



**Gujarat
Technological
University**

INTERNATIONAL INNOVATIVE UNIVERSITY

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R & D Newsletter

Gujarat Technological University, Ahmedabad

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- Collaborations/Interactions
- Research Oriented Talks

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Message From Hon'ble Vice Chancellor

Dear Faculty Members and Researchers,

Greetings from GTU!

I am delighted to share with you the fifth issue of our quarterly R&D newsletter, showcasing our continuous efforts to strengthen GTU's research and development ecosystem. This edition highlights recent activities organized at the university and also includes a special section on R&D initiatives taking place at affiliated colleges.

We must aim towards a collaborative and supportive research ecosystem wherein researchers can grow and contribute. The R&D Cell at GTU is organizing regular sessions, events and other collaborative activities. Your ideas and active participation are vital for advancing our research goals and addressing real-world challenges. This newsletter reflects GTU's commitment for advancing research and innovation.

Congratulations to the R&D Cell team for their dedicated efforts for the release of this newsletter. I urge you to circulate this among your peers to highlight GTU's accomplishments and make outside world familiar with our efforts and initiatives.

Best wishes

A handwritten signature in green ink, appearing to read 'R. K. Gajjar'.

(Dr. R. K. Gajjar)

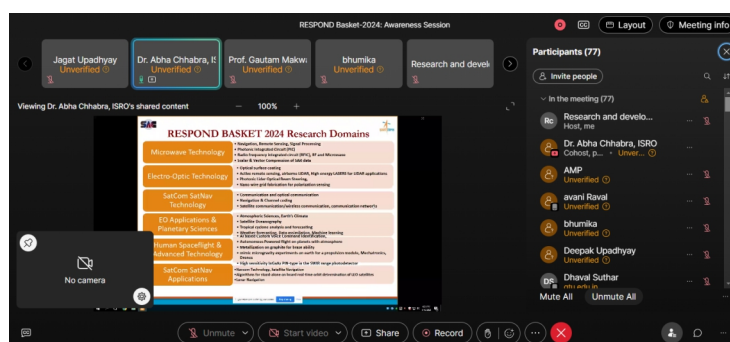
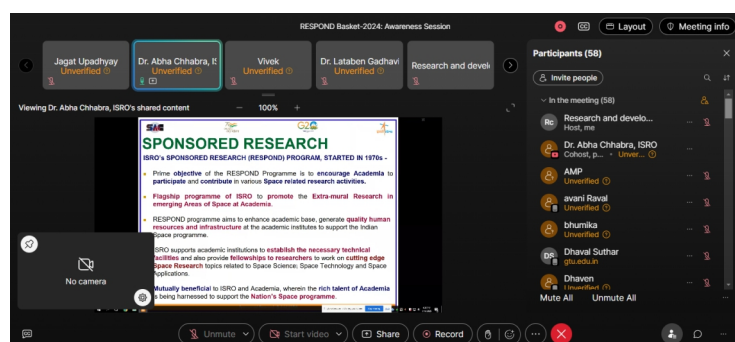
Awareness Session on RESPOND Basket-2024

An online awareness session on the RESPOND Basket-2024 was conducted on January 16, 2025. This session was delivered by Dr. Abha Chhabra, Senior Scientist & Head-RRMD & Coordinator RESPOND at ISRO-SAC Ahmedabad. Dr. Chhabra has over 25 years of experience in remote sensing and has authored more than 95 research papers cited over 7400 times globally.

During this session, Dr. Chhabra emphasized the primary objective of RESPOND – to nurturing collaboration between academic institutions and research organization in space technology. She informed that this year, SAC-ISRO Ahmedabad has offered 45 proposals under RESPOND Basket-2024.

Dr. Chhabra also highlighted the significant achievements of SAC-ISRO Ahmedabad, particularly for the RESPOND Basket proposals this year. She discussed about ISRO's proactive research efforts, which are directed towards societal benefits, and could foster potential collaborations between both the organizations.

Dr. Chhabra provided a comprehensive overview about the RESPOND Scheme and introduced the i-GRASP portal, an online platform launched in March 2022 to facilitate and streamline research project submissions under RESPOND, STCs, and S-TICs.



2nd Ph.D. Research Supervisors' Meet 2025

R&D Cell organized the 2nd Ph.D. Research Supervisors' Meet -2025 on January 24, 2025, at GTU, Chandkheda Campus, Ahmedabad.

This event aimed towards showcasing the comprehensive range of programs and resources provided by the University to support Ph.D. supervisors and scholars. Through this interactive session, the supervisors were informed about various tools, funding opportunities, and facilities available to enhance research quality. Additionally, the event served as a platform for promoting collaboration and encouraging exchange of ideas and sharing best practices among Ph.D. supervisors.

This event was inaugurated under the chairmanship of Honourable Vice-Chancellor, GTU – Dr. R. K. Gajjar. Dr. R. A. Thakker, Director-RDC, in his introductory note, emphasized the crucial role of research supervisors in elevating the quality of doctoral research. He provided insights into the university's ongoing efforts to improve research facilities and promoting collaboration.

Following this Dr. R.K. Gajjar, Hon'ble Vice Chancellor, shared her vision for doctoral research at the university. She encouraged supervisors to promote innovation, engage in interdisciplinary research, and ensure high standards of research output.

Then after the session was handed over to Dr. Vipul L. Tanna, a cryogenics engineer and physicist from the Institute for Plasma Research, Ahmedabad. Dr. Tanna delivered an insightful talk on "Improvement in the Quality of Doctoral Research Thesis." He discussed the essential elements of a high-quality thesis, addressed common research pitfalls, and emphasized best practices in methodology, originality, and clarity in writing.

The final session was delivered by Dr. Dhiraj Bhatia, an Associate Professor of Biological Sciences and Engineering at IIT Gandhinagar. He presented on "Funding Mechanisms at R&D at IIT Gandhinagar and Networking Opportunities." Dr. Bhatia outlined the various national and international funding options, shared strategies for securing research grants, and emphasized the significance of networking and collaboration in advancing research efforts.

This session concluded with answering the concerns of the research scholars regarding funding accessibility, thesis evaluation, publication, and improving the overall quality of doctoral research.

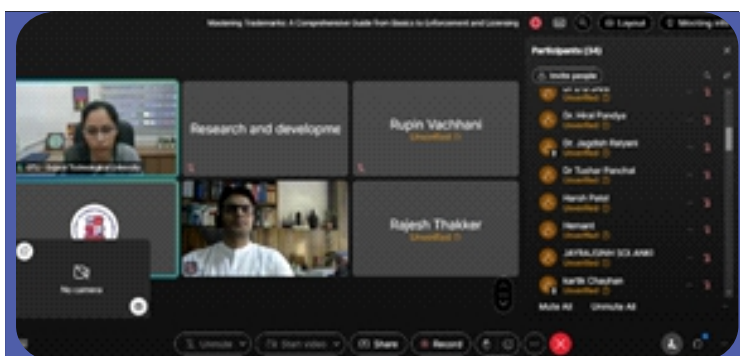


Session *on* Mastering Trademarks: A Comprehensive Guide from Basics to Enforcement and Licensing

GTU- IPFC and DPIIT- SPRIHA in collaboration with R&D organized a session on "Mastering Trademarks: A Comprehensive Guide from Basics to Enforcement and Licensing" on January 30, 2025 delivered by Dr. Gaurav Soni, Co-Partner, Soni & Soni, Ahmedabad. He is an IPR professional with more than 10 years of experience in various domains of IPR and Trademark Law.

During this session, he addressed trademark basics, enforcement, and licensing, underscoring the importance of in-depth searches to ensure uniqueness. He emphasized the significance of trademarks, including names, logos, and packaging, in building a strong brand identity.

Furthermore, he discussed legal frameworks that protect trademarks, enabling owners to prevent unauthorized use, and explored cases of infringement along with remedies such as lawsuits, damage recovery, and seizure of infringing goods.



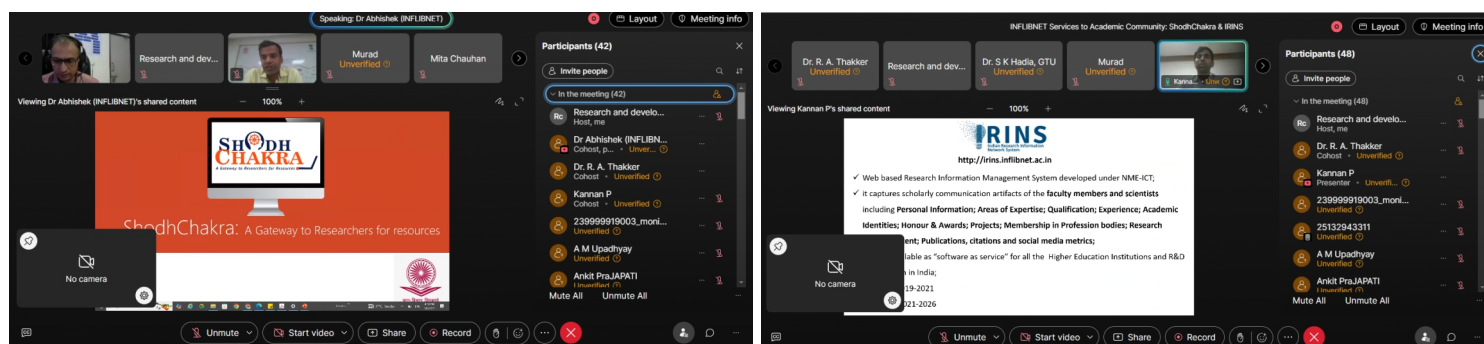
Session on INFLIBNET Services to Academic Community: ShodhChakra & IRINS

An online awareness session on INFLIBNET Services to Academic Community: ShodhChakra & IRINS was held on February 06, 2025. These session was delivered by Dr. Abhishek Kumar, Scientist E (CS) and Dr. Kannan P., Scientist E (LS) from INFLIBNET.

Dr. Abhishek Kumar introduced ShodhChakra, an INFLIBNET initiative under guidance from UGC, designed to support researchers throughout their Ph.D. This portal integrates millions of resources and provides insights into research trends in India. He discussed about the eight core functionalities of ShodhChakra, such as creating researcher profiles, accessing a wealth of knowledge, conducting literature reviews, aggregating research outputs, and facilitating publication opportunities. Additionally, it supports mentor interactions, reference management, and ensures thesis submission compliance. Dr. Kumar also highlighted essential resources, including databases, over 5.8 lakh theses via Shodh, open-access platforms like Crossref and IRINS, and reference management systems.

Then the session was then handed over to Dr. Kannan, who addressed key challenges in the scholarly ecosystem, including issues with discoverability, publication data inaccuracies, and the high costs of citation databases. He introduced IRINS, a web-based system designed to address these challenges by offering research information management for higher education institutions across India.

Dr. Kannan explained how IRINS integrates with data sources such as Google Scholar and Scopus to manage personal and research information, along with publications. He highlighted the integration of external data repositories, including SCOPUS, ORCID, and Altmetric, to enhance research visibility and profile management.



PhD Students' Orientation Programme – Batch (2024-25)

An Orientation session for the Ph.D. Students (Batch 2024-25) was organized by the R&D Cell on February 19, 2025, at the A2 Conference Hall, GTU, Chandkheda Campus. This session aimed to familiarize newly admitted Ph.D. scholars with the university's research ecosystem, policies, and available resources.

Dr. Rajesh Thakker, Director-RDC in his welcome address, emphasized the importance of structured research and the essential role that Ph.D. scholars play in driving academic and industrial progress. Prof. D. Pallamraju, Dean IPR, shared valuable insights into research methodologies and the evolving landscape of academia, while Prof. Amit Prashant, Dean (R&D), IIT-Gn, highlighted the significance of interdisciplinary research, innovation, and problem-solving in doctoral studies.

The presidential address by Prof. Rajul. K. Gajjar, Hon'ble Vice Chancellor, highlighted the university's commitment in fostering high-quality research and encouraged scholars to leverage GTU's resources for impactful contributions in their respective fields.

A dedicated session on Library Facilities was conducted by the University Librarian, Dr. Mahesh Solanki, providing an overview of available research materials, digital repositories, and support services.

A key segment of the orientation was presented by Mrs. Neha Gameti, Ph.D. Section, GTU on the Ph.D. program's rules and regulations. This session was organised to apprise the new scholars about academic policies, research practices, and compliance requirements etc.

The event concluded with an engaging Q&A session and remarks by Dr. Rajesh Thakker, Director- R&D Cell, GTU.



Exploring Collaborative Opportunities between CSIR-CSMCRI and GTU

R&D Cell-GTU organized an event aimed at exploring research collaborations between research scholars, postgraduate students and faculty members of GTU and scientists of CSMCRI – Bhavnagar on February 25, 2025 at the A-2 Conference Hall, GTU Chandkheda Campus, Ahmedabad. This programme was organized for research scholars and research supervisors/faculty members specifically in the field of Chemical Engineering, Rubber Technology, Textile, Plastic Technology, Environmental Engineering, Chemistry, Biotechnology, Mechanical Engineering, Metallurgical Engineering and allied disciplines.

Dr. Rajesh Thakker, on behalf of Dr. K. N. Kher delivered the inaugural address, emphasizing collaboration, innovation, and opportunities for joint research with CSIR-CSMCRI.

Following the inaugural address, the session was handed over to Dr. Parul Sahu, Senior Scientist from the Salt & Marine Chemicals Division –CSMCRI. She showcased CSMCRI's advanced analytical facilities, including NMR, SXRD, TEM, FE-SEM, PXRD, XPS, and XRF, vital for material research. She highlighted opportunities for internships and dissertations at CSIR-CSMCRI.

Thereafter the session was handed over to Dr. Arup Ghosh, Senior Principal Scientist and Co-divisional Chair - Applied Phycology and Biotechnology Division, CSIR-CSMCRI Bhavnagar. He highlighted CSMCRI's mission

and R&D efforts in areas like Biology, Chemical Engineering, advanced materials, and sustainability. He also gave details about the technologies for salt production, solar energy, desalination, and silica applications. Dr. Ghosh also introduced the Mandapam Camp research station in Tamil Nadu and emphasized innovative initiatives such as seaweed cultivation in Gujarat and mobile desalination for delivering potable water solutions.

Following this enlightening session, Dr. Rajul K. Gajjar, Hon'ble Vice Chancellor-GTU, delivered her presidential speech highlighted the pivotal role of research in driving technological innovation through collaborations between academic institutions and organizations like CSIR-CSMCRI.

Post lunch session was delivered by Dr. B.K. Markam, Principal Scientist, Process Design & Engineering Division, CSMCRI. He discussed about decentralized solar thermal systems, highlighting their sustainable applications and optimization techniques. He presented the solar thermal dryer, a technology benefiting fishing communities by enhancing fish drying efficiency through humidity regulation and renewable energy integration.

The next session was delivered by Dr. Mrinmoy Mondal, Scientist Membrane Science & Separation Technology Division, CSMCRI. He discussed about the R&D activities related to membrane science and separation technologies especially in areas of membrane science, focusing on advanced solutions for desalination, purification, wastewater treatment, and energy efficiency. He highlighted the versatility of polymeric, ceramic, and composite membranes in industries like food processing and gas separation, along with innovations in synthetic membranes for reverse osmosis, nano-filtration, ultrafiltration, and fuel cell applications.

The last session was delivered by Dr. Saravanan S., Senior Scientist Inorganic Materials & Catalysis Division, CSMCRI. He delivered a presentation on tailoring organic molecules and materials for task-specific catalytic applications. He discussed his research on catalytic activity aimed at the synthesis of fine chemicals and the chemical fixation of CO₂. He emphasized the exploration of marine resources as a promising avenue for identifying catalytic and polymeric applications. By leveraging the unique properties of marine-derived materials, this division seeks to develop innovative solutions that are both environmentally friendly and highly functional.

The session concluded with a vote of thanks from Dr. R.A. Thakker, He expressed his gratitude to all the scientists from CSMCRI for sharing insights on the ground-breaking research being conducted at CSIR-CSMCRI.



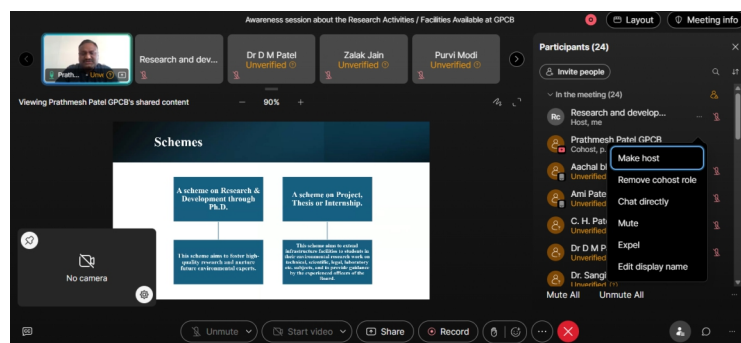
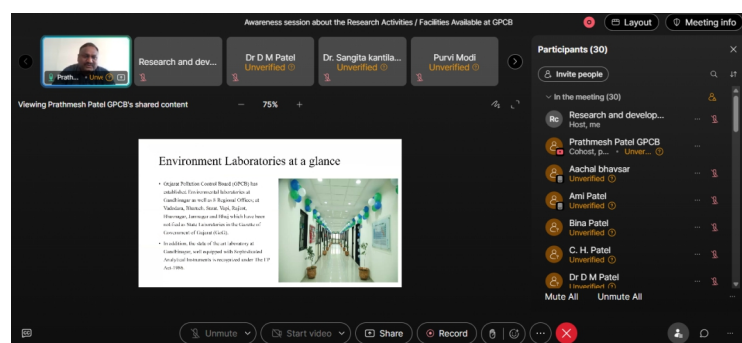
Session on Research Facilities available at Gujarat Pollution Control Board (GPCB)

The R&D Cell - GTU organized an online session on research facilities available at Gujarat Pollution Control Board (GPCB) on March 07, 2025. This session was delivered by Mr. Prathmesh Patel, Unit Head – R&D, GPCB. Mr. Prathmesh Patel emphasized GPCB's commitment towards environmental protection through sustainability, innovation, and collaboration, highlighting research as vital to drive impactful changes. He highlighted GPCB's research efforts in pollution control, innovative technologies, site remediation, and efficient treatment methods, along with showcasing advanced instruments.

Mr. Prathmesh Patel introduced the Ph.D. Scheme, which supports research in environmental science and pollution control in the state, offering Rs. 20,000/- month for up to three years and Rs. 60,000/- annually for research-related expenses. He briefed about the Internship Scheme, which supports environmental research through resources availability and mentorship from GPCB professionals.

During his talk, he presented GPCB's initiative, "A Scheme on Project, Thesis, or Internship," which promotes academic research in environmental subjects, offering students facilities, guidance and resources. He also informed about the state-notified environmental laboratories at Gandhinagar and eight regional offices. He informed that GPCB Gandhinagar lab is well- equipped having state-of-the-art instrumentation facilities.

Participants actively engaged during the Q&A session, where Mr. Prathmesh Patel elaborated on the research facilities available at GPCB that can be utilized by students and faculty members.



Session on Viksit Bharat @2047- Participation of Women in Research & Innovation

Gujarat Technological University (GTU) organized a seminar on "Viksit Bharat @2047—Participation of Women in Research & Innovation" on 10 March, 2025, at the A-2 Conference Hall, GTU Chandkheda Campus, Ahmedabad. This event was hosted by the Vidushi Gargi Centre for Women Development (WDC) in collaboration with the Research & Development (R&D) Cell- GTU, was part of the International Women's Day celebrations. This seminar aimed at emphasizing the critical role of women in science, technology and research; inspiring the next generation of researchers and innovators. This programme was specifically organized for female students, research scholars and faculty members.

The expert session were delivered by Dr. Neharika Vohra, Professor IIM-Ahmedabad, and Ms. Minal Rohit, Scientist and Systems Engineer-ISRO. Ms. Rohit played a pivotal role in India's Mars Orbiter Mission, showcasing her expertise in sensor integration and advancing India's space exploration initiatives.

The event started with an address by Dr. K. N. Kher, Registrar-GTU, emphasized the crucial role of women in science and technology and inspired young researchers to strive for excellence and make the most of available opportunities. Thereafter the session was handed over to Dr. Neharika Vohra, encouraged participants to pursue research with curiosity and persistence, emphasizing its impact on innovation. The next session was delivered by Ms. Minal Rohit who shared her inspiring journey in space science, showcasing her contributions to India's space exploration and the significance of monitoring systems in addressing global challenges like climate change and disaster management.

The session concluded with a vote of thanks from Dr. Komal Borisagar, Chairperson, WDC, GTU, expressing her gratitude to the esteemed speakers and participants. She highlighted the importance of the event and acknowledged the collaborative efforts of the GTU-WDC and R&D Cell in making the event a grand success. More than 100 female students, research scholars, and faculty members attended this event, drawing inspiration to dream big, conduct impactful research, and act decisively.



6 Days Faculty development Programme *on* Empowering Faculty *on* IPR: Patent, Designs, Copyrights, Trademarks, GIs *and* Plant Varieties

GTU- IPFC under DPIIT- SPRIHA, in collaboration with GTU- R & D Cell and GUJCOST, Govt. of Gujarat organized a 6 Days Faculty Development Programme on Empowering Faculty on Intellectual Property Rights: Patent, Designs, Copyrights, Trademarks, GIs and Plant Varieties with a total of 32 participants from 21 colleges across Gujarat, comprising 20 faculty members nominated by the DTE, and 3 IP and Incubation Officers from Gujcost.

The 6-days intensive Faculty Development Program (FDP) on Intellectual Property Rights (IPR) successfully covered essential topics such as Patents, Copyrights, Trademarks, Geographical Indications, Industrial Designs, and Plant Varieties. Through expert-led sessions, interactive discussions, and practical activities, participants gained in-depth knowledge of IPR frameworks, filing processes, legal aspects, and commercialization strategies, equipping them to integrate IPR practices into research, innovation, and academic curricula.

The FDP concluded with a vote of thanks from Dr. Kshipra Chauhan. She extended her sincere gratitude towards the Directorate of Technical Education (DTE) for deputing faculty members from various parts of the state and thanked SPRIHA, and GUJCOST for providing financial assistance and also for deputing IP and Incubation Officers for the FDP.

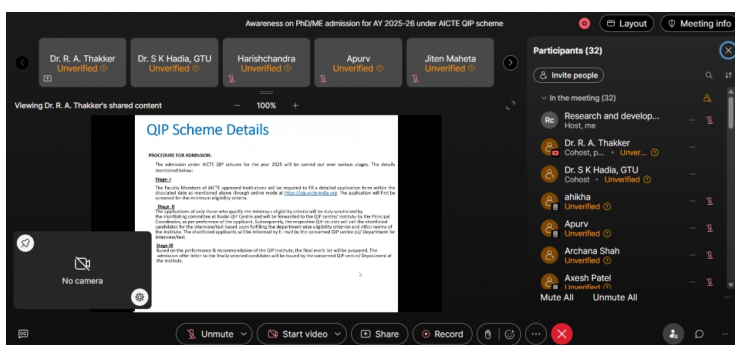
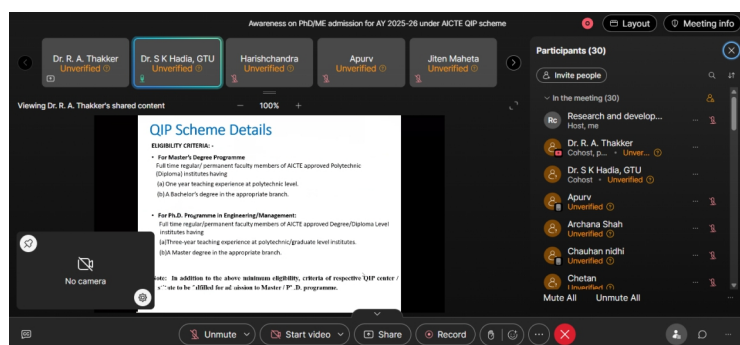


PhD/ME Admission for AY 2025-26 under AICTE QIP (Quality Improvement Programme) Scheme

The R&D Cell - GTU organized an online session aimed for creating awareness amongst the faculties of all affiliated institutes to explore option for further studies under AICTE-QIP Scheme. This event was organized on 19 March 2025 for faculty members of degree and diploma engineering institutes specifically for those interested to pursue further study.

Dr. Rajesh Thakker, Director-RDC, delivered the welcome address highlighting the objectives of the AICTE QIP scheme. He also urged participants to grab opportunities for joining Ph.D. and ME at GTU QIP Centre.

Then the session is handed over to GTU-QIP Coordinator to deliver an overview about the AICTE QIP scheme, discussing the admission processes, procedure and timelines.





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