A REPORT ON

A FIVE-DAY WORKSHOP ON BLOCKCHAIN TECHNOLOGY

30th January 2023 to 03rd February 2023

Organized By

DEPARTMENT OF COMPUTER SCIENCE

(CYBER SECURITY)

RAJIV GANDHI NATIONAL INSTITUTE OF YOUTH DEVELOPMENT

(Institution of National Importance by the Act of Parliament No. 35/2012)

Ministry of Youth Affairs and Sports, Government of India

SRIPERUMBUDUR-602105

TABLE OF CONTENTS

ABOUT THE WORKSHOP

The proposal for Five-Day National Workshop on "Blockchain Technology" was submitted by Dr.P.Thiyagarajan, Associate Professor and Head, The Department of Computer Science, Cyber Security, Rajiv Gandhi National Institute of Youth Development, Sriperumbudur.

ABOUT THE INSTITUTE

RGNIYD is an Institution of National Importance under the Ministry of Youth Affairs & Sports, Government of India. It serves as a think-tank for the Ministry and functions as a vital resource center with its multi-faceted functions of offering academic programmed at Post Graduate level encompassing theoretical and practical knowledge in various fields of computer science and allied subjects, recent trends in technologies, various dimensions of youth development and engaging in seminal research in the vital areas, coordinating training programmed for state agencies and the officials of youth organization, besides the extension and outreach initiatives across the country. As the apex institute at the national level, it works in close cooperation with the NSS, NYKS and other youth organizations in the implementation of training programme. The RGNIYD serves as a youth observatory and depository in the country thereby embarking on youth surveillance on youth-related issues.

ABOUT THE DEPARTMENT

Department of Computer Science (Cyber Security) in RGNIYD is offering M.Sc. Computer Science (Cyber Security) and Ph.D. in Computer Science programs. Both the programs have been carefully designed to create innovators and researchers. Students are given a strong foundation in Computer Science field with more emphasis on practical approach. The syllabus of the courses is tailored in such a way that it meets both industry and research demand. The vision of the Department of Computer Science (Cyber Security) aims to become an internationally recognized centre of excellence in computer science with special focus on emerging areas like cyber security, network security, communication networks and machine learning in cyber security. The Mission of the Department is

- To mentor students by providing them an environment that is supportive in fostering intellectual skills
- To produce employable graduates who are trained in cutting edge technologies of Computer Science

- To train the graduates with the skillsets required for collaborative multidisciplinary research
- To develop core competencies in the field of cyber security, network security, communication networks.

ABOUT THE WORKSHOP

Blockchain nowadays is an emerging technology, which can be exploited in many distributed applications, especially for those which requires multi-party agreement. This technology has been designed such that any participant having computation resources can participate and contribute in the agreement process. However, use of these third parties can be vulnerable and hence this technology has many security and privacy issues, which needs proper attention. For example, if a malicious actor participates in the agreement process, it may be possible for it to affect the blockchain system for its malicious objective. It can also learn much sensitive information of the other actors. Therefore, the designers have to design the blockchain system addressing all these security issues. Objective of this workshop is to discuss and disseminate the basic architecture of block chain technology, its components, working principles, implementation of block chain and then to discuss on security and privacy issues that need to be dealt in the area of "Blockchain Technology".

Contents of the Workshop

- Blockchain Introduction and its Components
- Cryptographic Primitives and Distributed Databases
- Blockchain Architecture
- Cryptocurrencies, Bitcoin and Bitcoin Platform
- Ethereum – Theory and Practice
- Blockchain and FinTech
- Smart Contracts
- Hyperledger – Theory and Practice
- Consensus Algorithms : The root of the blockchain technology
- Blockchain 4.0
- Implementation of Block Chain – Practical

WORKSHOP AUDIENCE

The workshop is open to UG/PG students, Research Scholars, participants from Government, Industry Officials (Bureaucrats / Technicians etc.) and faculty members from other institutions. A total of 115 participants were registered for this workshop from six different states namely Andhra Pradesh, Gujarat, Pondicherry, Rajasthan, Tamil Nadu and Telangana. Among the registered participants we have 73.9% - students, 21.7% - faculty and 4.4%- research scholars. Apart from RGNIYD, there were more 50 participants registered from other academic institutions.

RESOURCE PERSONS

Experts from Nirma University, Ahmedabad, Dr.Nitin Singh Singha, NIT Delhi, Prof.Shanmugavadivu, Gandhigram Rural Institute, Ministry of Education, Prof.T.Chithralekha, Pondicherry University, Dr.Kunwar Singh, NIT, Trichy, Dr.Kunwar Singh, NIT Trichy, Prof.K.Chandrasekaran, NIT Surathkal, Ms.Vigneshwari,CDAC – Chennai, Mr.Ajinkya Lohakare, CTO & Founder of Ditto Security, Mr.Srinivas Bhoosarapu, Former Chief Information, Security Officer, PFRDA, Ms.Jyostna Grandhi CDAC – Hyderabad, Dr.Venkatesan M, NIT Karaikal, Dr.Chandramouli, Cognizant Technology, Solutions are acted as resource person for this workshop.

FINANCIAL ASSISTANCE

The workshop was conducted on as part of annual action plan fully funded by Rajiv Gandhi National Institute of Youth Development.

WORKSHOP BROCHURE

राजीव गांधी राष्ट्रीय युवा विकास संस्थान
Rajiv Gandhi National Institute of Youth Development
RGNIYD

DEPARTMENT OF COMPUTER SCIENCE
(CYBER SECURITY)

organizes

FIVE DAY WORKSHOP
ON
BLOCKCHAIN TECHNOLOGY

30th Jan - 03rd Feb, 2023 (9.30a.m - 5p.m)

NYRC Seminar Hall, RGNIYD

About the Institute:

RGNIYD is an Institution of National Importance under the Ministry of Youth Affairs & Sports, Government of India. It serves as a think-tank for the Ministry and functions as a vital resource center with its multi-faceted functions of offering academic programmed at Post Graduate level encompassing theoretical and practical knowledge in various fields of computer science and allied subjects, recent trends in technologies, various dimensions of youth development and engaging in seminal research in the vital areas, coordinating training programmed for state agencies and the officials of youth organization, besides the extension and outreach initiatives across the country. As the apex institute at the national level, it works in close cooperation with the NSS, NYKS and other youth organizations in the implementation of training programme. The RGNIYD serves as a youth observatory and depository in the country thereby embarking on youth surveillance on youth-related issues.

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Contents of the Workshop:

- Blockchain Introduction and its Components
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- Blockchain Architecture
- Cryptocurrencies, Bitcoin and Bitcoin Platform
- Ethereum – Theory and Practice
- Blockchain and FinTech
- Smart Contracts
- Hyperledger – Theory and Practice
- Consensus Algorithms : The root of the blockchain technology
- Blockchain 4.0
- Implementation of Block Chain – Practical

NB: First three days of the workshop will be theoretical and rest of the days will be hands on session.

Participants:

The workshop is open to UG/PG students, Research Scholars, participants from Government, Industry (Bureaucrats / Technicians etc.) and faculty members of the other institutes.

Resource Person:

All resource persons are from Centrally funded institutions and industries.

Co-Ordinator:

Chief Patron

Prof. Sibnath Deb Ph.D., D.Sc.
Director, RGNIYD

Organizing Secretary & Convener

Dr. P.Thiyagarajan
Associate Professor & HoD (Cyber Security)
Department of Computer Science RGNIYD, Sriperumbudur

Co-Convener

Dr. V.Sameeswari
Guest Faculty (On Contract) (Cyber Security)
Department of Computer Science RGNIYD, Sriperumbudur

Registration Guidelines:

- Interested participants must register by filling out the GOOGLE FORM on or before 26.01.2023, 05:00 PM (IST).
- Click the below link or Scan the QR code to register for workshop.

https://forms.gle/LwdHgWrmqbbAtiA

- Registered candidates will be intimated through the Mail or WhatsApp.
- The workshop is open for all RGNIYD students / fraternity and only 20 candidates from other institutions. Hence candidates are advised to register early as seats are limited.

Workshop Requirements:

- Good internet connectivity and laptop with full power backup.
- Assumes a basic understanding of technology and networks.

Workshop Facilities:

- CERTIFICATE will be provided after completing five day workshop.
- Tea and snacks will be served to the participants for refreshment. (LUNCH will not be provided.)

COVID Note:

All candidates must either carry a valid vaccination certificate (both doses done) or a negative RT-PCR test report (sample taken within 72 hours before the workshop dates).

Workshop Terms & Conditions:

- If in any case workshop is cancelled by only organizers due to any reason, the candidates will get the information by the organizers.
- If the workshop get postponed for any reason then candidates will get a new date to attend the event.
- If we find any candidate misbehaving, damaging venue properties, or showing misconduct with any member of the organizing team or faculty members, his/her candidature will be cancelled and leave the venue immediately.
- Kindly bring your soft copy of College ID card or Aadhar card.
- It is requested to the candidates to follow a proper protocol and write a formal mail to cyberorgrgniyd@gmail.com in case of any queries.

Contact Details

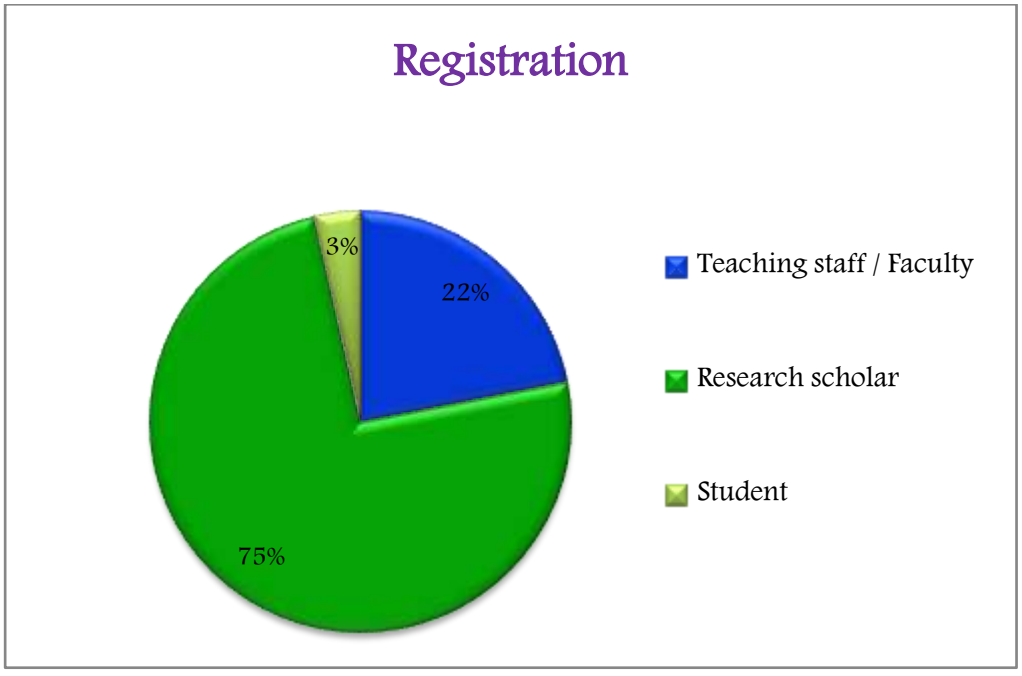
Dr. P.Thiyagarajan
Associate Professor & HoD
(Cyber Security)
Department of Computer Science
RGNIYD, Sriperumbudur
+91 9488584010
+91 9047224930
thiyagurgniyd@gmail.com

REGISTRATION

The brochure for this FIVE-DAY WORKSHOP ON BLOCKCHAIN TECHNOLOGY was posted in our RGNIYD website and in social media. Soon after this notification was out, there was huge response from participants from academic institutions across India. In order to reduce paper work, the registration was carried out through Google forms using the link https://forms.gle/4rhxpf9cwB3jft1h7.

In total 115 participants were registered for this workshop from six different states namely Andhra Pradesh, Gujarat, Pondicherry, Rajasthan, Tamil Nadu and Telangana. We were forced to close the registration much ahead of the planned date as there was a huge response.

Among the registered participants we have 73.9% - students, 21.7% - faculty and 4.4%- research scholars. Apart from RGNIYD, there were more 50 participants registered from other academic institutions.



WORKSHOP KIT

All the participants, student volunteers and faculties of Department of Computer Science are provided with one Button File, which consist of one pen, one notepad one group photo. After giving the workshop kit to the participant's signature was obtained and it is enclosed.

GROUP PHOTO

A group photo was taken with all the participants, resource person Prof. Sudeep Tanwaar, Nirma University, Ahmedabad, and Professor and Director Dr. Sibnath Deb, RGNIYD on 30th January 2023 at Rajiv Gandhi National Institute of Youth Development (RGNIYD), Sriperumbudur.

PARTICIPANT'S ATTENDANCE

Attendance was taken for the participants on all the five days. The photo copy of the attendance sheet is enclosed in Annexure.

DEPARTMENT OF COMPUTER SCIENCE (CYBER SECURITY)

RAJIV GANDHI NATIONAL INSTITUTE OF YOUTH DEVELOPMENT

SRIPERUMBUDUR – 602 105

FIVE DAY WORKSHOP ON BLOCKCHAIN TECHNOLOGY

RGNIYD PARTICIPANTS REGISTRATION SHEET

Date: 30.01.2023

SL.NO.	NAME	Received Kit (Yes / No)	Signature
1	Abdullah S	Yes	
2	Adithya Kp		
3	Adithya PT		
4	Aditya Kumar Mishra	Yes	
5	Anagha A Krishnan	Yes	
6	Anand Krishnan N		
7	Anupriya	yes	
8	Archana Ajith		
9	Aruvithati Sanishamma	Yes	
10	Asha Shaik	Yes	
11	Ashna James	Yes	
12	Asmina A.P.K		
13	Athar Obaid Khan	yes	
14	Bhavya Lakshmi A		
15	Chintapenta Surya Bharadwaja	Yes	

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FIVE DAY WORKSHOP ON BLOCKCHAIN TECHNOLOGY

RGNIYD PARTICIPANTS REGISTRATION SHEET

Date: 30.01.2023

SL.NO.	NAME	Received Kit (Yes / No)	Signature
16	Dhruti Ranjan Mohanty	Yes	
17	Diparkar Bora	Yes	
18	Farhana Sherin V		
19	Gudepu Eshwari	Yes	
20	Gururprasada V	YeR	
21	Hiba K		
22	Hilma P V		
23	Ishika Mandal	yes	
24	J Dineshkumar		
25	Jai Vishwa J		
26	Jerrin Thomas	Yes	
27	Joshua John		
28	Joyal Jose T S	Yes	
29	Juthisha Jayan		
30	Kamesh A S		

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RGNIYD PARTICIPANTS REGISTRATION SHEET

Date: 30.01.2023

SL.NO.	NAME	Received Kit (Yes / No)	Signature
31	Kamati Venkata Praveen Kumar Reddy	Yes	
32	Kavya P		
33	Kiruthika		
34	Kishore V R		
35	Kishorekumar N		
36	Marabattina Manoj Kumar	Yes	
37	Mithun Lal . V.S	Yes	
38	Mohamed Athifan D	Yes	
39	Mohanraj		
40	Mrigendra Kumar	Yes	
41	Mugilan R		
42	Muhammad Nisamudheen K K	Yes	
43	Muhammed Anshad M K		
44	Muhammed Farzan K	Yes	
45	Nagam Venkateswarlu	Yes	N.Venkateswarlu

DEPARTMENT OF COMPUTER SCIENCE (CYBER SECURITY)

RAJIV GANDHI NATIONAL INSTITUTE OF YOUTH DEVELOPMENT

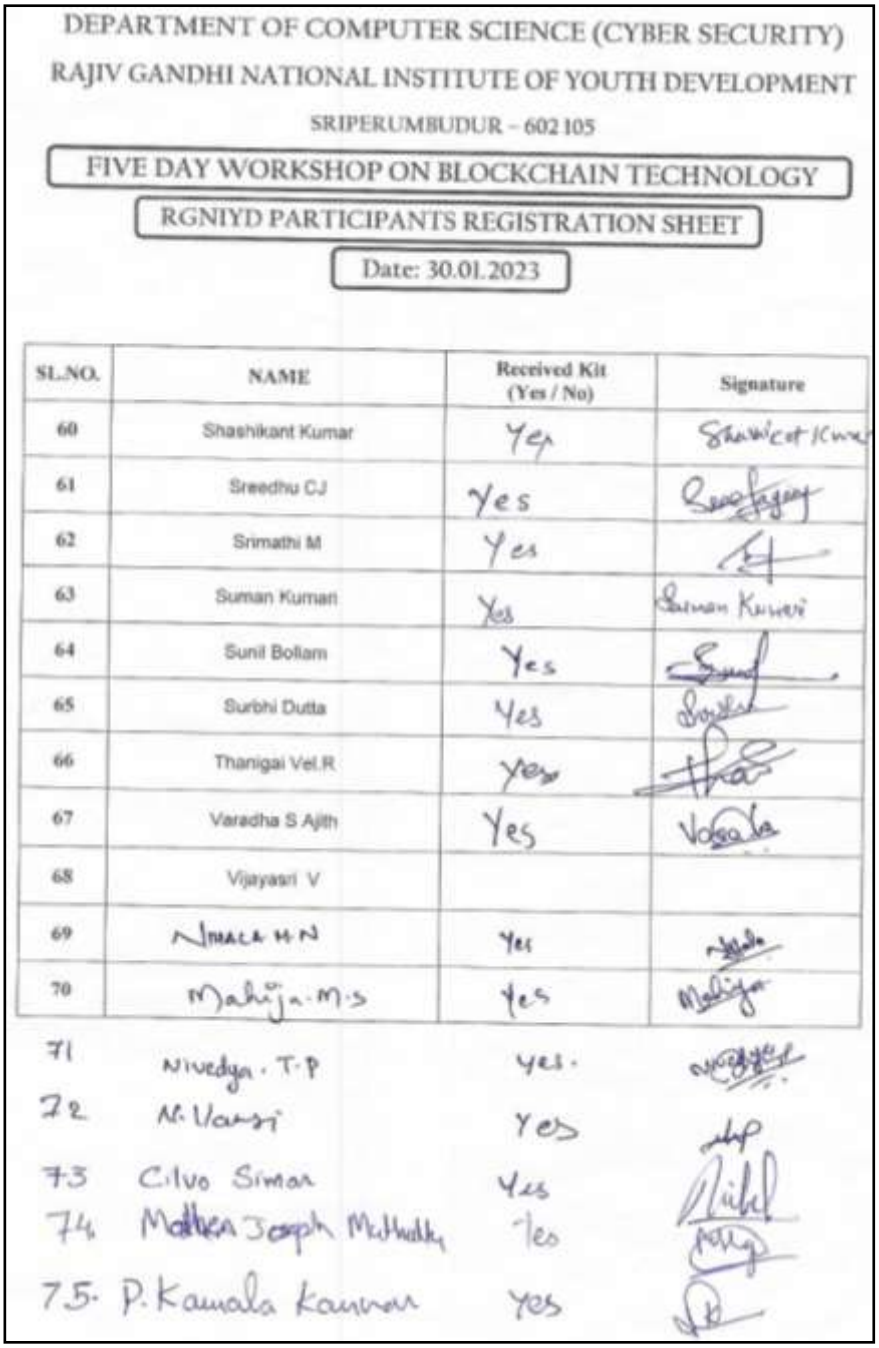
SRIPERUMBUDUR – 602 105

FIVE DAY WORKSHOP ON BLOCKCHAIN TECHNOLOGY

RGNIYD PARTICIPANTS REGISTRATION SHEET

Date: 30.01.2023

SL.NO.	NAME	Received Kit (Yes / No)	Signature
46	Nathan Aazil N M	Yes	
47	Naveen Kumar S	Yes	
48	Rajesh Rajesh	Yes	
49	Raju Ranjan Chaudhary		
50	Raja Suresh M		
51	Ritik Sahu	Yes	
52	Rohit Sahu	Yes	
53	Rustham Shahan. V	Yes	
54	Santhosh. P	Yes	
55	Santhoshkumar S	Yes	
56	Seyana Chandran M V		
57	Shahabas KM	Yes	
58	Shahabaz		
59	Shamil Danish Thoraippa	Yes	



DEPARTMENT OF COMPUTER SCIENCE (CYBER SECURITY)

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SRIPERUMBUDUR – 602 105

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RGNIYD PARTICIPANTS REGISTRATION SHEET

Date: 30.01.2023

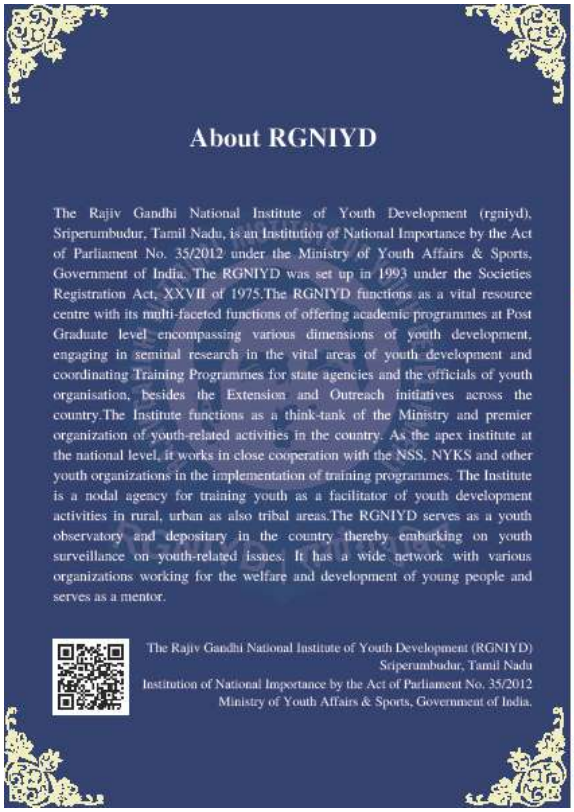
SL.NO.	NAME	Received Kit (Yes / No)	Signature
60	Shashikant Kumar	Yes	
61	Sreedhu CJ	Yes	
62	Srimathi M	Yes	
63	Suman Kumari	Yes	
64	Sunil Bollam	Yes	
65	Surbhi Dutta	Yes	
66	Thanigai Vel.R	Yes	
67	Varadha S Ajith	Yes	
68	Vijayasri V		
69	[illegible]	Yes	
70	Mahija.M.S	Yes	
71	Nivedya. T.P	yes.	
72	M. Vansi	Yes	
73	Silvo Simon	Yes	
74	[illegible]	Yes	
75.	P. Kamala Kanwar	yes	

FOOD AND REFRESHMENTS

For all the five days high quality and different varieties of Snacks and Tea/Coffee was served to the participants. Tea / Coffee were served in the morning between 11:30 am to 11:45 am and in the evening between 04:00 pm to 04:15pm.

PROGRAMME SCHEDULE

The detailed workshop program schedule for all the five days from 30th February to 03rd February 2023 is given below:



Program Schedule

DAY 1 - 30.01.2023

Time	Session	Invited Speaker
09:00-10:00 AM	Registration	
10:00 AM	Inauguration	
	Tea Break	
	Session 1	
11:45 AM-01:15 PM	Blockchain Introduction and its Components	Prof.Sudeep Tanwar Nirma University, Ahmedabad
	Lunch Break	
	Session 2	
02:30-04:00 PM	Cryptographic Primitives and Distributed Databases	Dr.Nitin Singh Singha NIT Delhi
	Tea Break	
04:00-04:30 PM		Summarization of sessions by the participants

DAY 2 - 31.01.2023

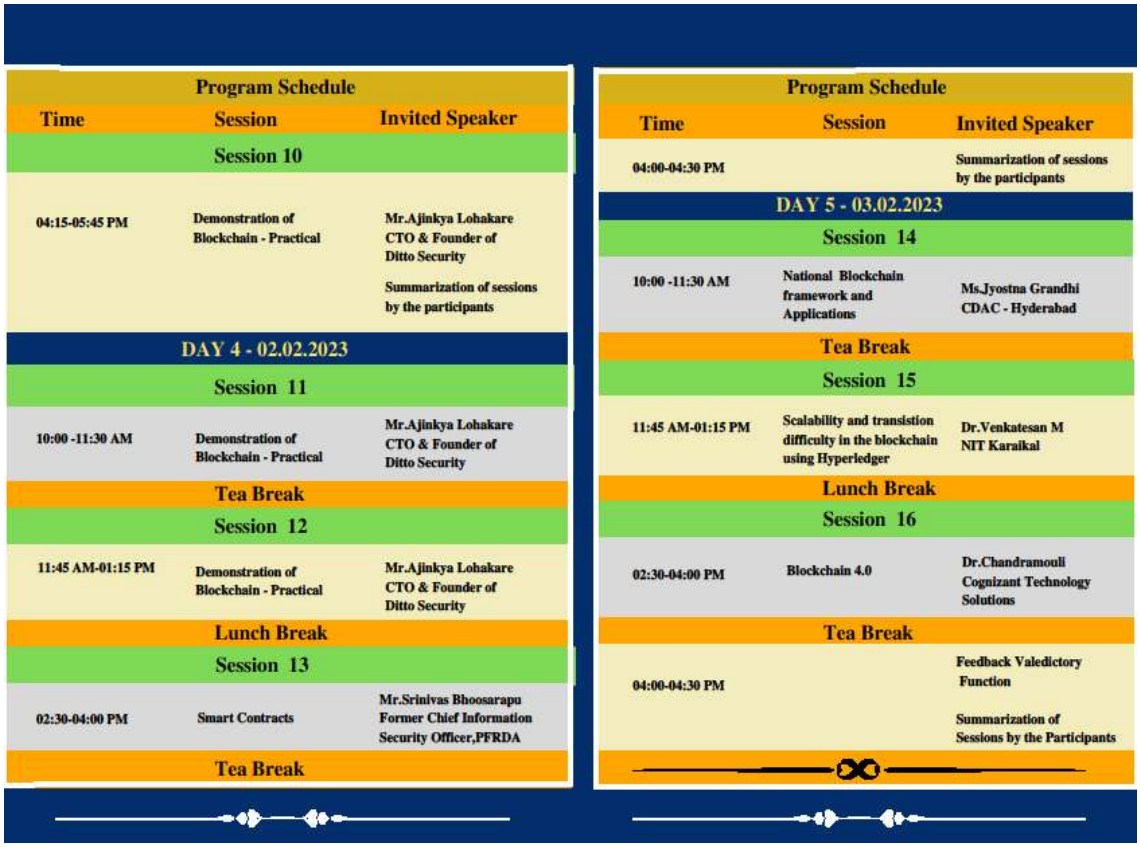
	Session 3	
10:00 -11:30 AM	Ethereum - Theory and Practice	Prof.Shanmugavadivu Gandhigram Rural Institute, Ministry of Education
	Tea Break	
	Session 4	
11:45 AM-01:15 PM	Cryptocurrencies, Bitcoin & bitcoin Platform	Prof.T.Chithralekha Pondicherry University
	Lunch Break	

Program Schedule

Time	Session	Invited Speaker
	Session 5	
02:30-04:00 PM	Blockchain Architecture and Technology	Dr.Kunwar Singh NIT Trichy
	Tea Break	
	Session 6	
04:15-05:30 PM	Blockchain Architecture and Technology	Dr.Kunwar Singh NIT Trichy
		Summarization of sessions by the participants

DAY 3 - 01.02.2023

	Session 7	
10:00 -11:30 AM	Blockchain and FinTech	Prof.K.Chandrasekaran NIT Surathkal
	Tea Break	
	Session 8	
11:45 AM-01:15 PM	Hyperledger - Theory and Practice	Ms.Vigneshwari CDAC - Chennai
	Lunch Break	
	Session 9	
02:30-04:00 PM	Demonstration of Blockchain - Practical	Mr.Ajinkya Lohakare CTO & Founder of Ditto Security
	Tea Break	



Program Schedule

Time	Session	Invited Speaker
	Session 10	
04:15-05:45 PM	Demonstration of Blockchain - Practical	Mr.Ajinkya Lohakare CTO & Founder of Ditto Security
	Summarization of sessions by the participants	
	DAY 4 - 02.02.2023	
	Session 11	
10:00 -11:30 AM	Demonstration of Blockchain - Practical	Mr.Ajinkya Lohakare CTO & Founder of Ditto Security
	Tea Break	
	Session 12	
11:45 AM-01:15 PM	Demonstration of Blockchain - Practical	Mr.Ajinkya Lohakare CTO & Founder of Ditto Security
	Lunch Break	
	Session 13	
02:30-04:00 PM	Smart Contracts	Mr.Srinivas Bhoosarapu Former Chief Information Security Officer,PFRDA
	Tea Break	

Program Schedule

Time	Session	Invited Speaker
04:00-04:30 PM		Summarization of sessions by the participants
	DAY 5 - 03.02.2023	
	Session 14	
10:00 -11:30 AM	National Blockchain framework and Applications	Ms.Jyostna Grandhi CDAC - Hyderabad
	Tea Break	
	Session 15	
11:45 AM-01:15 PM	Scalability and transistion difficulty in the blockchain using Hyperledger	Dr.Venkatesan M NIT Karaikal
	Lunch Break	
	Session 16	
02:30-04:00 PM	Blockchain 4.0	Dr.Chandramouli Cognizant Technology Solutions
	Tea Break	
04:00-04:30 PM		Feedback Valedictory Function Summarization of Sessions by the Participants

WORKSHOP INAUGURATION

The inaugural function of this workshop was held in the Seminar Hall of Rajiv Gandhi National Institute of Youth Development at 10:15 A.M. The inauguration was graced by Prof.Sibnath Deb, Honourable Director, RGNIYD and Prof. Sudeep Tanwar from Department of Computer Science & Engineering, Institute of Technology, Nirma University, Ahmedabad.

The welcome address was delivered by the Dr.P.Thiyagarajan, Associate Professor & Head, Department of Computer Science, Cyber Security, RGNIYD. The presidential address was delivered by Prof.Sibnath Deb Honourable Director, RGNIYD and the inaugural address was delivered by Prof. Sudeep Tanwar.

INAUGURAL INVITATION

RAJIV GANDHI NATIONAL INSTITUTE OF YOUTH DEVELOPMENT
SRIPERUMBUDUR – 602 105

DEPARTMENT OF COMPUTER SCIENCE (CYBER SECURITY)

We solicit your gracious presence at the inaugural function

A FIVE-DAY WORKSHOP ON BLOCKCHAIN TECHNOLOGY

30th January 2023 - 03rd February 2023

INAUGURATION

Date : 30.01.2023 Time : 10:00 A.M.

Venue : Seminar Hall, RGNIYD

Presidential Address : **Prof.Sibnath Deb Ph.D., D.Sc.**
Director
RGNIYD, Sriperumbudur - 602 105

Inaugural Address : **Prof.Sudeep Tanwar**
Department of Computer Science & Engineering
Institute of Technology, Nirma University
Ahmedabad - 382 481

Welcome Address : **Dr.P.Thiyagarajan**
Associate Professor & HoD
Organizing Secretary & Convener
Department of Computer Science (Cyber Security)
RGNIYD, Sriperumbudur - 602 105

RESOURCE PERSON PROFILE

Prof. SUDEEP TANWAR

Dr. Sudeep Tanwar, Professor, Department of Computer Science and Engineering, Institute of Technology, Nirma University, Ahmadabad, India. He is a visiting Professor of Jan Wyzykowski University in Polkowice, Poland and University of Pitestiin Pitesti, Romania. His research interests include Blockchain Technology, Wireless Sensor Networks, Fog Computing, Smart Grid, and IoT. He has received numerous awards such as the "IEEE Outstanding Leadership Award", "Recognized Reviewer Award", and "Outstanding Reviewer Award". He holds the design patent titled as "BIGDATA IN SUPPLY CHAIN ANALYSIS USING BLOCKCHAIN".

He has authored and edited 78 books, presented 114 research papers in various Conferences, and has 181 Journal Publications which include top journals and top conferences, such as IEEE Transactions on Network Science and Engineering (IEEE TNSE), IEEE Transactions on Vehicular Technology(TVT), IEEE Transactions on Industrial Informatics (TII), Water Conservation and Management (WCM), Networks, IEEE International Conference on Communications (ICC), IEEE Global Communication (GLOBECOM), and INFOCOM. He has thus achieved 11,392 citations and 60- h-index, 169-i-10 index. He is also the editor of several reputed journals.

He has also initiated the research field of blockchain technology adoption in various verticals in 2017. He actively serves his research communities in various roles. And he is currently serving the editorial boards of Physical Communication, Computer Communications, International Journal of Communication System, and Security and Privacy. He is also part of plenty of International and National research collaborations with a number of scholars across the world. He has received the best research paper award from IEEE GLOBECOM 2018, IEEE ICC 2019, and Springer International Conference on Recent Innovations in Computing (ICRIC)-2019.

He has served many international conferences as a member of the organizing committee, such as publication chair for Futuristic Trends in Networks and Computing Technologies (FTNCT)-2020, International Conference on Cognitive and Intelligent Computing ICCIC 2020, International Conference on Wireless and Mobile Computing WiMob-2019. And he is a member of the advisory board for International Conference on Advanced Computing and Communication Technology-2021, International Conference on Advanced Computing and Informatics (ICACI) 2020. Also he is a Workshop co-chair for Computer Information Systems (CIS) 2021 and general chair for International Conference on Cognitive Computing and Cyber Physical Systems (IC4S) 2019, 2020, International Conference on Cyber Security and Digital Forensics (ICCSDF) 2020.

Dr. Sudeep Tanwar is a final voting member for IEEE Communication Society Tactile Internet Committee in 2020. He is a Senior Member of IEEE, Computer Society of India (CSI), International Association of Engineers (IAENG), Indian Society for Technical Education (ISTE), Computer Science Teachers Association (CSTA), and the member of the Technical Committee on Tactile Internet of IEEE Communication Society.

Dr. NITIN SINGH SINGHA

Nitin Singha has completed M.Tech and B.Tech from NIT Hamirpur. During M.Tech, he was a university gold medalist. He has also secured All India Rank 49 in Indian Engineering service 2012. He has completed his Ph.D from Indian Institute of Technology, Kanpur, Uttar Pradesh, India. He is currently working as an Assistant Professor in the Department of Electronics and Communication Engineering at National Institute of Technology (NIT), Delhi, India. His area of specialization is Peer-to-Peer Network, Social Networks, Game Theory, and BlockChain. Previously, he was an Assistant Professor and Head of the Department of Electronics and Communication Engineering at the Indian Institute of Information Technology (IIIT), Kurnool, Andhra Pradesh, India. He was also the faculty-in-charge of Web and Software Development Cell and chairman admission committee at the Institute. He also has industrial experience. He has worked in Cosco Networks and Wipro technology, Bangalore.

Prof. SHANMUGAVADIVU

Prof.P. Shanmugavadivu is currently working as a Professor of Computer Science and Applications, at Gandhigram Rural Institute (Deemed to be University), and is involved in Teaching, Research, and Extension. She is the Director of Internal Quality Assurance Cell (IQAC) as well as the Local Coordinator of Global Initiative of Academic Networks (GIAN), MHRD, India, for the University.

Prof.P Shanmugavadivu has about 33 years of Academic experience, and has guided and guiding Research Scholars, and funded-research projects of UGC, DST and ICMR for an outlay of Rs. 150.6 Lakh. Her research areas include Medical Image Analysis, Healthcare Analytics, Parallel Computing, Digital Image Processing, Software Engineering and Content-Based Image Retrieval. She has conducted a National Conference, Training Programme, and Workshops, and has delivered 80+ Lectures as Keynote Speaker, Chief Guest, and Guest Lecturer.

She has edited two conference proceedings, co-authored two research reference books on Image Enhancement & Image Retrieval and Analysis and authored about 100+ research publications. She is the Recipient of Indo-US 21st Century Knowledge Initiative Award 2015. She had been on an international academic assignment to Malaysia and USA. Prof.P Shanmugavadivu holds a Master's Degree in Computer Applications (REC, Trichy), Ph.D. in Digital Image Restoration (GRI) and MBA (IGNOU).

Prof.T.CHITHRALEKHA

Prof. T. Chithralekha did her B.Tech Degree in Computer Science Engineering at Pondicherry University in 1993, M.Tech Degree in Computer Science Engineering at Pondicherry University in 1994, Ph.D Degree in Computer Science Engineering at Pondicherry University in 2008.

She has been associated with Pondicherry University since 1996. She has gained 26 years of rich teaching and research experience. Her teaching experience spans across M.Tech., M.Sc., M.C.A and MBA programs of the University. She specializes in Cybersecurity with focus on Cryptography, Access Control Management, Cyber Attacks, Cyber Insurance and IoT Security and supervises research scholars pursuing Ph.D programs in these areas. She also had a stint at Xerox Corporation Inc. on a major Crowd-sourcing related project and has been granted 09 patents based on this project in addition to several research publications in various National and International Journals of repute. She is a Chevening UK India Cybersecurity Fellow. She is received International DFLSS Green Belt Certified Award by Six Sigma Certification in 2013, National Certified Information Security Management System Lead Auditor Award by Indian Institute of Quality Management in 2007, National Entrance Test Award by University Grants Commission in 1995, and State level Best Project Award for B.Tech Project by Tata Consultancy Services in1993.

Dr.KUNWAR SINGH

Dr. Kunwar Singh did his M.Tech Degree in Computer Science, Jawaharlal Nehru University, New Delhi in 2001, and completed his Ph.D Degree in Computer Science at IIT in the year of 2015. He is currently working as an Associate Professor at NIT-Trichy. His research interests include cryptology and blockchain technology. He has published many papers in peer-reviewed journals and conferences in the area of cryptology and has presented many research papers at various National and International Conferences in the area of Cryptology. He has two projects in the name of "Research and Development of Lightweight Stream Cipher" by DST (Completed), "Research and Development of Secure and Privacy Preserving Blockchain based Smart Contract and its Applications" by SERB (On-going).

Prof.K.CHANDRASEKARAN

Prof. K. Chandrasekaran currently working as a Professor (HAG), Department of Computer Science and Engineering, National Institute of Technology Karnataka Surathkal. He did his Ph.D Degree, Jawaharlal Nehru Technological University in 2021 titled "KREC in the Domain of Computer Networks". He has 218 publications in various highly reputed journals and conferences. He has published 16 book chapters. And he is an editor of two journals. And he has authored one book. For his research articles, he has hold 3839 citations along with 26 H-index and 98 i-10 Indexes. He is received Best Paper Awards in International Conferences and received Best Teacher Awards. Under his supervision, 13 Ph.D scholars were awarded and 04 research works were submitted. He holds two patents. Book Authored: K Chandrasekaran, Essentials of Cloud Computing, CRC Publications (USA), 2015. He served as a Member of Editorial Board, IEEE Transactions on CLOUD Computing, and has Served as a Member of IEEE Cloud Computing STC, TCTP (Indo-British Award) in 1995 – Visiting LMU, UK. And he is worked as a Visiting Professor / SRF at IIT Madras in 2010.

Ms.VIGNESHWARI

Ms. S. Vigneswari is a Joint Director at the Centre for Development of Advanced Computing (C-DAC), Chennai. She has been working in C-DAC since 2006. Her research interests include Blockchain technology, DevOps, Containerization, and Orchestration of containers. She is pursuing MS (By Research) at Anna University. She has work experience in the development and management of various client and government-funded projects such as Component-based OS, ERP development, and Blockchain-based applications development. She is also teaching modules such as Microservices, Containerization, DevOps, and Probability & Statistics for PG Diploma courses conducted by CDAC.

Mr. AJINKYA LOHAKARE

Mr. Ajinkya Lohakare, who is working at Ditto Security as a Chief Technology Officer. He's a podcaster, computer security expert, Certified Ethical Hacker, Certified Hacking Forensic Investigator and Google Certified Application developer. Since 2015, Ajinkya has helped law enforcement with cybercrime cases in Bangladesh, India, Srilanka and various other countries. Since 2016, also he has been a paid security consultant, public speaker and author. He has given

keynotes and presentations at a number of conferences around the world. And has delivered talks at general-interest events, such as JOSH TALK, VEDH TALK, THE DAIS CONCLAVE, and Data security event. He is also a public-interest technologist, working at the intersection of security, technology, and people. He does security consulting for Fortune 500 companies and the Law enforcements. He performs penetration testing services for the world's largest companies. Also he teaches Social Engineering classes to dozens of companies and government agencies.

Additionally, Ajinkya works in education by speaking at technology conferences and running workshops. His primary workshop, titled "Unlocked", aims to teach software developers with little security background how to defend their applications by looking at them from an attacker's perspective. Being a Cyber Security Researcher and Ethical Hacking Expert, Ajinkya has revealed numerous critical vulnerabilities, bugs and loop holes on websites and networks of major corporate, institutions and government portals. He has Conducted more than 500+ Workshop all over globe. He's been invited to some of the top institutions across the country ranging from NITSs, to IITs, to interact with some of the brightest minds in the country.

Ajinkya Lohakare also has a vast experience in conducting customized training of art programmed For a Variety of different audience. He has conducted more than 100 Different Training & Awareness Session which includes Financial & Banking Sector, Software Sector, Internet Service Sector, Government Sector Transportation Sector, Industrial Good sector, Education Sector, service sector and Healthcare sector.

Mr.SRINIVAS BHOOSARAPU

Mr. Srinivas Bhoosarapu is a Chief Information Security Officer (CISO), Chief Fintech Innovation

Officer and Information and Cyber Security Researcher, Pension Fund Regulatory and Development Authority (PFRDA) has over 20+ years of working experience in Information Technology and Cyber Security. He is provided IT and Cyber Security services in Pension Fund Regulatory Development Authority (PFRDA) and Insurance Regulatory and Development Authority of India (IRDAI) and Techno Functional expert solutions in various organizations such as PFRDA, IRDAI, Andhra Pradesh Civil Supplies Corporation, Sthree Nidhi Cooperative Bank (Govt. of Andhra Pradesh), National Payments Corporation of India (NPCI) and Genpact India. Additionally, he had been conducting regular advisory, trainings, seminars and workshops as a speaker in conferences and forums on various topics BFSI, Smart City Security, IoT, Digital India, Digital Piracy, National Cyber Security Policy (NCSP 2013), IPV6, Block Chain in Fintech, Information Technology Policy,

Cyber Risk Awareness and Financial Regulatory Compliance in IDRBT, MCRHRD, ICM, IPE, JNTU, Police Academy (TSPA), IIT, Anna University, Engineering Colleges. He has published 20+ Research Papers and Books on Information and Cyber Security and Solution. Papers presented in Singapore, Malaysia and various Universities in India on Information Systems and Security. He is member of various Cyber Security in Meity, Ministry of Finance, and National Cyber Security.

JYOSTNA GRANDHI G

Jyostna Grandhi. G is a Joint Director in C-DAC Hyderabad. And she has received her M. Tech in Embedded Systems from Bharath University. She has 16 years of experience at C-DAC Hyderabad in the field of Cyber Security. She is currently executing Research and Development projects in the area of Blockchain. She has several National and International publications and filed one patent. Her research areas include End Point Security, Embedded Device Security and Blockchain Technology. She has proven a track record of insightful and engaging presentations on a wide range of cyber security topics. She is well versed Inverse Kinematics (IK) the latest technologies and security trends.

Dr.VENKATESAN M

Dr. Venkatesan M is currently working as an Assistant Professor and Head in the Department of Computer Science and Engineering, National Institute of Technology, Puducherry. He has 15 years of professional experience. He completed his B.Tech Degree in Computer Science and Engineering in 1999, M.Tech Degree in Information Technology in 2006, and his Ph.D Degree in Computer Science and Engineering in the year of 2014. Two projects he has named as "GIS Based Early Warning Landslide Susceptibility Model Using Data Mining Classification Approach" funded by ISRO and "DST Sponsored Ten Days Training Program on Big Data Analytics" funded by ISRO. He has published various papers in peer-reviewed journals. He has worked as a visiting faculty at Monash University, Clayton, Melbourne, Australia. His area of interest includes Data Base, Data Science, Big Data Analytics, Spatial Data Mining, and Soft Computing.

Dr. CHANDRAMOULI. S

Dr S Chandramouli, Ph.D, PfMP, PMI-ACP, is an alumnus of the Indian Institute of Management, Kozhikode (IIM-K), and a prolific writer of business management articles dealing with Delivery Management, Program Management, Competitiveness, IT, Organizational Culture, and Leadership. His famous books include PMP Certification-Excel with Ease, PMI Agile Certified Practitioner Excel with ease, Software Engineering, Software Project Management, Machine Learning, and Blockchain Technologies. These books have been recognized as Text and reference books in various universities across the globe. He has Customized two books: Design Patterns (Enrich Gama) and Applying UML and Patterns (Craig Larman) published by PEARSON. He is a certified "Green Belt" in six sigma methodology and ITIL(F) Certified. In addition, he is a Certified Global Business Leader from Harvard Business. He was an active member in PMI's OPM3 and PMCDF project works. He is an invited speaker at various conferences on Project And Program Management. His paper on "Best practices of Agile Program Management – SCRUM TEA Model" won an award at "Program and Portfolio Management Conference." Another paper, "Strategy Based Service Model – DISCO PMO" won an award at International IT Service Management Conference 2013.

He has experience in Project Portfolio Management, Software Sales Management, Client Relationship Management, and Competency Management. He has substantial experience in Portfolio/Program/Project Delivery and Escalation Resolution- providing executive oversight and monitoring the overall portfolio and program health. He has been actively involved with the Project, Program Management discipline. He has a good record of delivering large-scale, mission-critical programs on-time and within budget with Customer Satisfaction using Agile and Traditional Project Management methodologies.

SUMMARIZATION OF WORKSHOP SESSIONS

A lecture was delivered by **Dr. Sudeep Tanwar** sir on the topic of "Blockchain Introduction and Its Components". Almost all aspects of Blockchain technology were covered in his lecture. Also, he has used simple examples to illustrate how transactions are performed by utilizing the Blockchain method of calculating. He has demonstrated the practical implementation of Blockchain technology using Javascript and visualized it graphically to give the audience a better understanding of what it is all about. Furthermore, he discussed blockchain technology, blockchain nodes, types of blockchain technology, and how they are implemented from a business perspective. Consensus is also discussed. During this discussion, he discusses what consensus is, why it is significant, and how it can be created. He explains it in the context of a simple flight transportation system and how it can be implemented.

Dr. Nitin Singh Sinha spoke about "Cryptographic Primitives and Distributed Databases" in his lecture. In his lecture, he shared information about blockchain and cryptocurrencies, as well as why they are so crucial. He shared knowledge about why blockchain is indestructible, and also the traditional and prevalent ways of disseminating information. The discussion included Blockchain ledgers, the ways in which transactions are linked to them, hash functions, properties of effective hash functions, Tampering Detection in Blockchain, and how authorization is ensured in Blockchains, how error-free records are maintained on Blockchain, and how to verify transactions.

Prof. P. Shanmugavadivu gave an interesting lecture about Ethereum, the second-largest cryptocurrency after bitcoin, which was very interesting to learn about. By using an appropriate example to demonstrate how a smart contract works and the purchase of a home through Ethernet, it is possible to gain a deeper understanding of how Ethereum works. Additionally, it provides information about where to get Ethereum as well as who is able to effectively use it. As well as that, there are challenges associated with Ethereum's blockchain technology. There is a clear distinction between Ethereum and bitcoin that she outlined perfectly. The roadmap for the future development of Ethereum is also included in this presentation.

Prof.T.Chithralekha talks about Cryptocurrencies, Bitcoin & Bitcoin Platform. She started from the scratch then she discussed about cryptocurrency, and Bitcoin. In this particular, she has also discussed crypto assets, unity tokens, security tokens, stable coins, and central banks, using real-time data experiments. Also she demonstrated the program implementation where as how to create the coins and how it is benefitted us, and how to transact the coins.

Dr. Kunwar Singh is given the lecture on "Blockchain Architecture and Technology". The lecture was informative and included blockchain technology. In the first part of blockchain, the cryptographic concepts of hash function, public cryptography, and digital signature were explained very well with a suitable example and a detailed description. He uses terms like "blockchain," "hypothetical cryptocurrency," and "goofy coin" to describe the double-spending attack in depth. Hash puzzles and the consensus algorithm, which is also termed "proof-of-work" (POW), are transferred to the power-of-stake. In the second part of blockchain, which is more than cryptocurreny, he goes through

the Ethereum blockchain. The topic covered by Dr. Kunwar Singh allows us to gain a better understanding of the content of blockchain technology. Along with the attractive presentation, sir perfectly and neatly explained each term with a nice explanation and in an understandable manner.

A lecture on "Blockchain and FinTech" is given by Prof.K.Chandrasekaran. With the help of real-time experiments, he presented all the nooks and corners of Blockchain technology, including introduction, types of blockchain technology, advantages, disadvantages, hash function, smart contracts, and FinTech technology. Also, he discussed all aspects of cryptocurrency and bitcoin; this lecture will provide more insight into the field and create a curiosity for more details, as well as help with doing research or projects in this field.

Ms. Vigneshwari S views and insights on Hyperledger, which is employed in non-financial applications, were interesting. Additionally, the objectives of the Hyperledger Foundation and their design philosophies were well articulated. The application cases of Hyperledger projects in the areas of banking and finance, IT, healthcare, supply chain, the education domain, and registration were also covered in this lecture. She also gave a quick explanation of the framework and tools used in the Hyperledger Umbrella project. In-depth explanations of the Hyperledger fabric, architectural model, network architecture, channels, transaction, and deployment architecture were also provided. Finally, the demonstration section really aids in our understanding of the idea.

In the lecture given by **Mr. Ajinkya Lohakare**, he started from the fundamentals of blockchain technology and then went on to talk about how to communicate effectively across a variety of fields. In his lecture, he demonstrated every aspect of his lecture with the help of various online tools and implementations, including Ganache, Jackson NG, Metasploit, and many other online tools and methods to implement a bitcoin transaction. Furthermore, he also demonstrated how the implementation of the solution can be used to effectively protect the system as a whole.

A lecture on "smart contracts" was delivered by **Mr. Srinivas Bhoosarapu**. In his lecture, he explains how smart contracts work and how they can be beneficial to us. During the discussion, Ethereum is brought up. As well, he discussed the decentralization of the Blockchain and distributed ledger technology, and how it can provide a secure and transparent transaction. He also discussed how blockchain technology can be used in various industries, such as finance, supply chain, and healthcare. With the use of online tools, everything is lectured using a multimedia presentation.

In the session, **Dr. Venkatesan M** gave us deep insights into Blockchain technology and its implementation. Here are the top takeaways from his talk: Proper implementation of blockchain technology in the field of cyber security, Intrusion Detection using Blockchain, Anomaly Detection using Blockchain, Consensus and the widely available mechanisms for consensus and Multilayer perception in blockchain technology.

Ms. Joshna Granthi is delivered the lecture was likely intended to explore the potential applications and use cases of blockchain technology through the exploration of blockchain technology and the National Blockchain framework. Moreover, it was also likely to be focused on how it could be integrated into a variety of industries and how it could be used in a variety of ways. A legal framework and regulatory framework for the use of blockchain technology were discussed as well as technical standards for implementing blockchain systems, as well as standards for protecting personal data and ensuring the security and privacy of personal information. In addition, the definition and scope of blockchain technology and its applications were discussed. In addition to driving innovation and growth in the industry, it will help develop and adopt blockchain technology.

In addition to giving lectures on what Blockchain is, what the key concepts of Blockchain are, how Blockchain works, the evolution of blockchain, the difference between blockchain versions and the applications of Blockchain 4.0, Dr.Chandramouli S gave lectures on what Blockchain is, and the key concepts of Blockchain. Each of these points is explained in a detailed and easy-to-understand manner using simple examples.

VALEDICTORY FUNCTION

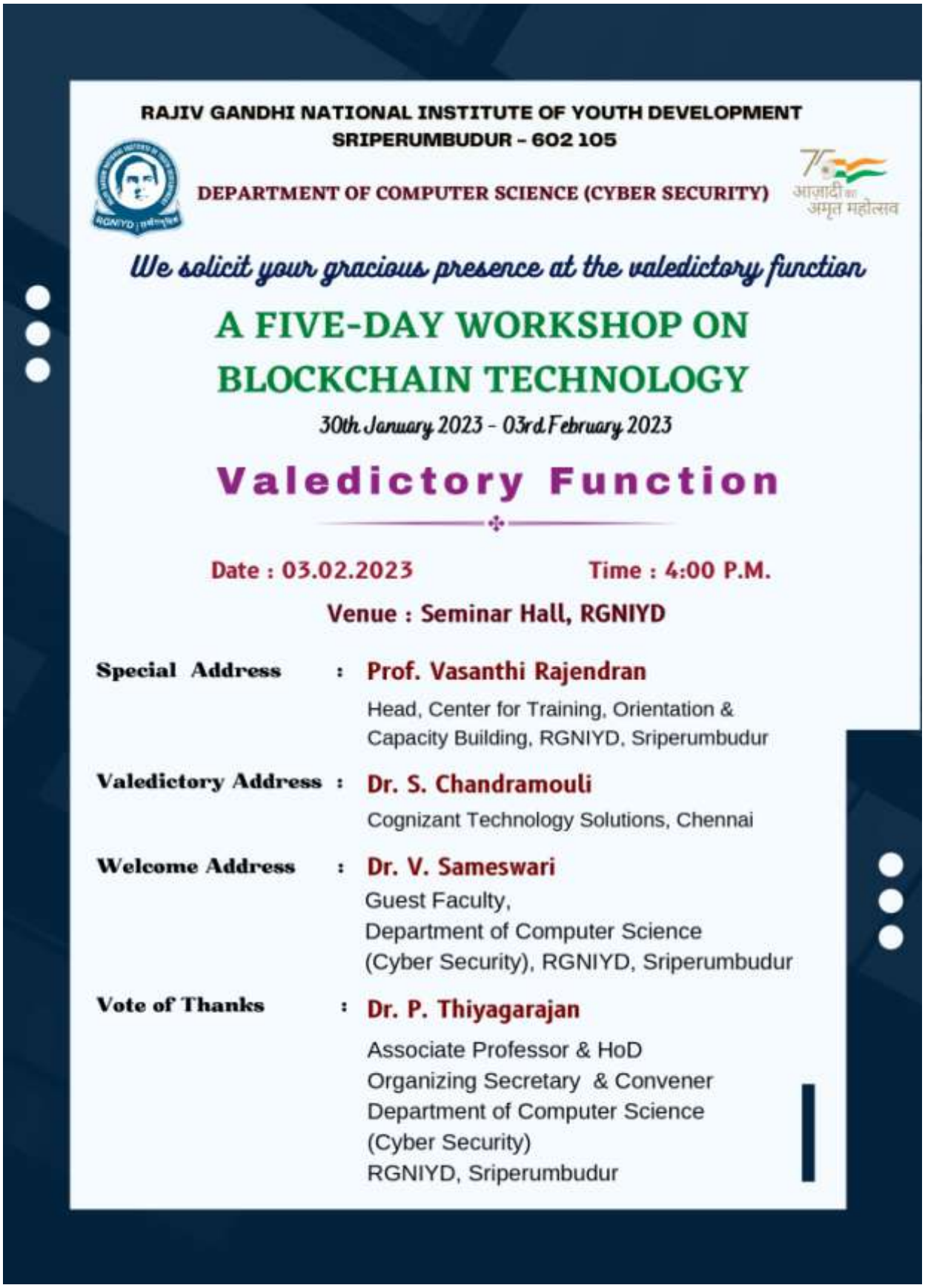
The workshop valedictory function was held on 3rd February 2023 in a grand manner. The Chief

Guest of the valedictory function was Dr. S. Chandramouli, Ph.D, PfMP, PMI-ACP, Associate Director, Cognizant Technology Solutions delivered the valedictory Address. According to him, Blockchain Technology will have a great impact on our world today, and the platform plays a huge role in the transmission of digital money. He also explained how digital security works, and asked participants to implement what they learned in the workshop. Prof. Vasanthi Rajendran, the Department of Training, RGNIYD delivered the special address. In her address, she has emphasized the need of the workshop in the digital world and congratulated Dr.P.Thiyagarajan, Associate Professor and Head, Department of Computer Science, Cyber Security, RGNIYD for organizing such kind of workshop where equal importance was given to both practical and theoretical sessions. And

Dr.V.Sameswari, Guest Faculty, Department of Computer Science, Cyber Security, RGNIYD is given the welcome Address. The Vote of thanks was delivered by Dr.P.Thiyagarajan, Convener

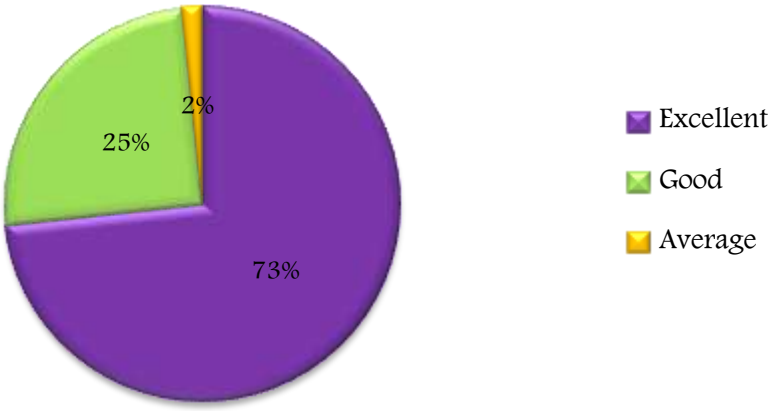
and Organizing Secretary of the Workshop and Associate Professor & Head, Department of Computer Science, Cyber Security, RGNIYD. Sample few photos which were taken in the valedictory function is enclosed. At the end of the Program, Dr.S.Chandramouli and Prof. Vasanthi Rajendran distributed certificates to all the participants. Few participants shared the feedback about the workshop in the Valedictory function.

VALEDICTORY INVITATION

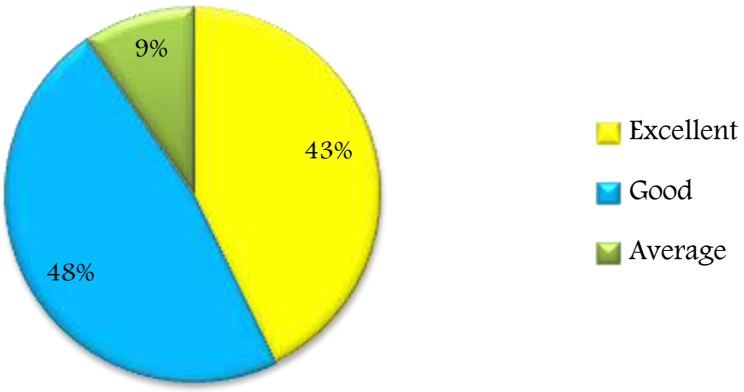


FEEDBACKS FROM THE PARTICIPANTS

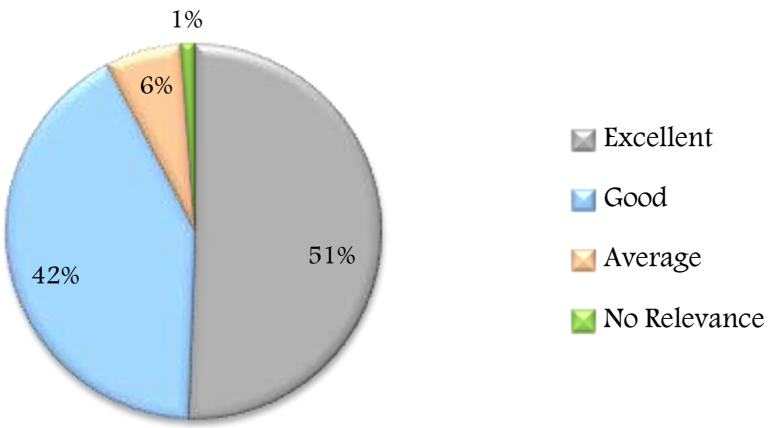
Session–I: Prof. Sudeep Tanwar



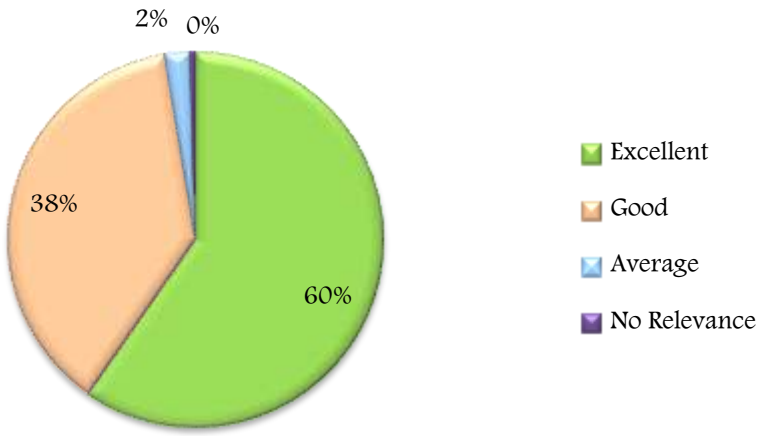
Session–II: Dr.Nitin Singh Singha



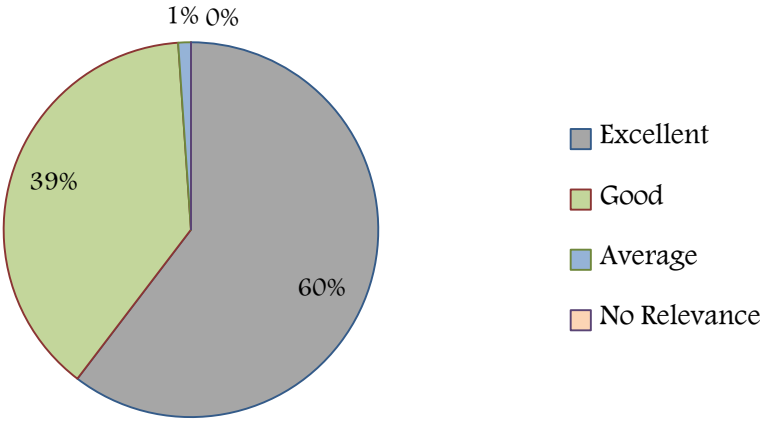
Session–III: Prof.Shanmugavadivu



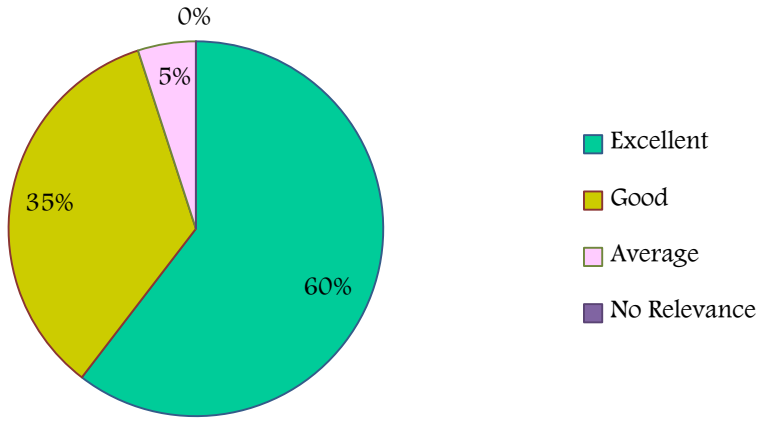
Session-IV: Prof.T.Chithralekha



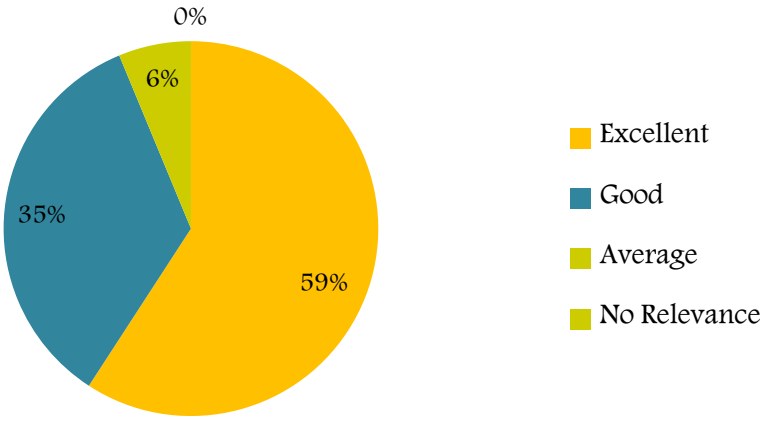
Session-V: Dr.Kunwar Singh



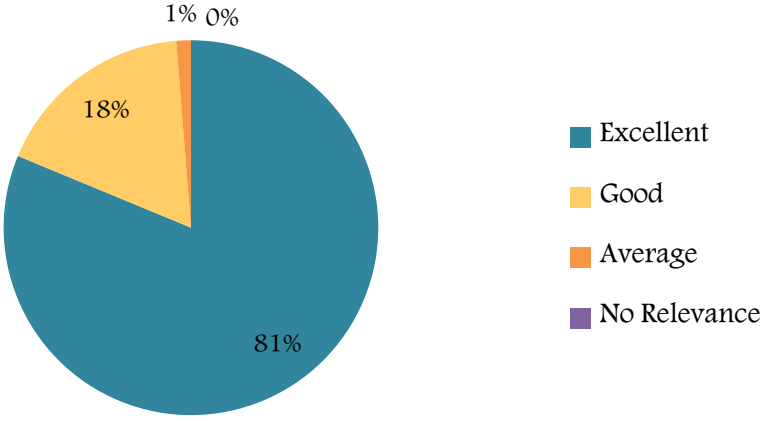
Session-VI: Dr.Kunwar Singh



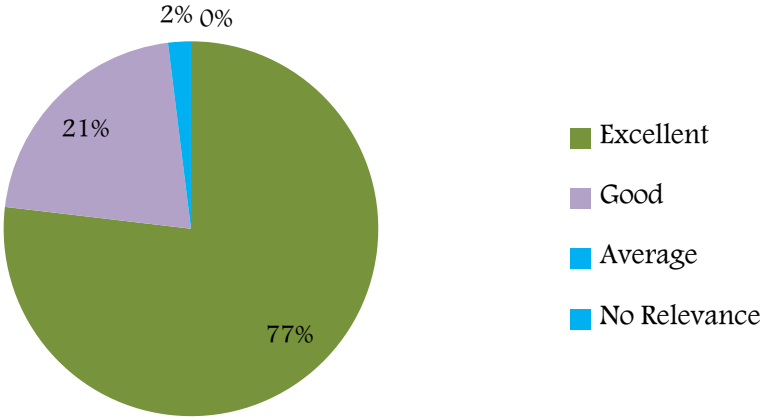
Session–VII: Prof.K.Chandrasekaran



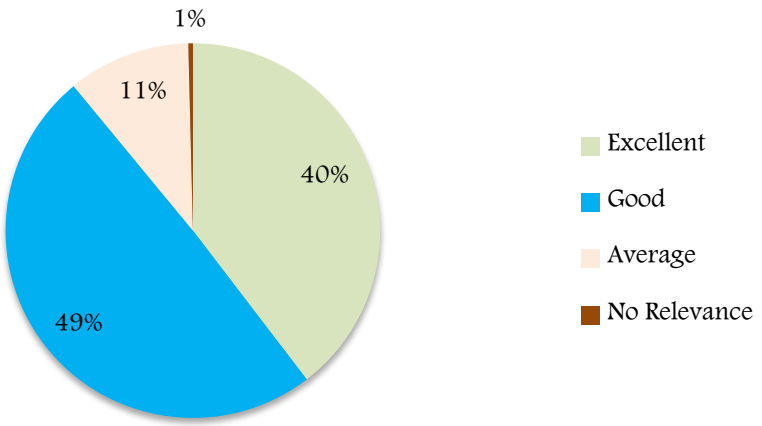
Session–VIII: Ms.Vigneshwari



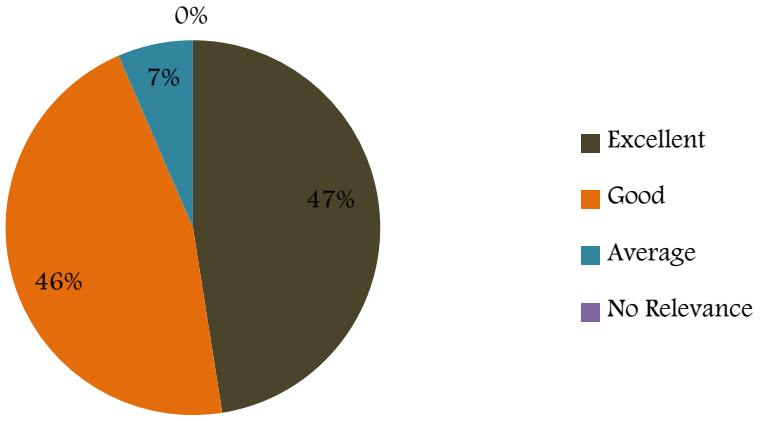
Sessions–IX, X, XI, XII: Mr.Ajinkya Lohakare



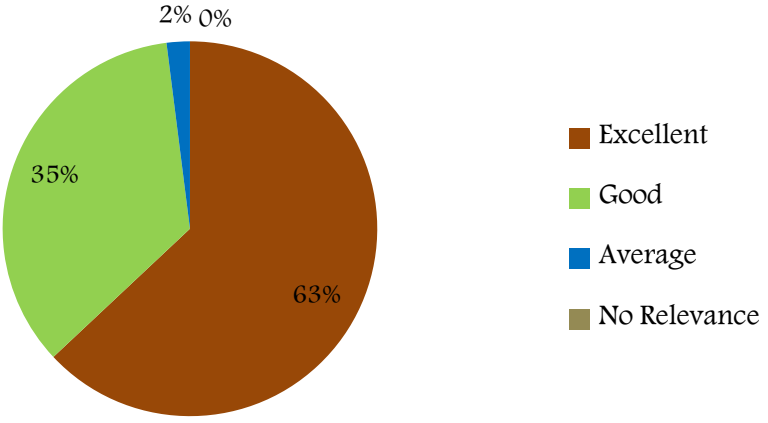
Session-XIII: Mr.Srinivas Bhoosarapu

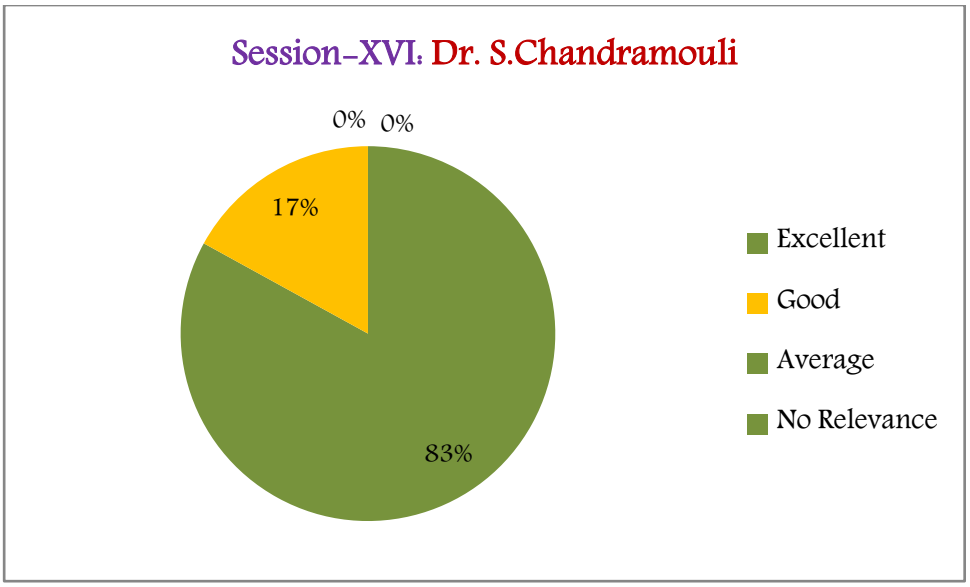


Session-XIV : Ms.Jyostna Grandhi



Session-XV: Dr.Venkatesan M




Session-XVI: Dr. S.Chandramouli
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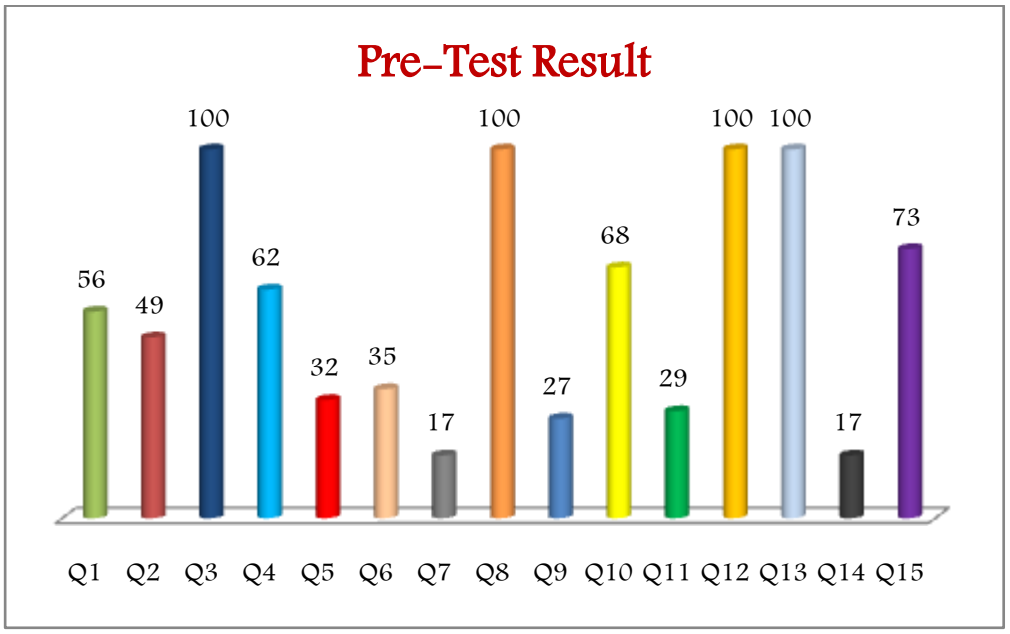
0%
17%
83%
Excellent
Good
Average
No Relevance

TEST RESULT


Pre-Test Result
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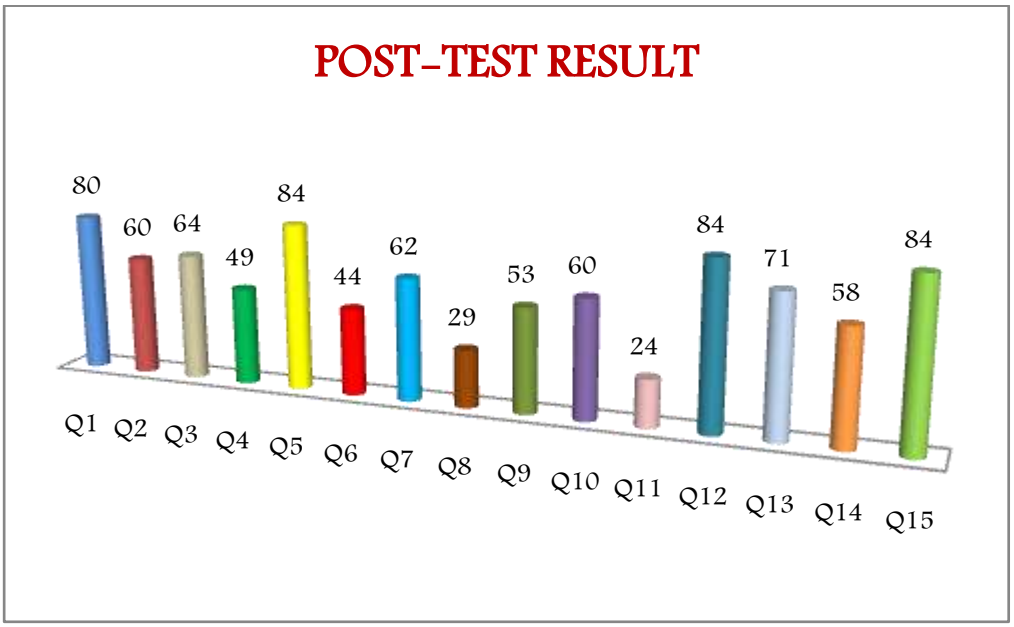
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15


POST-TEST RESULT
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84
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15

PHOTOS

HONORING THE GUEST


SONY