Report

of

Capacity Building Program for PGT Biology at IIT Mandi

from 19 to 23 November 2024

Submitted by

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Resource Person (IT), SCERT, Delhi

Introduction

The Capacity Building Program for PGT-Biology 2024, held at the prestigious Indian Institute of Technology (IIT) Mandi from **19th to 23rd November 2024**, was a meticulously organized initiative aimed at enhancing the professional skills and subject knowledge of Post Graduate Teachers (PGTs) in Biology. Designed to focus on contemporary advancements in the biological sciences, the program fostered a deeper understanding of critical concepts through interactive sessions, laboratory experiments, and collaborative learning.

This five-day residential program incorporated competency-based assessments, cutting-edge research topics, and hands-on lab activities. Below is a detailed account of the program, structured day-wise.

Detailed Report: Day 1 - Capacity Building Program for PGT Biology

Date: Tuesday, 19th November 2024
Location: IIT Mandi, Himachal Pradesh

The first day of the **Capacity Building Program for PGT Biology** was designed to set a strong foundation for the participants by introducing key biological concepts and engaging them in practical applications. It focused on evolutionary biology, immunology, and laboratory techniques, providing a mix of theoretical and hands-on learning experiences.

1. Inaugural Session (9:00 AM–9:30 AM)

The day began with a brief but impactful **inaugural function** in **Hall A, North Campus**, where participants were warmly welcomed by the organizers and coordinators. The session outlined the objectives of the program, emphasizing the importance of continuous professional development for educators. The speakers highlighted how this program would bridge the gap between advanced research in biological sciences and classroom teaching practices.

Key Highlights:

- Participants were introduced to the schedule and key resource persons.
- A strong emphasis was laid on active participation and collaborative learning.

2. Session: Evolutionary Biology and Perspectives (9:30 AM–10:30 AM)

Speaker: Dr. Trayambak Basak
Venue: Hall A, North Campus

The first academic session delved into the fascinating field of **evolutionary biology**. Dr. Basak provided an engaging overview of evolutionary theories, emphasizing Darwin's contributions and their significance in modern biology. The lecture covered:

- The principles of natural selection and adaptation.
- Modern perspectives, including molecular evolution and phylogenetics.
- The role of evolutionary studies in understanding biodiversity and ecosystem dynamics.

Participants were encouraged to ask questions, and the discussion explored how educators could effectively teach these concepts in a classroom setting.

3. Session: Evolution and Darwin's Concepts (11:00 AM–12:00 PM)

Speaker: Dr. Trayambak Basak
Venue: Hall A, North Campus

Building on the previous session, Dr. Basak elaborated on **Darwin's theories**, focusing on:

- The origin of species.
- The evidence supporting evolution, including fossils, comparative anatomy, and embryology.
- How evolutionary theory has shaped modern biological sciences.

This session included real-life examples and analogies to make the complex ideas relatable and easy to understand for students.

4. Session: Basic Concepts of Immunology and Vaccines (12:00 PM–1:00 PM)

Speaker: Dr. Amit Prasad
Venue: Hall A, North Campus

Dr. Prasad's session introduced participants to the fundamentals of **immunology**. He explained the mechanisms by which the immune system protects the body and the science behind vaccine development. Key topics included:

- Innate and adaptive immunity.
- The history of vaccines and their impact on global health.
- Advances in vaccine technology, including mRNA vaccines.

This session was particularly relevant, considering the recent global focus on vaccination during the COVID-19 pandemic.

5. Laboratory Session: Bio Lab I - Biochemical and Enzyme Assays (2:00 PM–3:30 PM)

Instructor: Dr. Shyam Kumar Masakapalli
Venue: Bio Lab I (A1 and A6), South Campus

The afternoon session transitioned into the **first laboratory activity**, where participants worked hands-on with biochemical assays and enzyme kits. Under Dr. Masakapalli's guidance, they learned:

- Techniques for preparing and handling biochemical assay kits.
- Methods to measure enzyme activity and interpret results.
- Best practices for laboratory safety and accuracy.

Participants appreciated the opportunity to perform real-time experiments, which helped reinforce theoretical concepts.

6. Laboratory Session: Bio Lab II - Plant Science Experiments (4:00 PM–6:00 PM)

Instructor: Dr. Shyam Kumar Masakapalli
Venue: Bio Lab II (A1 and A6), South Campus

The final session of the day focused on **plant sciences**. Participants conducted experiments to study:

- Photosynthesis processes.
- Enzymatic activities in plant tissues.
- Preparation and analysis of plant extracts.

Dr. Masakapalli provided personalized attention to each group, ensuring that participants grasped the practical aspects of plant physiology.

Conclusion of Day 1

The first day concluded with participants reflecting on their learning experiences. Many expressed enthusiasm for the hands-on sessions, stating that they provided valuable insights into practical applications of biological concepts. The combination of engaging lectures and interactive lab activities ensured that the participants stayed motivated and inspired for the days ahead.

Key Takeaways from Day 1:

1. A deeper understanding of evolutionary biology and its teaching methodologies.
2. Insights into the immune system and the science of vaccines.
3. Practical skills in biochemical assays and plant science techniques.
4. An appreciation for collaborative learning and the integration of theoretical and practical knowledge.

Day 1 set a high standard for the program, leaving participants eager to explore the upcoming sessions.

Detailed Report: Day 2 - Capacity Building Program for PGT Biology

Date: Wednesday, 20th November 2024
Location: IIT Mandi, Himachal Pradesh

The second day of the program focused on molecular biology, plant physiology, and innovative learning approaches. It combined theoretical sessions with hands-on lab experiments, fostering an interactive learning environment.

1. Session: Biomolecules and Enzyme Functionality (9:30 AM–10:30 AM)

Speaker: Dr. Shyam Kumar Masakapalli
Venue: Bio Lab (A1 and A6), South Campus

The day began with a lecture on the structural and functional aspects of **biomolecules**, including proteins and carbohydrates. Dr. Masakapalli explained:

- The role of proteins as enzymes and structural components.
- The chemical properties of carbohydrates and their importance in energy storage.
- The classification of enzymes, including their catalytic mechanisms and specificity.

Through relatable examples, participants explored how these biomolecules drive cellular processes, making it easier to link these concepts to their teaching practices.

2. Session: Plant Physiology (11:00 AM–1:00 PM)

Topic: Photosynthesis and Respiration
Speaker: Dr. Shyam Kumar Masakapalli
Venue: Bio Lab (A1 and A6), South Campus

Dr. Masakapalli conducted an engaging session on **photosynthesis and respiration**, delving into the biochemical pathways that sustain plant life. Key points discussed included:

- The light-dependent and light-independent reactions of photosynthesis.
- The Calvin cycle and the role of ATP and NADPH.
- Cellular respiration pathways, including glycolysis, the Krebs cycle, and oxidative phosphorylation.

The session included real-life analogies and videos to enhance understanding, followed by discussions on how these complex processes can be simplified for students.

3. Laboratory Session: Practical Applications in Plant Physiology (11:00 AM–1:00 PM)

Participants performed practical experiments to reinforce theoretical learning:

- Measuring the rate of photosynthesis under varying light intensities.
- Observing the effects of environmental stressors on plant respiration.

These experiments demonstrated how to conduct simple yet effective practicals in a school laboratory setup.

4. Lunch Break (1:15 PM–2:00 PM)

Participants enjoyed a delicious lunch, providing an opportunity for informal networking and relaxation.

5. Session: Tinkering Lab (2:00 PM–5:00 PM)

Facilitator: Prof. Rahul Vaish
Venue: Tinkering Lab

The highlight of Day 2 was an interactive session in the **Tinkering Lab**, where participants explored innovation in teaching science. Activities included:

- Designing creative experiments with low-cost tools.
- Exploring how tinkering labs can foster curiosity and critical thinking among students.
- Group exercises to develop prototypes for science demonstrations.

Participants shared ideas on using tinkering labs to align with competency-based learning goals. The session encouraged collaboration and showcased the importance of hands-on engagement in science education.

6. Feedback and Reflections (5:00 PM–5:30 PM)

The day ended with a reflection session where participants shared their experiences and suggestions. They appreciated the integration of theoretical knowledge with practical skills and expressed excitement about applying these methods in their classrooms.

Key Takeaways from Day 2

1. **Enhanced Understanding of Biomolecules**: Participants gained in-depth knowledge about the structure and function of proteins and carbohydrates, and enzyme mechanisms.
2. **Practical Skills in Plant Physiology**: The laboratory sessions provided hands-on experience in studying photosynthesis and respiration, reinforcing classroom concepts.
3. **Innovation through Tinkering**: The Tinkering Lab session inspired participants to adopt creative teaching methods and use experimental setups to promote active learning.
4. **Collaborative Learning**: Group activities and discussions encouraged the exchange of ideas and best practices among educators.

Conclusion of Day 2
Day 2 was a perfect blend of academic rigor and innovation, equipping participants with the knowledge and tools to make biology education more interactive and impactful. The focus on molecular biology, plant physiology, and creative teaching methodologies prepared the participants for advanced topics in the days to come.

Detailed Report: Day 3 - Capacity Building Program for PGT Biology

Date: Thursday, 21st November 2024
Location: IIT Mandi, Himachal Pradesh

Day 3 of the Capacity Building Program centered on biotechnology, genetic engineering, and practical laboratory sessions. The day also included a refreshing field trip to Parashar Lake, providing participants with an opportunity to unwind amidst nature's beauty after an intensive learning schedule.

1. Session: Recombinant DNA Technology (9:30 AM–11:00 AM)

Speaker: Dr. Baskar Bakthavachalu
Venue: Bio Lab (A1), South Campus

The morning session introduced participants to the fascinating world of **recombinant DNA technology**. Dr. Bakthavachalu's lecture highlighted:

- The steps involved in genetic engineering, including cutting, ligating, and transforming DNA.
- Real-world applications such as gene therapy, genetically modified crops, and the production of therapeutic proteins like insulin.
- Ethical considerations and biosafety measures associated with genetic engineering.

The session emphasized how educators can present these advanced topics in a simplified and engaging way for students.

2. Laboratory Session: Bio Lab III - DNA Isolation and Kit Preparation (11:30 AM–1:00 PM)

Instructor: Dr. Baskar Bakthavachalu
Venue: Bio Lab (A6), South Campus

Participants transitioned into the lab to perform **DNA isolation** experiments. They learned:

- The process of extracting DNA from plant tissues using simple reagents.
- Preparing DNA isolation kits suitable for school laboratory demonstrations.

This hands-on session allowed participants to connect theoretical knowledge with practical applications, boosting their confidence in conducting such experiments with students.

3. Lunch Break (1:15 PM–2:15 PM)

Participants enjoyed a relaxing lunch, re-energizing themselves for the much-anticipated field trip in the afternoon at Prashar Lake.

4. Field Trip: Parashar Lake (2:30 PM–7:00 PM)

The highlight of the day was a serene and scenic excursion to **Parashar Lake**, nestled amidst the mountains. This trip served as a perfect blend of education and recreation.

Key Experiences:

- Participants explored the natural flora and fauna around the lake, connecting it to ecological concepts discussed during the program.
- The unique floating island within the lake sparked conversations about its formation and ecological significance.

- A visit to the ancient temple dedicated to Sage Parashar provided cultural and spiritual enrichment.

The trip fostered camaraderie among participants and faculty, enhancing informal interactions and creating memorable experiences.

Conclusion of Day 3

Day 3 offered a balanced mix of academic rigor and relaxation. The sessions on recombinant DNA technology and DNA isolation provided participants with insights into the latest advancements in biotechnology, while the Parashar Lake trip allowed them to rejuvenate and connect with nature.

Key Takeaways from Day 3

1. **Understanding of Genetic Engineering**: The lecture and lab sessions deepened participants' knowledge of recombinant DNA technology and its applications.
2. **Hands-On Laboratory Skills**: Participants gained practical expertise in DNA isolation and kit preparation, making them more equipped to conduct such experiments in their schools.
3. **Integration of Nature and Science**: The Parashar Lake trip demonstrated how natural ecosystems can be used as educational tools to teach ecological and environmental concepts.
4. **Networking and Collaboration**: The field trip provided an informal platform for participants to build stronger connections with peers and faculty.

Day 3 was an excellent example of how educational programs can combine rigorous academic learning with holistic development, making it both impactful and enjoyable for participants.

Detailed Report: Day 4 - Capacity Building Program for PGT Biology

Date: Friday, 22nd November 2024
Location: IIT Mandi, Himachal Pradesh

The fourth day of the Capacity Building Program was a deep dive into biotechnology, competency-based assessments, and advanced laboratory techniques. It provided participants with practical insights into modern scientific applications and innovative teaching methodologies.

1. Session: Biotechnology and Its Applications (9:30 AM–11:00 AM)

Speaker: Dr. Baskar Bakthavachalu
Venue: Hall A, North Campus

The day began with a comprehensive lecture on **biotechnology**. Dr. Bakthavachalu explained:

- The role of genetically modified organisms (GMOs) in agriculture, medicine, and industry.
- Applications of gene therapy, recombinant vaccines, and microbial biotechnology.
- Ethical and environmental concerns surrounding biotechnology.

Participants engaged in discussions about the societal implications of these advancements, enriching their understanding of the topic and how to introduce it effectively in classrooms.

2. Session: Competency-Based Assessment (11:30 AM–1:00 PM)

Speaker: Dr. Prasad Kasturi
Venue: Hall A, North Campus

Dr. Kasturi conducted a highly interactive session on **competency-based assessments**, emphasizing the need for skill-based evaluation in modern education. Key points included:

- Designing assessments that test critical thinking, problem-solving, and application skills.
- Aligning assessments with the learning outcomes of biology curricula.
- Tools and techniques for creating effective rubrics and feedback mechanisms.

Participants shared their experiences and received actionable strategies to improve their assessment practices.

3. Laboratory Session: Bio Lab IV - DNA Cloning (2:00 PM–3:30 PM)

Instructor: Dr. Baskar Bakthavachalu
Venue: Bio Lab (A6), South Campus

The afternoon session focused on **DNA cloning techniques**, allowing participants to perform:

- Ligation of DNA fragments using restriction enzymes.
- Transformation of DNA into host cells and plating for colony observation.

This hands-on experience strengthened participants' confidence in demonstrating these processes to their students.

4. Laboratory Session: Bio Lab V - PCR and DNA Fingerprinting (4:00 PM–6:00 PM)

Instructor: Dr. Baskar Bakthavachalu
Venue: Bio Lab (A6), South Campus

In this session, participants explored advanced molecular biology techniques:

- Polymerase Chain Reaction (PCR): Understanding the amplification of DNA and its diagnostic applications.
- DNA Fingerprinting: Practical insights into identifying genetic patterns and its use in forensic science.

The session emphasized the relevance of these techniques in real-world applications, bridging the gap between classroom learning and scientific research.

5. Dham Dinner (7:00 PM–9:00 PM)

Venue: Guest House Dining Hall, First Floor

The day concluded with a memorable **Dham Dinner**, featuring traditional Himachali cuisine. Participants, faculty, and organizers came together to celebrate the success of the program so far. This event fostered camaraderie and provided a relaxed setting for informal interactions.

Key Takeaways from Day 4

1. **Understanding Biotechnology**: Participants gained a thorough understanding of the applications and implications of biotechnology in various fields.
2. **Improved Assessment Practices**: The competency-based assessment session equipped educators with practical tools to evaluate student learning effectively.
3. **Hands-On Molecular Biology Techniques**: Laboratory sessions on DNA cloning, PCR, and DNA fingerprinting enhanced participants' technical skills and teaching confidence.
4. **Cultural Connection**: The Gala Dinner provided a cultural and social experience, fostering stronger bonds among participants and faculty.

Conclusion of Day 4

Day 4 was a perfect blend of rigorous academic learning, practical skill development, and cultural celebration. Participants left with valuable insights into biotechnology and molecular biology, along with strategies to implement these topics innovatively in their teaching practices. The evening gala added a touch of festivity, making the day both enriching and enjoyable.

Detailed Report: Day 5 - Capacity Building Program for PGT Biology

Date: Saturday, 23rd November 2024
Location: IIT Mandi, Himachal Pradesh

The final day of the Capacity Building Program focused on advanced topics like gene expression and regulation, practical laboratory applications, and the program's valedictory session. It marked the culmination of a week of learning, collaboration, and growth, leaving participants inspired and equipped for their professional roles.

1. Session: Gene Expression and Regulation (9:30 AM–11:00 AM)

Speaker: Dr. Prasad Kasturi
Venue: Bio Lab (A1), South Campus

The day started with a detailed lecture on **gene expression and regulation**, covering:

- The mechanisms of transcription and translation in prokaryotes and eukaryotes.
- Regulatory elements such as promoters, enhancers, and repressors.
- Operon models, including the lac operon and trp operon, to illustrate gene regulation in prokaryotes.
- Linkage and crossing over in genetic inheritance.

Dr. Kasturi emphasized simplifying these advanced topics for classroom teaching, ensuring students understand the fundamental concepts behind genetic mechanisms.

2. Laboratory Session: Bio Lab VI - Microscopy and Genetic Mutants (11:30 AM–1:30 PM)

Instructor: Dr. Prasad Kasturi
Venue: Bio Lab (A6), South Campus

Participants engaged in hands-on experiments, focusing on:

- **Microscopy Techniques**: Observing cellular structures and identifying phenotypic variations in genetic mutants.
- **Transgenic Animals**: Understanding the development and applications of transgenic organisms.
- Analysis of genetic mutations and their phenotypic effects.

This practical session provided participants with advanced technical skills and ideas for incorporating such experiments into their teaching methodologies.

3. Lunch Break (1:30 PM–2:30 PM)

A relaxed lunch allowed participants to recharge before the concluding session.

4. Feedback and Valedictory Session (2:30 PM–4:00 PM)

Venue: Hall A, North Campus

The program concluded with a **Valedictory Session**, where participants reflected on their learning journey. Key highlights included:

- **Feedback Collection**: Participants shared their experiences, appreciated the program's structure, and offered suggestions for improvement.
- **Certificate Distribution**: Each participant received a certificate of completion, acknowledging their active participation.
- **Closing Remarks**: Coordinators and faculty members expressed gratitude to the participants for their enthusiasm and engagement. They reiterated the importance of applying the acquired knowledge and skills in their teaching practices.

The session ended on a high note, with participants expressing their gratitude to the organizers, resource persons, and the institution for providing such a transformative experience.

Key Takeaways from Day 5

1. **Advanced Knowledge**: Participants gained insights into the complex mechanisms of gene expression and regulation, along with practical applications.
2. **Laboratory Skills**: The hands-on session enhanced their proficiency in microscopy and understanding genetic mutations and transgenics.
3. **Reflection and Growth**: The feedback and valedictory session provided an opportunity to reflect on the week's learning and establish goals for future application.
4. **Acknowledgment**: Receiving certificates and appreciation motivated participants to continue their professional development.

Conclusion of Day 5

The final day of the program was a fitting conclusion to a week of intensive learning and collaboration. Participants left with enriched knowledge, practical skills, and a renewed passion for teaching biology. The valedictory session underscored the program's success, making the participants feel valued and prepared for future challenges.

The Capacity Building Program for PGT Biology at IIT Mandi has set a benchmark for professional development, leaving a lasting impact on its participants.

Suggestions for Future Programs

1. **Extended Duration**:
   Adding more days could allow for additional advanced topics.
2. **Focus on Emerging Technologies**:
   Topics like CRISPR, AI in biology, and bioinformatics could be incorporated.
3. **Follow-Up Sessions**:
   Regular online check-ins post-program could sustain the momentum of learning.

Conclusion

The Capacity Building Program at IIT Mandi was a resounding success, combining academic excellence with a touch of cultural vibrancy. It equipped PGT Biology educators with the tools to inspire future generations and adapt to the ever-evolving landscape of biological sciences.

This program not only strengthened the participants' professional capabilities but also fostered a sense of community, making it a memorable and impactful experience.

List of Participants in the Capacity Building Program for PGT Biology held at IIT Mandi from 19th to 23rd November 2024

				
1. Kusum 20071549	2. Priyanka Sharma 19990631	3. Roop Kishor 20051344	4. Manishi Chawla 20000414	5. Sunita Jain 20025391
				
6. Saju Prasad Sharma 19980192	7. Jashbir Singh 2014051865	8. Anil Kumar Nirwal 20040309	9. Rajesh Dhankhar 20090947	10.Sanjay Kumar Srivastava 20080456
				
11. Sudhir Singh 20050598	12. Sangeeta Meena 20091258	13. Sushil Kumar 20101688	14. Anuradha Sharma 20000388	15. Nirab Kumar Roy 20050716

List of Participants in the Capacity Building Program for PGT Biology held at IIT Mandi from 19th to 23rd November 2024

				
16. Komal Sethi 19980762	17. Alka Sirohi 20081859	18. Kumud Sharma 19980359	19. Surender Singh 20090935	20. Daisy Kalia 19960583
				
21. Nidhi 2014263805	22. Prem lata 20071825	23. Dhyan Singh Bhati 19911129	24. Prem Kumar 19985096	25. Ram Singh 20080326
				
26. Manisha Rajlani 20130690	27. Chander Jeet Yadav 20197753	28.Ganesh Chand Waila 19920204	29. Rajesh Gautam 20071648	30. Iqbal Kaur 20130691

List of Participants in the Capacity Building Program for PGT Biology held at IIT Mandi from 19th to 23rd November 2024

		
31. Ravi Kumar 20232192	32. Sunder Lal Sambhariya 20140486	33. Md Jabihul Quamar Jugnu Coordinator, SCERT

State Council of Educational Research and Training

(An autonomous organization of Govt. of NCT of Delhi)
Varun Marg, Defence Colony, New Delhi 110024
http://scert.delhi.gov.in

F.No.-3(3)(xiii)/IIT Mandi/INSET/SCERT/24-25 | 10794-10801 Date: 14/11/24

CIRCULAR

Sub: Five Days Capacity Building Program for PGT Biology of DoE, GNCTD at IIT Mandi during 19-23 Nov, 2024.

SCERT Delhi is organizing a Five Day Capacity Building Program for PGT Biology of DoE, GNCTD and SCERT/DIET faculty at IIT Mandi campus. 33 participants will attend the program from 19-23 Nov, 2024.

Objectives of the program :

- To promote hands-on experiential learning in the specific context of Biology.
- To nurture creativity and conceptual understanding.
- To integrate experimentation and observation
- To expose with an alternative pedagogy of Biology.

Schedule of the program :

Dates of Program	:	19-23 November, 2024
Departure from SCERT, Delhi to Mandi (by Bus)	:	17 November, 2024 (Evening)
Departure from Mandi to SCERT,Delhi (by Bus)	:	23 November, 2024 (Evening)
Duration of program	:	Five Days
Participants	:	33 (32 PGT Biology and 01 SCERT)
Coordinator	:	Mr. Md. Jabihul Quamar Jugnu, SCERT

The concerned DDE and Heads of School are hereby requested to ensure that all the participants whose names appear in the list are to be deputed to attend the training program without fail.

The boarding of the bus will be SCERT, Varun Marg Defence Colony, New Delhi -110024 at 7 PM.

The list of participants for the training program is attached at **ANNEXURE- A**

(Dr. Nahar Singh)
Joint Director
Date: 14/11/24

F.No.-3(3)(xiii)/IIT Mandi/INSET/SCERT/24-25 | 10794-10801
Copy to:

1. P.S. to Secy. Education/Chairperson, SCERT, Delhi
2. P.S. to Director (Education), DoE, GNCTD
3. P.S. to Director, SCERT, Delhi
4. Addl. DE (Schools), DoE, GNCTD
5. Concerned Coordinator.
6. OS IT, DoE, GNCTD
7. WIM SCERT, Delhi
8. Guard File

(Dr. Nahar Singh)
Joint Director

ANNEXURE-A

Sr. No.	Name	Employee ID	School Address	School ID
1	Kusumlata	20071549	BHOLA NATH NAGAR, NO 1, SKV	1001018
2	Priyanka Sharma	19990631	JHILMIL COLONY, GGSSS	1001111
3	ROOP KISHOR	20051344	Sarvodaya(Co-ed)SSS-I.P. Extension	1002189
4	Manishi Chawla	20000414	RPVV Gandhi Nagar	1003261
5	SUNITA JAIN	20025391	MBP BMSKV GT Road Shahdara	1105110
6	SAJU PRASAD SHARMA	19980192	GSBV BURARI	1207009
7	JASHBIR SINGH	2014051865	SBV, Keshav Puram	1411029
8	Anil Kumar Nirwal	20040309	S.V., C Blk, Saraswati Vihar	1411123
9	Rajesh Dhankhar	20090947	SV Ghevra	1413003
10	Sanjay Kumar Srivastava	20080456	SCSDSV Sec 9Rohini	1413010
11	SUDHIR SINGH	20050598	GBSSS PRASHANTI VIHAR	1413016
12	RAVI KUMAR	20232192	SBV NO.2 TILAK NAGAR	1514006
13	SANGEETA MEENA	20091258	GSBV RAMESH NAGAR NEW DELHI-15	1516002
14	SUSHIL KUMAR	20101688	GSBV NANGLOI	1617002
15	Anuradha Sharma	20000388	SKV Ranhaula	1617005
16	NIRAB KUMAR ROY	20050716	SBV , A-Block Vikas puri	1618002
17	KOMAL SETHI	19980762	GOVT.SARVODAY CO-ED S.S.S POSSANGIPUR B-1 JANAKPURI	1618003
18	ALKA SIROHI	20081859	JMSV, SEC-12, R.K. PURAM	1719001
19	Surender Singh	20090935	G.B.S.S.S. Rajokari	1720028
20	Kumud Sharma	19980359	Govt. Sarvodaya Kanya Vidyalaya - Raj Nagar-II, Palam Colony, New Delhi	1821279
21	Daisy Kalia	19960583	S K V Chirag Delhi	1923037
22	NIDHI	2014263805	RPVV B-1 VASANT KUNJ	1720031
23	PREMLATA	20071825	GBSSS AYA NAGAR	1923354
24	DHYAN SINGH BHATI	19911129	LAJPAT NAGAR GOVT.(CO.ED)S.S.S	1925335
25	PREM KUMAR	19985096	SV Rouse Avenue.Mata Sundari Road	2127001
26	RAM SINGH	20080326	SBV No2 Molarband	1925402
27	SUNDER LAL SAMBHARIYA	20140486	GOVT.CO ED SARVODAYA vidyalaya SECTOR 13 DWARKA	1821281
28	Manisha Rajlani	20130690	SKV Dallupura	1002027
29	Chander jeet Yadav	20197753	VPO SURHERA NEW DELHI	1822003
30	Ganesh Chand Walia	19920204	GSBV, No.1,Yamuna Vihar	1104001
31	Rajesh Gautam	20071648	G.S.B.V. Prahalad Pur	1310002
32	Iqbal Kaur	20130691	RPVV BT BLOCK SHALIMAR BAGH	1309124
33	Mr. Md. Jabihul Quamar Jugnu, SCERT (Coordinator)	SCERT		