सत्यमेव जयते

nidm
Resilient India - Disaster Free India

Report

Five Days Short Term Course (Hybrid Mode) Programme on

Flood Estimation and Hydraulic Structures

- New Approach for Risk Reduction

(FEHS-2024)

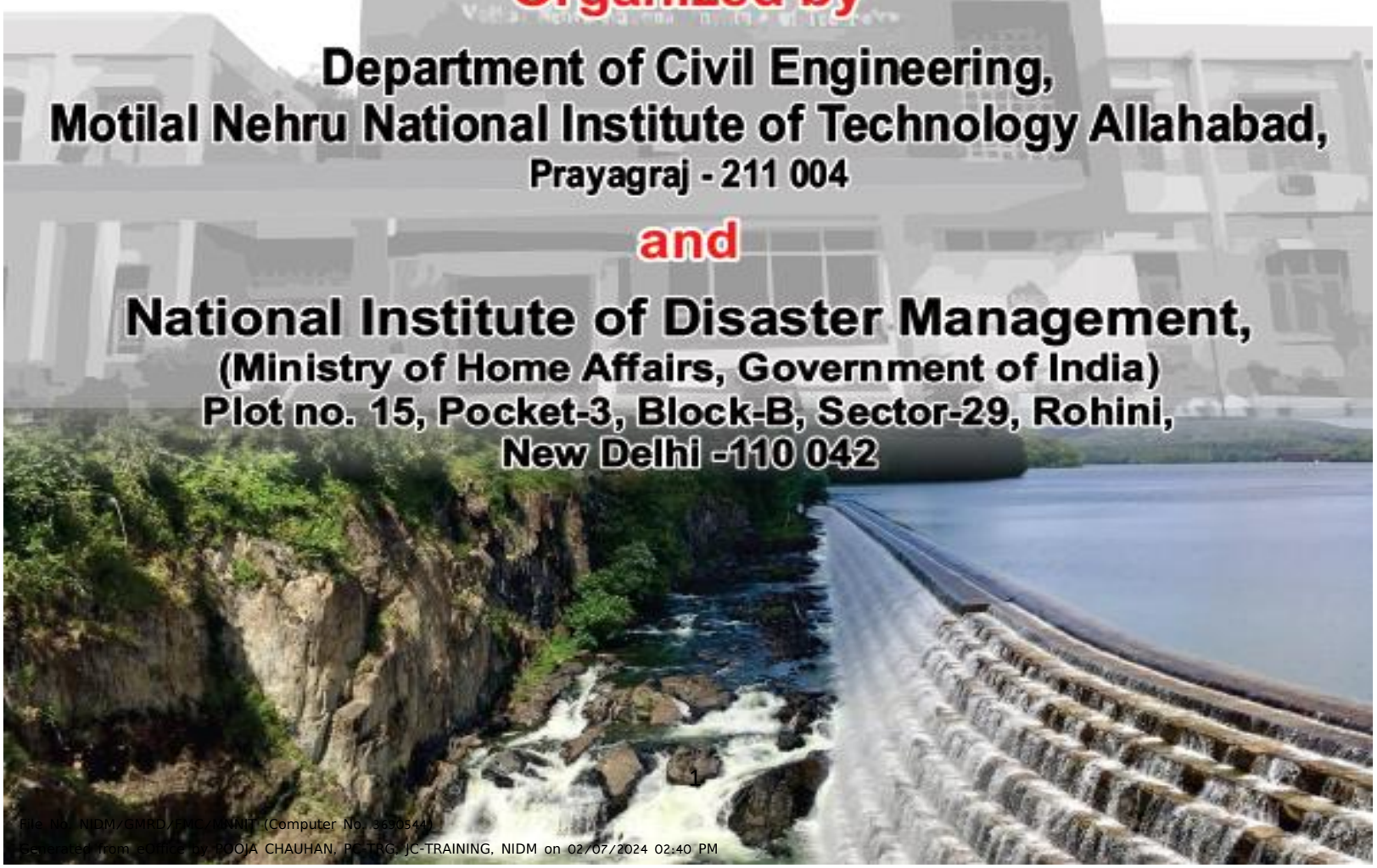
[29th April to 03rd May, 2024]

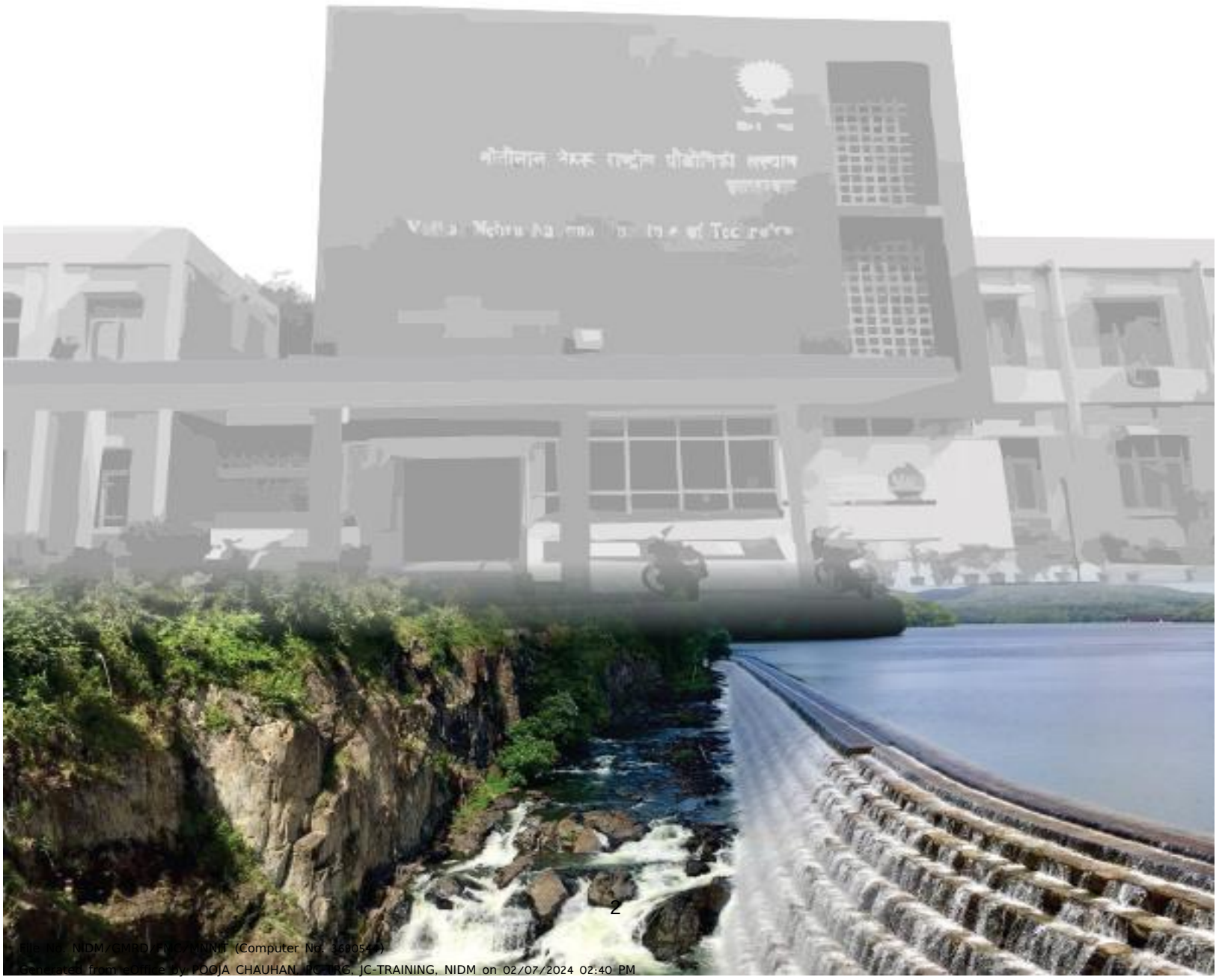
Organized by

Department of Civil Engineering,
Motilal Nehru National Institute of Technology Allahabad,
Prayagraj - 211 004

and

National Institute of Disaster Management,
(Ministry of Home Affairs, Government of India)
Plot no. 15, Pocket-3, Block-B, Sector-29, Rohini,
New Delhi -110 042





Report

Five Days Short Term Course (Hybrid Mode) Programme on

Flood Estimation and Hydraulic Structures

-New Approach for Risk Reduction

(FEHS - 2024)

[29th April to 03rd May, 2024]

PREFACE

In general, disaster refers to any such accident; for which no person or group should be ready and capable in itself. In the National Disaster Management Act-2005 Disaster defined as any major accident caused by natural, man-made, accident or negligence has been done, in which extensive loss of life and property, damage to the environment has been caused and the affected area will be unable to face it. Traditionally providing relief assistance to the natural disaster victims like flood, drought, fire, celestial after lightning, hailstorm and heavy rains, etc. provided by the government or the government agencies has been in practice. In new circumstances, many man-made accidents can happen in this way, whose effect would be equal to or greater than that of acts of God. For this reason, in the current concept of disaster, natural calamities along with this, the area of man-made factors has also been included and pre-preparation and rehabilitation in disaster management. The national network has been involved in the distribution of relief as well. At present the aim of disaster management is to prevent such incidents as far as possible. Reaching out and then helping and rehabilitating the affected people to recover from the disaster. They have to be rehabilitated under the National Disaster Management Act-2005. Under the National Disaster Management Act-2005, the National Disaster Management Authority at the national level has been formed. State Disaster Management Authority has been constituted at the state level. District Authority has been constituted at the district level.

Motilal Nehru National Institute of Technology Allahabad, Prayagraj is one of the prominent technical institution of national importance and significance that caters several engineering dimensions and domains to serve society and nation. Department of Civil Engineering is one of its pioneer branches that have its own legacy in the field of technical education and services. Dept. of Civil Engg. has been continuously involved in educating, enlightenment, dissemination of technical knowledge to masses through various programs, courses and initiatives.

Prayagraj is located in the holy bank of Sangam and is bounded by rivers from its three sides. It lies in the fertile plain of river Ganga, Yamuna and Saraswati (invisible) which is highly rich for agriculture and its practices. Thus, the relevance of Prayagraj becomes highly significant whenever we talk about disaster. In addition to this, India is an agriculture-based country and about 70% of its economy depends on it. Although India has to support 16 per cent of the

world's population and 15 per cent of livestock, we have only 2.4 per cent of the land and 4 per cent of the water resources of the world. Out of about 4 000 km^3 of precipitation in a year, as much as 3000 km^3 comes as rainfall in a short monsoon period of three to four months from June to September. The distribution of the water thus available is not uniform and is highly uneven both with respect to space and time. The average annual water resource potential of the country is estimated to be 1869 km^3. Due to hydrological, topographical and geological limitations, however, only 690 km^3 of surface water can be utilized by conventional storage and diversion structures. The annual recharge of groundwater is 433 km^3.

In Prayagraj traditional natural calamities due to excessive rains have been coming like Flood, drought, fire, storm, etc. Since, Prayagraj lies in the seismic zone III of the country, therefore the probability of tremor hitting the area would be remote and thus disaster from earthquake would be not much.

Mainly two rivers in Prayagraj District (1) Yamuna river at Tehsil Sadar, Karchna and Bara and (2) Ganga river at Soraon, Phulpur, Handia, Karchna and Meja along with their tributaries rivers Bakulahi, Mansaita, Barna, Tons, Lapri and Belan rivers, from the above rivers respectively Tehsil Sadar-61, Soraon-106, Phulpur-116, Handia-92, Karchhana-78, Bara-79, Meja-94 and Koraon-15. Thus in total 6,411 villages get affected by floods. In addition to this Prayagraj organizes Kumbh and Magh Mela at the bank of Sanagm. During this mela, a complete town is developed on the bank of Sangam in which three to five crores of pilgrims reside and visit.

Due to the Ganga and Yamuna rivers in the past years, this district has been awarded in the years 1948, 1956, 1967, 1971, 1948, 1956, 1967, 1971, 1978, 1983, 2001 and 2013, we had to see severe outbreak of flood. The September flood of the year 1978 was the biggest flood of the century for this district, it was a big flood in which the water level of river Ganga was 88.390 meters and the water level of river Yamuna was 87.390 meters in Naini. The district was completely destroyed by this flood. This flood affected an area of 6,85,000 hectares in a total of 1,075 villages of the district. A total of 2,02,745 persons in 251 villages were completely inundated covering an area of 1,67,735 hectares, in which the sown area is 1,24,412 affected. A total of 5023 buildings were involved in the damaged area. Total 5023 buildings were damaged whose estimated loss was estimated at Rs 7,82,10,000,00. In the historical city of the country at that time terrible danger was created when at the Yamuna bank road crossing, river water entered the city area and starting to enter the city area also in Baksi dam due to water leakage

there was a possibility of dam failure. With the untiring efforts of the administration and the concerned departments, this historic city, was saved from flood disaster. The flood of the year-2013 lasted for almost a month, in which relief work was done for 39 days in the camp Approx Rs.30,76,570/- expenditure was incurred.

The average rainfall of the district is 976.40 mm per year. Main rainy months are June, July, August and September. Ganga and Yamuna are two main rivers in Prayagraj district. However there are rivers like Tons, Belan, Baruna, Mansauta, Sasur Khaderi, etc. The problem of flood in the district mainly due to Ganga and Yamuna rivers.

According to the United Nations Office for Disaster Risk Reduction, disasters are defined as 'a serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources'. Human and economic losses from disasters in India are high in comparison to many other developing nations. Events in the last few years around the world focused on the fact that the climate is changing and consequently, for India, which has a vast coastline, the implications of such climate change are humongous. In India, natural disasters like floods, cyclones and drought occur repeatedly in different parts of the country. Numerous districts of India face different disasters around the year and are prone to multiple hazards. Earthquakes, hailstorms avalanches, and landslides also occur in some parts of India but the magnitude of the event and the vulnerability of the location determines the impact of such occurrences. Brunt of such disasters in India is disproportionately high on the poor and vulnerable, like children (especially girls and children with special needs), who suffer the most and are ill-equipped to protect themselves.

An article in 'India Climate Dialogue' (2017) mentions that, in 2016, the country reported the highest number of deaths due to extreme weather (2119 fatalities) and suffered losses of more than INR 1.4 trillion in property damage, which is almost one percent of India's GDP. The Hyogo Framework of Action (HFA) approved in 2005 by United Nations International Strategy for Disaster Reduction (UNISDR), to which India is a signatory, advocates mainstreaming disaster risk reduction into socioeconomic development planning and activities. Towing along these guidelines, the Government of India (GOI) constituted a High Powered Committee (HPC) on Disaster Management. Thus came into existence 'The Disaster

Management Act' 2005, which lays down institutional, legal, financial and coordination mechanisms at the central, state, district and local levels.

In this context, Dept. of Civil Engg., MNNIT Allahabad, Prayagraj has been dynamically engaged in disaster preparedness and response operations in-order to minimize or address issues of disaster being made due to droughts and floods. We also endeavor to develop safer communities resilient towards disasters by strengthening institutional/ individual capacities, building partnerships, identifying the disaster risk management needs, and mainstreaming risk reduction measures in our projects and programs.

ACKNOWLEDGEMENT

On successful and effective completion of five days short term (Hybrid mode) Programme on "Flood Estimation and Hydraulic Structures – New approach for Risk Reduction (FEHS -2024" from 29th April to 03rd May, 2024, we would like to extend our sincere thanks and gratitude to Patrons of our organizing committee namely Prof. R.S. Verma, Director, MNNIT Allahabad and Shri. Rajendra Ratnoo, IPS Executive Director, NIDM, New Delhi. Under their visionary and dynamic leadership this Short-Term Course has reached it pinnacle, with achievements of identified objectives for this course.

Our sincere thanks and gratitude are also extended to Shri. Arvind Kumar Chauhan I.A.S., VC, Prayagraj Development Authority, Prayagraj and Er. Vijay Kumar, Chief Engineer (Irrigation) Prayagraj for their valuable guidance and mentoring by setting the tone of further technical session after their inspirational, motivational and informative address during inaugural session as Chief Guest and Guest of Honour respectively.

In continuation to this, we extend our sincere thanks to Prof. R.M. Singh, HoD, Dept. of Civil Engg., MNNIT and Prof. Surya Parkash, Head, NIDM, New Delhi for extending their valuable inputs in the capacity of Chairperson, Organizing Committee, FEHS – 2024.

We ought it as our pleasure to extend sincere thanks to all the key speakers of the technical session those have being the backbone of this programme and have made the session highly effective and relevant from their lecture.

In the end, we would also like to thank all the participants and team members directly and indirectly involved with this programme and have extended their sincere contributions to ensure its ultimate success.

Dated: **21-May-2024**
Place: **Prayagraj**

(Prof. R.P. Singh)	(Prof. H.K. Pandey)	(Dr. Ananth Wuppukondur)	(Dr. Binit Kumar)	(Sandeep Kr. Singh)
Coordinator, FEHS - 2024	**Coordinator, FEHS - 2024**	**Coordinator, FEHS - 2024**	**Coordinator, FEHS - 2024**	**Coordinator, FEHS - 2024**
Professor, Dept. of Civil Engg., MNNIT Allahabad	Professor, Dept. of Civil Engg., MNNIT Allahabad	Assistant Professor, Dept. of Civil Engg., MNNIT Allahabad	Assistant Professor, Dept. of Civil Engg., MNNIT Allahabad	Young Professional, NIDM, New Delhi

CONTENTS

About MNNIT Allahabad

Motilal Nehru National Institute of Technology Allahabad, Prayagraj (MNNIT) is an Institute with total commitment to quality and excellence in academic pursuits. It was established as one of the seventeen Regional Engineering Colleges of India in the year 1961 as a joint enterprise of Government of India and Government of Uttar Pradesh, and was an associated college of University of Allahabad, which is the third oldest university in India.

The Institute was affiliated to U.P. Technical University for a short duration of two years (2000-2002). With over 45 years of experience and achievements in the field of technical education, having traversed a long way. The MNREC was transformed into National Institute of Technology and Deemed University fully funded by Government of India on June 26, 2002. With the enactment of National Institutes of Technology Act-2007(29 to 2007), the Institute has been granted the status of institution of national importance w.e.f. 15.08.2007.

The Institute had begun with offering bachelor's degree Programmes in Civil, Electrical and Mechanical Engineering. It was the first in the country to start an undergraduate programme in Computer Science & Engineering in 1976-77. Subsequently, in the year 1982-83 undergraduate programmes in Electronics Engineering and Production & Industrial Engineering

were started. The first Master's Programme of the Institute was introduced by the Mechanical Engineering Department in the year 1966. In all other Engineering Departments, Master's Programmes were introduced in the 1970-71. To add a new dimension to itself the Institute established School of Management studies in 1996, which offers two years post graduate degree programme in Management (MBA).

The Institute now offers nine B.Tech., nineteen M.Tech. Degree Programmes (including part-time), MCA, MBA, M.Sc. (Mathematics and Scientific Computing) and Master of Social work (M.S.W.) programmes and also registers candidates for the Ph.D. degree. The Institute has been recognized by the Government of India as one of the centers for the Quality Improvement Programme for M.Tech. and Ph.D. The Institute has a very progressive policy towards extending all possible facilities to its faculty members to acquire higher degrees and receive advanced training. As a result, all the faculty members possess Ph.D. degrees. The entire campus is networked with 94 Mbps lease line.

In the year 1972, the Institute initiated a self-employment project and established an industrial estate with 68 sheds with the objective of encouraging entrepreneurs and creating additional employment avenues. The Institute was selected as a lead institution in the Design theme under Indo-UK REC Project (1994-99). Under this scheme a Design Centre was established. The Institute has been selected as a Lead Institution under World Bank funded Government of India Project on Technical Education Quality Improvement Programme (TEQIP) (2002-2007). Two state level institutions are networked with MNNIT under the project.

MNNIT Allahabad has been ranked under top 10 central institution in the country under ATAL Ranking for Innovation achievements. It has also been awarded 4 star ranking for Innovation Institution Council by the Ministry of Education, Govt. of India.

About NIDM New Delhi

The National Institute of Disaster Management (NIDM) was constituted under an Act of Parliament with a vision to play the role of a premier institute for capacity development in India and the region. The efforts in this direction that began with the formation of the National Centre for Disaster Management (NCDM) in 1995 gained impetus with its redesignation as the National Institute of Disaster Management (NIDM) for training and capacity development.

Under the Disaster Management Act 2005, NIDM has been assigned nodal responsibilities for human resource development, capacity building, training, research, documentation and policy advocacy in the field of disaster management.

Both as a national Centre and then as the national Institute, NIDM has performed a crucial role in bringing disaster risk reduction to the forefront of the national agenda. The Institute believes that disaster risk reduction is possible only through promotion of a "Culture of Prevention" involving all stakeholders. The Institute works through strategic partnerships with various ministries and departments of the central, state and local governments, academic, research and technical organizations in India and abroad and other bi-lateral and multi-lateral international agencies.

NIDM is proud to have a multi-disciplinary core team of professionals working in various aspects of disaster management. In its endeavor to facilitate training and capacity development, the Institute has state-of-the-art facilities like class rooms, seminar hall and video-conferencing facilities etc. The Institute has a well-stocked library exclusively on the theme of disaster management and mitigation. The Institute provides training in face-to-face, on-line and self-learning mode as well as satellite based training. In-house and off-campus face-to-face training to the officials of the state governments is provided free of charge including modest boarding and lodging facilities.

NIDM provides Capacity Building support to various National and State level agencies in the field of Disaster Management & Disaster Risk Reduction. The Institute's vision is to create a Disaster Resilient India by building the capacity at all levels for disaster prevention and preparedne

About Department of Civil Engineering, MNNIT Allahabad

The Civil Engineering Department offers a Bachelor of Technology and two years regular post graduate courses in Structural, Environmental, Geotechnical and Transportation Engineering. It also offers part-time M.Tech. and Ph.D. programme. The Department is also recognized QIP (Quality Improvement Program) Centre for post graduate studies. The course curriculum is up to date, spanning disciplines that cover both traditional concepts and recent developments. A strong foundation is laid through courses on Concrete and Steel Structures, Geotechnical Engineering, Environmental Engineering, Transportation Engineering, Irrigation Engineering and Computer Application. Besides, students are offered a variety of electives like Advance Engineering, Properties of Soil, Computer Simulation, Rock Mechanics, Ecology and Operations Research. The theoretical courses are supplemented by imparting practical experience through well-equipped laboratories. The department has 29 nos. of faculty members belonging to different disciplines. All the faculty members have expertise and strong research background. The department is well equipped with state of art laboratories for UG, PG. and research scholars. Under outreach activities, significant numbers of consultancies are provided to the stakeholders and highest contributor in resource generation in the Institute.

About the Five Days Short Term Course (Hybrid Mode) Programme

Genesis:

In India, the relevance and need for short-term courses and training sessions on "Flood Estimation and Hydraulic Structures - New Approach for Risk Reduction" cannot be overstated given the country's susceptibility to floods and the increasing frequency and intensity of such events due to climate change. These courses provide a vital platform for equipping professionals, policymakers, and practitioners with the knowledge and skills necessary to address the evolving challenges of flood management effectively. With rapid urbanization and infrastructural development and the increasing flood risks with climate change, there is an urgent demand for innovative approaches that integrate advanced techniques and technologies to mitigate these risks.

Moreover, such courses fill a critical gap in the existing capacity-building efforts by offering specialized training focused on flood estimation and hydraulic structures, which are integral components of flood risk reduction strategies. By familiarizing participants with state-of-the-art methodologies, tools, and best practices, these sessions empower them to develop comprehensive flood management plans tailored to the unique geographical and hydrological contexts of different regions in India. Furthermore, the emphasis on new approaches underscores the importance of innovation and adaptation in addressing the evolving nature of flood risks in the country.

Beyond technical expertise, these short-term courses foster collaboration and knowledge sharing among diverse stakeholders, including government agencies, academic institutions, and civil society organizations. By bringing together professionals from various backgrounds and disciplines, these sessions create opportunities for interdisciplinary dialogue and the exchange of experiences, ultimately contributing to more holistic and integrated approaches to flood risk reduction. Overall, the relevance and need for short-term courses on flood estimation and hydraulic structures reflect India's commitment to building resilience and sustainability in the face of escalating flood challenges, positioning the country to better respond to and mitigate the impacts of future flood events.

National Institute of Disaster Management (NIDM), Ministry of Home Affairs, Government of India has been mandated under Disaster Management Act 2005 to develop training modules and educational materials, undertake training, research, documentation and publication for capacity development and dissemination of knowledge / information related to disaster management, assist in formulation of policies, plans, strategies and frameworks for disaster risk reduction and resilience as well as promote awareness among different stakeholders for enhancing human capacity to avoid, prevent, mitigate, prepare, respond and recover efficiently in a proactive, holistic and integrated manner.

In pursuance to the mandate of Disaster Management Act 2005, Dept. of Civil Engg., Motilal Nehru National Institute of Technology Allahabad, Prayagraj with the support from National Institute of Disaster Management (NIDM), Ministry of Home Affairs, Government of India has conducted a Five Days Short Term Course (Hybrid Mode) on “Flood Estimation and Hydraulic Structures -New Approach for Risk Reduction (FEHS 2024)” from 29th April to 03rd May, 2024.

This course was intended for Professionals, Academicians, Research Scholars, Scientists, Technocrats already engaged in or in pursuant of exploring new dimensions in the subject area. This course also aimed at capacity building of new stakeholders in the society those may extend their sincere contributions towards mitigation of disasters by developing new approach for risk reduction and disaster resilient new hydraulic infrastructures and upgrading the old ones.

Objectives:

At the end of this course, participants were able to:

- develop better understanding about disaster mitigating hydraulic infrastructure;
- learn about the relevant Act, Policy, Plan, Guidelines and SOPs on Disaster Management in the country;
- understand the applications of different software and new techniques to analyze the disaster arising due to floods
- develop solutions for mitigating the adverse impacts of disaster in regions likely to be affected by them;
- initiate activities on planning, designing and development of disaster mitigating roadmaps and effective planning for their functional and geographical regimes;
- discuss the collaboration and strengthening mechanisms for effective implementation of flood disaster mitigation related awareness activities at national, state as well as local level.

Demography of Participants:

A total of 40 Professionals, Academicians, Research Scholars, Scientists and Technocrats engaged in or in pursuant of exploring new dimensions in the subject area and various other stakeholders engaged in the domain of Risk Reduction and Management due to floods and flood driven disasters have attended the said five days short term course (hybrid mode). Out of 40 participants 37 have attended the session in physical mode and 03 were present through online mode.

- **Discretion of participants on the basis of Gender:**

	MALE (1)	**FEMALE** (2)	**BOTH** (1+2)
In nos.	37	03	40
In %	92.50%	7.50%	100%

- **40 numbers of participants have come all across from 10 different institutes to participate in this programme.**

- **Twenty-four participants were professional engineers and officials coming from various Government organizations.**

- **Discretion of participants on the basis of qualification:**

	Academician (1)	**Researcher** (2)	**Professional Official** (3)	**Professional Engineer** (4)	**All** (1+2+3+4)
In nos.	04	12	11	13	40
In %	10.00%	30.00%	27.50%	32.50%	100%

Learning Methods:

This complete program was organized in hybrid mode for participants. Those participants participating in physical mode, they were participating in the activities at Smart Classroom inside EDC of MNNIT Allahabad, Prayagraj. However, same activities were broadcasted through online platform so that participants in virtual mode can join the activities of the programme. Along with the theoretical lectures hands-on sessions were also carried out.In addition to this, four expert speakers namely Prof. Zulfequar Ahmed from IIT Roorkee, Dr. Pramod Soni from IIT-BHU, Varanasi, Dr. Manish Pandey from IIT Kharagpur and Dr. S. Ramalingam from NIT Puducherry have joined the programme virtually and have effectively taken their sessions.

Organizing Committee:

PATRONS

Shri. Rajendra Ratnoo
IPS Executive Director,
NIDM, New Delhi
ed.nidm@nic.in

Prof. R.S. Verma
Director,
MNNIT Allahabad
director@mnnit.ac.in

CHAIRPERSONS

Prof. Surya Parkash
Head, GMRM & CBRN Division, NIDM, New Delhi
surya.nidm@nic.in

Prof. R.M. Singh
Head, CED, MNNIT Allahabad
hced@mnnit.ac.in

COORDINATORS

Dr. R.P. Singh
Professor,
Dept. of Civil Engg.,
MNNIT Allahabad
rps@mnnit.ac.in
+91-9450 536 371

Dr. H.K. Pandey
Professor,
Dept. of Civil Engg.,
MNNIT Allahabad
hkp@mnnit.ac.in
+91-9415 630 591

Dr. Binit Kumar
Assistant Professor,
Dept. of Civil Engg.,
MNNIT Allahabad
binitkumar@mnnit.ac.in
+91-9709408849

Dr. Ananth Wuppukondur
Assistant Professor,
Dept. of Civil Engg.,
MNNIT Allahabad
ananth@mnnit.ac.in
+91-9550 777 345

Mr. Sandeep Kumar Singh,
Young Professional, NIDM, New Delhi
sandeepsingh.nidm@nic.in
+91-9234 049 954

STUDENT COORDINATORS

Er. Swapnil Kumar Sharma
Research Scholar,
CED, MNNIT Allahabad

Er. Amit Kumar Pandey,
PG Student
CED, MNNIT Allahabad

Er. Himanshu Hanumant Singh,
PG Student
CED, MNNIT Allahabad

Er. Diwakar Shukla,
PG Student
CED, MNNIT Allahabad

SPEAKERS

Dr. Chandan Ghosh
Professor (Retd.)

Dr. Zulfequar Ahmad
Professor,
IIT Roorkee

Dr. Jothi Prakash
Professor,
IIT Bombay

Dr. Sudhir Kumar Singh
Associate Professor,
University of Allahabad

Dr. Pramod Soni
Assistant Professor,
IIT-BHU, Varanasi

Dr. Manish Pandey
Assistant Professor,
IIT Kharagpur

Dr. Ishtiyaq Ahmed
Assistant Professor,
NIT Raipur

Dr. S. Ramalingam
Assistant Professor,
NIT Puducherry

Program Schedule:

Day 01 – 29th April, 2024		
INAUGURATION		
09:30 am to 10:00 am	Physical Reporting of Participants	
10:00 am to 10:30 am	Physical Registration of Participants	
10:30 am to 10:35 am	Lighting of Lamp and Saraswati Vandana	
10:35 am to 10:40 am	Welcome address- Prof. R. P. Singh, Coordinator, FEHS-2024	
10:40 am to 10:50 am	Course objectives and details - Prof. H. K. Pandey, Coordinator, FEHS-2024	
10:50 am to 10:55 am	Introduction to Department of Civil Engineering – Prof. R.M. Singh, Head, Dept. of Civil Engineering, MNNIT Allahabad	
10:55 am to 11:05 am	Address by "Guest of Honor" – Er. Vijay Kumar, Chief Engineer (Irrigation), Prayagraj	
11:05 am to 11:15 am	Address by "Chief Guest" – Shri. Arvind Kumar Chauhan I.A.S., VC, Prayagraj Development Authority, Prayagraj	
11:15 am to 11:25 am	Presidential Address – Patron – FEHS 2024, Director, MNNIT Allahabad	
11:25 am to 11:30 am	Vote of Thanks – Dr. Binit Kumar, Coordinator, FEHS-2024	
11:30 am onwards	National Anthem	
TEA BREAK [11:30 am to 11:40 am]		
TECHNICAL SESSION - I		
Time	**Title**	**Expert/Speaker**
11:40 am to 01:00 pm	**Urban Flood Mitigation Measures**	**Prof. (Ret.) Chandan Ghosh,** NIDM New Delhi
LUNCH BREAK [01:00 pm to 02:00 pm]		

TECHNICAL SESSION – II		
Time	**Title**	**Expert/Speaker**
02:00 pm to 03:30 pm	**Flood understanding under the lens of Geospatial & modeling approach**	**Dr. Sudhir Kumar Singh,** University of Allahabad
TEA BREAK [03:30 pm to 03:40 pm]		
TECHNICAL SESSION – III		
Time	**Title**	**Expert/Speaker**
03:40 pm to 05:00 pm	**Hydraulics of Piano Key Weirs**	**Dr. Binit Kumar,** MNNIT Allahabad
Day 02 – 30th April, 2024		
TECHNICAL SESSION – IV		
Time	**Title**	**Expert/Speaker**
10:00 am to 11:30 am	**Flood Estimation using SWOT**	**Dr. Pramod Soni,** IIT-BHU, Varanasi
TEA BREAK [11:30 am to 11:40 am]		
TECHNICAL SESSION – V		
Time	**Title**	**Expert/Speaker**
11:40 am to 01:00 pm	**Hydraulic Structures: Design Perspectives**	**Prof. R.M. Singh,** MNNIT Allahabad
LUNCH BREAK [01:00 pm to 02:00 pm]		
TECHNICAL SESSION – VI		
Time	**Title**	**Expert/Speaker**
02:00 pm to 03:30 pm	**Flood Evaluation using SWOT** **Hands On Exercise**	**Dr. Pramod Soni,** IIT-BHU, Varanasi **And** **Prof. H.K. Pandey,** MNNIT Allahabad
TEA BREAK [03:30 pm to 03:40 pm]		
Time	**Title**	**Expert/Speaker**
03:40 pm to 05:00 pm	**SESSION CONTINUES**	**----do----**

Day 03 – 01st May, 2024		
TECHNICAL SESSION – VII		
Time	**Title**	**Expert/Speaker**
10:00 am to 11:30 am	**Sediment and Hydraulic Hazards**	**Dr. Manish Pandey,** IIT Kharagpur
TEA BREAK [11:30 am to 11:40 am]		
TECHNICAL SESSION – VIII		
Time	**Title**	**Expert/Speaker**
11:40 am to 01:00 pm	**Rubber Dam: An innovative hydraulic structure**	**Prof. Zulfequar Ahmad,** IIT Roorkee
LUNCH BREAK [01:00 pm to 02:00 pm]		
TECHNICAL SESSION – IX		
Time	**Title**	**Expert/Speaker**
02:00 pm to 03:30 pm	**Physical and Numerical Modelling (DualSPHYsics) of Hydraulic Structures - Hands On Experience**	**Dr. Binit Kumar,** MNNIT Allahabad and **Dr. Ananth Wuppukondur**, MNNIT Allahabad
TEA BREAK [03:30 pm to 03:40 pm]		
Time	**Title**	**Expert/Speaker**
03:40 pm to 05:00 pm	**SESSION CONTINUES**	**----do----**
Day 04 – 02nd May, 2024		
TECHNICAL SESSION – X		
Time	**Title**	**Expert/Speaker**
10:00 am to 11:30 am	**Climate Change Impact on Coastal Flooding and communities**	**Dr. S. Ramalingam,** NIT Puducherry
TEA BREAK [11:30 am to 11:40 am]		
TECHNICAL SESSION – XI		
Time	**Title**	**Expert/Speaker**

11:40 am to 01:00 pm	**Flood Plain Mapping for Ungauged Basins**	**Dr. Ishtiyaq Ahmad,** NIT Raipur
LUNCH BREAK [01:00 pm to 02:00 pm]		
TECHNICAL SESSION – XII		
Time	**Title**	**Expert/Speaker**
02:00 pm to 03:30 pm	**River Modelling using TELEMAC software- Hands On Experience**	**Dr. Ananth Wuppukondur,** MNNIT Allahabad, **Dr. Binit Kumar** , MNNIT Allahabad**, Prof. R.P. Singh**, MNNIT Allahabad and **Prof. Surya Parkash** NIDM Delhi
TEA BREAK [03:30 pm to 03:40 pm]		
Time	**Title**	**Expert/Speaker**
03:40 pm to 05:00 pm	**SESSION CONTINUES**	**----do----**
Day 05 – 03rd May, 2024		
TECHNICAL SESSION – XIII		
Time	**Title**	**Expert/Speaker**
10:00 am to 11:30 am	**Regional Flood Frequency Analysis including Reservoir Outflow**	**Prof. V. Jothiprakash,** IIT Bombay
TEA BREAK [11:30 am to 11:40 am]		
TECHNICAL SESSION – XIV		
Time	**Title**	**Expert/Speaker**
11:40 am to 01:00 pm	**National Policy and Guidelines of Floods Risk Reduction and Resilience**	**Prof. Surya Parkash,** NIDM, New Delhi
LUNCH BREAK [01:00 pm to 02:00 pm]		
Time	**Title**	**Expert/Speaker**
02:00 pm to 02:30 pm	**Group Photo Session Activities**	NA

TEA BREAK [02:50 pm to 03:00 pm]	
VALEDICTORY SESSION	
03:00 pm to 03:05 pm	Welcoming the Chief Guest and other Dignitaries on Dias
03:05 pm to 03:10 pm	Welcome Address - Prof. R.P. Singh, Coordinator, FEHS-2024
03:10 pm to 03:20 pm	Overview of the Five Days Programme - Prof. H.K. Pandey, Coordinator, FEHS-2024
03:20 pm to 03:30 pm	Feedback - Participants, Any participant(s) of FEHS-2024
03:30 pm to 03:40 pm	Address by HoD, CED - Prof. R.M. Singh, HoD, CED, MNNIT Allahabad
03:40 pm to 03:50 pm	Address by “Guest of Honour" - Prof. V. Jothiprakash, IIT-Bombay
03:50 pm to 04:00 pm	Address by “Chief Guest" - Prof. Surya Prakash, NIDM, New Delhi
04:00 pm to 04:25 pm	Felicitation of Guests and Distribution of Certificates to Participants
04:25 pm to 04:30 pm	Vote of Thanks - Dr. Ananth Wuppukondur, Coordinator, FEHS-2024
04:30 pm Onwards	National Anthem

Inaugural Session:

09:30 am to 10:00 am **Physical Reporting of participants**

All the participants those have already got themselves registered online have reported at the venue of programme i.e. Smart Classroom at EDC Guest House, MNNIT Allahabad, Prayagraj

10:00 am to 10:30 am **Physical Registration of participants**

In total 40 participants coming from 10 different institutes have got themselves registered out of which 37 have been attending in physical mode (offline) and 03 have joined program in virtual mode (online) and all of them have their registration successfully for the programme. Upon successful registration of participants a registration kit was given to all the participants. However, no fee was charged from any of the participants in any form.

10:30 am to 10:35 am **Lighting of Lamp and Saraswati Vandana**

All the guests have arrived at the venue and Dr. HK Pandey along with all other coordinators of FEHS-2024 have escorted all the dignitaries and guests for lightening of lamp offering of garlands to idol of Goddess Saraswati.

As per the cultural accustom Devi Saraswati was adored with Saraswati Vandana before starting any proceeding of the program in order to seek her blessings for successful execution of this course. Saraswati Vandana recording was played and everyone joined the prayer by standing with folded hands at their place. Once the guest took their seats over the dais they were welcomed with bouquet of flowers.

10:35 am to 10:40 am *Welcome Address* – **Prof. R.P. Singh,**

Coordinator, FEHS-2024

Prof. RP Singh, during his address, expressed sincere gratitude to both Patrons of the organizing committee, namely; **Shri. Rajendra Ratnoo**, IPS and Executive Director, NIDM, New Delhi, **Prof. R.S. Verma**, Director, MNNIT Allahabad.

He said that this course has been brought into the reality due the visionary initiatives of Shri. Ratnoo and Prof. Verma.

Further, he welcomed **Er. Vijay Kumar**, Chief Engineer (Irrigation), **Prof. M.M. Gore**, Director (Officiating), MNNIT Allahabad and **Prof. R.M. Singh**, Head, CED, MNNIT Allahabad. He extended his sincere thanks to **Prof. Surya Parkash**, Head, NIDM, New Delhi and **Prof. R.M. Singh**, Head, CED, MNNIT Allahabad for their time-to-time valuable inputs in their significant capacity of Chairperson inside the organizing committee of FEHS-2024. He also welcomed all Coordinators of FEHS-2024 namely; **Prof. H.K. Pandey** and **Dr. Ananth Wuppukondur, Dr. Binit Kumar** from MNNIT Allahabad and **Mr. Sandeep Singh** from NIDM, New Delhi followed with the welcome of experts and speakers of scheduled upcoming technical sessions.

He also welcomed the officials, staffs and volunteers of NIDM, New Delhi and MNNIT Allahabad for their sincere contribution. In his address he reached out to the last person being directly or indirectly involved with this course. In the end he welcomed all dear participants those have come forward to enroll and participate this five days long duration programme.

10:40 am to 10:50 am

Course and objective details - **Prof. H. K. Pandey,**

Coordinator, FEHS-2024

Prof. H.K. Pandey in his address briefed about the objectives and outline of the course. He also emphasized on the needs, significance and relevance of the program.

From his address everyone came to know about the technologies and hands-on activities that participants will be experiencing and enhancing their skills by their continuous practical applications. He also urged the participants to identify any one of the area in their locale that are prone to disaster due to flood and further upon completion of this course they may try to apply their imparted skills to explore possible solution for mitigation of nearing disaster through resilient Hydraulic Structures.

10:50 am to 10:55 am

About the Department of Civil Engineering

- **Prof. R.M. Singh,** Head, CED, MNNIT Allahabad

Prof. R.M. Singh during his address briefed that Department of Civil Engineering at MNNIT Allahabad is one of its oldest and pioneer department.

It has long history and legacy of producing prolific and highly rated engineers. Many of them are currently serving at top posts in Government as well as in Private sectors. Department of Civil Engineering has been also instrumental in giving pace and shape to the constructive and prosperous growth of the nation and society. This programme is aligned on the mandates and objectives of department.

10:55 am to 11:15 am

Address by "Guest of Honor"

– **Er. Vijay Kumar,** Chief Engineer (Irrigation), Prayagraj

Er. Vijay Kumar during his address talked about the importance and significance of this course. Based on his real-life experiences

He said that it is highly difficult and painful experience to face any disaster from ground zero. He said that preparedness, analysis and management are the best policy to check any disaster. However, in India people knowingly get settled in watershed region of rivers and giving open

invitation to disaster. He extended best wishes to the organizers of this course and motivated participants to sincerely participate in the course work.

11:15 am to 11:25 am	*Presidential Address* – **Prof. M.M. Gore,** Director (Offg.), MNNIT Allahabad

Prof. M.M. Gore highly appreciated the efforts of organizers of this programme and with this warm heart welcomes all the participants of this programme to MNNIT campus.

11:25 am to 11:30 am	*Vote of Thanks* – **Dr. Binit Kumar,** Coordinator, FEHS-2024

Dr. Binit Kumar on behalf of the organizing committee extended his sincere thanks to all the stakeholders of programme and thanked all the guests on dais.

11:30 am Onwards **National Anthem**

The Inaugural session concludes with the national anthem that was played on audio system and everyone joined the chorus by standing still at their place.

Technical Session:

The complete course spanned over fourteen technical sessions (including both technical and practical lectures) in five days i.e. from 29th April to 03rd May, 2024. The brief structure of sessions is already discussed earlier in this report. The details of sessions are as follows:

Day 01 – 29th April, 2024		
TEA BREAK [11:40 am to 11:50 am]		
TECHNICAL SESSION - I		
Time	**Title**	**Expert/Speaker**
11:40 am to 01:00 pm	**Urban Flood Mitigation Measures**	**Prof. (Ret.) Chandan Ghosh,** NIDM New Delhi
Prof. Chandan Ghosh has beautifully explained participants about the concepts of Resilient Infrastructure and significant measures to check flood in urban areas. With participants he shared information highlighting the impact of disasters in India. He said that floods are recurring disaster in some of the prominent regions of the country and thus concrete plan to mitigate them must be deduced for their effective management.		
LUNCH BREAK [01:00 pm to 02:00 pm]		
TECHNICAL SESSION – II		
Time	**Title**	**Expert/Speaker**
02:00 pm to 03:30 pm	**Flood understanding under the lens of Geospatial & modeling approach**	**Dr. Sudhir Kumar Singh,** University of Allahabad
Dr. Sudhir Kumar Singh explained that with GIS, we can create new approaches that help us understand the relationship between man and the environment. With the application of GIS we can timely raise alarms before Floods may strike any area and can also estimate the extend of impacts that it can leave in the region. This calls for more integrated tools that build a holistic and comprehensive approach to resolving planning problems. Creating and applying GIS tools and knowledge allow us to integrate geographic intelligence into how we think and behave. To that end, GIS can govern our relationship with the environment as well as help us perceive		

intricate relationships that otherwise we would never be able to understand. Further, he thoroughly explained how Thematic maps generation is possible on one or more than one base maps.

TEA BREAK
[03:30 pm to 03:40 pm]

TECHNICAL SESSION – III

Time	Title	Expert/Speaker
03:40 pm to 05:00 pm	**Hydraulics of Piano Key Weirs**	**Dr. Binit Kumar,** MNNIT Allahabad

Dr. Binit Kumar explained in detail about the new technology introduced in India and in the field of flood management i.e. piano weir/barrage. He said that in this method there is no need to close the gates since there is no concept of gates in this technique and operates automatically. These are capable of discharging three times of water and will not allow silt to settle on the bottom of the channel. It can be installed on dam easily and at low cost. He called it as the future of tomorrow. The piano key weir is an innovative technique to surpass the excess discharge during floods and due to less foundation area, it would be easy and economical in construction. This is the modified labyrinth weir which is responsible for flushing sediment particles easily and in this way it maintains sediment continuity in an open channel flow.

Day 02 – 30th April, 2024

TECHNICAL SESSION – IV

Time	Title	Expert/Speaker
10:00 am to 11:30 am	**Flood Estimation using SWOT**	**Dr. Pramod Soni,** IIT-BHU, Varanasi

Dr. Pramod Soni introduced techniques for Forecasting extreme hydrological events, such as floods, demands a sophisticated approach integrating various tools and models. By synergizing weather forecasting with hydrological modeling, the SWAT (Soil and Water Assessment Tool) model, coupled with QGIS (Quantum GIS), emerges as a robust solution. Initially, setting up the SWAT model using QSWAT allows for seamless integration of spatial data and model parameters. Calibration of the SWAT model fine-tunes its accuracy, ensuring reliable predictions. Collecting Global Forecast Data (GFS) enhances forecasting precision by providing global-scale meteorological inputs. With real-time GFS data feeding into the calibrated SWAT model, rapid predictions of flood discharge become feasible, empowering authorities with

timely insights for effective disaster management and mitigation strategies. This comprehensive approach merges cutting-edge technology with scientific rigor, enabling proactive responses to mitigate the impacts of extreme hydrological events.

TEA BREAK
[11:30 am to 11:40 am]

TECHNICAL SESSION – V

Time	Title	Expert/Speaker
11:40 am to 01:00 pm	**Hydraulic Structures: Design Perspectives**	**Prof. R.M. Singh,** MNNIT Allahabad

Prof. R.M. Singh through his presentation discussed mainly about the designing perspectives of Hydraulic structures. Although he also said that Innovations in hydraulic structure design are catalyzing a paradigm shift towards more effective flood risk reduction strategies. By integrating advanced engineering principles with a holistic understanding of hydrology, these new approaches prioritize resilience and adaptability. Emphasizing multifunctionality, hydraulic structures are designed not only to mitigate flood risk but also to enhance ecological integrity and socio-economic sustainability. Incorporating state-of-the-art technologies such as remote sensing, Geographic Information Systems (GIS), and Artificial Intelligence (AI), these structures offer real-time monitoring and adaptive control mechanisms. Furthermore, community engagement and participatory approaches ensure that local knowledge and needs are integrated into the design process, fostering ownership and enhancing the effectiveness of flood management initiatives. This evolution in hydraulic structure design signifies a proactive stance towards addressing the growing challenges posed by climate change-induced floods, ultimately promoting safer and more resilient communities worldwide

LUNCH BREAK
[01:00 pm to 02:00 pm]

TECHNICAL SESSION – VI

Time	Title	Expert/Speaker
02:00 pm to 03:30 pm	**Flood Evaluation using SWOT - Hands on Exercise**	**Dr. Pramod Soni,** IIT-BHU, Varanasi **And** **Prof. H.K. Pandey,** MNNIT Allahabad

Dr. Pramod Soni and Prof. H.K. Pandey demonstrated and gave participants a hands-on experience during session where participants were able to synergize weather forecast with

hydrological model, the SWAT (Soil and Water Assessment Tool) model, coupled with QGIS (Quantum GIS) using sample data. They also try their hands-on integration of spatial data and model parameters.

TEA BREAK
[03:30 pm to 03:40 pm]

Time	Title	Expert/Speaker
03:40 pm to 05:00 pm	**SESSION CONTINUES**	**--- do ---**

The session continues and participants learn the Calibration of the SWAT model fine-tunes, collecting Global Forecast Data (GFS) which enhances forecasting, real-time GFS data feeding into the calibrated SWAT model, rapid predictions of flood discharge using sample data

Day 03 – 01st May, 2024

TECHNICAL SESSION – VII

Time	Title	Expert/Speaker
10:00 am to 11:30 am	**Sediment and Hydraulic Hazards**	**Dr. Manish Pandey,** IIT Kharagpur

Dr. Manish Pandey through his presentation explained that Sediment and hydraulic hazards pose significant challenges to the stability and integrity of hydraulic structures, necessitating a comprehensive understanding and management approach. Among these hazards, bridge scour stands out as a critical concern, with both general scour in the river and contraction scour presenting substantial risks. Contraction scour, particularly the scour of the streambed, requires precise computation methods to accurately assess its potential impact on structures. Predicting maximum scour depth within channel contractions is paramount for ensuring the structural integrity of bridges and other hydraulic infrastructure. Determining live-bed and clear water scour conditions further refines the assessment, enabling proactive mitigation strategies. Through meticulous prediction and analysis of scour depths, engineers can develop robust designs that withstand the erosive forces of sediment transport, ultimately safeguarding infrastructure and enhancing resilience against hydraulic hazards.

TEA BREAK
[11:30 am to 11:40 am]

TECHNICAL SESSION – VIII

Time	Title	Expert/Speaker
11:40 am to 01:00 pm	**Rubber dam: An innovative hydraulic**	**Prof. Zulfequar Ahmad,** IIT Roorkee

structure

Prof. Zulfequar Ahmad through his presentation discussed the rubber dam which represents a pioneering advancement in dam engineering, diverging from conventional structures to offer a versatile and efficient solution for water resource management. Unlike traditional dams constructed from concrete or earth, a rubber dam comprises a flexible barrier made of reinforced rubber sheets supported by concrete or steel frames. Its adaptable design allows for easy installation and removal, making it ideal for temporary applications or locations with varying water levels. Some salient points about rubber dams include their ability to regulate flow, store water, and mitigate flooding while also facilitating sediment control and ecosystem restoration. The merits of rubber dams extend to their cost-effectiveness, minimal environmental impact during installation, and low maintenance requirements compared to traditional dam structures. The inflation and deflation of a rubber dam are controlled through a sophisticated system of pneumatic or hydraulic mechanisms, enabling precise adjustments to water levels and flow rates as needed. Various types of rubber dams exist, including low-profile, mid-profile, and high-profile designs, each tailored to specific hydraulic conditions and project requirements. Understanding the hydraulics of rubber dams is crucial for optimizing their performance, ensuring efficient water management, and enhancing the resilience of water infrastructure systems in diverse environmental contexts.

LUNCH BREAK
[01:00 pm to 02:00 pm]

TECHNICAL SESSION – IX

Time	Title	Expert/Speaker
02:00 pm to 03:30 pm	**Physical and Numerical Modelling (DualSPHYsics) of Hydraulic Structures - Hands On Experience**	**Dr. Binit Kumar,** MNNIT Allahabad, **Dr. Ananth Wuppukondur**, MNNIT Allahabad **and** **Prof. R.P. Singh**, MNNIT Allahabad

Dr. Binit Kumar and Dr. Ananth Wuppukondur during hands-on experience session focused on physical and numerical modeling, particularly using DualSPHYsics, offers invaluable insights into the intricate dynamics of hydraulic structures. Participants were immersed in a blend of theoretical concepts and practical applications, gaining a deeper understanding of fluid behavior

and structural response. Through physical modeling, participants interact directly with scaled-down replicas of hydraulic structures, observing how different design parameters and environmental conditions influence flow patterns, turbulence, and sediment transport.

TEA BREAK
[03:30 pm to 03:40 pm]

Time	Title	Expert/Speaker
03:40 pm to 05:00 pm	**SESSION CONTINUES**	**--- do ---**

Further in the session, complementing this hands-on approach, numerical modeling using DualSPHYsics software enabled participants to simulate complex hydraulic scenarios, analyze data, and visualize results in a virtual environment using sample data. By combining physical experimentation with computational techniques, participants developed critical skills in model setup, calibration, and validation, empowering them to tackle real-world engineering challenges with confidence and innovation.

Day 04 – 02nd May, 2024

TECHNICAL SESSION – X

Time	Title	Expert/Speaker
10:00 am to 11:30 am	**Climate Change Impact on Coastal Flooding and Communities**	**Dr. S. Ramalingam,** NIT Puducherry

Dr. S. Ramalingam through his presentation made an effort to visualize the impact of climate change on coastal flooding poses significant challenges for communities residing along the Indian coast, including those in Puducherry. As sea levels rise and coastal erosion accelerates, coastal communities face heightened vulnerability to flooding and storm surges. The installation of hard coastal protection structures has inadvertently exacerbated the rate of coastal erosion, compounding the risks faced by these communities. Moreover, land subsidence, coupled with sea level rise, further exacerbates the threat of inundation, placing additional areas at risk of flooding. A community survey reveals that low-income individuals are disproportionately affected by these changes, with concerns ranging from financial stability to healthcare and infrastructure resilience. Addressing the multifaceted impacts of climate change on coastal communities necessitates a concerted effort to enhance adaptive capacity, foster community resilience, and implement sustainable coastal management strategies to mitigate future risks and safeguard vulnerable populations.

TEA BREAK [11:30 am to 11:40 am]		
TECHNICAL SESSION – XI		
Time	**Title**	**Expert/Speaker**
11:40 am to 01:00 pm	**Flood Plain Mapping for Ungauged Basins**	**Dr. Ishtiyaq Ahmad,** NIT Raipur
Dr. Ishtiyaq Ahmad told participants that floodplain mapping for ungauged basins is a critical undertaking essential for understanding and mitigating the risks associated with flooding in regions lacking streamflow data. This process involves several key methodologies and techniques aimed at estimating peak flows and delineating flood-prone areas. Utilizing streamflow data and hydrological models such as the unit hydrograph (UH) and Snyder's method, engineers can derive peak flow values crucial for floodplain delineation. Physiographic parameters, including watershed characteristics and soil properties, play a pivotal role in the selection and application of appropriate hydrological models. The Soil Conservation Service (SCS) peak discharge method, integrated with rainfall-runoff modeling using the SCS-CN method and Geographic Information Systems (GIS), enables comprehensive floodplain mapping by considering factors like land use, hydrological soil groups (HSG), and rainfall characteristics. Through the overlay of land use and HSG data, coupled with the application of Snyder's UH and SCS dimensionless UH methods, accurate estimations of peak discharge can be achieved, facilitating informed decision-making and effective flood risk management strategies for ungauged basins.		
LUNCH BREAK [01:00 pm to 02:00 pm]		
TECHNICAL SESSION – XII		
Time	**Title**	**Expert/Speaker**
02:00 pm to 03:30 pm	**River Modelling using TELEMAC software- Hands On Experience**	**Dr. Ananth Wuppukondur,** MNNIT Allahabad **and** **Dr. Binit Kumar**, MNNIT Allahabad
Dr. Ananth Wuppukondur and Dr. Binit Kumar demonstrated and explained to the participants participating in a hands-on learning session focused on river modeling using TELEMAC software		

which offers a unique opportunity to delve into the intricacies of hydraulic simulations and river dynamics. TELEMAC, renowned for its advanced capabilities in modeling flow processes, sediment transport, and morphological changes, provides a powerful platform for understanding and analyzing river behavior. During the session, participants were engaged in practical exercises, guided them through model setup, boundary conditions definition, and calibration procedures.

TEA BREAK
[03:30 pm to 03:40 pm]

Time	Title	Expert/Speaker
03:40 pm to 05:00 pm	**SESSION CONTINUES**	**--- do ---**

Later on, in the session participants learn by simulating various scenarios using sample data, such as floods or channel modifications, participants gain insights into how different factors influence river behavior and morphology. Additionally, the session enabled participants to interpret simulation results, analyze hydraulic patterns, and assess the potential impacts of proposed interventions or infrastructure projects. Through this hands-on experience, participants developed valuable skills in river modeling and management, empowering them to make informed decisions and contribute effectively to sustainable river basin management practices.

Day 05 – 03rd May, 2024

TECHNICAL SESSION – XIII

Time	Title	Expert/Speaker
10:00 am to 11:30 am	**Regional Flood Frequency Analysis including Reservoir Outflow**	**Prof. V. Jothiprakash,** IIT Bombay

Prof. V. Jothiprakash through his presentation discusses about water resources management in flood-prone areas demands a multifaceted approach that encompasses various strategies and methodologies to mitigate risks and optimize resource utilization. Regional flood frequency analysis, including considerations for reservoir outflow, forms the backbone of flood management planning, enabling authorities to assess the frequency and magnitude of potential flooding events. Introducing floods, control measures, and both structural and non-structural interventions provides a comprehensive understanding of flood risk reduction strategies, emphasizing the role of reservoirs as crucial components of flood control infrastructure. Within

this framework, effective reservoir operation becomes paramount, involving the establishment of rule curves through conventional methods or innovative soft computing techniques to regulate water release and storage. Methodologies for real-time flood modeling and reservoir inflow prediction enhance the precision of flood forecasting, facilitating timely responses and informed decision-making. Additionally, integrated modeling approaches, which merge reservoir operation models with downstream numerical models, offer a holistic perspective on flood dynamics and enable comprehensive assessments of flood risk and management strategies in flood-prone areas. Through the integration of advanced modeling techniques and management strategies, water resources management in flood-prone areas can achieve greater resilience and effectiveness in addressing the challenges posed by floods.

TEA BREAK
[11:30 am to 11:40 am]

TECHNICAL SESSION – XIV

Time	Title	Expert/Speaker
11:40 am to 01:00 pm	**National Policy and Guidelines of Floods Risk Reduction and Resilience**	**Prof. Surya Parkash,** NIDM, New Delhi

Prof. Surya Parkash told participants that in India, the National Policy and Guidelines for Flood Risk Reduction and Resilience serve as a cornerstone in addressing the nation's vulnerability to floods. Recognizing the multifaceted nature of flood risk, the policy emphasizes action plans at various levels, ranging from national to local, to effectively mitigate the impacts of floods. Flood prevention, preparedness, and mitigation strategies are integral components, encompassing measures such as early warning systems, floodplain zoning, and infrastructure development. Moreover, capacity development initiatives aim to enhance the readiness of stakeholders involved in flood response, including government agencies, communities, and non-governmental organizations. Activities focused on minimizing flood risk and losses encompass a wide spectrum of interventions, including the restoration of natural floodplains, construction of flood embankments, and adoption of resilient land use practices. By addressing vulnerability comprehensively and implementing coordinated strategies across multiple sectors, India's national policy and guidelines for flood risk reduction and resilience strive to build a more resilient and adaptive society in the face of recurrent flood events.

LUNCH BREAK
[01:00 pm to 02:00 pm]

GROUP PHOTOGRAPH SESSION		
Time	**Title**	**Expert/Speaker**
02:00 pm to 02:30 pm	**GROUP PHOTOGRAPH**	**NA**
The culmination of the five-day short-term course on Flood Estimation and Hydraulic Structures marked a memorable moment as participants, organizing committee members, and esteemed guests gathered for a group photograph session in the picturesque surroundings of the EDC Guest House lawn. Against the backdrop of newfound knowledge and camaraderie forged through shared learning experiences, the photograph captured the collective spirit of collaboration and dedication towards embracing innovative approaches for flood risk reduction. Amidst smiles and laughter, the image encapsulated the culmination of a successful endeavor aimed at equipping individuals with the tools and insights necessary to navigate the challenges posed by floods with resilience and ingenuity. As participants dispersed, the group photograph remained a symbol of unity and shared commitment towards fostering safer and more resilient communities in the face of hydrological hazards.		
TEA BREAK [02:50 pm to 03:00 pm]		

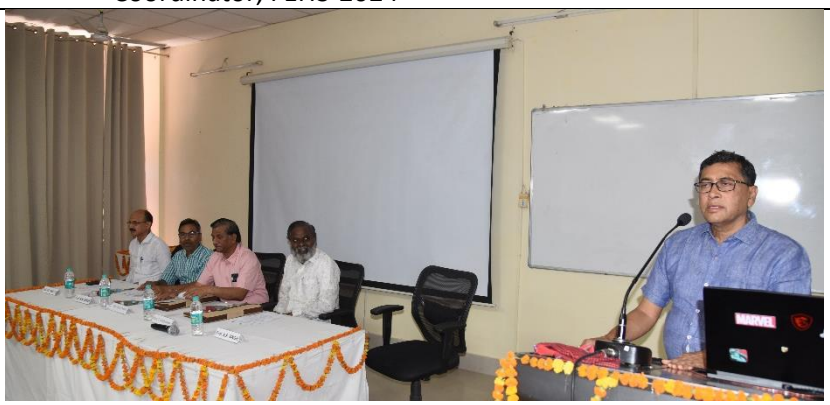
Valedictory Session:

03:00 pm to 03:05 pm	Welcoming the Chief Guest and other Dignitaries on Dais

Soon after the completion of Technical Session-XIV followed with group photo session all the participants, experts, organizers have proceeded for the valedictory session.

In the meanwhile, all the invited guests and other dignitaries were formally escorted to dais by Dr. H.K. Pandey and bouquet of flowers were presented to all the guests on dais.

03:05 pm to 03:10 pm	*Welcome Address* – **Prof. R.P. Singh,** Coordinator, FEHS-2024



Prof. R.P. Singh welcomed all the guests, dignitaries, experts, speakers, organizers and participants in this valedictory session.

He said that any event becomes successful with kind of participants but any academic programme achieves it goal with the quality of teachers. He further added, that any mission becomes successful when its stakeholders are technically well equipped and have ultimate zeal to bring a change. Proudly he said that he feels esteem pleasure to state that all the three parameters said by him are found checked during this programme. He ends his address with acknowledgement to the last person standing and involved with this programme.

03:10 pm to 03:20 pm

Briefing about the course **- Prof. H. K. Pandey,**
Coordinator, FEHS-2024

Dr. H.K. Pandey in his address highlighted the experience which he had received from various stakeholders (participants, organizers and speakers) of this course. He stated that about in about 28 hours of technical sessions covering applications of different software, techniques and technologies were completed in the five days duration short term programme. MNNIT Allahabad and NIDM, New Delhi together have achieved the objective of course schedule under collaborative approach.

03:20 pm to 03:30 pm

Feedback **- Participants,**
Any participant(s) of FEHS-2024

On successful completion of this course, a live feedback link was circulated among the participants for their feedback and experiences. Considering the time limit, some of the participants shared their views and gave positive feedback about the course experts. They applauded for effective organization of this capacity-building course and urged organizers and policymakers organize more course.

However, they requested that such courses should also be planned in future that may be in continuation series to this course. The feedbacks were taken in a positive manner, and will be

surely incorporated into future events. Participants have also urged organizers to take necessary steps and deduce policy to connect these participants with ongoing and upcoming government projects in Prayagraj region and especially with projects allied with Magh Mela and Kumbh Mela. They were readily available to extend their technical skills and expertise in the national interest and with intend to polish their skills and enhance their knowledge bank.

03:30 pm to 03:40 pm — *Address by HoD* **- Prof. R.M. Singh,**
Head, CED, MNNIT Allahabad

Prof. R.M. Singh in his address highlighted the relevance of this programme and has extended his best wishes to organizing committee for successful organization of this event. He also encourages participants for their enthusiastic and effective participation in such programmes in nearing future too.

03:40 pm to 03:50 pm — *Address by "Guest of Honour"* **- Prof. V. Jothiprakash,**
IIT-Bombay

Prof. V. Jothiprakash during his address talked about the importance and significance of this course. Based on his real-life experiences pertaining to disaster right through from Bhuj, Earthquake in 2001 to Chennai, Tsunami in 2004 and further Uttrakhand Flash Flood in 2013. He said that it is highly difficult and painful experience to face any disaster from ground zero.

He said that preparedness, analysis and management are the best policy to check any disaster.

He urged the Civil Engineering Department and organizers to plan and organize more such courses in nearing future. He also acknowledged the role of NIDM in mitigating Disaster and applauded praise for their efforts. He extended best wishes to the organizers of this course and appreciated participants for their sincere participation in the course work.

03:50 pm to 04:00 pm

Address by "Chief Guest"

- Prof. Surya Prakash,

NIDM, New Delhi

Prof. Surya Parkash during his address pronounced that this course in a true sense has met the entire objective identified. He also extended greetings blended with motivational words to come up with more such courses and activities in nearing future. He assured that NIDM, New Delhi would be happy to support MNNIT for capacity building of new stakeholders in society to check and mitigate the impacts of disaster. He shared some of his experiences and technical initiatives taken during field works.

04:00 pm to 04:05 pm **Felicitation of Guests on Dias**

In accustom to formal etiquettes of valedictory ceremony a memento was presented to guests on dais by the Coordinators of FEHS-2024

04:05 pm to 04:25 pm **Certificate Distribution**

Certificates were presented to all the participants upon successful completion of their course. They received certificates from the auspicious hands of Prof. V. Jothiprakash, Guest of Honour

and Prof. Surya Parkash, Chief Guest of the session. Upon receiving the certificates all the participants felt highly motivated and excited.

04:25 pm to 04:30 pm

Vote of Thanks

- Dr. Ananth Wuppukondur,
Coordinator, FEHS-2024

Dr. Ananth Wuppukondur extended the vote of thanks and he sincerely acknowledges the contributions of **Shri. Rajendra Ratnoo**, IPS, Patron of the organizing committee and Executive Director, NIDM, New Delhi and **Prof. R.S. Verma**, Director, MNNIT Allahabad. He said both of them have been personally and keenly involved with this course and guided the organizing committee under their dynamic leadership so that success with deemed quality was ensured. This course was organized and brought into reality is fruitful result of series of guidance received.

He made a special note of acknowledgement to **Prof. Surya Parkash**, Head, NIDM, New Delhi and **Prof. R.M. Singh**, Head, CED, MNNIT Allahabad for their deeply and immense contribution to this program in various roles and capacity may be it's as Chairperson in Organizing Committee or as a Key Speaker or may it be as administrator.

He also extended his thanks to panel of experts and speakers scheduled to grace the upcoming technical sessions by their experience and expertise in the form of lectures.

He also extended vote of thanks to the fellow coordinators. He conveyed his sincere thanks to officials, staffs and volunteers of NIDM, New Delhi and MNNIT Allahabad for their sincere contribution. In his address he reached out to the last person being directly or indirectly involved with this course along with the participants.

He concluded with this thanks to media houses and media officials for effective coverage of course activities.

04:30 pm Onwards **National Anthem**

The event concludes with national anthem that was played over sound system and everyone joined the chorus by standing still at their places.

Learning Outcomes:

The outcomes of this programme encompass a series of advantages which will make participants to become independent in following areas:

- Hands on experience and exposure to Computer aided modeling software like DualSPHYsics, TELEMAC, Arc-GIS and HECH-RAS to analyze and deduce plan to check impact of disaster.
- To develop and groom new stakeholders in society and those are technically sound for mitigating disaster through developing disaster resilient infrastructure.
- The learning of past's disastrous events should be employed into future development activities to strengthen the resilience of infrastructures and existing structures.
- Inter-sectorial and Inter-Departmental collaborations were explored and groomed during this programme by exchange of intellectual resources between participants coming from various institutes.
- Kumbh Mela and Magh Mela are significant key features of Prayagraj and almost a city is being planted and developed every year at Sangam. Thus, with the application of Flood estimation and new Hydraulic Structures techniques and technologies in collaboration with Prayagraj Development Authority, District Administration and other concerned allied government institution the prospective disaster(s) can be effectively mitigated.
- Strong institutional framework and capacity development of the human resources are utmost important in droughts and floods disaster management.

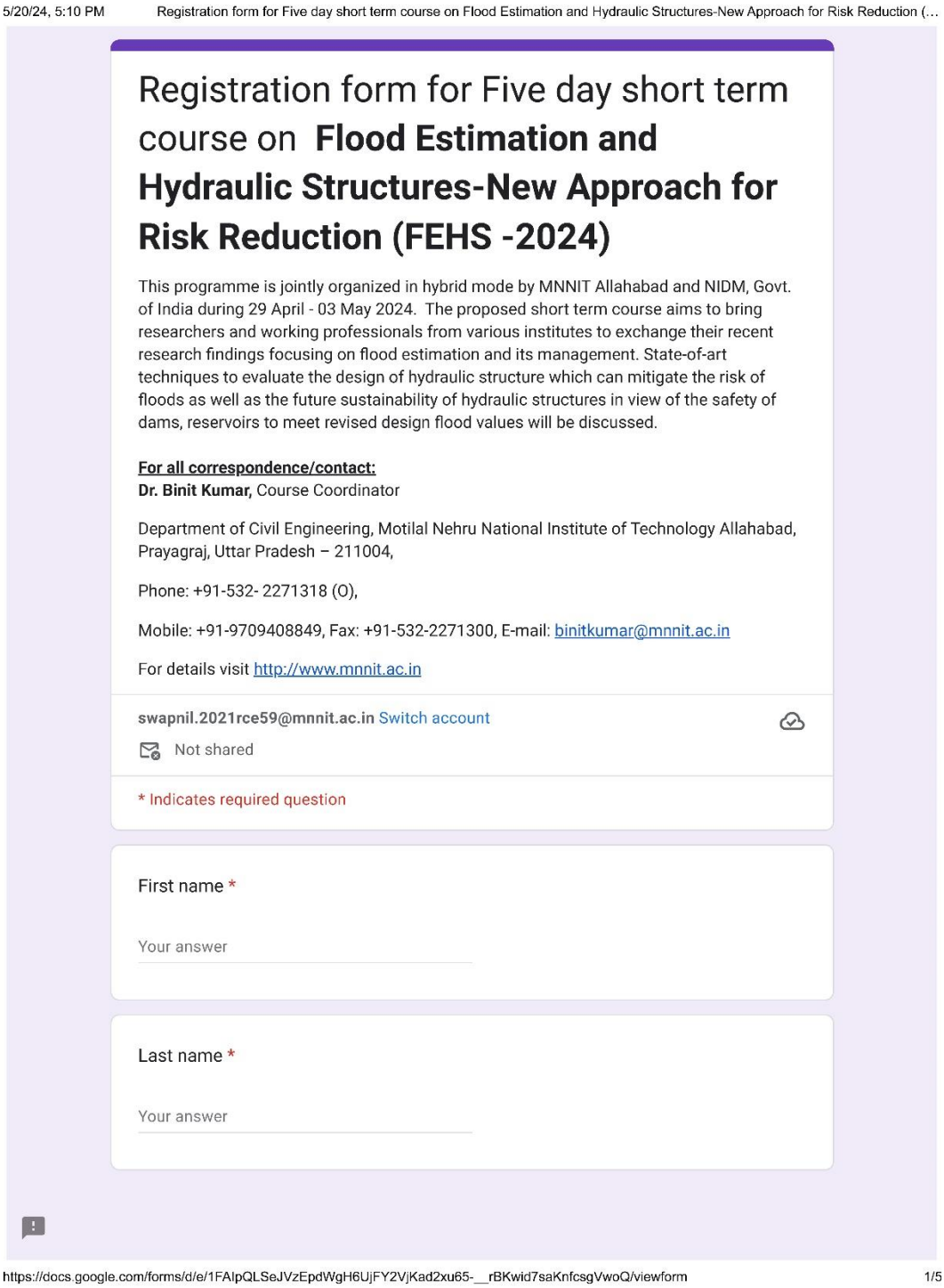
Course Registration:

Participants were asked to get themselves registered for this five days short term (hybrid mode) programme on platform as given below; However considering the limited number of seats “First come first serve” basis of registration process was adopted:

- **Google form created by Organizers (**https://forms.gle/C2MrE1CWEGM7KiTC9**):** Participants were asked to fill the Google form with needful information.

1	MAHESHWA	SONKER	maheshwar	7052378920	MNNIT Allah	Research Sc	Online			1	MAHESHWA	SONKER	MNNIT Allah	Research Scholar	
2	Anubhav	Baranwal	anubhavnit	8565956374	NIT PATNA	Research Sc	Online			2	Anubhav	Baranwal	NIT PATNA	Research Scholar	
3	Abdul	Gani	abdul.gani.j	8802843439	Netaji Subh	Research Sc	Online			3	Abdul	Gani	Netaji Subh	Research Scholar	
4	Mohammad	Mustafa	dmmustafa	9717461189	Aligarh mus	Research Sc	Online			4	Mohammad	Mustafa	Aligarh mus	Research Scholar	
5	GOKUL	MADKAMI	bhimasenka	9078396663	Student	Student	Online			5	GOKUL	MADKAMI	Student	Student	
6	Anupriya	Verma	anupriya.ve	8377837448	Netaji Subh	Research Sc	Online			6	Anupriya	Verma	Netaji Subh	Research Scholar	
7	Saravanan	Kothandara	saravanan@	7598627374	Vellore Insti	Professor	Online			7	Saravanan	Kothandara	Vellore Insti	Professor	
8	Berlin	Mohanadha	berlin@nita	8870890922	NIT Arunach	Associate P	Online			8	Berlin	Mohanadha	NIT Arunach	Associate Professor	
9	SK Pramada	Pramada	Pramada@r	9656006952	NiTC	Assistant Pr	Online			9	SK Pramada	Pramada	NiTC	Assistant Professor	
10	Saroj	Rana	saroj.20cez	9634199404	IIT Ropar	Research Sc	Online			10	Saroj	Rana	IIT Ropar	Research Scholar	
11	Nitish	Chitransh	chitranshni	7905211557	UP Irrigation	Assistant En	Online			11	Nitish	Chitransh	UP Irrigation	Assistant Engineer	
12	Dr Ambuj	Dwivedi	adwi001@g	9455719123	Uttar Prades	Superinten	Online			12	Dr Ambuj	Dwivedi	Uttar Prades	Superintending Engineer	
13	Akhilesh	Gautam	cutlets.essa	6393290601	Irrigation an	Executive En	Online			13	Akhilesh	Gautam	Irrigation an	Executive Engineer	
14	Dr K	Praveen	praveen.k1(	9494699277	SV College c	Assistant Pr	Online			14	Dr K	Praveen	SV College c	Assistant Professor	
15	Rahul	Kumar	rahul@keck	7541939722	Katihar Engi	Assistant Pr	Online			15	Rahul	Kumar	Katihar Engi	Assistant Professor	
16	Reshma	Tabassum	rt712012@	9236894959	Irrigation &C	Deputy Exec	Online			16	Reshma	Tabassum	Irrigation &C	Deputy Executive engineer	
17	Chandan	Raj	chandanraj(	9771879891	Ramgarh En	Assistant Pr	Online			17	Chandan	Raj	Ramgarh En	Assistant Professor	
18	R D	Chauhan	rdc9100@g	7007706430	Up irrigation	Superinten	Online			18	R D	Chauhan	Up irrigation	Superintendent engineer	
19	Shaivi	Chaurasiya	shaivichaur	9993007549	Jawaharlal N	Phd scholar	Online			19	Shaivi	Chaurasiya	Jawaharlal N	Phd scholar	
20	Chitaranjan	Dalai	dr.chitaranj	7585012314	Odisha Univ	Assistant Pr	Online			20	Chitaranjan	Dalai	Odisha Univ	Assistant Professor	
21	MOHIT	KUMAR	mohitkuma	8699361668	Punjab Engi	Assistant Pr	Online			21	MOHIT	KUMAR	Punjab Engi	Assistant Professor	
22	Avinash	Srivastava	avinashsriv	9795991686	United Colle	Assistant Pr	Online			22	Avinash	Srivastava	United Colle	Assistant Professor	
23	Krishnapal S	Tomar	kptomar.wa	9179662442	The nisarga	Senior Desig	Online			23	Krishnapal S	Tomar	The nisarga	Senior Designer	
24	Sujeet Kum	Bhatt	bhattsujeet	9953786199	Maharana P	Lecturer	Online			24	Sujeet Kum	Bhatt	Maharana P	Lecturer	
25	Abhiraj	Kumar	kabhiraj527	8409940541	Givernment	Na	Online			25	Abhiraj	Kumar	Givernment	Na	
26	Mohd	Khalid	siddiquikha	9548139496	Maulana Aza	Assistant Pr	Online			26	Mohd	Khalid	Maulana Aza	Assistant Professor	

Registration form (https://forms.gle/C2MrE1CWEGM7KiTC9):



5/20/24, 5:10 PM Registration form for Five day short term course on Flood Estimation and Hydraulic Structures-New Approach for Risk Reduction (…

Registration form for Five day short term course on **Flood Estimation and Hydraulic Structures-New Approach for Risk Reduction (FEHS -2024)**

This programme is jointly organized in hybrid mode by MNNIT Allahabad and NIDM, Govt. of India during 29 April - 03 May 2024. The proposed short term course aims to bring researchers and working professionals from various institutes to exchange their recent research findings focusing on flood estimation and its management. State-of-art techniques to evaluate the design of hydraulic structure which can mitigate the risk of floods as well as the future sustainability of hydraulic structures in view of the safety of dams, reservoirs to meet revised design flood values will be discussed.

For all correspondence/contact:
Dr. Binit Kumar, Course Coordinator

Department of Civil Engineering, Motilal Nehru National Institute of Technology Allahabad, Prayagraj, Uttar Pradesh – 211004,

Phone: +91-532- 2271318 (O),

Mobile: +91-9709408849, Fax: +91-532-2271300, E-mail: binitkumar@mnnit.ac.in

For details visit http://www.mnnit.ac.in

swapnil.2021rce59@mnnit.ac.in Switch account

Not shared

* Indicates required question

First name *

Your answer

Last name *

Your answer

https://docs.google.com/forms/d/e/1FAIpQLSeJVzEpdWgH6UjFY2VjKad2xu65-__rBKwid7saKnfcsgVwoQ/viewform 1/5

Email *

Your answer

Phone number *

Your answer

Mailing address *

Your answer

Highest qualification *

- ◯ Undergraduate (such as BTech/BE/BS)
- ◯ Postgraduate (such as MTech/ME/MS)
- ◯ Doctorate (such as PhD/DPhil)
- ◯ Other:

Organization *

Your answer

Designation *

Your answer

Location of work *

Your answer

Work experience in years *

Your answer

Please provide the details (name and email/phone number) of the person who nominated you for this programme/Head of the Institute/Department/Organization. *

Your answer

Mode of attendance (preference will be given for on-campus participants) *

- ◯ On-campus at MNNIT Allahabad
- ◯ Online

Do you require accommodation at MNNIT Allahabad during the programme? (Shared accommodation will be provided at MNNIT Allahabad) *

- ◯ Yes
- ◯ No

If attending on-campus at MNNIT Allahabad, please provide tentative date of arrival.

Date

mm/dd/yyyy

If attending on-campus at MNNIT Allahabad, please provide tentative date of departure.

Date

mm/dd/yyyy

Do you have any special requests for accommodation? If yes, please indicate below (Please note these requests will be considered under extraordinary situations only).

Your answer

Do you have any dietary requirements that we should be aware of, such as allergies? If yes, please indicate below.

Your answer

Submit Page 1 of 1 Clear form

Never submit passwords through Google Forms.

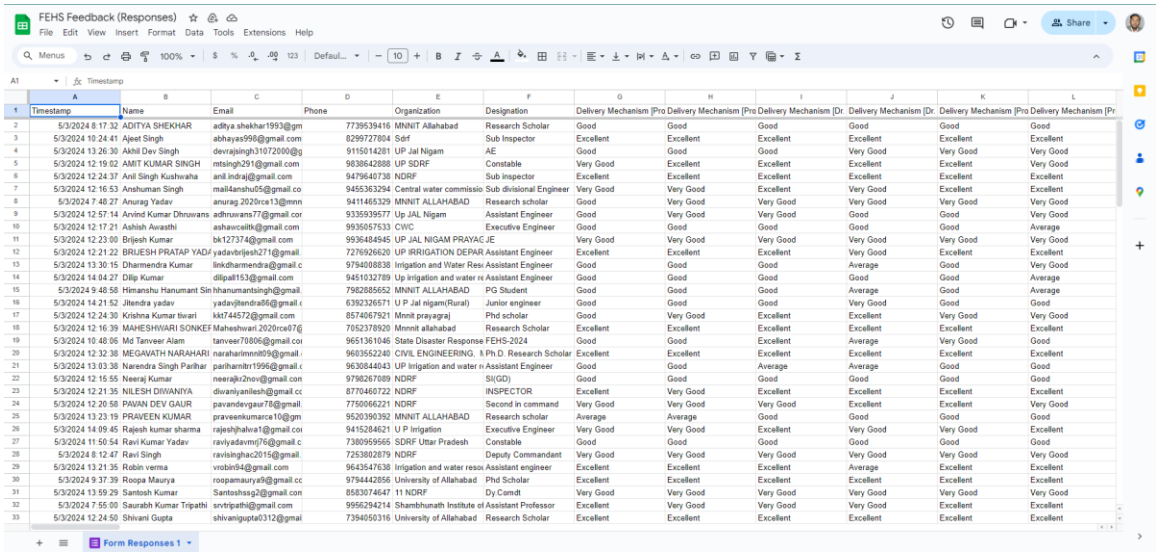
This form was created inside of MNNIT ALLAHABAD. Report Abuse

Google Forms

Course Feedback:

Participants were supposed to tender their feedbacks at Google form created for the purpose.

- **Google form (https://forms.gle/t51MT2HSfnEj8Lpa8):** Once the course completed with its last session successfully all the participants were asked to extend their valuable feedback on Google form platform created by the organizing committee for the purpose.



Timestamp	Name	Email	Phone	Organization	Designation	Delivery Mechanism [Pro	Delivery Mechanism [Pro	Delivery Mechanism [Dr	Delivery Mechanism [Dr	Delivery Mechanism [Pro	Delivery Mechanism [Pr
5/3/2024 8:17:32	ADITYA SHEKHAR	aditya.shekhar1993@gm	7739539416	MNNIT Allahabad	Research Scholar	Good	Good	Good	Good	Good	Good
5/3/2024 10:24:41	Ajeet Singh	abhayas998@gmail.com	8299727804	Sdrf	Sub Inspector	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
5/3/2024 13:26:30	Akhil Dev Singh	devrajsingh31072000@g	9115014281	UP Jal Nigam	AE	Good	Good	Good	Very Good	Very Good	Very Good
5/3/2024 12:19:02	AMIT KUMAR SINGH	mtsingh291@gmail.com	9838642888	UP SDRF	Constable	Very Good	Excellent	Excellent	Excellent	Excellent	Very Good
5/3/2024 12:24:37	Anil Singh Kushwaha	anil.indraj@gmail.com	9479640738	NDRF	Sub inspector	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
5/3/2024 12:16:53	Anshuman Singh	mail4anshu05@gmail.co	9455363294	Central water commissio	Sub divisional Engineer	Very Good	Very Good	Excellent	Very Good	Excellent	Excellent
5/3/2024 7:48:27	Anurag Yadav	anurag.2020rce13@mnn	9411465329	MNNIT ALLAHABAD	Research scholar	Good	Very Good	Very Good	Very Good	Very Good	Very Good
5/3/2024 12:57:14	Arvind Kumar Dhruwans	adhruwans77@gmail.cor	9335939577	Up JAL Nigam	Assistant Engineer	Good	Very Good	Very Good	Good	Good	Very Good
5/3/2024 12:17:21	Ashish Awasthi	ashawceiitk@gmail.com	9935057533	CWC	Executive Engineer	Good	Good	Good	Good	Good	Average
5/3/2024 12:23:00	Brijesh Kumar	bk127374@gmail.com	9936484945	UP JAL NIGAM PRAYAG	JE	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good
5/3/2024 12:21:22	BRIJESH PRATAP YADA	yadavbrijesh271@gmail.	7276926620	UP IRRIGATION DEPAR	Assistant Engineer	Excellent	Excellent	Excellent	Very Good	Excellent	Excellent
5/3/2024 13:30:15	Dharmendra Kumar	linkdharmendra@gmail.c	9794008838	Irrigation and Water Res	Assistant Engineer	Good	Good	Good	Average	Good	Very Good
5/3/2024 14:04:27	Dilip Kumar	dilipali153@gmail.com	9451032789	Up irrigation and water re	Assistant Engineer	Good	Good	Good	Good	Good	Average
5/3/2024 9:48:58	Himanshu Hanumant Sin	hhanumantsingh@gmail.	7982685652	MNNIT ALLAHABAD	PG Student	Good	Good	Good	Average	Good	Average
5/3/2024 14:21:52	Jitendra yadav	yadavjitendra86@gmail.(	6392326571	U P Jal nigam(Rural)	Junior engineer	Good	Good	Good	Very Good	Good	Good
5/3/2024 12:24:30	Krishna Kumar tiwari	kkt744572@gmail.com	8574067921	Mnnit prayagraj	Phd scholar	Good	Very Good	Excellent	Excellent	Very Good	Very Good
5/3/2024 12:16:39	MAHESHWARI SONKEF	Maheshwari.2020rce07@	7052378920	Mnnnit allahabad	Research Scholar	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
5/3/2024 10:48:06	Md Tanveer Alam	tanveer70806@gmail.cor	9651361046	State Disaster Response	FEHS-2024	Good	Good	Excellent	Average	Very Good	Good
5/3/2024 12:32:38	MEGAVATH NARAHARI	naraharimnnit09@gmail.(	9603552240	CIVIL ENGINEERING, N	Ph.D. Research Scholar	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
5/3/2024 13:03:38	Narendra Singh Parihar	pariharnitr1996@gmail.(	9630844043	UP Irrigation and water re	Assistant Engineer	Good	Good	Average	Average	Good	Good
5/3/2024 12:15:55	Neeraj Kumar	neerajkr2nov@gmail.com	9798267089	NDRF	SI(GD)	Good	Good	Good	Good	Good	Good
5/3/2024 12:21:35	NILESH DIWANIYA	diwaniyanilesh@gmail.cc	8770460722	NDRF	INSPECTOR	Excellent	Very Good	Excellent	Excellent	Excellent	Excellent
5/3/2024 12:20:58	PAVAN DEV GAUR	pavandevgaur78@gmail.	7750066221	NDRF	Second in command	Very Good	Very Good	Very Good	Excellent	Excellent	Very Good
5/3/2024 13:23:19	PRAVEEN KUMAR	praveenkumarce10@gm	9520390352	MNNIT ALLAHABAD	Research scholar	Average	Average	Good	Good	Good	Good
5/3/2024 14:09:45	Rajesh kumar sharma	rajeshjhalwa1@gmail.co	9415284621	U P Irrigation	Executive Engineer	Very Good	Very Good	Excellent	Very Good	Very Good	Excellent
5/3/2024 11:50:54	Ravi Kumar Yadav	raviyadavmj76@gmail.c	7380959565	SDRF Uttar Pradesh	Constable	Good	Good	Good	Good	Good	Good
5/3/2024 8:12:47	Ravi Singh	ravisinghac2015@gmail.	7253802879	NDRF	Deputy Commandant	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good
5/3/2024 13:21:35	Robin verma	vrobin94@gmail.com	9643547638	Irrigation and water reso	Assistant engineer	Excellent	Excellent	Excellent	Average	Excellent	Excellent
5/3/2024 9:37:39	Roopa Maurya	roopamaurya9@gmail.cc	9794442856	University of Allahabad	Phd Scholar	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
5/3/2024 13:59:29	Santosh Kumar	Santoshssg2@gmail.com	8583074647	11 NDRF	Dy.Comdt	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good
5/3/2024 7:55:00	Saurabh Kumar Tripathi	srvtripathi@gmail.com	9956294214	Shambhunath Institute of	Assistant Professor	Excellent	Very Good	Very Good	Very Good	Excellent	Excellent
5/3/2024 12:24:50	Shivani Gupta	shivanigupta0312@gmai	7394050316	University of Allahabad	Research Scholar	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

Feedback form:

Flood Estimation and Hydraulic Structures-New Approach for Risk Reduction (FEHS -2024) [Feedback Form]

This programme is jointly organized in hybrid mode by MNNIT Allahabad and NIDM, Govt. of India during 29 April - 03 May 2024. The details of the speakers and sessions is as below -

Day 1
Session 1 - Urban Flood Mitigation Measures by **Prof. Chandan Ghosh (Retd. NIDM)**
Session 2 - Application of GIS in Flood Estimation by **Dr. Sudhir Kumar Singh (University of Allahabad)**
Session 3 - Hydraulics of Piano Key Weirs by **Dr. Binit Kumar (MNNIT Allahabad)**

Day 2
Session 1 - Forecasting Hydrological Extreme events using SWAT and GFS models by **Dr. Pramod Soni (IIT BHU)**
Session 2 - Hydraulic Structures: Design Perspectives by **Prof. RM Singh (MNNIT Allahabad)**
Hands-on - Flood Evaluation using SWOT by **Dr. Pramod Soni (IIT BHU) and Prof HK Pandey (MNNIT Allahabad)**

Day 3
Session 1 - Sediment and Hydraulic Hazards by **Dr. Manish Pandey (IIT Kharagpur)**
Session 2 - Rubber dam - An innovative structure by **Prof. Zulfequar Ahmad (IIT Roorkee)**
Hands-on - Physical and Numerical Modelling (DualSPHYsics) of Hydraulic Structures by **Dr Binit Kumar, Dr Ananth and Prof. RP Singh (MNNIT Allahabad)**

Day 4
Session 1 - Climate Change Impact on Coastal Flooding and communities by **Dr. S Ramalingam (NIT Puducherry)**
Session 2 - Flood plain mapping for ungauged basins by **Dr. Isthiyaq Ahmad (NIT Raipur)**
Hands-on - River modelling using TELEMAC by **Dr Ananth Wuppukondur and Dr Binit Kumar (MNNIT Allahabad)**

Day 5
Session 1 - Regional Flood Frequency Analysis including Reservoir Outflow by **Prof. Jothi Prakash (IIT Bombay)**
Session 2 - National Policy and Guidelines of Floods Risk Reduction and Resilience by **Prof. Surya Prakash (NIDM)**

swapnil.2021rce59@mnnit.ac.in Switch account

Not shared

* Indicates required question

Name *

Your answer

Email *

Your answer

Phone *

Your answer

Organization *

Your answer

Designation *

Your answer

Delivery Mechanism *

	Poor	Average	Good	Very Good	Excellent
Prof. Chandan Ghosh (Retd. NIDM)	○	○	○	○	○
Prof. Sudhir Kumar Singh (University of Allahabad)	○	○	○	○	○
Dr. Binit Kumar (MNNIT Allahabad)	○	○	○	○	○
Dr. Pramod Soni (IIT BHU)	○	○	○	○	○
Prof. HK Pandey (MNNIT Allahabad)	○	○	○	○	○
Prof. RM Singh (MNNIT Allahabad)	○	○	○	○	○
Prof. RP Singh (MNNIT Allahabad)	○	○	○	○	○
Dr. Manish Pandey (IIT Kharagpur)	○	○	○	○	○
Prof. Zulfequar Ahmad (IIT Roorkee)	○	○	○	○	○
Dr. Sivakumar Ramalingam (NIT Puducherry)	○	○	○	○	○
Dr. Isthiyaq Ahmad (NIT Raipur)	○	○	○	○	○
Dr. Ananth Wuppukondur (MNNIT Allahabad)	○	○	○	○	○
Prof. Jothi Prakash (IIT Bombay)	○	○	○	○	○
Prof. Surya Prakash (NIDM)	○	○	○	○	○

Eye Contact *

	Poor	Average	Good	Very Good	Excellent
Prof. Chandan Ghosh (Retd. NIDM)	○	○	○	○	○
Prof. Sudhir Kumar Singh (University of Allahabad)	○	○	○	○	○
Dr. Binit Kumar (MNNIT Allahabad)	○	○	○	○	○
Dr. Pramod Soni (IIT BHU)	○	○	○	○	○
Prof. HK Pandey (MNNIT Allahabad)	○	○	○	○	○
Prof. RM Singh (MNNIT Allahabad)	○	○	○	○	○
Prof. RP Singh (MNNIT Allahabad)	○	○	○	○	○
Dr. Manish Pandey (IIT Kharagpur)	○	○	○	○	○
Prof. Zulfequar Ahmad (IIT Roorkee)	○	○	○	○	○
Dr. Sivakumar Ramalingam (NIT Puducherry)	○	○	○	○	○
Dr. Isthiyaq Ahmad (NIT Raipur)	○	○	○	○	○
Dr. Ananth Wuppukondur (MNNIT Allahabad)	○	○	○	○	○
Prof. Jothi Prakash (IIT Bombay)	○	○	○	○	○
Prof. Surya Prakash (NIDM)	○	○	○	○	○

Query Satisfaction *

	Poor	Average	Good	Very Good	Excellent
Prof. Chandan Ghosh (Retd. NIDM)	○	○	○	○	○
Prof. Sudhir Kumar Singh (University of Allahabad)	○	○	○	○	○
Dr. Binit Kumar (MNNIT Allahabad)	○	○	○	○	○
Dr. Pramod Soni (IIT BHU)	○	○	○	○	○
Prof. HK Pandey (MNNIT Allahabad)	○	○	○	○	○
Prof. RM Singh (MNNIT Allahabad)	○	○	○	○	○
Prof. RP Singh (MNNIT Allahabad)	○	○	○	○	○
Dr. Manish Pandey (IIT Kharagpur)	○	○	○	○	○
Prof. Zulfequar Ahmad (IIT Roorkee)	○	○	○	○	○
Dr. Sivakumar Ramalingam (NIT Puducherry)	○	○	○	○	○
Dr. Isthiyaq Ahmad (NIT Raipur)	○	○	○	○	○
Dr. Ananth Wuppukondur (MNNIT Allahabad)	○	○	○	○	○
Prof. Jothi Prakash (IIT Bombay)	○	○	○	○	○
Prof. Surya Prakash (NIDM)	○	○	○	○	○

Engagement of Participants *

	Poor	Average	Good	Very Good	Excellent
Prof. Chandan Ghosh (Retd. NIDM)	○	○	○	○	○
Prof. Sudhir Kumar Singh (University of Allahabad)	○	○	○	○	○
Dr. Binit Kumar (MNNIT Allahabad)	○	○	○	○	○
Dr. Pramod Soni (IIT BHU)	○	○	○	○	○
Prof. HK Pandey (MNNIT Allahabad)	○	○	○	○	○
Prof. RM Singh (MNNIT Allahabad)	○	○	○	○	○
Prof. RP Singh (MNNIT Allahabad)	○	○	○	○	○
Dr. Manish Pandey (IIT Kharagpur)	○	○	○	○	○
Prof. Zulfequar Ahmad (IIT Roorkee)	○	○	○	○	○
Dr. Sivakumar Ramalingam (NIT Puducherry)	○	○	○	○	○
Dr. Isthiyaq Ahmad (NIT Raipur)	○	○	○	○	○
Dr. Ananth Wuppukondur (MNNIT Allahabad)	○	○	○	○	○
Prof. Jothi Prakash (IIT Bombay)	○	○	○	○	○
Prof. Surya Prakash (NIDM)	○	○	○	○	○

Clarity of Presentation *

	Poor	Average	Good	Very Good	Excellent
Prof. Chandan Ghosh (Retd. NIDM)	○	○	○	○	○
Prof. Sudhir Kumar Singh (University of Allahabad)	○	○	○	○	○
Dr. Binit Kumar (MNNIT Allahabad)	○	○	○	○	○
Dr. Pramod Soni (IIT BHU)	○	○	○	○	○
Prof. HK Pandey (MNNIT Allahabad)	○	○	○	○	○
Prof. RM Singh (MNNIT Allahabad)	○	○	○	○	○
Prof. RP Singh (MNNIT Allahabad)	○	○	○	○	○
Dr. Manish Pandey (IIT Kharagpur)	○	○	○	○	○
Prof. Zulfequar Ahmad (IIT Roorkee)	○	○	○	○	○
Dr. Sivakumar Ramalingam (NIT Puducherry)	○	○	○	○	○
Dr. Isthiyaq Ahmad (NIT Raipur)	○	○	○	○	○
Dr. Ananth Wuppukondur (MNNIT Allahabad)	○	○	○	○	○
Prof. Jothi Prakash (IIT Bombay)	○	○	○	○	○
Prof. Surya Prakash (NIDM)	○	○	○	○	○

Clarity of Topic *

	Poor	Average	Good	Very Good	Excellent
Prof. Chandan Ghosh (Retd. NIDM)	○	○	○	○	○
Prof. Sudhir Kumar Singh (University of Allahabad)	○	○	○	○	○
Dr. Binit Kumar (MNNIT Allahabad)	○	○	○	○	○
Dr. Pramod Soni (IIT BHU)	○	○	○	○	○
Prof. HK Pandey (MNNIT Allahabad)	○	○	○	○	○
Prof. RM Singh (MNNIT Allahabad)	○	○	○	○	○
Prof. RP Singh (MNNIT Allahabad)	○	○	○	○	○
Dr. Manish Pandey (IIT Kharagpur)	○	○	○	○	○
Prof. Zulfequar Ahmad (IIT Roorkee)	○	○	○	○	○
Dr. Sivakumar Ramalingam (NIT Puducherry)	○	○	○	○	○
Dr. Isthiyaq Ahmad (NIT Raipur)	○	○	○	○	○
Dr. Ananth Wuppukondur (MNNIT Allahabad)	○	○	○	○	○
Prof. Jothi Prakash (IIT Bombay)	○	○	○	○	○
Prof. Surya Prakash (NIDM)	○	○	○	○	○

Coverage of Topic *

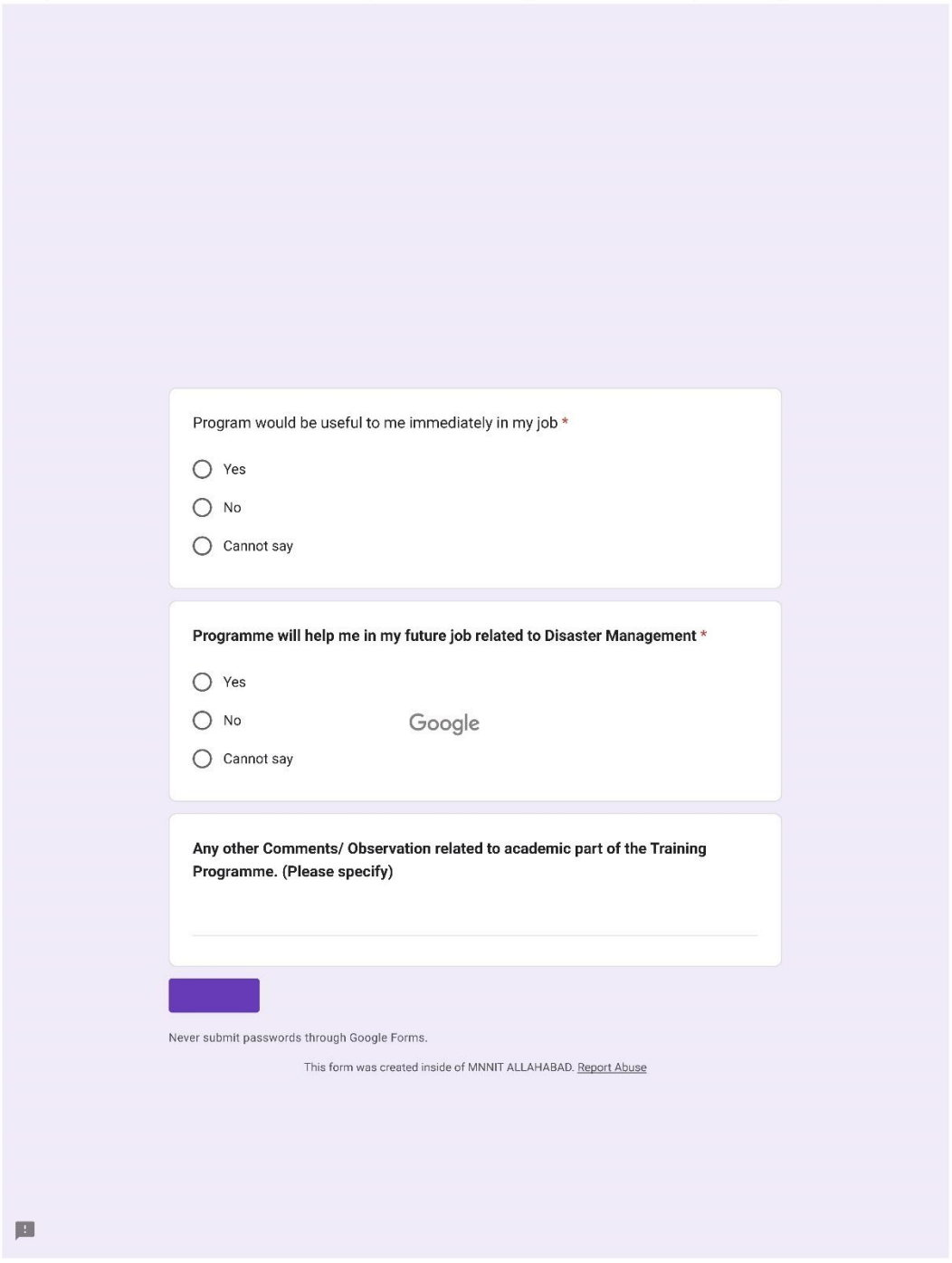
	Poor	Average	Good	Very Good	Excellent
Prof. Chandan Ghosh (Retd. NIDM)	○	○	○	○	○
Prof. Sudhir Kumar Singh (University of Allahabad)	○	○	○	○	○
Dr. Binit Kumar (MNNIT Allahabad)	○	○	○	○	○
Dr. Pramod Soni (IIT BHU)	○	○	○	○	○
Prof. HK Pandey (MNNIT Allahabad)	○	○	○	○	○
Prof. RM Singh (MNNIT Allahabad)	○	○	○	○	○
Prof. RP Singh (MNNIT Allahabad)	○	○	○	○	○
Dr. Manish Pandey (IIT Kharagpur)	○	○	○	○	○
Prof. Zulfequar Ahmad (IIT Roorkee)	○	○	○	○	○
Dr. Sivakumar Ramalingam (NIT Puducherry)	○	○	○	○	○
Dr. Isthiyaq Ahmad (NIT Raipur)	○	○	○	○	○
Dr. Ananth Wuppukondur (MNNIT Allahabad)	○	○	○	○	○
Prof. Jothi Prakash (IIT Bombay)	○	○	○	○	○
Prof. Surya Prakash (NIDM)	○	○	○	○	○

Examples *

	Poor	Average	Good	Very Good	Excellent
Prof. Chandan Ghosh (Retd. NIDM)	○	○	○	○	○
Prof. Sudhir Kumar Singh (University of Allahabad)	○	○	○	○	○
Dr. Binit Kumar (MNNIT Allahabad)	○	○	○	○	○
Dr. Pramod Soni (IIT BHU)	○	○	○	○	○
Prof. HK Pandey (MNNIT Allahabad)	○	○	○	○	○
Prof. RM Singh (MNNIT Allahabad)	○	○	○	○	○
Prof. RP Singh (MNNIT Allahabad)	○	○	○	○	○
Dr. Manish Pandey (IIT Kharagpur)	○	○	○	○	○
Prof. Zulfequar Ahmad (IIT Roorkee)	○	○	○	○	○
Dr. Sivakumar Ramalingam (NIT Puducherry)	○	○	○	○	○
Dr. Isthiyaq Ahmad (NIT Raipur)	○	○	○	○	○
Dr. Ananth Wuppukondur (MNNIT Allahabad)	○	○	○	○	○
Prof. Jothi Prakash (IIT Bombay)	○	○	○	○	○
Prof. Surya Prakash (NIDM)	○	○	○	○	○

Relevance of Topic *

	Poor	Average	Good	Very Good	Excellent
Prof. Chandan Ghosh (Retd. NIDM)	○	○	○	○	○
Prof. Sudhir Kumar Singh (University of Allahabad)	○	○	○	○	○
Dr. Binit Kumar (MNNIT Allahabad)	○	○	○	○	○
Dr. Pramod Soni (IIT BHU)	○	○	○	○	○
Prof. HK Pandey (MNNIT Allahabad)	○	○	○	○	○
Prof. RM Singh (MNNIT Allahabad)	○	○	○	○	○
Prof. RP Singh (MNNIT Allahabad)	○	○	○	○	○
Dr. Manish Pandey (IIT Kharagpur)	○	○	○	○	○
Prof. Zulfequar Ahmad (IIT Roorkee)	○	○	○	○	○
Dr. Sivakumar Ramalingam (NIT Puducherry)	○	○	○	○	○
Dr. Isthiyaq Ahmad (NIT Raipur)	○	○	○	○	○
Dr. Ananth Wuppukondur (MNNIT Allahabad)	○	○	○	○	○
Prof. Jothi Prakash (IIT Bombay)	○	○	○	○	○
Prof. Surya Prakash (NIDM)	○	○	○	○	○



Program would be useful to me immediately in my job *

- Yes
- No
- Cannot say

Programme will help me in my future job related to Disaster Management *

- Yes
- No
- Cannot say

Google

Any other Comments/ Observation related to academic part of the Training Programme. (Please specify)

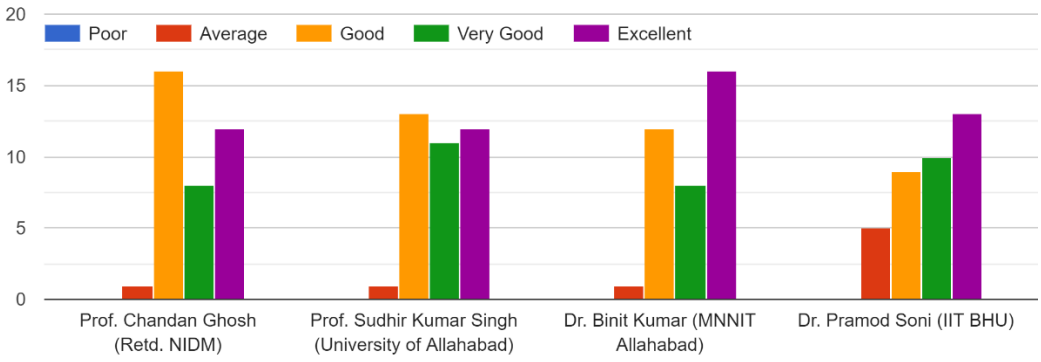
Never submit passwords through Google Forms.

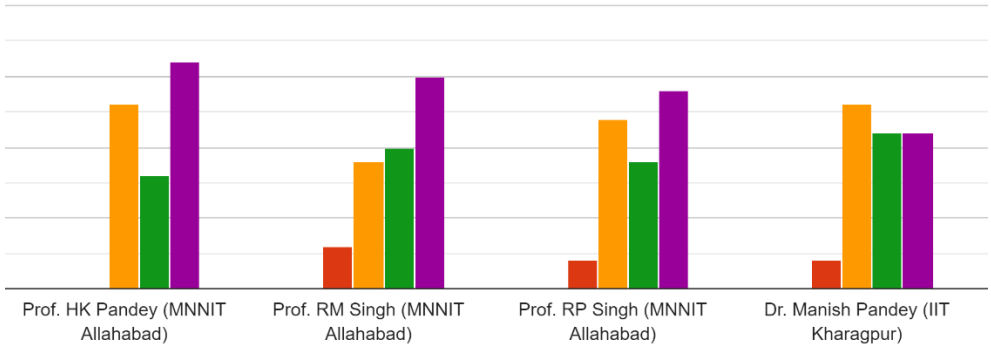
This form was created inside of MNNIT ALLAHABAD. Report Abuse

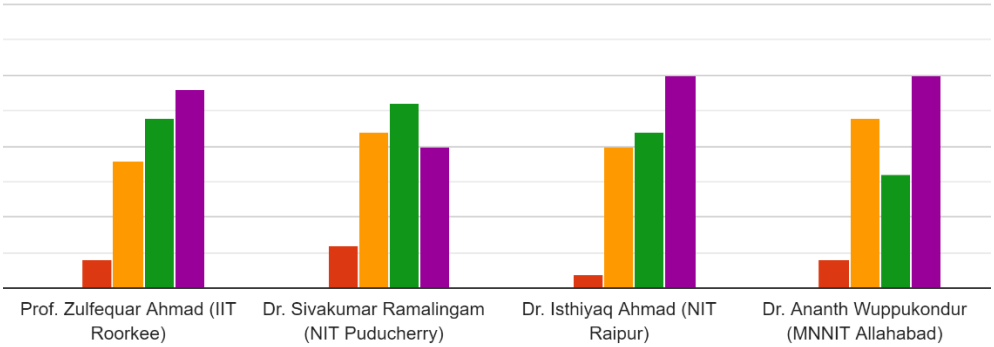
Parameters:

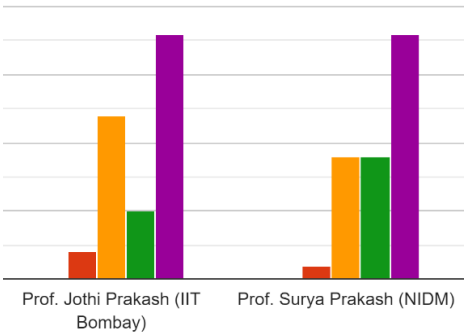
P01: Delivery Mechanism

Interpretation/Impact: The content delivery mechanism adopted was of high standards.



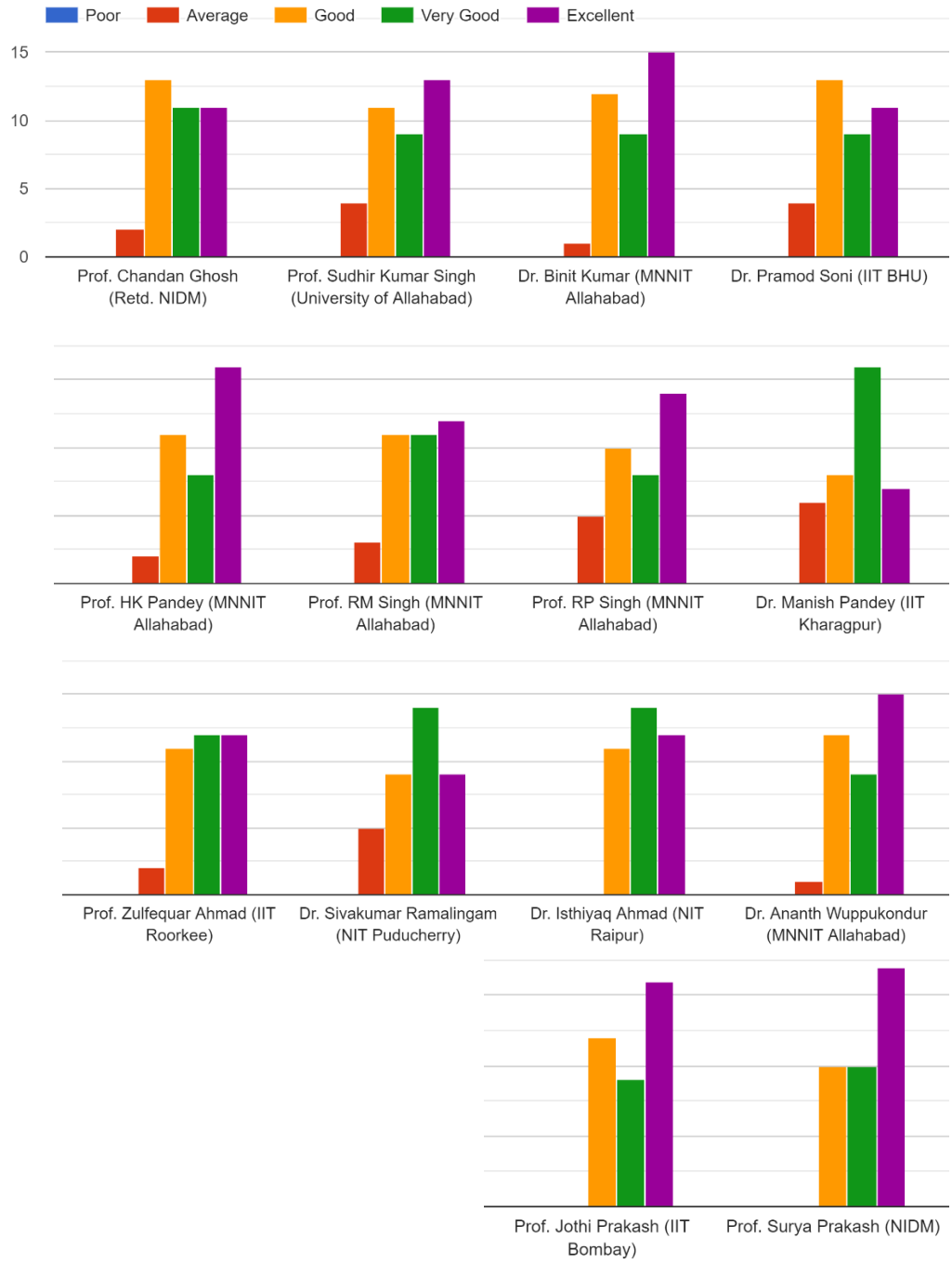






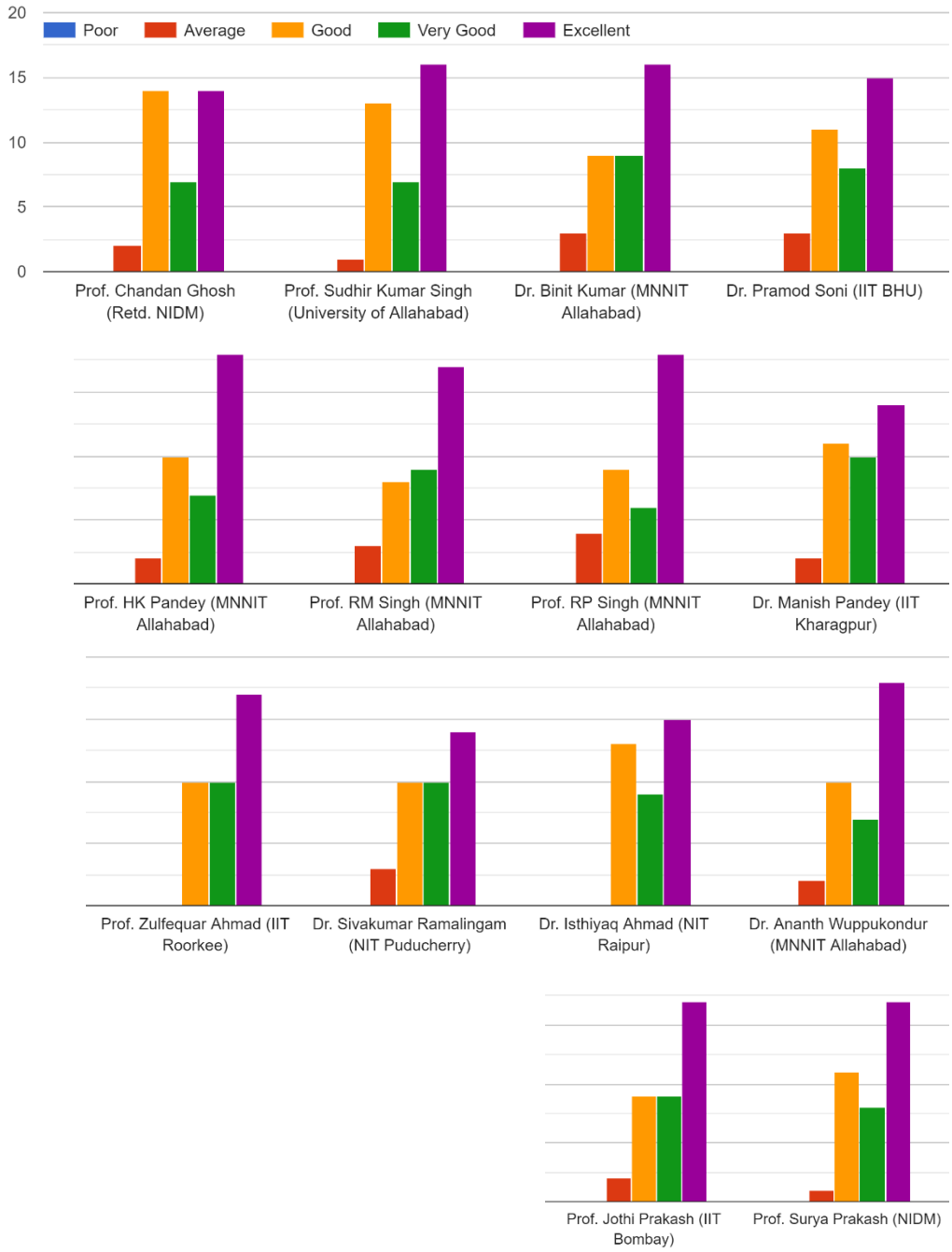
P02: Eye Contact

Interpretation/Impact: During this programme effective eye contact was maintained by the experts with the participants.



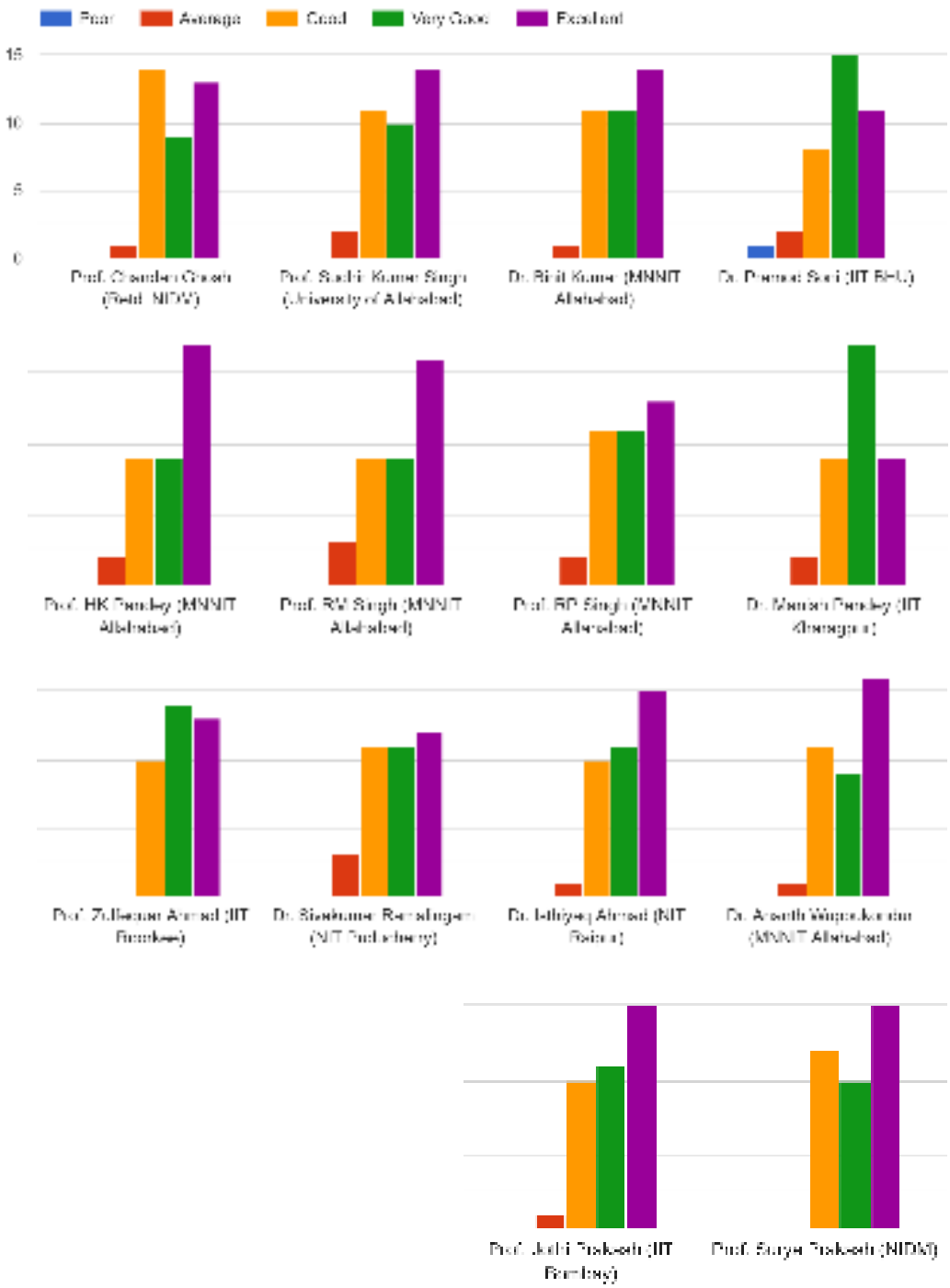
P03: Query Satisfaction

Interpretation/Impact: Queries were answered by the experts to higher extend for the ultimate satisfaction of the participants



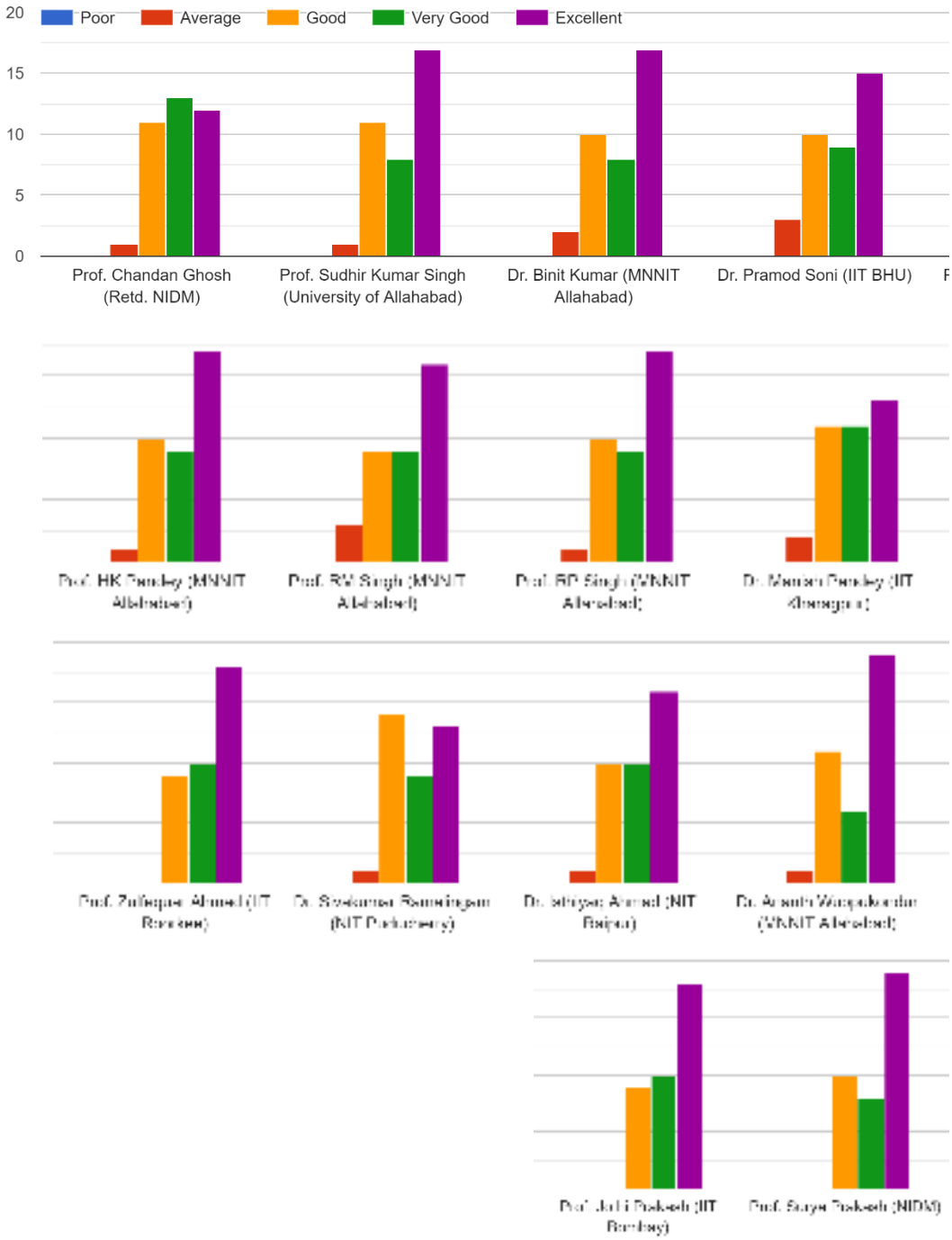
P04: Engagement of Participants

Interpretation/Impact: Participants find themselves highly engaged in the activities of the programme which signifies the high relevance of his programme with its objectives.



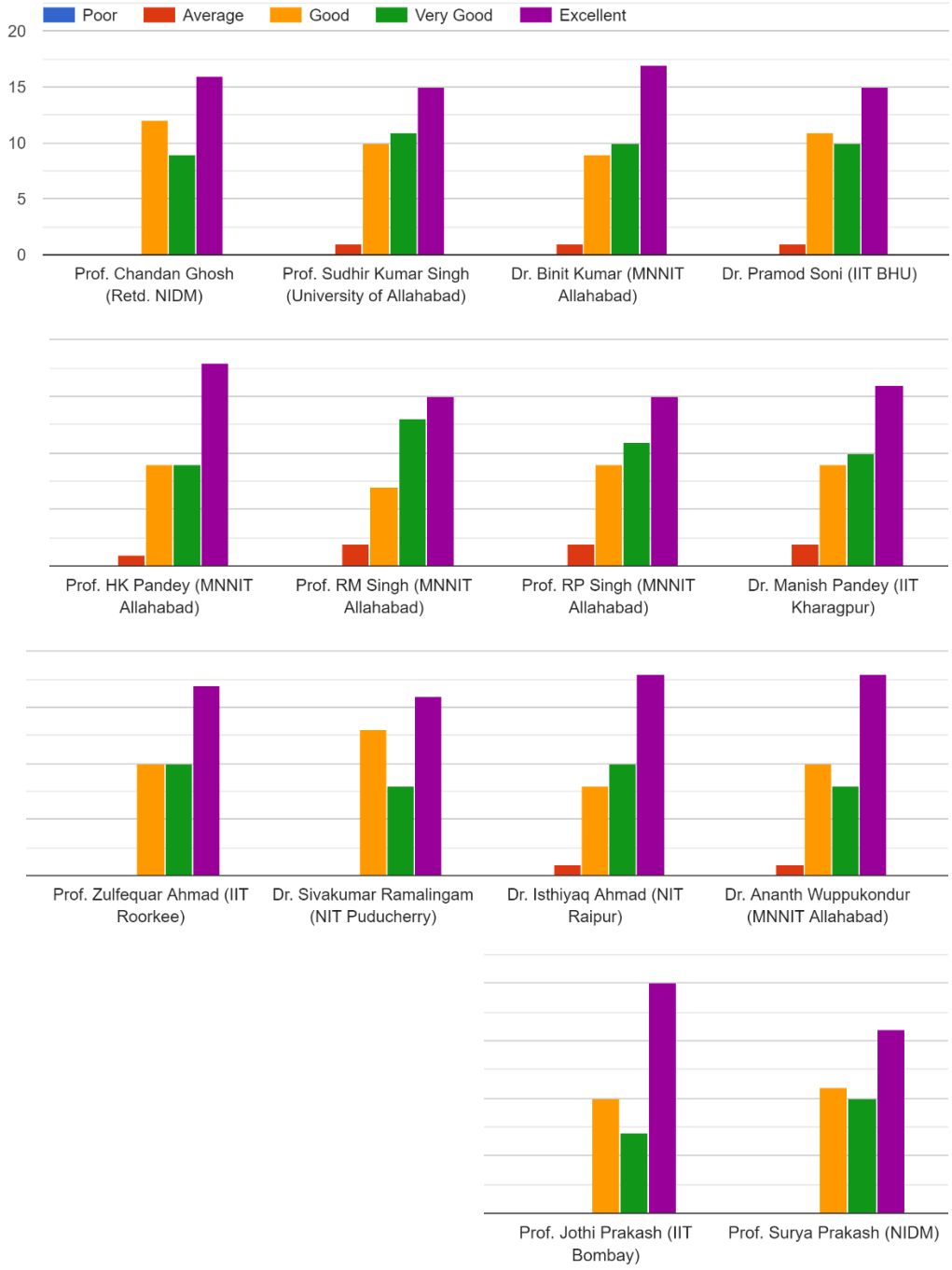
P05: Clarity of Presentation

Interpretation/Impact: Experts were highly instrumental with clarity in the presentation which means participants got effective information on the subject taught.



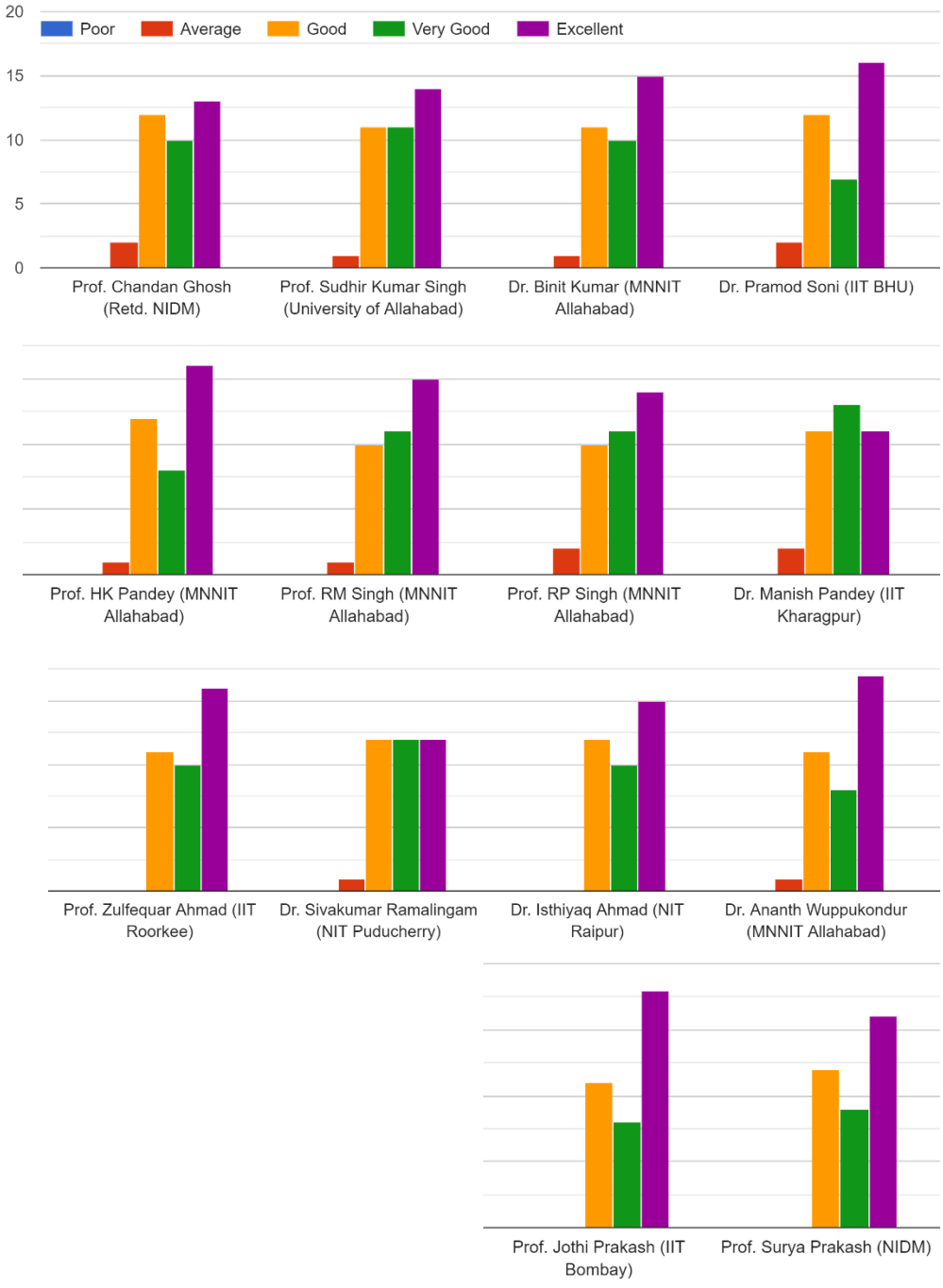
P06: Clarity of Topic

Interpretation/Impact: Experts were spot on with the topic and their clarity of topics means participants were taught those topics which were supposed to be dealt with during the sessions.



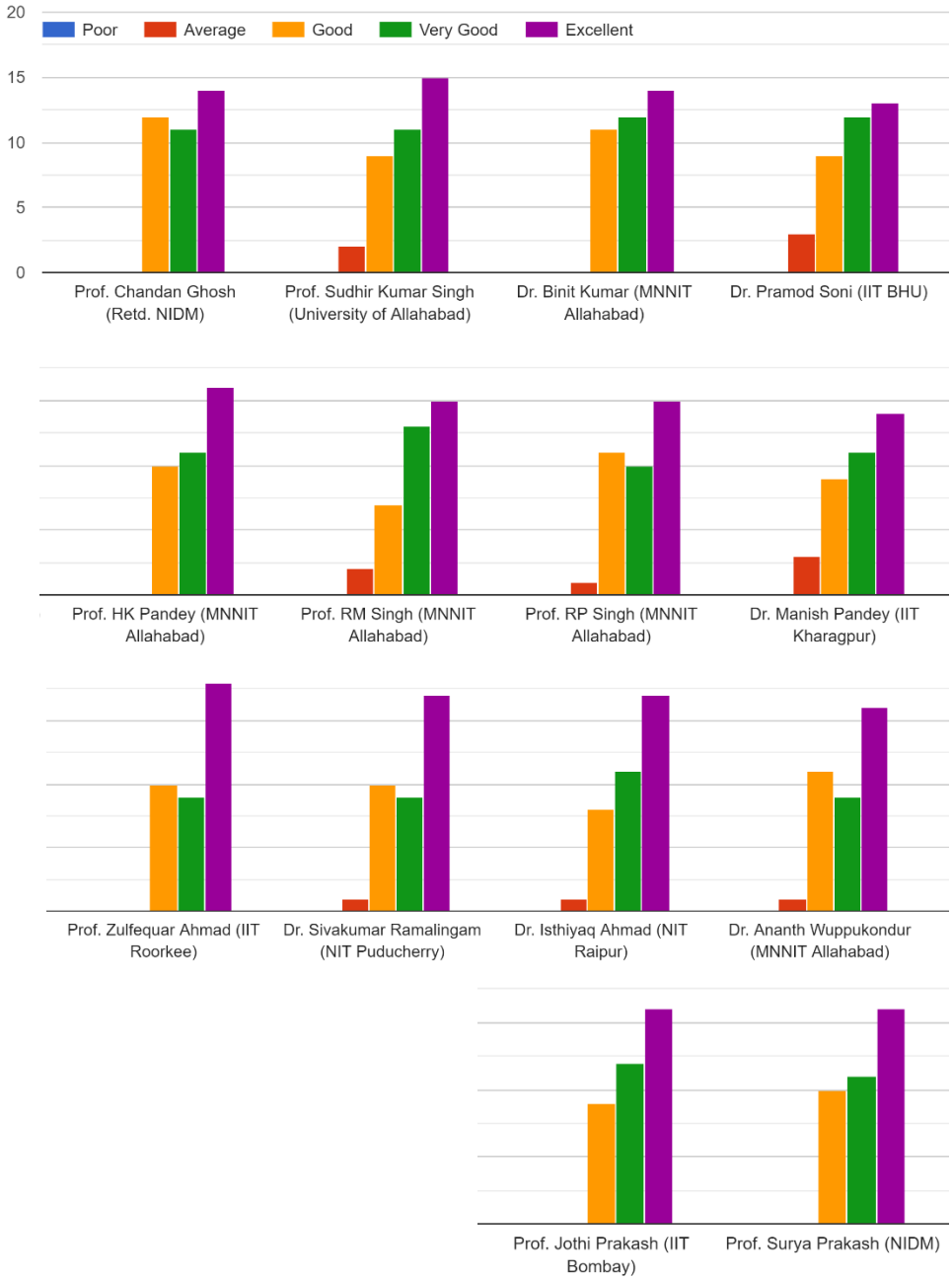
P07: Coverage of Topics

Interpretation/Impact: Participants found that the topics those are taken up during this programme were thoroughly covered.



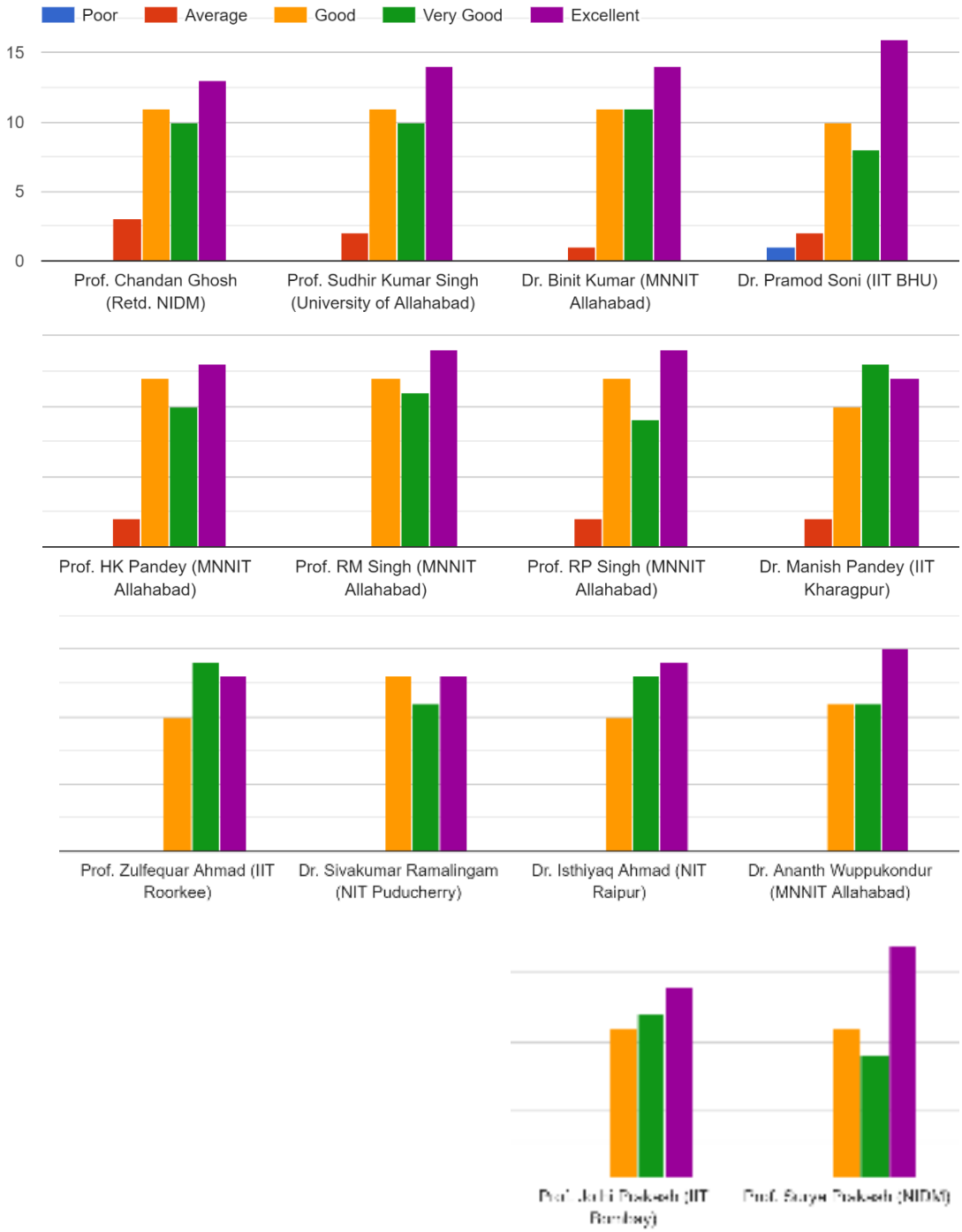
P08: Examples

Interpretation/Impact: During sessions significant importance was given over illustrative, comprehensive and live problem-oriented teaching and that has been found by participants.



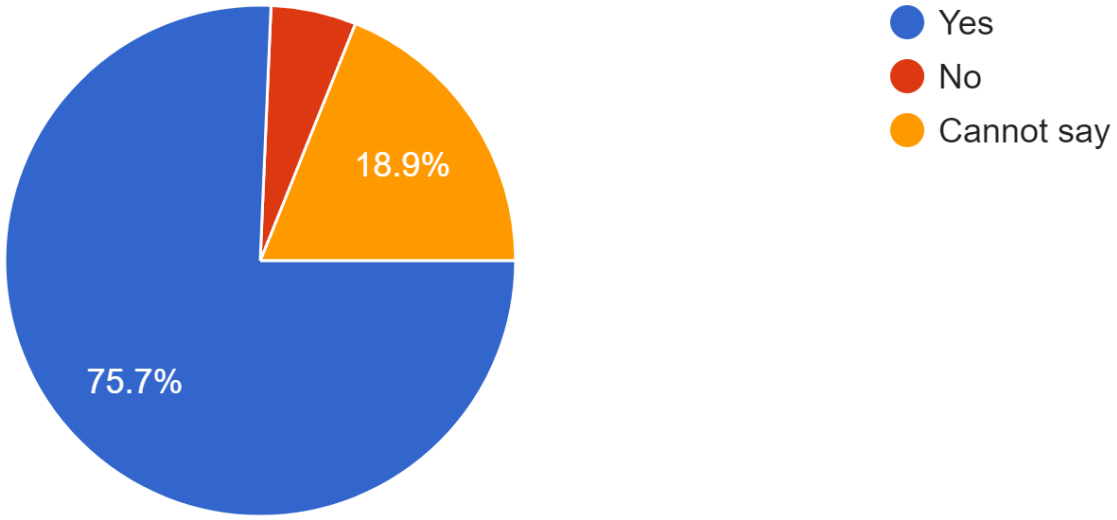
P09: Relevance of Topic

Interpretation/Impact: Most of the participants in heafthy majority found topics covered under this program to be highly relevant.



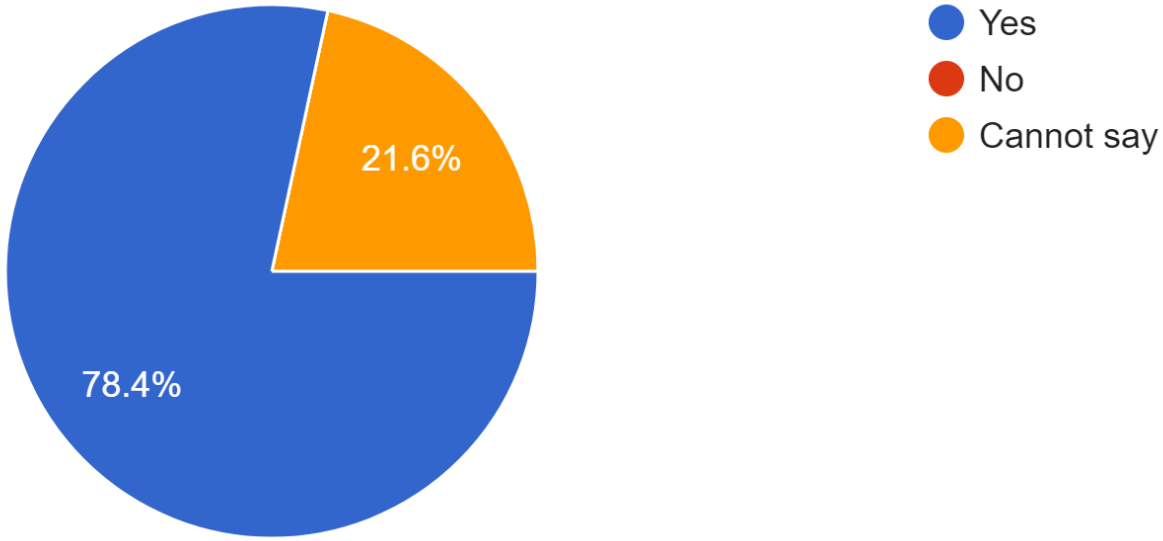
P10: Programme would be useful to me immediately in my job

Interpretation/Impact: The quality of course content and its relevance is affirmed.



P11: Programme will help me in my future job related to Disaster Management

Interpretation/Impact: The quality of course content and its relevance is affirmed.



P12: Any other Comments/ Observation related to academic part of the Training Programme. (Please specify)

	Responses:
1	No
2	Everything is perfect.
3	Training program may be designed with some field visit sessions.
4	The training programme was overall a good experience and would help in my future prospects. All the lectures and hands on sessions imparted the subject knowledge in a well presented manner.
5	This workshop is very much useful for my research work , got the innovative ideas in my research work.this workshop is very informative for all participants, I think should be conducted more and more workshops.
6	Would like to again participate such program.
7	The program and the topic was really very amazing and the training program helped me to understand clearly about the topic. It is a very good experience to be a part of this event. I will look forward for more such events.. thanks for making me a part of this event.
8	All lectures are good for scholars but total programm is not related to NDRF & SDRF , I want say that you have to design for NDRF & SDRF A basic plan which we are apply on Ground level in emergency condition .
9	No
10	Please conduct these type of courses in full time online mode .
11	Very useful before disaster this course
12	The national and international case studies on topics like revival of rivers' basins, rejuvenating of the urban rivers and lakes should be included for better preparedness during disasters as well as normal scenarios.
13	Training should cover only one topic and it includes class room lecture with its practical experience at site
14	This course is not directly related to NDRF.
15	It will be helpful and engaging if the handson session will be divided into 2-2 hours schedule on each day and in this way comprising all 6 hours in 2-3 days. that will be good

	for cope up with speaker and also in practicing and understand things .
16	All lecturers are done excellent but kindly relate all your topics to disaster response for NDRF, SDRF , and give us more field knowledge, Executive knowledge, precautionary measures,PTSD, which can understand by NDRF and SDRF That's all . Jai Hind
17	Timing of Hands on training should be more, also practical session
18	Proper time for hands-on session sir
19	Good
20	Must include more case studies
21	Time duration for Hands-on session is little bit less..
22	Only one topic should be taken and practical /hands on should be done. Not more topic should be taken in such a short period
23	The programme basically design for research scholars, irrigation deptt and for CWC representative, it should include topics for disaster Mitigation in extreme events viz extreme floding, hydraulic structure failure and role of stakeholders in tackling disasters .
24	Include more case study
25	Training was useful
26	More tools and techniques may be involved with field activities in future

Recognition & Certificates: Recognition is out-most important for motivating any individual or group. Here during this program the bonafied participants completing this course successfully were recognized and motivated by felicitating them with certificates. Participants were asked to register on given platforms for registration as described earlier under section "Course Feedback". A sample certificate is given below;

Five Days Short Term Course (Hybrid mode) on

Flood Estimation and Hydraulic Structures
-New Approach for Risk Reduction (FEHS-2024)

[29 April to 03 May, 2024]

CERTIFICATE

This is to certify that
Mr./Mrs./Ms./Dr./Er. _____ from _____

has successfully completed short term course (Hybrid mode) on "Flood Estimation and Hydraulic Structures - New Approach for Risk Reduction (FEHS-2024)" from 29 April to 03 May, 2024 organized by Department of Civil Engineering, Motilal Nehru National Institute of Technology Allahabad, Prayagraj with support from National Institute of Disaster Management, New Delhi at MNNIT Allahabad, Prayagraj

Prof. H.K. Pandey
Professor,
Department of Civil Engineering,
MNNIT Allahabad and
Coordinator FEHS-2024

Prof. Surya Prakash
Head,
GMRM and CBRN Division,
NIDM, New Delhi

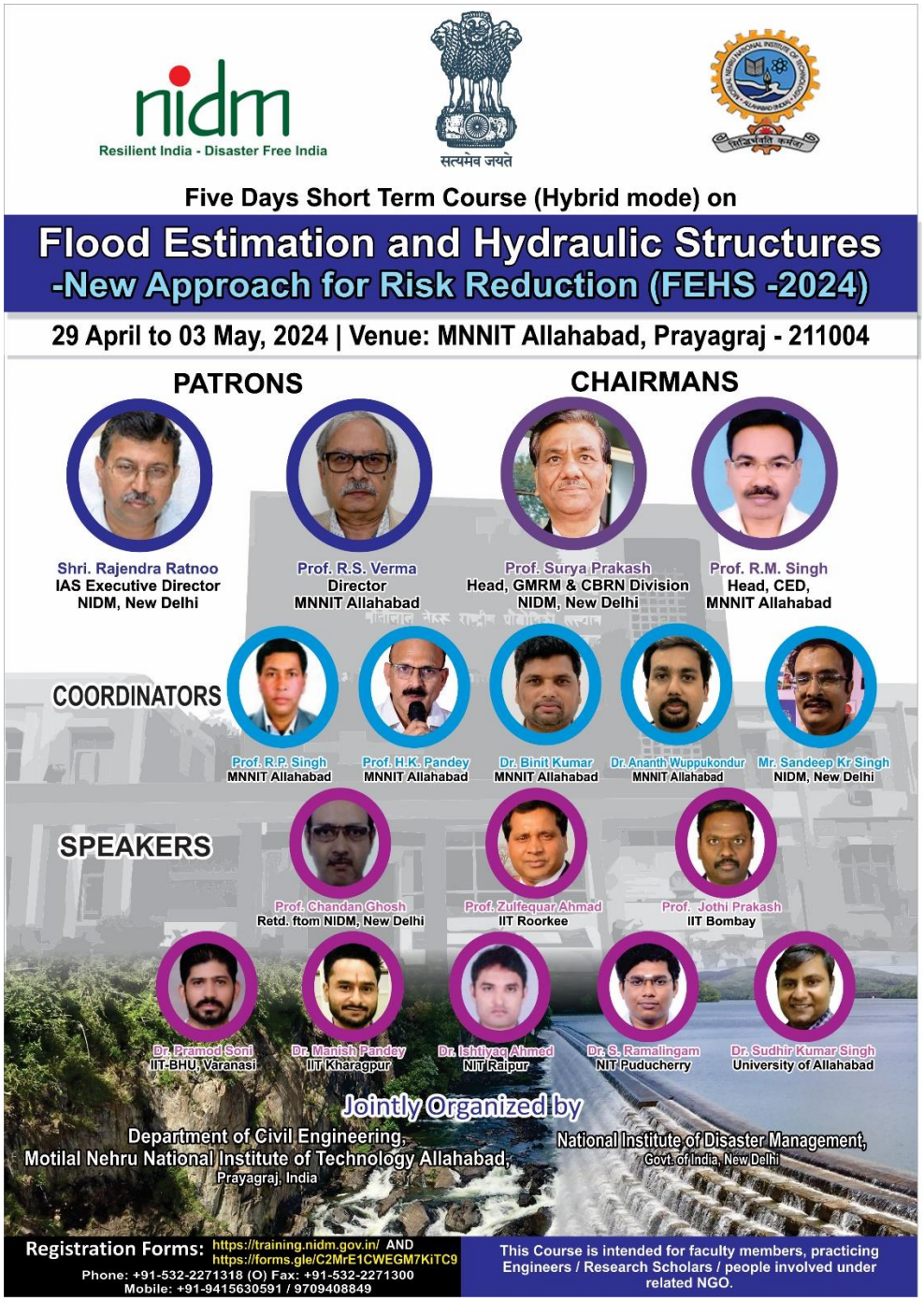
Prof. R.M. Singh
Head,
Department of Civil Engineering,
MNNIT Allahabad

During each session technical team of MNNIT Allahabad had been keenly monitoring the attendance of all participants to ensure the quality as well as effectiveness of course.

In addition to this, all the speakers, invited & distinguished guests and office bearers of organizing committee were felicitated with mementos.

Print and Publicity materials: For wider and effective publicity and promotion of this Programme print and publicity were developed in form of folders, posters and banners as described below:

Poster:



Size: 13inch x 19inch

3-Fold Paper Folder:

ABOUT PRAYAGRAJ
The city of Prayagraj is among the largest cities of Uttar Pradesh. It is situated at the confluence of three rivers Ganga, Yamuna and the mythological Saraswati. The sacred meeting point is known as Sangam. Prayagraj city is well connected via Air, Rail and Road routes with major cities of India.

MNNIT ALLAHABAD
Motilal Nehru National Institute of Technology Allahabad, Prayagraj (MNNIT) is an Institute with total commitment to quality and excellence in academic pursuits. It was established in 1961 as a joint enterprise of Government of India and Government of Uttar Pradesh as MNREC, and was an associated college of University of Allahabad. On June 26, 2002 MNREC was transformed into the National Institute of Technology, fully funded by the Government of India. The Institute has been granted the status of institution of national importance w.e.f. 15th August 2007.

DEPARTMENT OF CIVIL ENGINEERING
The Institute had begun offering Bachelor Degree Programmes in Civil Engineering. The Civil Engineering Department offers a Bachelor of Technology and four regular post graduate courses in Structural, Geotechnical, Environmental and Transportation Engineering. It also offers part-time courses for in-service engineers in the above mentioned specialization. The Department is also a recognized QIP (Quality Improvement Program) Centre for postgraduate studies. Department also offers a PhD Programme in the above specialization. The course curriculum is up-to-date which covers both traditional and recent developments. It also provides research and consultancy services to government /non-government organizations.

ABOUT NIDM
National Institute of Disaster Management is a statutory organization under the Ministry of Home Affairs, Government of India, mandated under the Disaster Management Act 2005 NIDM is mandated under section 42 (9) (b) to extend Capacity Building support to state governments and National and State level agencies in the field of Disaster Management & Disaster Risk. NIDM has been mandated by Sub-section 8 and 9, Section 42, Chapter 7 of Disaster Management Act 2005 to develop training modules and educational materials, undertake training, research, documentation and publication for capacity development and dissemination of knowledge/information related to disaster management, assist in formulation of policies, plans, strategies and frameworks for disaster risk reduction and resilience as well as promote awareness among different stakeholders for enhancing human capacity to avoid, prevent, mitigate, prepare, respond and recover efficiently in a proactive, holistic and integrated manner.

IMPORTANT DATES
Last date for receiving applications: **April 22, 2024**
Notification of acceptance: **April 25, 2024**

ORGANIZING COMMITTEE:

Patron
- Shri Rajendra Ratnoo, IAS Executive Director, NIDM, Delhi
- Prof. Rama Shanker Verma, Director, MNNIT, Allahabad

Chairman
- Prof. Surya Prakash, Head (Geo-Meteorological Risks Management), NIDM, Delhi.
- Prof R M Singh, Head, Department of Civil Eng. MNNIT Allahabad.

Coordinators
- Prof. R. P. Singh, Civil Eng. MNNIT Allahabad.
- Prof. H K Pandey, Civil Eng. MNNIT Allahabad.
- Dr. Binit Kumar, Assistant Professor, Civil Eng. MNNIT Allahabad.
- Dr. Ananth Wuppukondur, Assistant Professor, Civil Eng. MNNIT Allahabad.
- Mr. Sandeep Kumar Singh, Young Professional, NIDM, Delhi

Student Coordinators:
- Mr Swapnil Kumar Sharma, Research Scholar, Civil Eng. MNNIT Allahabad
- Mr Amit Kumar Pandey, M.Tech

FOR ALL CORRESPONDENCE/CONTACT:
Dr. Binit Kumar, Course Coordinator
Department of Civil Engineering, Motilal Nehru National Institute of Technology Allahabad, Prayagraj, Uttar Pradesh – 211004,
Phone: +91-532- 2271318 (O),
Mobile: +91-9709408849, Fax: +91-532-2271300, E-mail: binitkumar@mnnit.ac.in

For details visit http://www.mnnit.ac.in

Five Days Short Term Course
(Hybrid mode)

On

Flood Estimation and Hydraulic Structures-New Approach for Risk Reduction (FEHS -2024)

April 29 - May 03, 2024

Jointly Organized By

National Institute of Disaster Management (NIDM)
Ministry of Home Affairs, Delhi –110042
&
Department of Civil Engineering
Motilal Nehru National Institute of Technology
Allahabad, Prayagraj - 211004

Front

BACKGROUND
Dams are mainly constructed to regulate the catchment runoff for those rivers in which the temporal variations in the inflow are highly skewed and the floods need to be mitigated. However, construction of a large dam brings prominent changes in the river morphology and groundwater elevation which affects the surrounding areas and ecological aspects. It is reported that around 60,000 large dams are already registered with the International Commission on Large Dams (ICOLD) and more than 350 new dams (>60 m) are being constructed every year. Globally, 33.3% of the dam failures are reported to be due to insufficient spillway capacity. The present situation and future sustainability demand the safety of dams and reservoirs to meet revised design flood values. The upstream siltation causes losses in the storage of the reservoir and the affected sediment movement can change the channel form and aquatic life. In addition, the reduction of the maximum water level (MWL) can minimize the extent of the inundated area, which can be helpful in the relocation and rehabilitation of the villagers (if any) and the habitats that are affected by the project.

COURSE OBJECTIVE
Proposed short term course aims to bring researchers from various institutes to exchange their recent research findings focusing on flood estimation and its management. State-of-art techniques to evaluate the hydraulic structure which can mitigate the risk of floods as well as the future sustainability of hydraulic structures in view of the safety of dams, reservoirs to meet revised design flood values.

COURSE CONTENTS
Assessment of safety of dams and reservoirs, Flood management, Flood estimation techniques using numerical methods, Canal and river training structures, sedimentation management techniques, sustainable design of novel weirs, Dam safety and rehabilitation, Risk and hazard assessment, Debris management, Water Resource Management options in flood prone area, Hands on training on Dam Break Analysis and Modelling.

TARGET AUDIENCE
Faculty, Officers, Engineers, Scientists and researchers working for Floods, Hydraulic structures, River training works, Water resources management in different organisations are expected to join this course.

SPEAKERS
The speakers like faculty members/experts from IIT's/ MNNIT/ Other NIT's and scientists from field organisations like NIDM and Reputed Institutes/ Consultants in relevant areas would be invited so that sound knowledge and technical input are disseminated to the participants.

VENUE
Department of Civil Engineering, MNNIT Allahabad, Teliarganj, Prayagraj, Uttar Pradesh- 211004

NOTE
- Course fees are exempted for participants.
- Available seats will be filled on first cum first basis as well as preliminary screening.
- A separate registration form shall be used for every applicant.
- Incomplete registration form shall be rejected.
- All the participants will be given certificate on the successful completion of the training programme.
- Organisers have all the rights to cancel the course under unavoidable circumstances which will be communicated to all the participants by email.

IMPORTANT NOTE:
All the participants are supposed to register online on MNNIT registration link provided below.

ROUTE MAP OF MNNIT ALLAHABAD
Motilal Nehru National Institute of Technology Allahabad, Teliarganj, Prayagraj, Uttar Pradesh – 211004, Phone: +91-532- 2271318 (O).

Five Days Short Term Course (Hybrid mode)
On
Flood Estimation and Hydraulic Structures-New Approach for Risk Reduction (FEHS -2024)

April 29 - May 03, 2024
(Monday to Friday, 9.30 am to 05 pm)

Department of Civil Engineering
MNNIT Allahabad

REGISTRATION FORM

NAME (BLOCK LETTERS): _____

Gender: M / F

DESIGNATION: _____

INSTITUTION / ORGANIZATION: _____

MAILING ADDRESS: _____

_____

_____

TELEPHONE: _____

MOBILE: _____

FAX:

EMAIL: _____

Highest Qualification : _____ Experience : _____ Yrs.

Date: Signature of Applicant

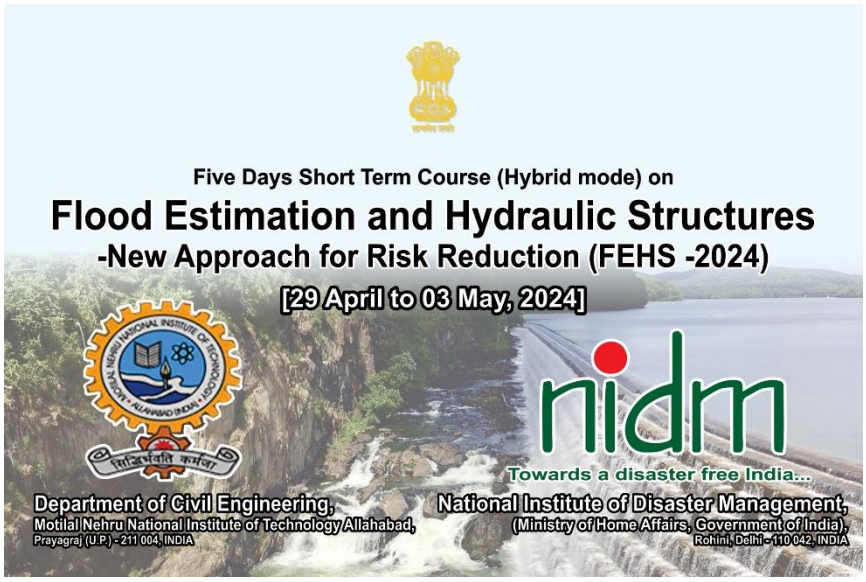
Recommendation

Signature of Head of the Institution/Department/Organization with date

Get yourself registered at following to complete your registration process:
https://forms.gle/C2MrE1CWEGM7KiTC9

Back
Size: 8.5 inch x 11 inch

Banner:



Dimensions: 6ft x 4ft

In addition to this through website of MNNIT efforts were made for effective and wider reach out to target audience.

Mounting of banners in MNNIT Campus:

Location 01: Ganga Gate, MNNIT Campus

Location 02: Outside EDC Guest House, MNNIT Campus

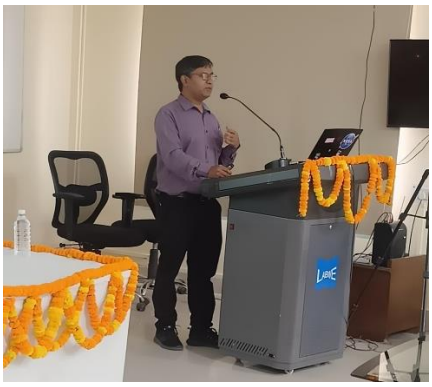
Location 03: Beside the Smart Classroom, (Venue of event) EDC Guest House, MNNIT Campus

Photos of ongoing lectures during different technical sessions:

DAY 01 | 29th April, 2024

DAY 01 | Technical Session 01

Day 01 | Technical Session 01



DAY 01 | Technical Session 02

DAY 01 | Technical Session 02

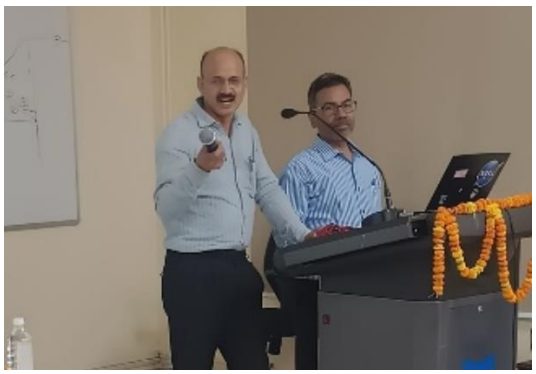
DAY 01 | Technical Session 03

DAY 01 | Technical Session 03

DAY 02 | 30th April, 2024

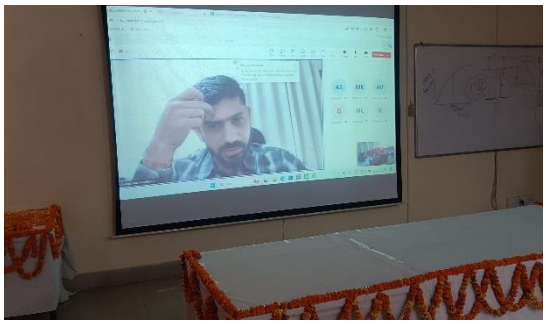
DAY 02 | Technical Session 04

Day 02 | Technical Session 04



DAY 02 | Technical Session 05

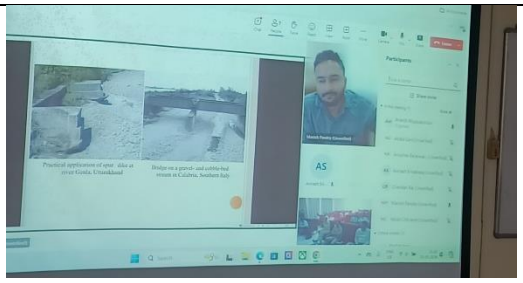
DAY 02 | Technical Session 05



DAY 02 | Technical Session 06

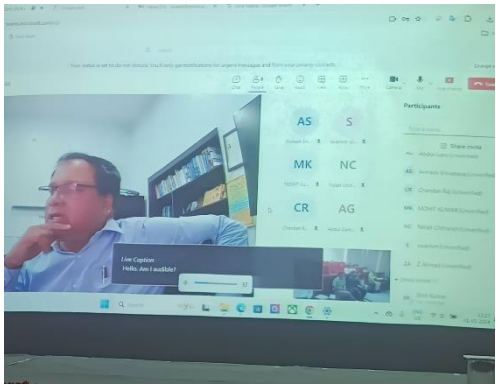
DAY 02 | Technical Session 06

DAY 03 | 01st May, 2024

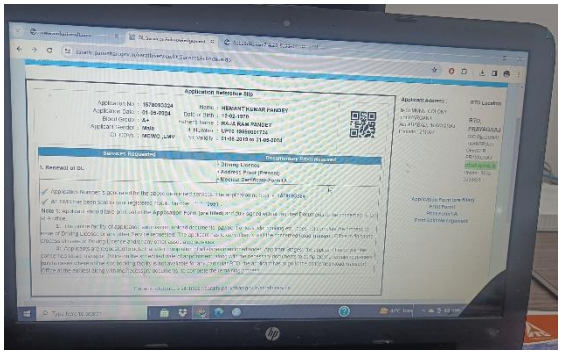


DAY 03 | Technical Session 07

Day 03 | Technical Session 07



DAY 03 | Technical Session 08

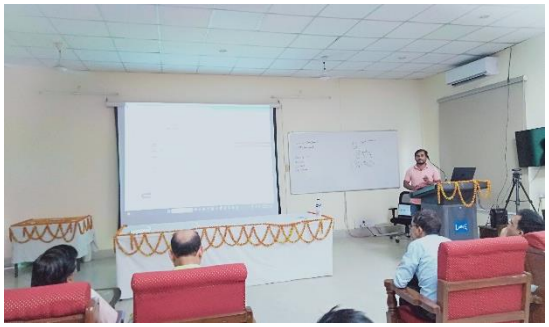


DAY 03 | Technical Session 08

DAY 03 | Technical Session 09

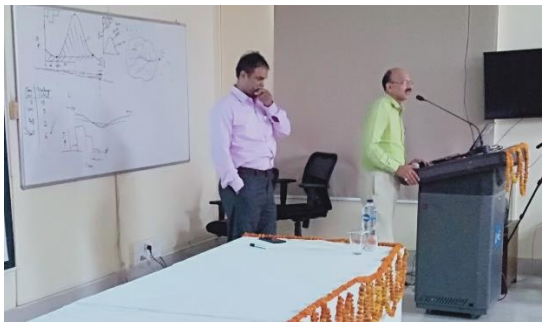
DAY 03 | Technical Session 09

DAY 04 | 02nd May, 2024



DAY 04 | Technical Session 10

Day 04 | Technical Session 10



DAY 04 | Technical Session 11

DAY 04 | Technical Session 11

DAY 04 | Technical Session 12

DAY 04 | Technical Session 12

DAY 05 | 03rd May, 2024

DAY 05 | Technical Session 13

Day 05 | Technical Session 13

DAY 05 | Technical Session 14

DAY 05 | Technical Session 14

Media Coverage:

कि किसी तरह माँ में आवेदन की प्रक्रिया शुरू कर दी जाए। बूटे ने एपीएस परीक्षा-2023 के तहत 311 पदों पर भर्ती के लिए विज्ञापन जारी किया था। तिथि अभी घोषित नहीं की गई है। आयोग ने पहले चरण की परीक्षा की पेपर लीक की घटना के बाद एपीएस परीक्षा की भी उच्च स्तरीय जांच कराई जाए। गौतम द्वितीय व अस्मा खान तृतीय रहा। बूटे

बाढ़ तो आएगी पर तकनीक के उपयोग से कम होगा नुकसान

पांच दिनी कोर्स में दिए गए सुझाव

प्रयागराज। मोतीलाल नेहरू राष्ट्रीय प्रौद्योगिकी संस्थान (एमएनएनआईटी) में सोमवार से फ्लड एस्टीमेशन एंड हाइड्रोलिक स्ट्रक्चर्स-न्यू एप्रोच फॉर रिस्क रिडक्शन पर पांच दिवसीय कोर्स की शुरुआत हुई।

विशिष्ट अतिथि सिंचाई विभाग के चीफ इंजीनियर विजय कुमार ने कहा, बाढ़ आना तो स्वाभाविक है, लेकिन तकनीक का प्रयोग करके नुकसान को कम किया जा सकता है। बाढ़ का पूर्वानुमान लगाते हुए स्मार्ट अलार्म सिस्टम बेहद जरूरी है। इस दौरान उन्होंने व्यावहारिक तौर पर अपनाई जाने वाली तकनीक की भी जानकारी दी। राष्ट्रीय आपदा प्रबंधन संस्थान, दिल्ली (एनआईडीएम) और एमएनएनआईटी के सिविल इंजीनियरिंग विभाग की पहल पर हुए कार्यक्रम में देशभर से 80 प्रतिभागी शामिल हुए। इसमें 50 ऑफलाइन और 30 ऑनलाइन जुड़े हैं।

एमएनएनआईटी के कार्यवाहक निदेशक प्रो.एमएम गोरे ने बहुआयामी और अंतर्विषयक तकनीक, दृष्टिकोण एवं समन्वय की जरूरी बताया। नई दिल्ली के प्रो.चंदन घोष ने शहरी बाढ़ शमन के उपायों की जानकारी दी। डॉ.सुधीर कुमार सिंह ने बाढ़ प्रबंधन में जीआईएस के उपयोग सहित जरूरी डाटाबेस बनाने का तरीका भी बताया। कहा, कई बार बाढ़ कई क्षेत्रों में नई जल निकासी का निर्माण करती है।

डॉ.बिनीत कुमार ने बाढ़ प्रबंधन के क्षेत्र में प्रचलित नई तकनीक के बारे में बताया। कहा, यह चैनल की तली पर गाद नहीं जमने देगा।

इस विधि में गेट खोलने या बंद करना जरूरी नहीं है। यह तीन गुना जल डिस्चार्ज करने में सक्षम भी है। इसे बांध पर बड़ी आसानी से लगाया जा सकता है। कार्यक्रम में सिविल इंजीनियरिंग विभाग के अध्यक्ष प्रो.आरएम सिंह, कोर्स समन्वयक प्रो.एचके पांडेय, प्रो.आरपी सिंह, डॉ.अनन्या ने मौजूदगी दर्ज कराई। संवाद

विज्ञापन बुक करने 1800-121-1166

Amar Ujala | 30-April-2024 | Prayagraj Edition

ति में मिश्रा, आमता शर्मा मौजूद रहे।

बाढ़ में नुकसान को कम करने का कौशल सीख रहे टेक्नोक्रेट्स

जासं, प्रयागराज : मोतीलाल नेहरू राष्ट्रीय प्रौद्योगिकी संस्थान में फ्लड एस्टीमेशन एंड हाइड्रोलिक स्ट्रक्चर्स न्यू अप्रोच फार रिस्क रिड्क्शन पर पांच दिवसीय पाठ्यक्रम शुरू हुआ। इसमें देशभर के करीब 80 विद्यार्थी शामिल हो रहे हैं। 50 विद्यार्थी आफलाइन तो 30 आनलाइन जुड़े हैं। यह पाठ्क्रम सिविल इंजीनियरिंग विभाग में दिल्ली स्थित एनआईडीएम के संयुक्त तत्वावधान में संचालित किया जा रहा है।

उद्घाटन सत्र में विशिष्ठ अतिथि चीफ इंजीनियर सिंचाई विभाग विजय कुमार रहे। उनके साथ एमएनएनआइटी के कार्यवाहक निदेशक प्रो. एमएम गोरे, प्रो. आरएम सिंह, प्रो. एचके पांडेय, प्रो. आरपी सिंह, डा. बिनित कुमार ने दीप प्रज्वलित कर कार्यक्रम की शुरुआत की। विशिष्ट अतिथि ने कहाकि यह पाठ्यक्रम बहुत ही प्रासंगिक है। बाढ़ आने पर तकनीक के जरिए नुकसान को कम करने का कौशल यहां सीखने को मिलेगा।इस पाठ्यक्रम में एमएनएनआइटी के साथ आइआइटी मुंबई, रुड़की, खड़गपुर, वाराणसी आदि के विद्यार्थी भी शामिल हो रहे हैं।

Dainik Jagran | 30-April-2024 | Prayagraj Edition

एमएनएनआईटी में पांच दिनी कोर्स का शुभारंभ

प्रयागराज। एमएनएनआईटी के सिविल इंजीनियरिंग विभाग और एनआईडीएम के संयुक्त तत्वावधान में पांच दिनी कोर्स का सोमवार को शुभारंभ हुआ। कार्यक्रम में देशभर से लगभग 80 प्रतिभागियों ने हिस्सा लिए। इसमें से 50 ऑफलाइन और 30 ऑनलाइन जुड़े हैं। विशिष्ट अतिथि चीफ इंजीनियर सिंचाई विभाग विजय कुमार, प्रो. एमएम गोरे, प्रो. आरएम सिंह एवं कोर्स समन्वयक प्रो. एचके पांडेय ने कार्यक्रम का शुभारंभ किया।

Dainik Jagran | 30-April-2024 | Prayagraj Edition

Resource Materials:

Day 01 – 29th April, 2024			
TECHNICAL SESSION - I			
Time	**Title**	**Expert/Speaker**	**Link to Resource Material**
11:40 am to 01:00 pm	**Urban Flood Mitigation Measures**	**Prof. Chandan Ghosh,** (Retd.) NIDM New Delhi	https://docs.google.com/presentation/d/1t8sKQw0y5pCoV38W1XFr7xiLVOvMFkkN/edit?usp=sharing&ouid=118322054571470352498&rtpof=true&sd=true
TECHNICAL SESSION – II			
Time	**Title**	**Expert/Speaker**	**Link to Resource Material**
02:00 pm to 03:30 pm	**Flood understanding under the lens of Geospatial & modeling approach**	**Dr. Sudhir Kumar Singh,** University of Allahabad	https://docs.google.com/presentation/d/1ym1EIBQXChHIhI94Y6-PW9rjSysxFFXq/edit?usp=sharing&ouid=118322054571470352498&rtpof=true&sd=true
TECHNICAL SESSION – III			
Time	**Title**	**Expert/Speaker**	**Link to Resource Material**
03:40 pm to 05:00 pm	**Hydraulics of Piano Key Weirs**	**Dr. Binit Kumar,** MNNIT Allahabad	https://drive.google.com/file/d/1apL7tDQbULIsrsTCX4-C7yCXy9vtc6rk/view?usp=sharing

Day 02 – 30th April, 2024			
TECHNICAL SESSION – IV			
Time	**Title**	**Expert/Speaker**	**Link to Resource Material**
10:00 am to 11:30 am	**Flood Estimation using SWOT**	**Dr. Pramod Soni,** IIT-BHU, Varanasi	**https://docs.google.com/presentation/d/1nbMflUDenfXRZtdAlVfcUq1-LlubU1Ia/edit?usp=sharing&ouid=118322054571470352498&rtpof=true&sd=true**
TECHNICAL SESSION – V			
Time	**Title**	**Expert/Speaker**	**Link to Resource Material**
11:40 am to 01:00 pm	**Hydraulic Structures: Design Perspectives**	**Prof. R.M. Singh,** MNNIT Allahabad	**https://drive.google.com/file/d/14NuRByMIntFHaXDftITIuzO0vkUYQ1mz/view?usp=sharing**
TECHNICAL SESSION – VI			
Time	**Title**	**Expert/Speaker**	**Link to Resource Material**
02:00 pm to 05:00 pm	**Flood Evaluation using SWOT - Hands On Exercise**	**Prof. H.K. Pandey**, MNNIT Allahabad And **Dr. Pramod Soni,** IIT-BHU, Varanasi	**https://drive.google.com/file/d/14NuRByMIntFHaXDftITIuzO0vkUYQ1mz/view?usp=sharing**

Day 03 – 01st May, 2024			
TECHNICAL SESSION – VII			
Time	**Title**	**Expert/Speaker**	**Link to Resource Material**
10:00 am to 11:30 am	**Sediment and Hydraulic Hazards**	**Dr. Manish Pandey,** IIT Kharagpur	**https://drive.google.com/file/d/1U_KQNQkR5fWhhsxMBM6wsabCfpX37IvM/view?usp=sharing**
TECHNICAL SESSION – VIII			
Time	**Title**	**Expert/Speaker**	**Link to Resource Material**
11:40 am to 01:00 pm	**Rubber dam: An innovative hydraulic structure**	**Prof. Zulfequar Ahmad,** IIT Roorkee	**https://docs.google.com/presentation/d/1Kp-FNA8BpTRwjHzf3qMgV1s97KCxxlZB/edit?usp=sharing&ouid=118322054571470352498&rtpof=true&sd=true**
TECHNICAL SESSION – IX			
Time	**Title**	**Expert/Speaker**	**Link to Resource Material**
02:00 pm to 05:00 pm	**Physical and Numerical Modelling (DualSPHYsics) of Hydraulic Structures - Hands On Experience**	**Dr. Binit Kumar,** MNNIT Allahabad And **Ananth Wuppukondur,** MNNIT Allahabad	**HANDS ON ACTIVITIES**

Day 04– 02nd May, 2024			
TECHNICAL SESSION – X			
Time	**Title**	**Expert/Speaker**	**Link to Resource Material**
10:00 am to 11:30 am	**Climate Change Impact on Coastal Flooding and communities**	**Dr. S. Ramalingam,** NIT Puducherry	**https://drive.google.com/file/d/1SkbPVzvgYi-hvhZseiKHxAl3kreNUB90/view?usp=sharing**
TECHNICAL SESSION – XI			
Time	**Title**	**Expert/Speaker**	**Link to Resource Material**
11:40 am to 01:00 pm	**Flood Plain Mapping for Ungauged Basins**	**Dr. Ishtiyaq Ahmad,** NIT Raipur	**https://docs.google.com/presentation/d/1WlZEiPC0jUI98Tt5TBNHZ0DIy31bdXsy/edit?usp=sharing&ouid=118322054571470352498&rtpof=true&sd=true**
TECHNICAL SESSION – XII			
Time	**Title**	**Expert/Speaker**	**Link to Resource Material**
02:00 pm to 05:00 pm	**River Modelling using TELEMAC software- Hands On Experience**	**Dr. Binit Kumar,** MNNIT Allahabad And **Ananth Wuppukondur,** MNNIT Allahabad, **Prof. R.P Singh,** MNNIT Allahabad and **Prof.Surya Parkash** NIDM Delhi	**HANDS ON ACTIVITIES**

Day 05– 03rd May, 2024			
TECHNICAL SESSION – X			
Time	**Title**	**Expert/Speaker**	**Link to Resource Material**
10:00 am to 11:30 am	**Regional Flood Frequency Analysis including Reservoir Outflow**	**Prof. Jothi Prakash,** IIT Bombay	**https://docs.google.com/presentation/d/1xfyNEQ954RJ8agdoXTzL1PnzkZu6tLYE/edit?usp=sharing&ouid=118322054571470352498&rtpof=true&sd=true**
TECHNICAL SESSION – XI			
Time	**Title**	**Expert/Speaker**	**Link to Resource Material**
11:40 am to 01:00 pm	**National Policy and Guidelines of Floods Risk Reduction and Resilience**	**Prof. Satya Parkash,** New Delhi	**https://docs.google.com/presentation/d/1HTC9WT-f9CSXnGCRqcdpwjjzqn2wgsZh/edit?usp=sharing&ouid=118322054571470352498&rtpof=true&sd=true**

List of Participants:

PHYSICAL MODE (Offline)

Sl. No	First Name	Last Name	Phone	Organization	Designation	Grade	Level
1	Robin	Verma	9643547638	Irrigation and Water Resource Department, Uttar Pradesh	Assistant Engineer	A	10-14
2	Dharmendra	Kumar	9794008838	Irrigation and Water Resource Department, Uttar Pradesh	Assistant Engineer	A	10-14
3	Megavath	Narahari	9603552240	MNNIT Allahabad	Researcher	A/ Equivalent	-
4	Anandita	Raj	7011716423	MNNIT Allahabad	Researcher	A/ Equivalent	-
5	Anurag	Yadav	9411465329	MNNIT Allahabad	Researcher	A/ Equivalent	-
6	Krishna	Kumar Tiwari	8574067921	MNNIT Allahabad	Researcher	A/ Equivalent	-
7	Swapnil Kumar	Sharma	9452786306	MNNIT Allahabad	Researcher	A/ Equivalent	-
8	Aditya	Shekhar	7739539416	MNNIT Allahabad	Researcher	A/ Equivalent	-
9	Himanshu Hanumant	Singh	7982885652	MNNIT Allahabad	Researcher	A/ Equivalent	-
10	Shobhnath	Yadav	9450455134	SDRF	Dy. S.P.	B	6-9
11	Md. Tanveer	Alam	9651361046	SDRF	Constable	B	6-9
12	Amit Kumar	Singh	9838642888	SDRF	Constable	B	6-9
13	Ajeet	Singh	8299727804	SDRF	Sub-Inspector	B	6-9
14	Saurabh Kumar	Tripathi	9956294214	Shambhunath Institute of Engineering and	Assistant Professor	A	10-14

				Technology, Prayagraj-			
15	Roopa	Maurya	9794442856	University of Allahabad	Researcher	A/ Equivalent	-
16	Brijesh Pratap	Yadav	7276926620	Irrigation and Water Resource Department, Uttar Pradesh	Assistant Engineer	A	10-14
17	Brijesh	Kumar	9936484945	UP Jal Nigam	Junior Engineer	B	6-9
18	Ashish	Awasthi		CWC	Executive Engineer	A	10-14
19	Anshuman	Singh	9935057533	CWC	Sub Divisional Engineer	A	10-14
20	Santosh	Kumar	9455363294	NDRF	DC	A	10-14
21	Nilesh	Diwaniya	8770460722	NDRF	Inspector/GD	B	6-9
22	Neeraj	Kumar	9798267089	NDRF	SI/GD	B	6-9
23	Anil Singh	Kushwaha	9479640738	NDRF	SI/GD	B	6-9
24	Pavan Dev	Gaur	7750066221	NDRF	Second-In-Command	A	10-14
25	Dilip	Kumar	9451032789	UP Irrigation	Assistant Engineer	A	10-14
26	Akhil Dev	Singh	9115014281	UP Jal Nigam	Assistant Engineer	A	10-14
27	Jitendra	Yadav	6392326571	UP Jal Nigam	Junior Engineer	B	6-9
28	Ravi	Singh	7253802879	NDRF	DC	A	10-14
29	Shivanshu		9451236494	Shambhunath Institute of Engineering and Technology, Prayagraj	Assistant Professor	A	10-14
30	Diwakar	Shukla	9998246289	MNNIT Allahabad	Researcher	A/ Equivalent	-
31	Shivani	Gupta	7394050316	University Of Allahabad	Researcher	A/ Equivalent	-

32	Praveen	Kumar	9520390392	MNNIT Allahabad	Researcher	A/ Equivalent	
33	Narendra	Singh Parihar	9630844043	UP Irrigation	Assistant Engineer	A	10-14
34	Maheshwari	Sonker	7052378920	MNNIT Allahabad	Researcher	A/ Equivalent	
35	Arvind Kumar	Dhruwans	9473854553	UP Jal Nigam	Assistant Engineer	A	10-14
36	Rakesh Kumar	Shukla	6392053248	UP Irrigation	Assistant Engineer	A	10-14
37	Ravi Kumar	Yadav	7380959565	SDRF	Constable	B	6-9

VIRTUAL MODE (Online)

Sl.No	First Name	Last Name	Phone	Organization	Designation	Grade	Level
1	Mohit	Kumar	08699361668	Punjab Engineering College	Assistant Professor	A	10-14
2	Chandan	Raj	9771879891	Ramgarh Engineering College	Assistant Professor	A	10-14
3	Nitish	Chitransh	7905211557	UP Irrigation	Assistant Engineer	A	10-14

Visual Records of Sessions:

S.NO.	DAY & DATE	TECHNICAL SESSION(s)
01.	**Day 01:** 29th April, 2024	Session I Session II Session III
	Link: https://drive.google.com/drive/folders/1erabZvvlrdTs1Vfp3ARsYhtIr9FID71J?usp=sharing	
02.	**Day 02:** 30th April, 2024	Session IV Session V Session VI
	Link: https://drive.google.com/drive/folders/1d1wm9hadynLq6hEPErM7G5gn79G91zM1?usp=sharing	
03.	**Day 03:** 01st May, 2024	Session VII Session VIII Session IX
	Link: https://drive.google.com/drive/folders/1To0rooHH8HQG1aRLZveQ_aXUKdwXIUjP?usp=sharing	
04.	**Day 04:** 02nd May, 2024	Session X Session XI Session XII
	Link: https://drive.google.com/drive/folders/1kiAMnUVlmboQSQODbR9gqBt8RNLJRTTO?usp=sharing	
05.	**Day 05:** 03rd May, 2024	Session XIII Session XIV
	Link: https://drive.google.com/drive/folders/129D4OZZRv6bbXe1nf7F9nttiW32C_MHb?usp=sharing	