technical Education (AICTE)

Organised by

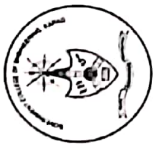## Department of Information Technology

During 19th -20th January, 2018

Prof. Dr. R. B. Kulkarni
Coordinator

Prof. Dr. S. S. Wagh
Chief Coordinator & Head, IT

Prof. Dr. A. T. Pise
Principal

GOVERNMENT COLLEGE OF ENGINEERING, KARAD

(An Autonomous Institute of Government of Maharashtra)

CERTIFICATE

This is to certify that Dr. / Mr. / Ms __Savita Ajay Kumbhare__

__ZEAL COLLEGE OF ENGG, NAHRE, PUNE .__

has attended International Seminar on

"Intelligent Computing For Future Internet (ICFI-2018)"

Sponsored by

All India Council for Technical Education (AICTE)

Organised by

Department of Information Technology

During 19th -20th January, 2018

Prof. Dr. R. B. Kulkarni
Coordinator

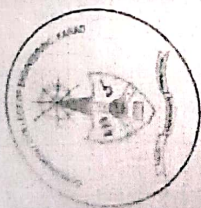Prof. Dr. S. T. Wagh
Chief Coordinator & Head, IT

Prof. Dr. A T. Pise
Principal

GOVERNMENT COLLEGE OF ENGINEERING, KARAD

(An Autonomous Institute of Government of Maharashtra)

CERTIFICATE

This is to certify that Dr. / Mr. / M/s __Jubber Salim Nadaf__

__Zeal College of Engg, Pune.__

has attended International Seminar on

"Intelligent Computing For Future Internet (ICFI-2018)"

Sponsored by

All India Council for Technical Education (AICTE)

Organised by

Department of Information Technology

During 19th -20th January, 2018

Prof. Dr. R. B. Kulkarni
Coordinator

Prof. Dr. S. S. Wagh
Chief Coordinator & Head, IT

Prof. Dr. A.T. Pise
Principal

GOVERNMENT COLLEGE OF ENGINEERING, KARAD

(An Autonomous Institute of Government of Maharashtra)

CERTIFICATE

This is to certify that Dr. / Mr. / Ms. **Atul Kathole**

ZCOER

has attended International Seminar on

"Intelligent Computing For Future Internet (ICFI-2018)"

Sponsored by

All India Council for Technical Education (AICTE)

Organised by

Department of Information Technology

During 19th -20th January, 2018

Prof. Dr. R. B. Kulkarni
Coordinator

Prof. Dr. S. J. Wagh
Chief Coordinator & Head, IT

Prof. Dr. A.T. Pise
Principal

GOVERNMENT COLLEGE OF ENGINEERING, KARAD

(An Autonomous Institute of Government of Maharashtra)

CERTIFICATE

This is to certify that Dr. / Mr. / Ms __Smita S. Bachal__

__Zeal College of Engg and Research.__

has attended International Seminar on

"Intelligent Computing For Future Internet (ICFI-2018)"

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Department of Information Technology

During 19th -20th January, 2018

Prof. Dr. R. B. Kulkarni
Coordinator
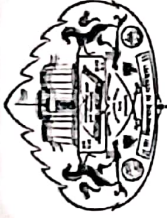
Prof. Dr. S. J. Wagh
Chief Coordinator & Head, IT

Prof. Dr. A.T. Pise
Principal

AKHIL BHARATIYA MARATHA SHIKSHAN PARISHAD'S

ANANTRAO PAWAR COLLEGE OF ENGINEERING & RESEARCH, PARVATI, PUNE

CERTIFICATE

This is to certify that Professor Mr./Miss/Mrs. _Prasad Halgaonkar_

has attended BE Computer Engineering Syllabus Revision Meet

organized by Board of Studies Computer Engineering, Savitribai Phule Pune University and

ABMSP'S Anantrao Pawar College of Engineering & Research on 30th January 2018.

Prof. M. A. Mulik
(Head, Computer Department)

Prof. Dr. Varsha H. Patil
(Coordinator, BoS, Comp. Engg.)

Dr. S. B. Thakare
(Principal APCOER)

AKHIL BHARATIYA MARATHA SHIKSHAN PARISHAD'S

ANANTRAO PAWAR COLLEGE OF ENGINEERING & RESEARCH, PARVATI, PUNE
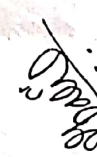
CERTIFICATE

This is to certify that Professor Mr./Miss/Mrs. _____ Kishor R. Pathak _____

has attended BE Computer Engineering Syllabus Revision Meet

organized by Board of Studies Computer Engineering, Savitribai Phule Pune University and

ABMSP'S Anantrao Pawar College of Engineering & Research on 30th January 2018.

Prof. M. A. Mulik
(Head, Computer
Department)

Prof. Dr. Varsha H. Patil
(Coordinator, BoS, Comp. Engg.)

Dr. S. B. Thakare
(Principal
APCOER)

IEEE Education Society

RoboFeast 2018

In Association With

EDC
IIT ROORKEE

CERTIFICATE OF PARTICIPATION

This is to certify that Mr./ Ms. ....Atul Balram Kokate........................

has participated in the 2 Days National Level Workshop cum Championship on

"IOT Using Arduino" from 5th to 6th February 2018.

Organized by

Zeal College Of Engineering & Research, Narhe, Pune

in Association with

Finland Labs , Revert Technology Pvt. Ltd. & EDC, IIT Roorkee.

Finland Labs
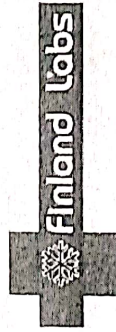
For Revert Technology Pvt. Ltd.

Director

Shivendra Parihar, Director
Revert Technology Pvt. Ltd.
New Delhi

Principal
Dr.Ajit M Kate
ZCOER,Pune

Savitribai Phule Pune University, Pune

BRACT's

VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY

CERTIFICATE

This is to certify that

Mr./Mrs. _Atul Kathole_

has successfully completed/organized two days State Level Workshop on " Future of Data " from 9 February to 10 February 2018 at Department of Computer Engineering VIIT, Pune in association with RTIL, SPPU, Pune

MR. S B PATIL
CONVENER

DR. S.R. DHOTRE
HOD COMPUTER ENGG

DR. H. S. KHARAIT
PRINCIPAL, VIIT

Two Days State Level Workshop

On

MACHINE LEARNING & DATA SCIENCE

Organized by

D. Y. PATIL INSTITUTE OF ENGINEERING AND TECHNOLOGY, AMBI, PUNE

D Y PATIL
— INSTITUTE OF —
ENGINEERING &
TECHNOLOGY
AMBI,PUNE

Certificate

This is to certify that Mr. / Ms. / Mrs. _Prof. P. D. Kshirsagar_

has attended Two Days Sate Level Workshop on "**MACHINE LEARNING & DATA SCIENCE**"

organized by Department of Computer Engineering & Information Techonology in association with

Savitribai Phule Pune University, Pune on 23rd & 24th February 2018.

Prof. Y. B. Pawar
Co-Convener

Prof. M. K. Manake
Convener

Dr. L. V. Kamble
Principal

Marathwada Mitra Mandal's
COLLEGE OF ENGINEERING
Karvenagar, Pune - 52
Accredited with 'A' Grade by NAAC
Department of Computer Engineering

Certificate

This certificate is awarded to

Mr. / Ms. _Prajakta S. Shinde_

of _Zeal, Pune._ _____ *participated in / organized*

Two Days Faculty Development Program on "Data Analytics" dated 22nd – 23rd June 2018, in association

with Board of Studies (Computer Engineering), SPPU, Pune, organized by

Department of Computer Engineering, MMCOE, Pune.

Ms. Geetha Chillarge	**Ms. Ila Savant**	**Prof. Dr. Sandeep Chaware**	**Dr. S. M. Deshpande**
Co-Conveners		Convener & HOD, Computer	Principal, MMCOE