POORNIMA
COLLEGE OF ENGINEERING

Affiliated to RTU, Kota • Approved by AICTE & UGC under 2(f) • Accredited by NBA

DEPARTMENT OF CIVIL ENGINEERING
FDP
On
'Earthquake Resistant Design of Concrete & Steel Moment Resisting frame Buildings'
Session_2019-20

Dr. Mahesh Bundele
B.E., M.E., Ph.D.
Director
Poornima College of Engineering
ISI-6, RIICO Institutional Area
Sitapura, JAIPUR

A

Post Detail Report of

TEQIP-III RTU (ATU) SPONSORED

Five Days FDP

On

"Earthquake Resistant Design of Concrete & Steel Moment Resisting frame Buildings"

September 21-25, 2020

Coordinated by

Mr. Divya Vishnoi

Ms. Supriya Bansal

Organized by

Department of Civil Engineering

Poornima College of Engineering

Jaipur, Rajasthan- (India)

&

Rajasthan Technical University, Kota

Dr. Mahesh Bundele
B.E., M.E., Ph.D.
Director
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ISI-6, RIICO Institutional Area
Sitapura, JAIPUR

Contents

1.	FDP BROCHURE	3
2.	PROGRAMME OUTLINE	5
3.	EXPERT DETAILS	6
4.	SCREENSHOTS OF ONLINE SESSION	11
5.	ASSESSMENT	36
6.	FEEDBACK FORM FORMAT	39
7.	CERTFICATE FORMATE	42
8.	FEEDBACK ANALYSIS	42
9.	PARTICIPANTS LIST AND CERTIFICATIONS	47

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Sitapura, JAIPUR

1. FDP BROCHURE

PCE ORGANIZING COMMITTEE

Mr. Pankaj Dhemla	Vice-Principal, PCE
Dr. Rekha Nair	Dean I Year, PCE
Mr. Balwan Seshma	Assistant Professor & HOD, PCE
Dr. Harshwardhan Singh Chouhan	Associate Professor, PCE
Dr. Shilpi Jain	Associate Professor, PCE
Mr. Arpit Singh Bhadoriya	Assistant Professor, PCE
Mr. Lokesh Kumar Prajapat	Assistant Professor, PCE
Mr. Rahul Khandelwal	Assistant Professor, PCE
Mr. Dinesh Sharma	Assistant Professor, PCE
Mr. Rituraj Singh Rathore	Assistant Professor, PCE
Mr. Jitendra Kumar	Assistant Professor, PCE
Mr. Vikas Sharma	Assistant Professor, PCE
Mr. Vishal Chourasiya	Assistant Professor, PCE

RESOURCE PERSONS

The resource person for the FDP will be eminent professors and experts in the area of Earthquake Resistant and Construction from IITs, NITs and other esteemed institutions.

ELIGIBILITY

This course is open to all the Faculty Members of AICTE Approved Institutions, Research Scholars, and Persons working in R&D organizations or Industry. Number of participants for FDP is limited. All the sessions will be conducted online only.

IMPORTANT DATES

Last date of recipient of application	September 15, 2020
Intimation of selection by mail	September 16, 2020
FDP duration	September 21-25, 2020

REGISTRATION AND FEE PARTICULARS

- There is no registration fee for faculty from AICTE approved Institutions, Participants from Industry, and Research Scholars.
- Registration for the program may be done by filling the Registration Form online, Reg. Link: **https://tinyurl.com/yxck6sex**

CORRESPONDENCE

Prof. (Dr.) A.K. Dwivedi
Event Coordinator (RTU)
✉ : akdrtu@gmail.com • ✆ : +91-9414260887

Mr. Divya Vishnoi
Event Coordinator (PCE)
✉ : divya.vishnoi@poornima.org • ✆ : +91-8440845083

Ms. Supriya Bansal
Event Coordinator (PCE)
✉ : supriya.bansal@poornima.org • ✆ : +91-8432947266

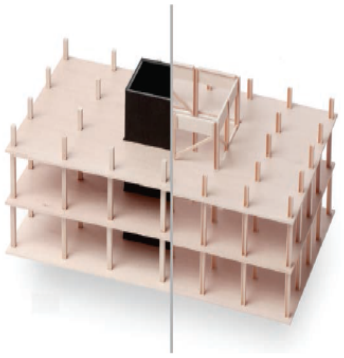
Venue

Department of Civil Engineering
Poornima College of Engineering
ISI-6, RIICO Institutional Area, Sitapura, Jaipur, Rajasthan 302022
www.pce.poornima.org

TEQIP-III SPONSORED

Faculty Development Program on Earthquake Resistant Design of Concrete & Steel Moment Resisting frame Buildings

September 21-25, 2020



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&
Department of Civil Engineering

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ABOUT TEQIP-III

The Project, third phase of Technical Education Quality Improvement Programme (referred to as TEQIP-III) is fully integrated with the Twelfth Five-year Plan objectives for Technical Education as a key component for improving the quality of Engineering Education in existing institutions with a special consideration for Low Income States and Special Category States and support to strengthen few affiliated technical universities to improve their policy, academic and management practices.

RAJASTHAN TECHNICAL UNIVERSITY

Rajasthan Technical University (RTU) is located in Kota in the state of Rajasthan. It was established in 2006 by the Government of Rajasthan. The University currently affiliates about 129 Engineering Colleges, 4 B.Arch., 41 MCA Colleges, 95 MBA Colleges, 44 M.Tech. Colleges and 3 Hotel Management and Catering Institutes. The University aims to provide quality technical education which may help Rajasthan in its technical development and will boost technical environment in the country.

POORNIMA COLLEGE OF ENGINEERING

Poornima College of Engineering (PCE), established as a brand of technical education in the year 2000, has its own glorious legacy of leading the young engineers to the mammoth sky of success. Its accomplishments forecast its journey through the hardships and its triumph over them one after another. PCE left no stone unturned since its establishment in turning the glorious vision into unbelievable reality providing the platform for knowledge and research and their practical implementations in different engineering professional prospects. Glorious glimpses of PCE:

- Highly recognized and renowned affiliated technical institution all over Rajasthan with built up area more than 3.5 lacs square feet
- Affiliated to RTU, Kota & approved by AICTE, New Delhi
- The most preferred NBA Accredited Engineering College with running of six specializations of Engineering at UG Level (CSE, ECE, EE, ME, IT, CIV) and two at PG level (CS & VLSI)
- The only institution permitted by RTU to admit FN/PIO/Gulf students & designated as centre of excellence by IBM

DEPARTMENT OF CIVIL ENGINEERING

The Civil Engineering Department of PCE came into existence in the year 2011 with an alignment of the department's evolution with key events and technological advances for the betterment of the society and nation. At present, it has the intake of 60 students providing all the amenities of infrastructure related to knowledge, research, experiments and training of multiple professions. Poornima College of Engineering believes that Civil Engineering is an evergreen branch in the engineering profession. Therefore, the Department of Civil Engineering has renowned scholars as the faculty members for sharing the knowledge. It has been taking initiatives for the versatile enhancement of the students through the technical, cultural and sports fests since its inception.

ABOUT FACULTY DEVELOPMENT PROGRAM

A Five days Faculty Development Programme shall be organized for faculty members from different Engineering colleges across India from 21th – 25th September, 2020. Experts, across the country shall deliver the lectures on demand for understanding and exposure to earthquake engineering in design and practice of Concrete and Steel structures. These members have been contributing significantly to the improvement of the quality of Civil Engineering education. The main focus of the FDP will be on providing comprehensive knowledge about fundamental of structural dynamics, relevant to earthquake resistant structure design. Faculty will introduce about recent techniques and methods to analyse and design of Steel and Concrete for earthquake resistant frame buildings.

OBJECTIVES OF THE FDP

- To make the faculty learn about behaviour of concrete and steel structure during earthquake.
- To introduce the provision of designs and ductile detailing of structures with reference to Indian standards.
- To motivate and develop confidence on use of recent techniques and methods to analyse and design of Steel and Concrete for earthquake resistant frame buildings.

COURSE MODULES

- Seismic resistant design philosophy – choice of form and material
- Design for seismic loads – displacement and curvature ductility requirements, Ductility demand of frames using static collapse mechanism and dynamic analysis
- Response spectra, elastic and inelastic spectra for MDOF structures
- Variation of ductility demand over height of multistory building
- Concept of soft storey, Detailing of reinforcement for specific ductility demand and Effect of confinement
- BIS code based design procedures for analysis, design and ductile detailing of buildings
- Overview of Earthquake Resistant Design of Steel MRF Buildings
- Design and Detailing of Steel MRF Buildings for Earthquake Effects as per IS 800 : 2007
- Design of a Steel MRF Building as per Current Code
- Draft Provisions for Earthquake Resistant Design of Concrete and Steel

FDP COMMITTEE

CHIEF PATRON

Prof. (Dr.) R. A. Gupta
Hon'ble Vice Chancellor, RTU Kota

PATRON

Dr. Mahesh M. Bundele
Principal & Director, Poornima College of Engineering

RTU EVENT COORDINATOR

Prof. (Dr.) A.K. Dwivedi (RTU, Kota)

RTU (ATU) TEQIP-III COORDINATOR

Prof. (Dr.) Dhirendra Mathur

RTU (ATU) TEQIP-III COMMITTEE

Dr. Harish Sharma	Nodal officer
Prof. D. K. Sambariya	Nodal Officer Procurement)
Dr. S. D. Purohit	Nodal Officer Finance
Dr. Irum Alvi	Conference
Mr. Santosh Sharma	Expert Lecture
Mr. Anshul Bansal	GATE & Induction
Mr. Dinesh Kumar	Workshop

HOST INSTITUTE COORDINATORS

Mr. Divya Vishnoi	Assistant Professor
Ms. Supriya Bansal	Assistant Professor

Dr. Mahesh Bundele
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2. PROGRAMME OUTLINE

RAJASTHAN TECHNICAL UNIVERSITY, KOTA
(Poornima College of Engineering, Jaipur)
TEQIP-III RTU (ATU) SPONSORED
Five Days TEQIP-III Sponsored Online Faculty Development Programme
On
Earthquake Resistant Design of Concrete & Steel Moment Resisting frame Buildings
(September 21-25, 2020)

SCHEDULE OF ONLINE FDP

DAY-1 (Monday, September 21, 2020)	
09:45 AM - 10:20 AM	**Inauguration Function of FDP** • **Prof. (Dr.) R.A. Gupta** , Hon'ble Vice Chancellor , RTU Kota **(Chief Guest)** • **Prof. (Dr.) Dhirendra Mathur**, RTU (ATU) TEQIP-III Coordinator **(Guest of Honour)** • **Prof. (Dr.) O.P. Chhangani,** Hon'ble Vice Chancellor, Apex University **(Guest of Honour)** • **Prof. (Dr.) A.K. Dwivedi** , RTU Event Coordinator • **Ar. Rahul Singhi,** Director Poornima Group • **Dr. Mahesh Bundele**, Director & Principal, Poornima College of Engineering, Jaipur • **Mr. Pankaj Dhemla,** Vice Principal , Poornima College of Engineering, Jaipur • **Mr. Balwan Sheshma**, HOD,CE, Poornima College of Engineering
10:30AM - 12:00 PM	**Session-I** **Topic:** Seismic Resistant Design Philosophy – Choice of Form and Material **Resource Person:** Prof.(Dr.) O.P. Chhangani , Hon'ble Vice Chancellor, Apex University
12:00 PM- 1:30 PM	**LUNCH BREAK**
1:30 PM- 3:00 PM	**Session-II** **Topic:** Evaluation of Seismic Forces and Seismic Analysis Methods **Resource Person:** Prof. (Dr.) Suhasini N. Madhekar, Professor, College of Engineering, Pune

DAY-4 (Thursday, September 24, 2020)	
10:30 AM - 12:00 PM	**Session-VII** **Topic:** BIS Code Based Design Procedures for Analysis, Design and Ductile Detailing of buildings. **Resource Person:** Dr. Rama Shanker, Associate Professor, MNNIT Allahabad
12:00 PM- 3:30 PM	**LUNCH BREAK**
3:30 PM- 5:00 PM	**Session-VIII** **Topic:** Design and Detailing of Steel MRF Buildings for Earthquake Effects as per IS 800: 2007 **Resource Person:** Dr. Anupam Rawat, Assistant Professor, MNNIT Allahabad

DAY-5 (Friday, September 25, 2020)	
10:30 AM - 12:00 PM	**Session-IX** **Topic:** Seismic Vibration Control of Tall Building **Resource Person:** Prof.(Dr.) B.P. Suneja, Dean Academics , RTU Kota
12:00 PM- 1:30 PM	**LUNCH BREAK**
1:30 PM- 3:00 PM	**Session-X** **Topic:** Seismic Resistant Analysis of Berthing Structures Including Soil Structure Interaction **Resource Person:** Dr. Seeram Madhuri, Assistant Professor, NIT Jamshedpur
3:00 PM - 3:30 PM	**Valedictory Session and Vote of thanks**
3:30 PM - 4:00 PM	**Assessment Quiz**

Prof. (Dr.) A.K. Dwivedi **RTU Coordinator**	**Mr. Divya Vishnoi** **Host Institute Coordinator**	**Ms. Supriya Bansal** **Host Institute Coordinator**	**Dr. Mahesh Bundele** **Head of Institute**

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3. EXPERT DETAILS

Dr. O.P. Chhangani
Hon'ble Vice Chancellor, Apex University,
opchhangani@yahoo.com

Professor Om Prakash Chhangani is a well-known scholar in the Structural Engineering within the area of Civil Engineering. He has contributed significantly in the utilization of fly ash within the state. He has more than 35 years of UG and 15 years of PG teaching experience. He has traveled extensively in Europe (Hungary, Czechoslovakia, Germany, France, Austria, Switzerland and Italy). He has participated in publication of European Committee du Beton manual on deflection calculation in slabs and currently a member of the Bureau of Indian standards on Earthquake resistance Design of Bridges and Retaining wall. His contributions on fly ash were also appreciated by college and erstwhile Engineering College Kota was awarded Business Council letter of appreciation for college activity to promote fly ash products.
He was instrumental in bringing TEQIP project to the state of Rajasthan in its II phase. He has authored numerous articles in journals of repute and delivered keynote lectures and expert lectures on subjects of Civil Engineering. He has contributed in curriculum development and courses formulation in PG programmes of University of Rajasthan and Rajasthan Technical University Kota. He has extensive administrative experience of working in different capacities in academic institutions within the state. He had been the Director University College of Engineering and Pro Vice-Chancellor at Rajasthan Technical University, Kota. He has worked as Director, Apex Group of Institutions as well as Director General of the Group. Currently he is the Vice Chancellor of the Apex University.

Dr. Suhasini N. Madhekar
Professor, College of Engineering, Pune
snm.civil@coep.ac.in

Dr. Suhasini N. Madhekar is currently working as Professor of Applied Mechanics, in the Department of Civil Engineering at College of Engineering Pune (COEP). She obtained her doctorate degree from Indian Institute of Technology (IIT) Bombay. The subject of her

research was ‘Seismic Control of Benchmark Highway Bridge’. Her PhD thesis is published in book form by LAP LAMBERT Academic Publishing GmbH and Company, Germany. Her current research interests include structural dynamics and vibration control, bridge engineering and protection of structures from earthquake. She is a supervisor of students for doctoral research. She is FIE (India) and life member of ISTE, ISSE, INDIAN ASTR, IIBE and ICI.
Dr. Madhekar has a published a book on ‘Seismic design of RC buildings - Theory and Practice’, co-authored by Mr. Sharad Manohar. The book is of international repute, published by Springer. The book was awarded the ‘Best book of the year - Useful to consultants’, in 2015, by Association of Consulting Civil Engineers, India. She has published international journal papers, conference papers and book chapters. Dr. Madhekar has delivered invited lectures in different educational institutes in India. She is also invited as examiner for evaluation of masters and PhD theses by different universities. Dr. Madhekar is recipient of the Excellence in Teaching Award at College of Engineering Pune, the ‘COEP Star Award’.

Dr.NitinSingh□is currently working as an Associate Professor in Department of Electrical Engineering, MNNIT Allahabad, Prayagraj, India. He is an alumnus of Motilal Nehru National Institute of Technology Allahabad, India. His primary areas of research are Power System Planning, Electricity markets, Artificial Intelligence, implementation of optimization algorithms and machine learning techniques for power system optimization. He has published more than 45 publications in International Journals and in Proceedings of International Conferences of repute. He is serving as reviewer of several Scopus, SCI and E-SCI-indexed journals. He has organized several international conferences under the banner of IEEE and Springer. He is Member of IEEE, member of IEEE Computational Intelligence Society, Power Energy Society, and Industrial Application society. He is currently serving as Secretary, IEEE Joint Chapter of Industrial Electronics/ Power Electronics /Control System at MNNIT Allahabad Dr.Nitin Singh is currently working as an Associate Professor in Department of Electrical Engineering, MNNIT Allahabad, Prayagraj, India. He is an alumnus of Motilal Nehru National Institute of Technology Allahabad, India. His primary areas of research are Power System Planning, Electricity markets, Artificial Intelligence, implementation of optimization algorithms and machine learning techniques for power system optimization. He has published more than 45 publications in International Journals and in Proceedings of International Conferences of repute. He is serving as reviewer of several Scopus, SCI and E-SCI-indexed journals. He has organized several international conferences under the banner of IEEE and Springer. He is Member of IEEE, member of IEEE Computational Intelligence

Society, Power Energy Society, and Industrial Application society. He is currently serving as Secretary, IEEE Joint Chapter of Industrial
Electronics/ Power Electronics /Control System at MNNIT Allahabad

Dr. Rama Shanker
Associate Professor, M. N. N. I. T. Allahabad
ramashanker@mnnit.ac.in

Dr. Rama Shanker is currently working as an Associate Professor in the Civil Engineering Department at MNNIT Allahabad. He did his masters and Ph.D. from IIT Delhi. His major research areas are Structural Health Monitoring (SHM), Soft Computing, Sensor System for SHM, Structural Dynamic, Soil Structure Interaction. He is involved in various testing and consultancy works including Design of various multi-storey residential and commercial buildings.
He has guided 10 research scholars towards their doctoral thesis, 5 on-going and 20 postgraduate students for their master's thesis. He has published numerous research papers in international/national journals and conference proceedings. He is also life time member of Indian Concrete Institute.

Dr. Keshav Kumar Sharma
Assistant Professor, National Institute of Technology, Jamshedpur
kksharma.ce@nitjsr.ac.in

Dr. Keshav Kumar Sharma is currently working as an Assistant Professor in the Civil Engineering Department at NIT Jamshedpur. He did his masters and Ph.D. from MNNIT Allahabad. His major research area is Design and Analysis of high rise buildings under the Seismic actions. He has published numerous research papers in the same area in international/national journals and conference proceedings. He is involved in various testing and consultancy works including design of bridges and multi-story Residential/Commercial buildings.

Dr. P. C. Ashwin Kumar
Assistant Professor, Indian Institute of Technology, Roorkee
pcashwin.feq2018@iitr.ac.in

Dr. P. C. Ashwin Kumar is currently working as an Assistant Professor in the Civil Engineering Department at IIT Roorkee. He did Ph.D. from IIT Delhi and masters from IIT Madras. His research interests include Seismic analysis and design of steel structures, Seismic retrofitting of structures, large scale testing of structures and Finite element modeling of structures. He is also a life member of ISET and affiliate member of ASCE.

Dr. Anupam Rawat
Assistant Professor, MNNIT Allahabad
anupam@mnnit.ac.in

Dr. Anupam Rawat is currently working as an Assistant professor in the Civil Engineering Department at MNNIT Allahabad. He did his masters and Ph.D. from MNNIT Allahabad. His major research areas are Structural Health Monitoring, Ferro-cement, Pavements, Soil-pavement interaction. He has published numerous research papers in the same area. He is also a Member in team for Inspection of Grossly Polluting Industries (GPIs) by third part technical institute funded under National Mission for Clean Ganga (NMCG) 'Namami Gange' Programme. April-July 2018.

Dr. B. P. Suneja
Professor, Rajasthan Technical University, Kota
bpsuneja@rtu.ac.in

Dr. B. P. Suneja is a Professor in the Civil Engineering Department of Rajasthan Technical University, Kota. Presently he is also working as the Dean, Faculty of Engineering and Architecture in the University and also as University coordinator for Universal Human Value Programs and Induction Programs of AICTE. He is also convener for New Education Policy-2020 for RTU.

He graduated from MBM Engg. College, Jodhpur in 1984 and later acquired his M. Tech. in 1992 and Ph. D. degree in 1997 both from IIT, Delhi. He is the life member of various professional and academic bodies. He is Vice-Chairman of Indian Building Congress, Kota Regional Centre.

He has to his credit more than 30 research papers in reputed international and national journals and in international and national conferences. His area of interest is Earthquake Disaster management. He has been one of the state resource persons for national disaster management program and has trained about 150 field engineers through short term disaster management programs.

His 35 years teaching experience also includes working in various important capacities like controller of examinations, Dean student welfare, Head of the Civil Engineering Department and Head Training and Placement of RTU.

Dr. Seeram Madhuri
Assistant Professor, National Institute of Technology, Jamshedpur
smadhuri.ce@nitjsr.ac.in

Dr. Seeram Madhuri is currently working as an Assistant professor in the Civil Engineering Department at NIT Jamshedpur. She did her masters and Ph.D. from IIT Madras. Her major research area is Dynamics of Offshore Structures. She has published numerous research papers in the same area. She received best paper award at IGC-2006 for the paper titled "Effect of Soil Structure Interaction Analysis Methods on Estimation of Natural Period of Berthing Structures".

4. SCREENSHOTS OF ONLINE SESSION

Date 21 September 2020

Inaugural Session

Poornima College of Engineering has organized a five days Faculty development Programme on Earthquake Resistant Design of Concrete & Steel Moment Resisting frame Buildings. This programme was innograted by Chief Guest Prof. R.A. Gupta, Hon.ble Vice Chancellor RTU Kota, Prof. Dhirrendra Mathur, RTU (ATU) TQIP-III Coordinator, Prof. O.P. Chhangani Vice Chancellor Apex Univeristy, Jaipur, Prof. B.P. Suneja Dean Academics Engineering and Architecture RTU Kota, Prof. A.K. Dwivedi, RTU FDP Coordinator, Prof. Mahesh Bundele, Director, PCE, Mr. Pankaj Demla and Mr. Divya Vishnoi.

Programme was preceded with welcome note by our Vice Principal Mr. Pankaj Dhemla. He welcomed our Chief Guest Prof. R.A. Gupta. He also briefed the importance of Earthquake resistant strucutres for faculty members, researchers, and students.

Prof. O.P. Chhangani also highlights the importance of such Faculty development Programme and Prof. B.P. Suneja disscuss about the importance of construction of Structure for Earthquake Rresistant. Also Prof. A.K. Dwivedi, RTU Event Coordinator, welcomed to all the participants and told about the FDP program. There are 134 participants were registered from various renowned institutes of Rajasthan and India.

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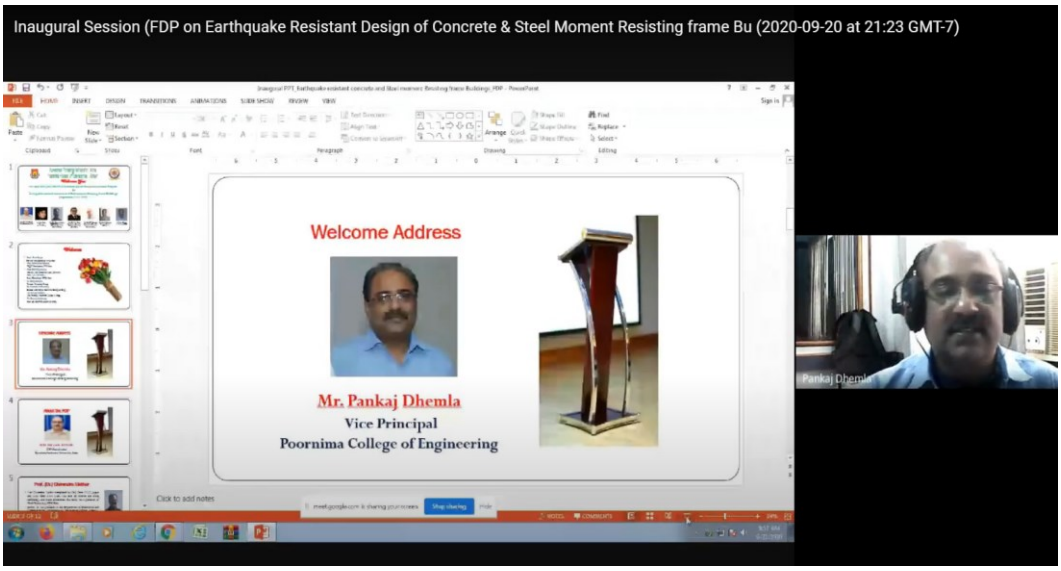

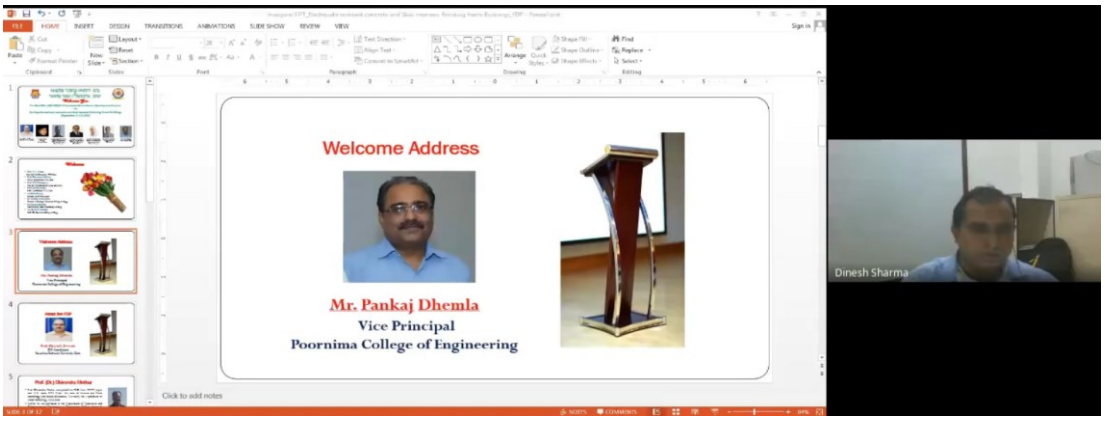

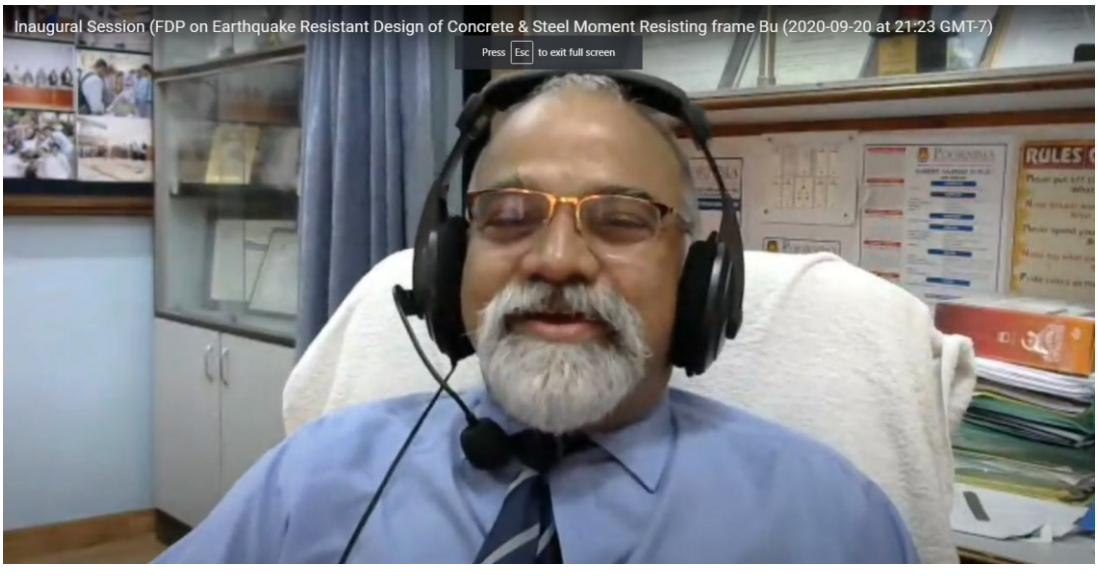

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Inaugural Session (FDP on Earthquake Resistant Design of Concrete & Steel Moment Resisting frame Bu (2020-09-20 at 21:23 GMT-7)

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Prof. (Dr.) B.P. Suneja

- Dr. B. P. Suneja is a Professor in the Civil Engineering Department of Rajasthan Technical University, Kota. Presently he is also working as the Dean, Faculty of Engineering and Architecture in the University and also as University coordinator for Universal Human Value Programs and Induction Programs of AICTE. He is also convener for New Education Policy-2020 for RTU.
- He graduated from MBM Engg. College, Jodhpur in 1984 and later acquired his M. Tech. in 1992 and Ph. D. degree in 1997 both from IIT, Delhi.
- He is the life member of various professional and academic bodies.
- He is Vice-Chairman of Indian Building Congress, Kota Regional Centre.

About the FDP

Prof. (Dr.) A.K. Dwivedi
FDP Coordinator
Rajasthan Technical University, Kota

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Prof. (Dr.) O.P. Chhangani

- He has authored numerous articles in journals of repute and delivered keynote lectures and expert lectures on subjects of Civil Engineering. He has contributed in curriculum development and courses formulation in PG programmes of University of Rajasthan and Rajasthan Technical University Kota.
- He has extensive administrative experience of working in different capacities in academic institutions within the state. He had been the Director University College of Engineering and Pro Vice-Chancellor at Rajasthan Technical University, Kota. He has worked as Director, Apex Group of Institutions as well as Director General of the Group. Currently he is the Vice Chancellor of the Apex University.

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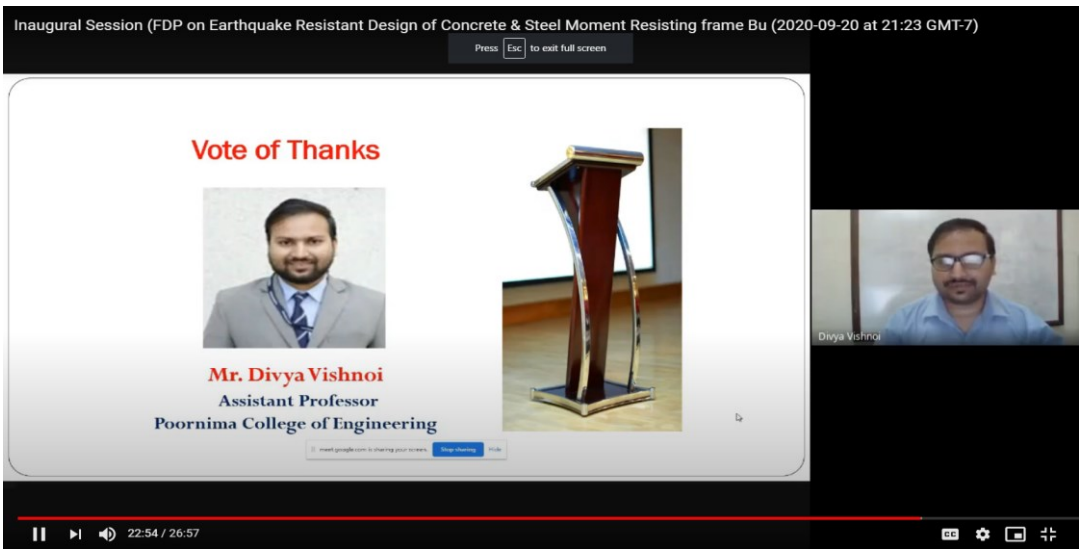

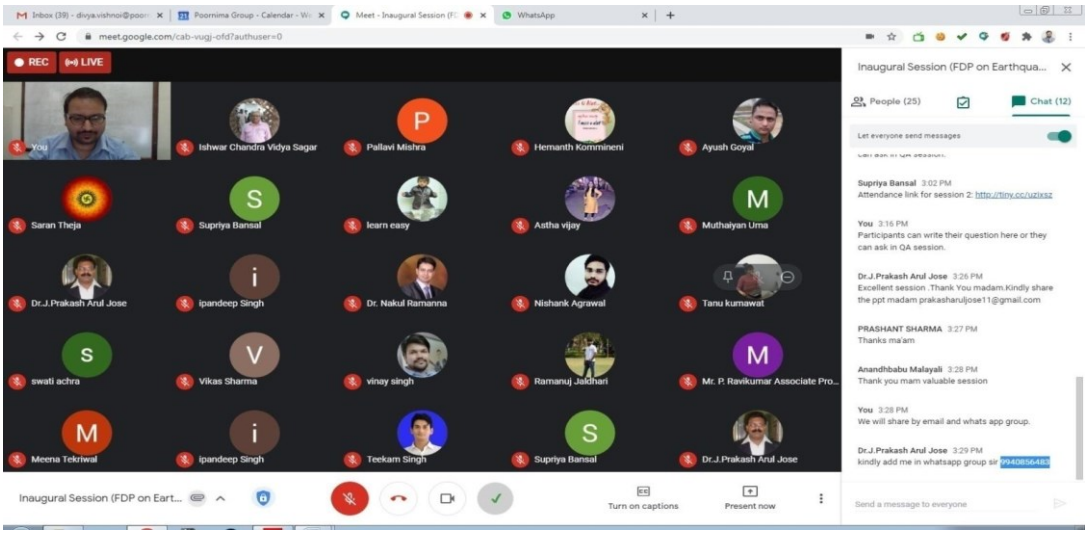

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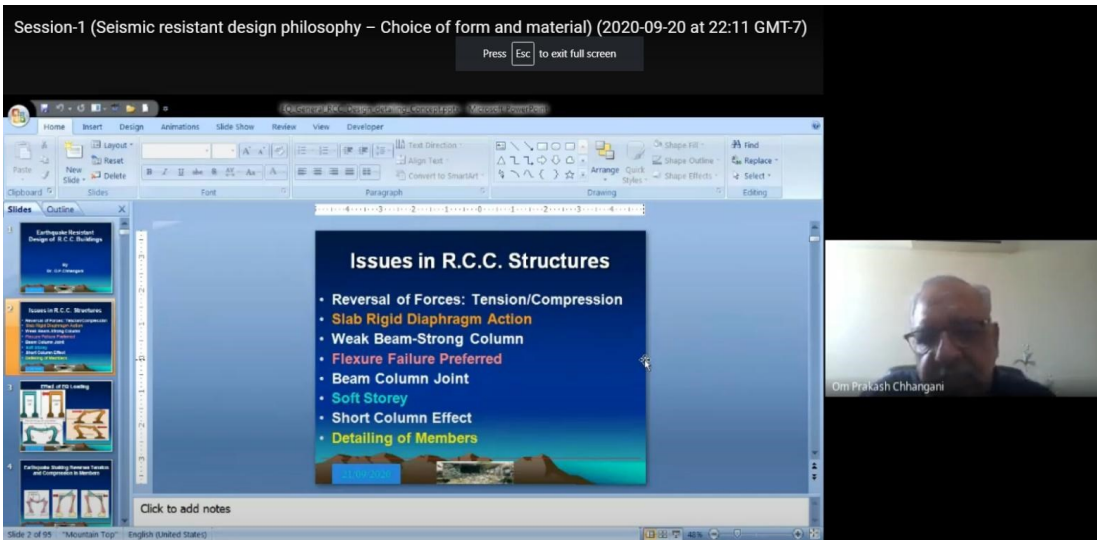
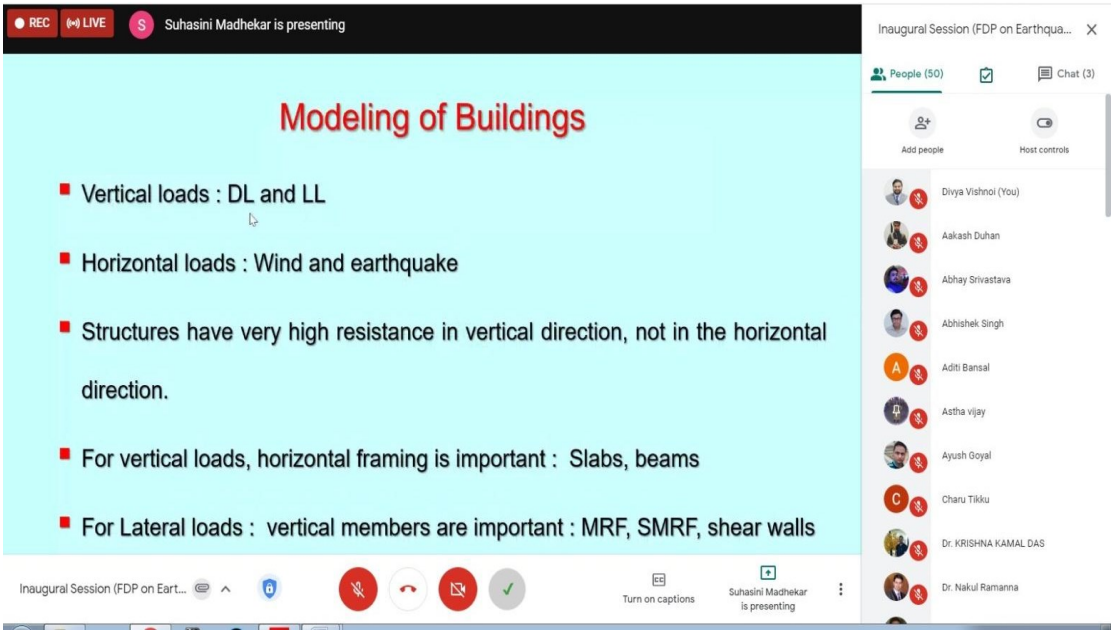
Session 1





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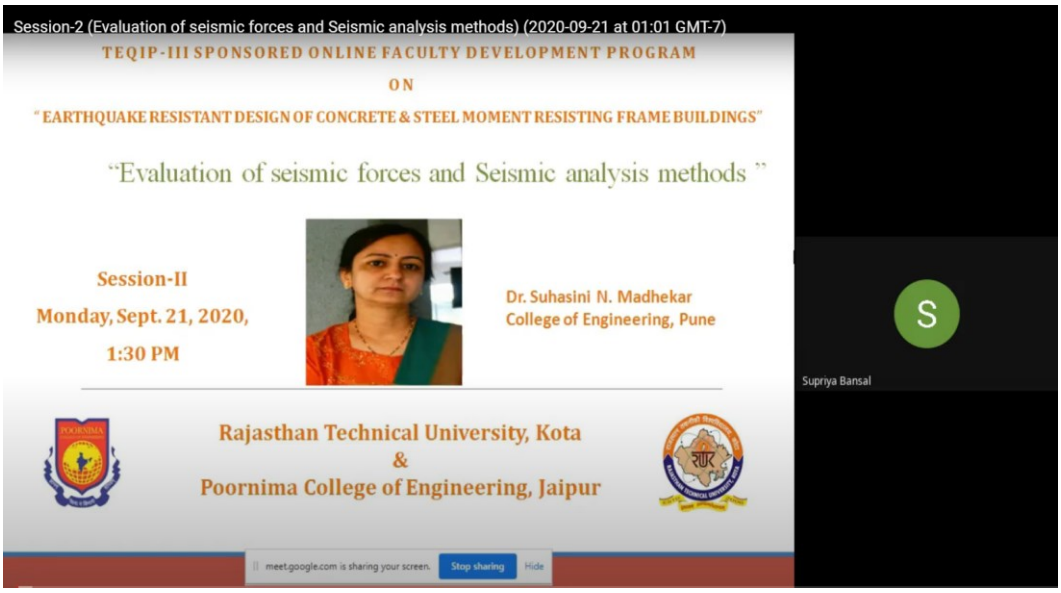
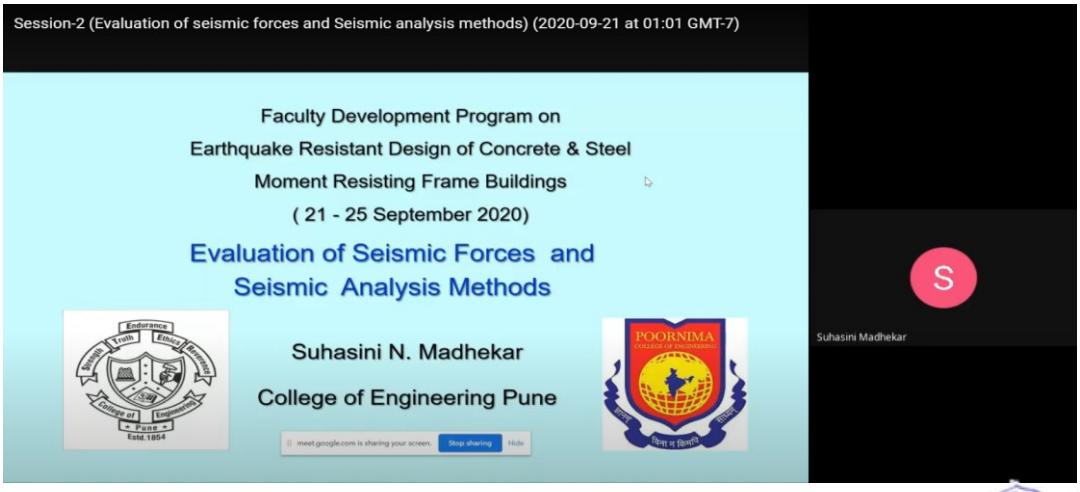
Session 2





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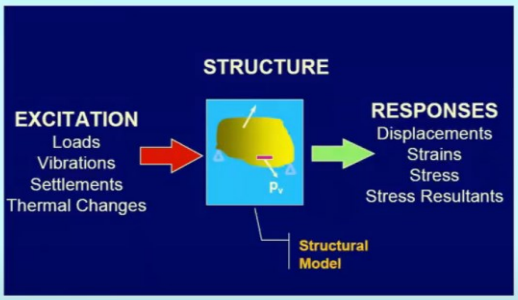
Sitapura, JAIPUR

Session-2 (Evaluation of seismic forces and Seismic analysis methods) (2020-09-21 at 01:01 GMT-7)

Press Esc to exit full screen

The need for Structural Model



- Real structure can only be load tested to determine the response.
- We can only analyse the model of a structure.
- We therefore need tools to model the structure and to analyse the model.

21

S

Suhasini Madhekar

Session-2 (Evaluation of seismic forces and Seismic analysis methods) (2020-09-21 at 01:01 GMT-7)

Press Esc to exit full screen

Time histories

- Time history (EQ signature) – Unique for a particular site.
- Consider suite of time histories. Minimum 11 time histories – Mean value of the response
- Consider time histories that represent seismo-tectonic characteristics of the site under consideration.
- Bhuj : Milestone EQ for revision of IS 1893.
- Ahmedabad : ~ 300 km away from Bhuj : Low-hazard zone: New buildings collapsed – Old survived
- PGA Bhuj - Amplified to ~ 15-18 times at Ahmedabad

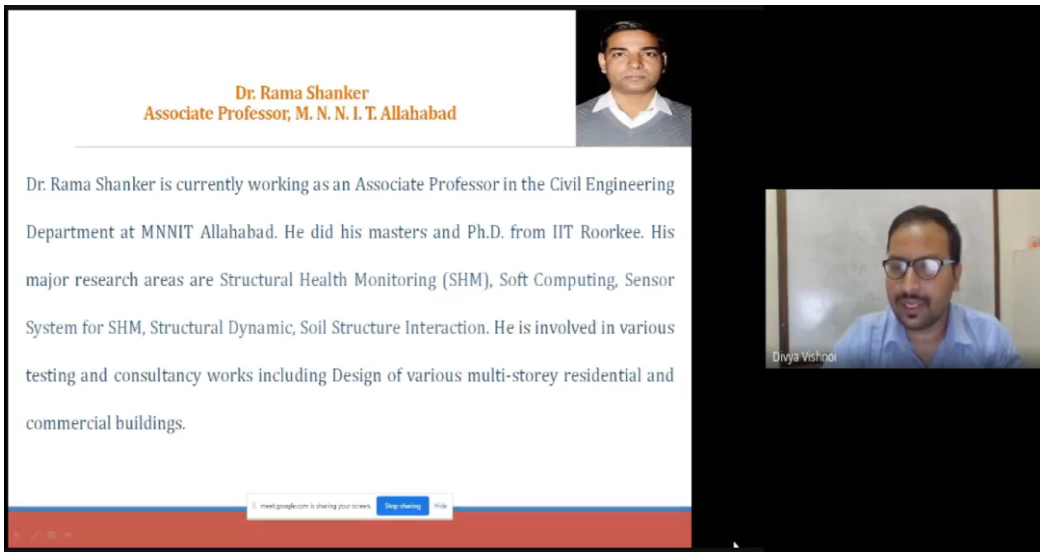
60

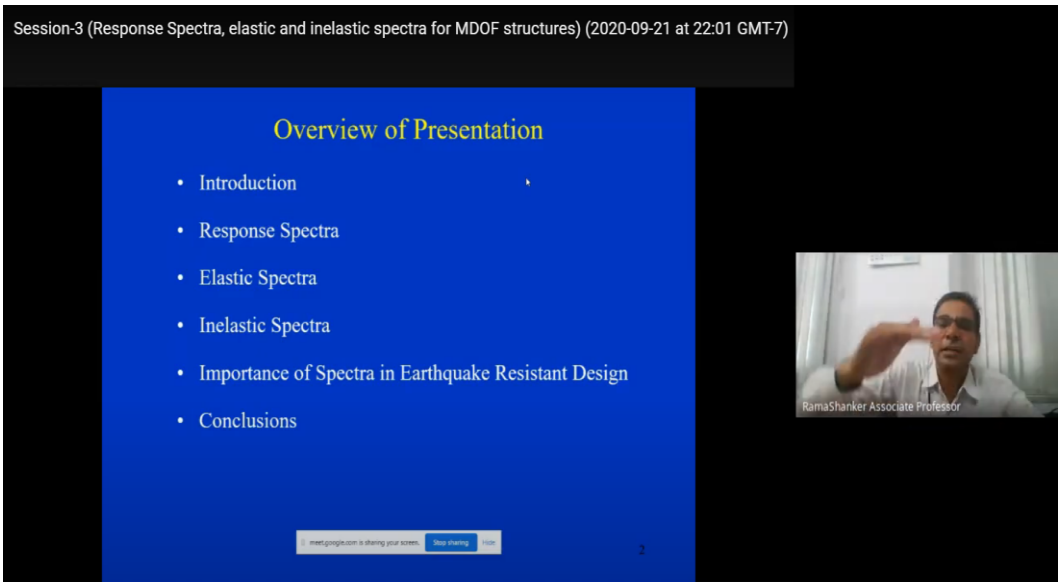
S

Suhasini Madhekar

Date 22 September 2020

Session 3





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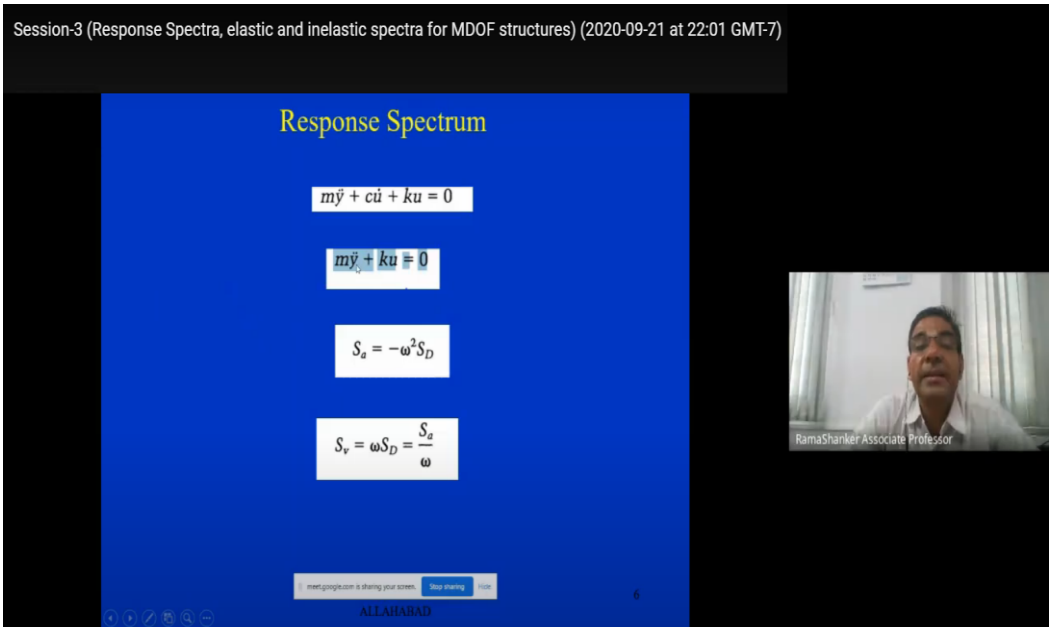

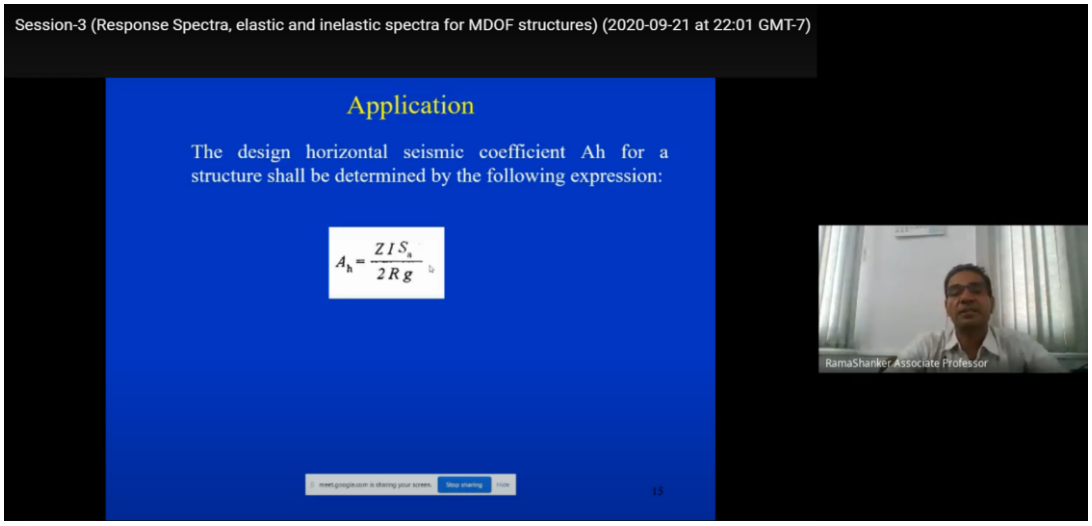

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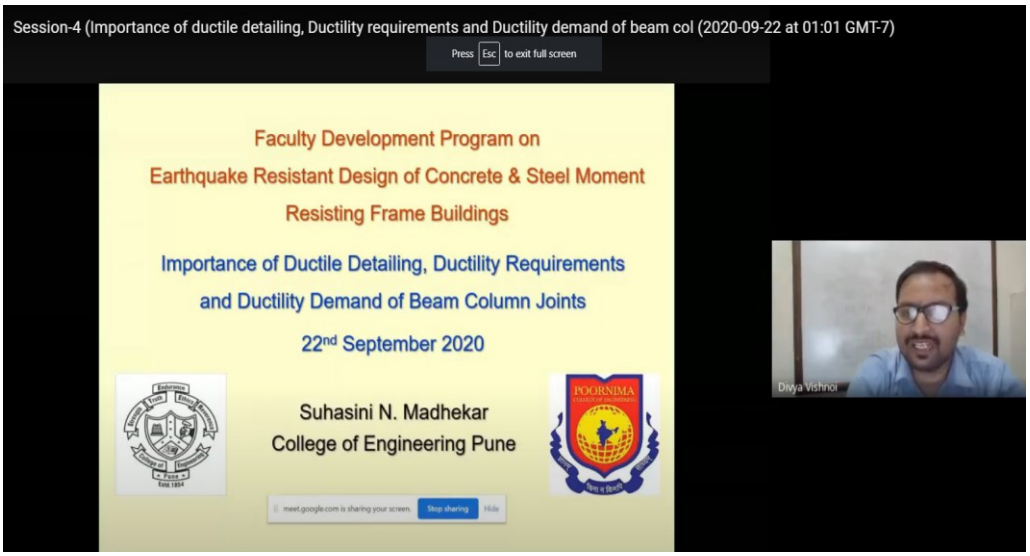
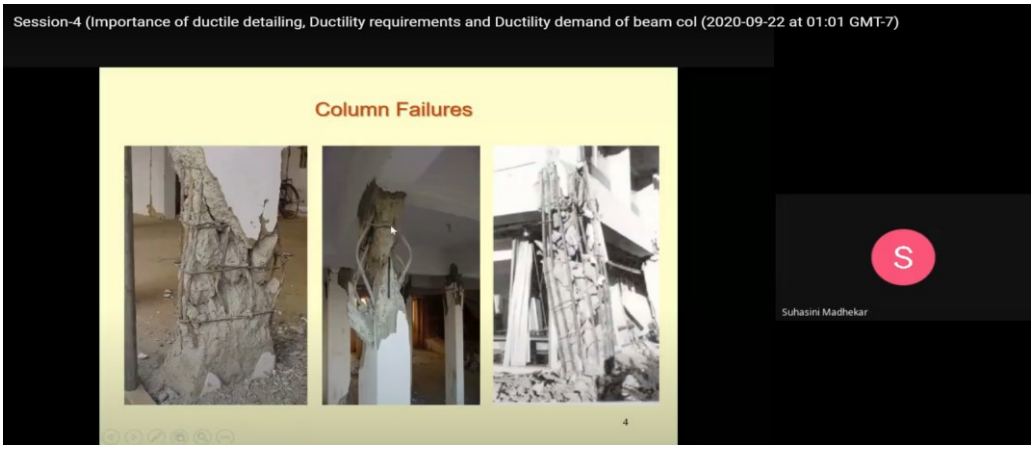
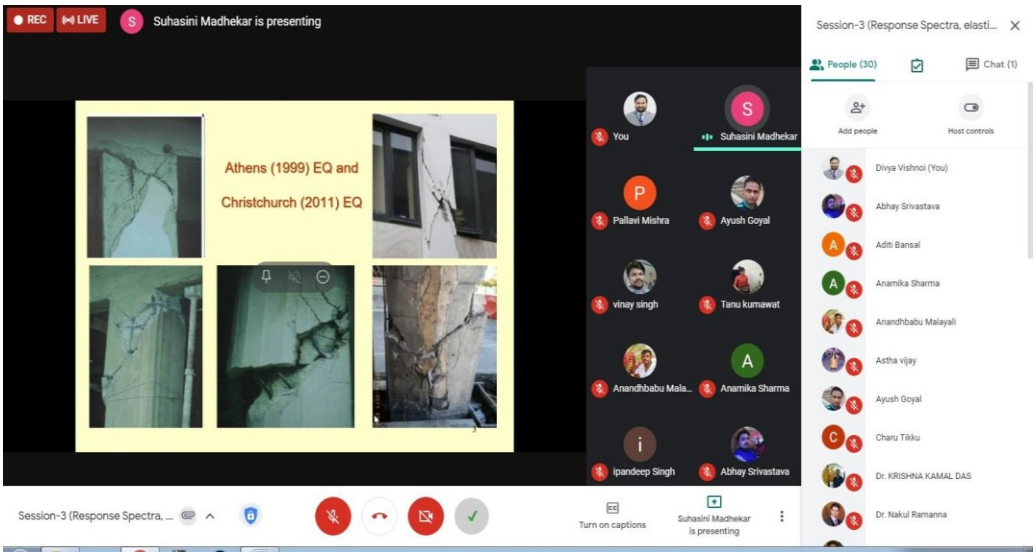
Session 4







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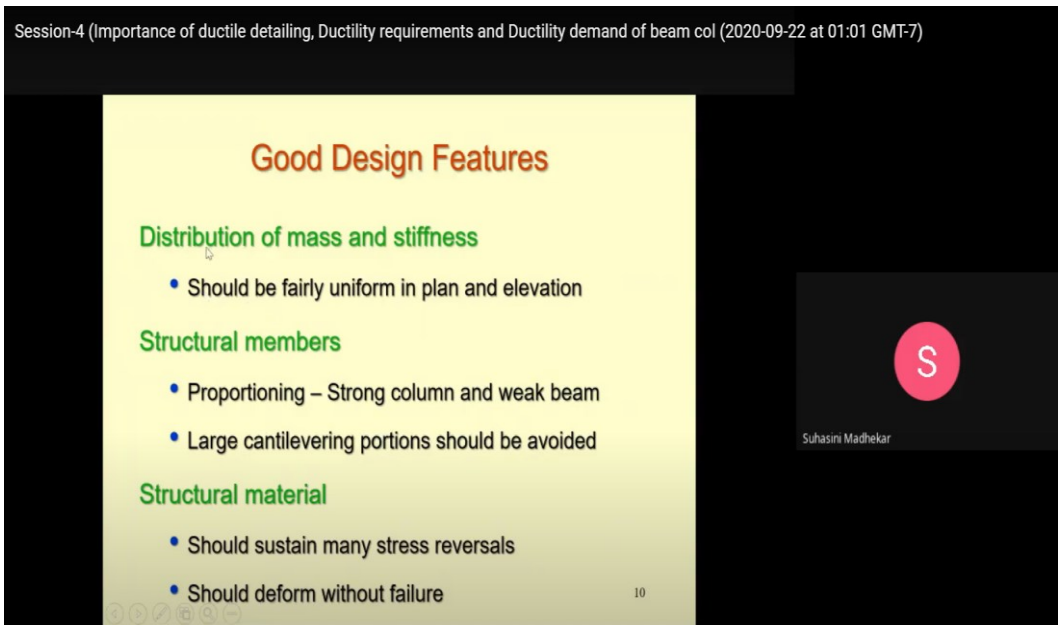

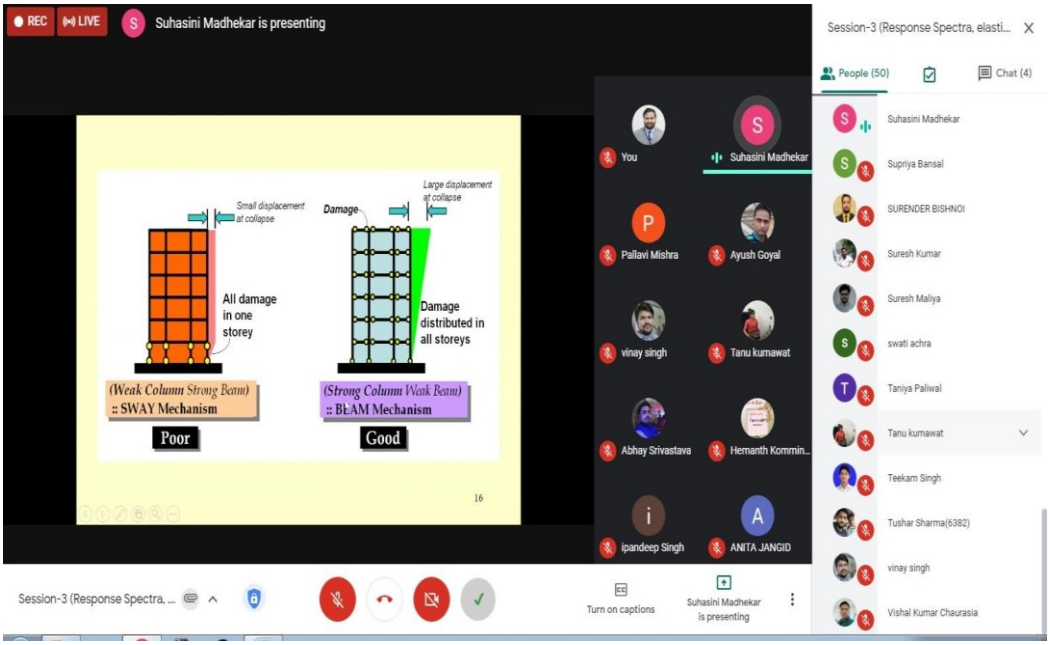

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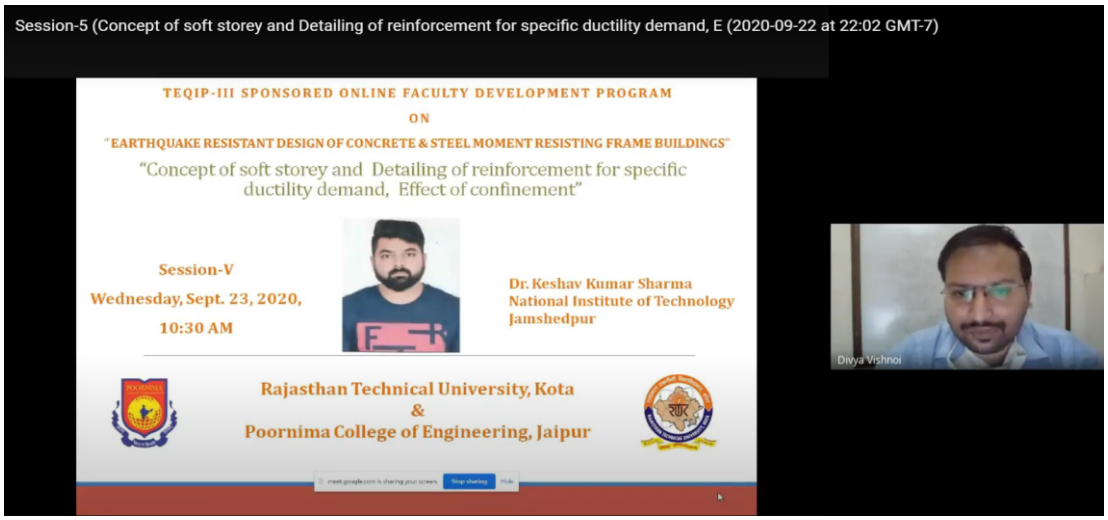
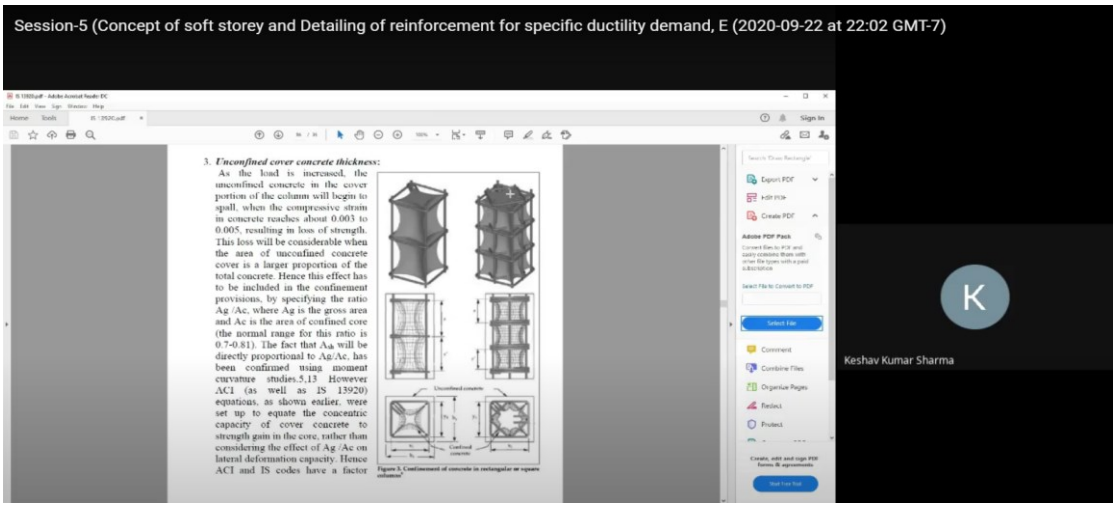
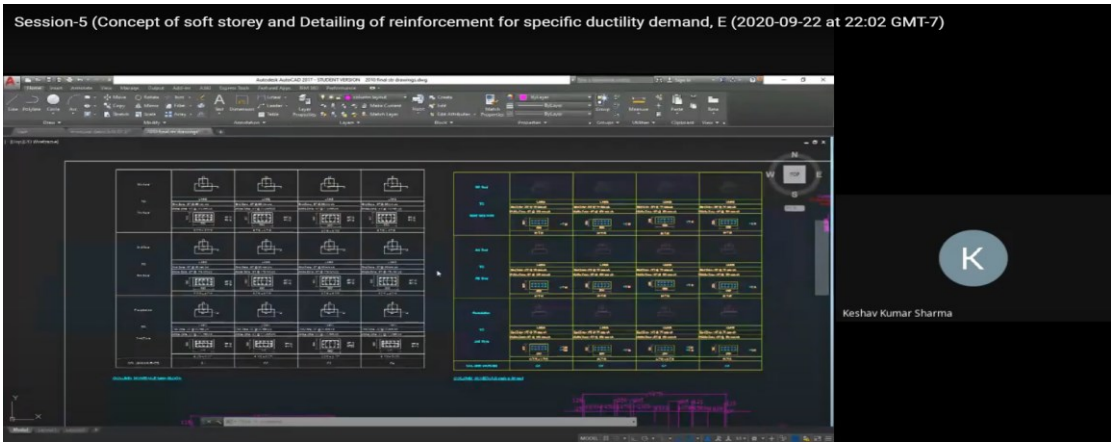
Date 23 September 2020

Session 5







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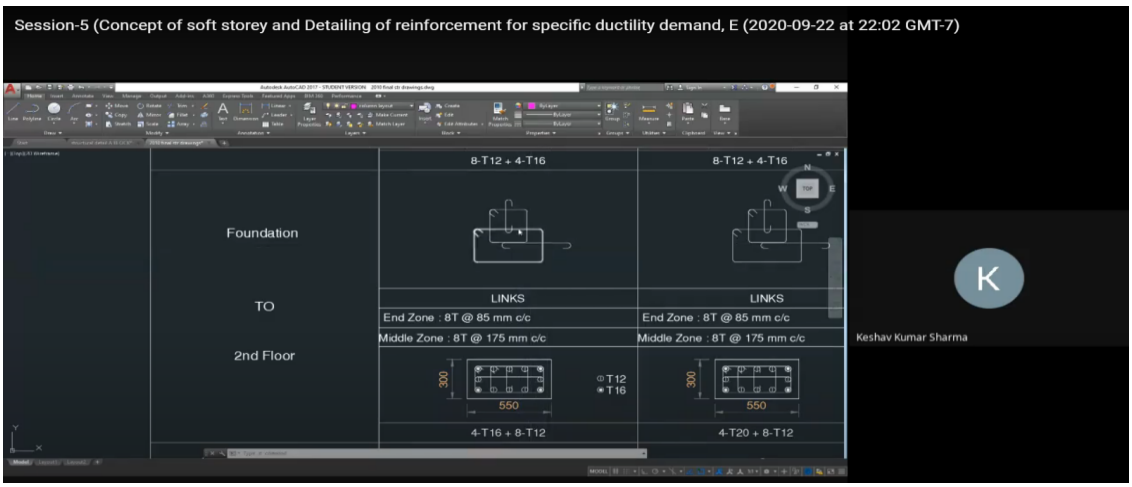
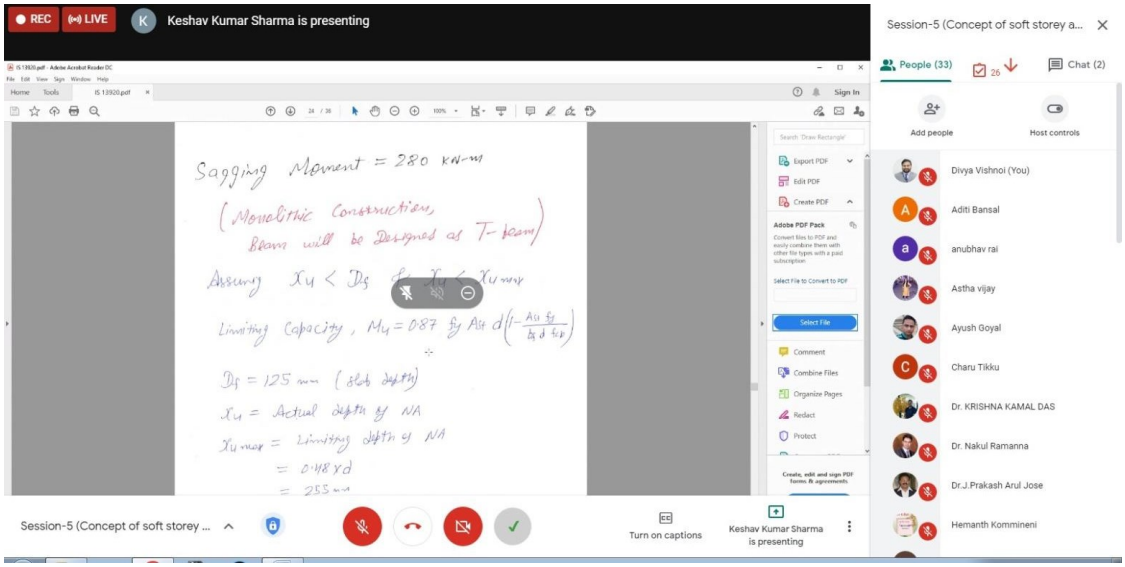
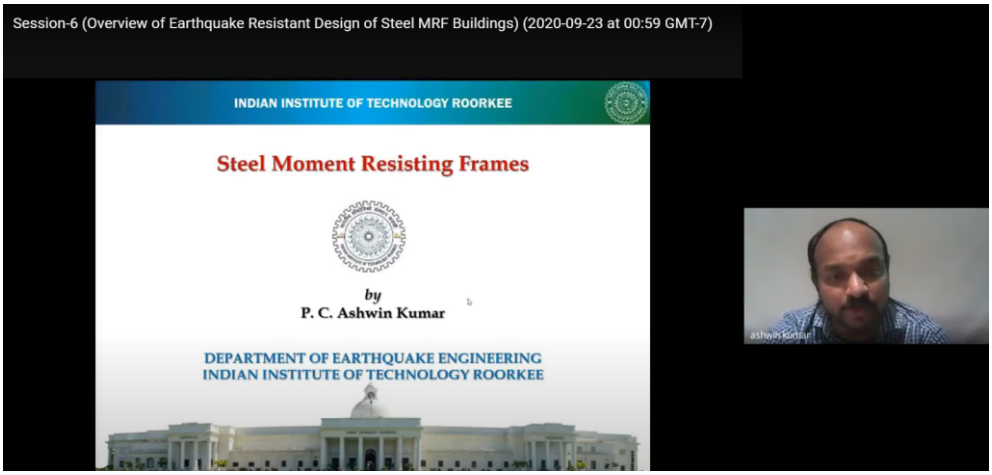
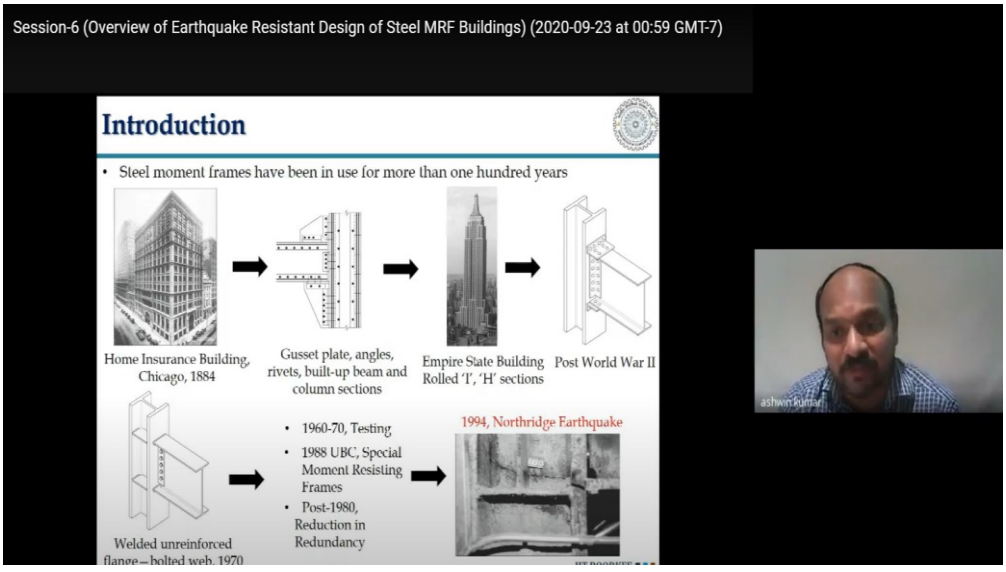
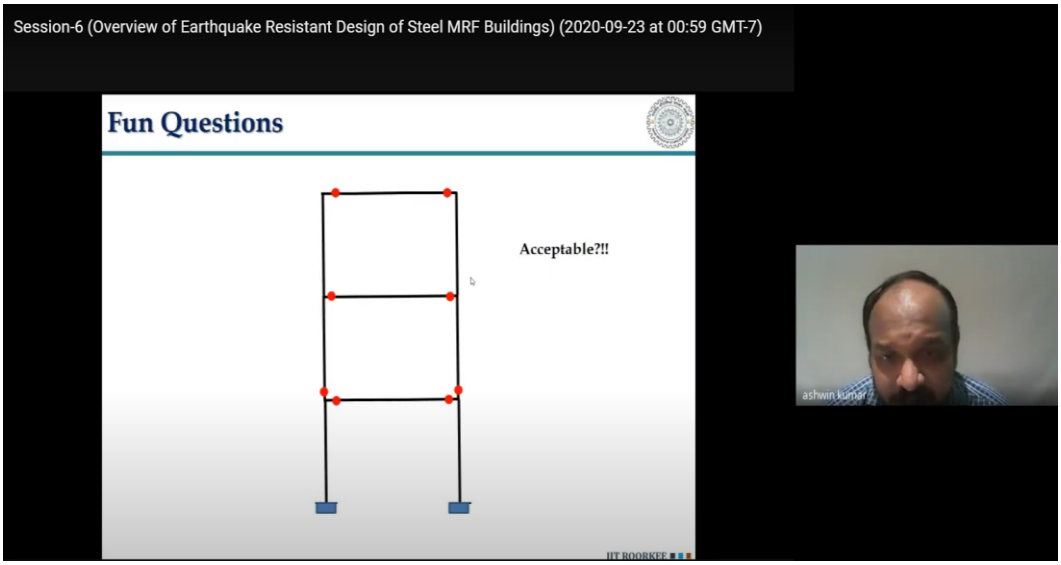


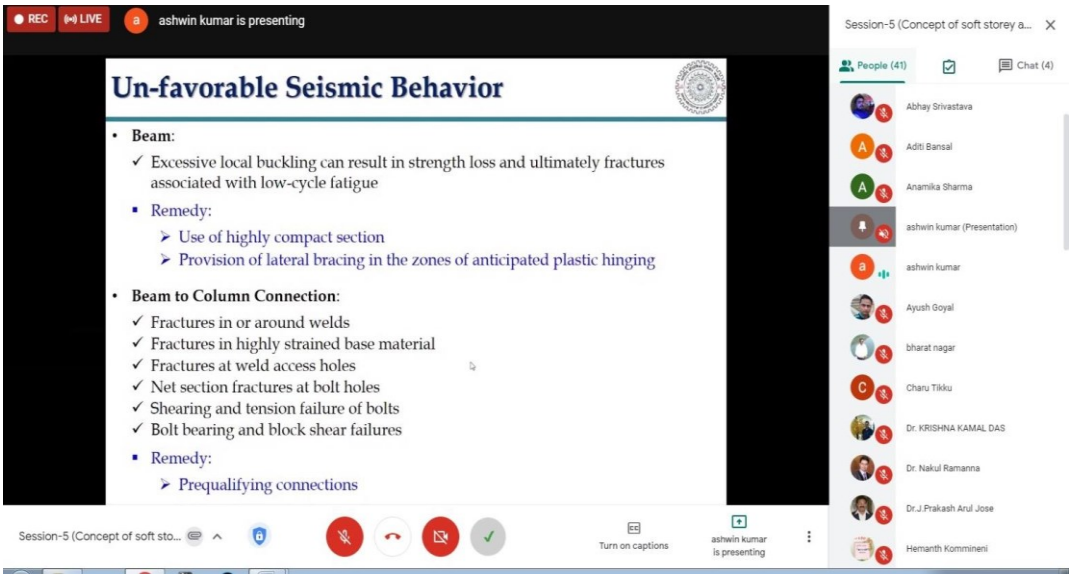


Session 6









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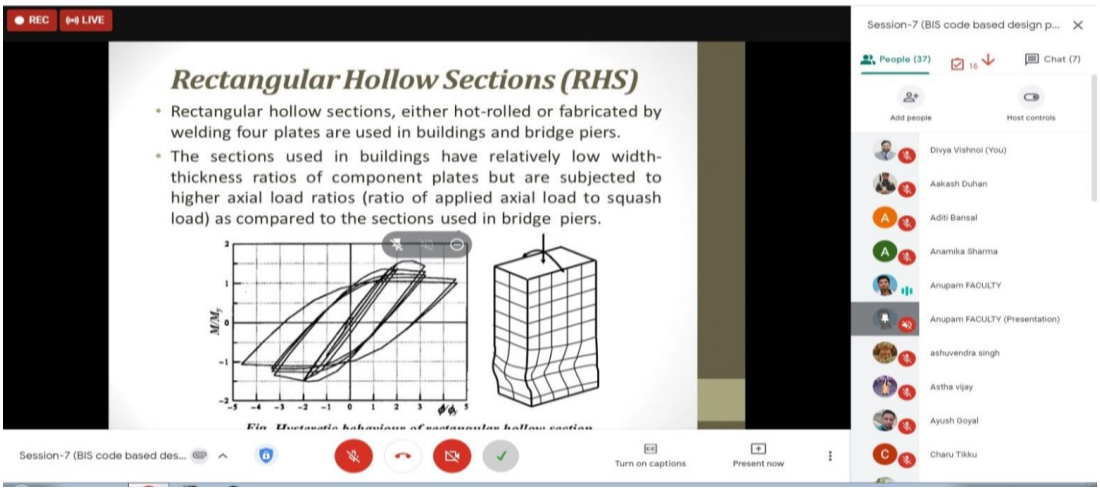
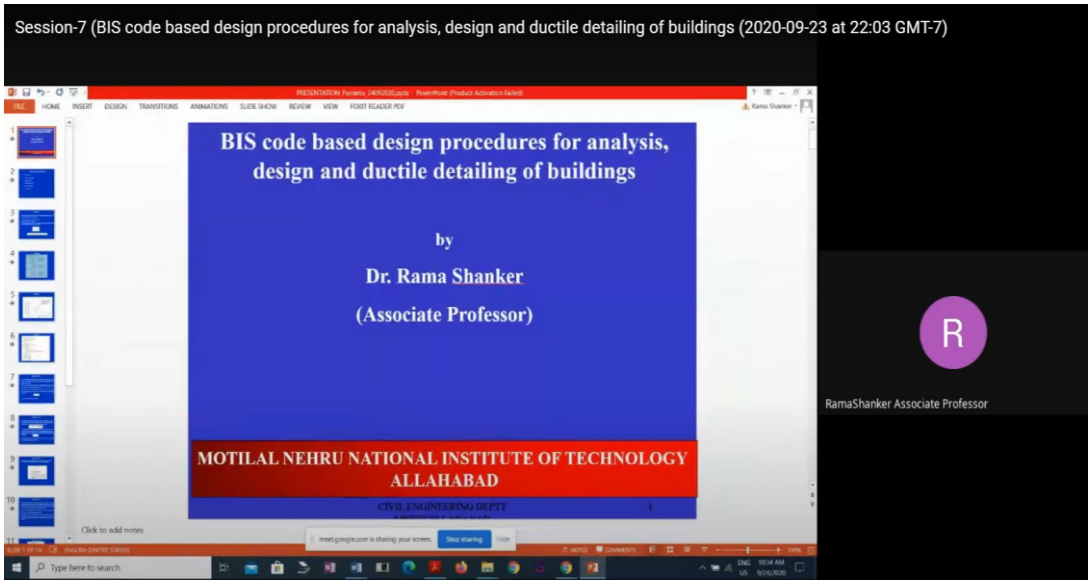
Date 24 September 2020

Session 7





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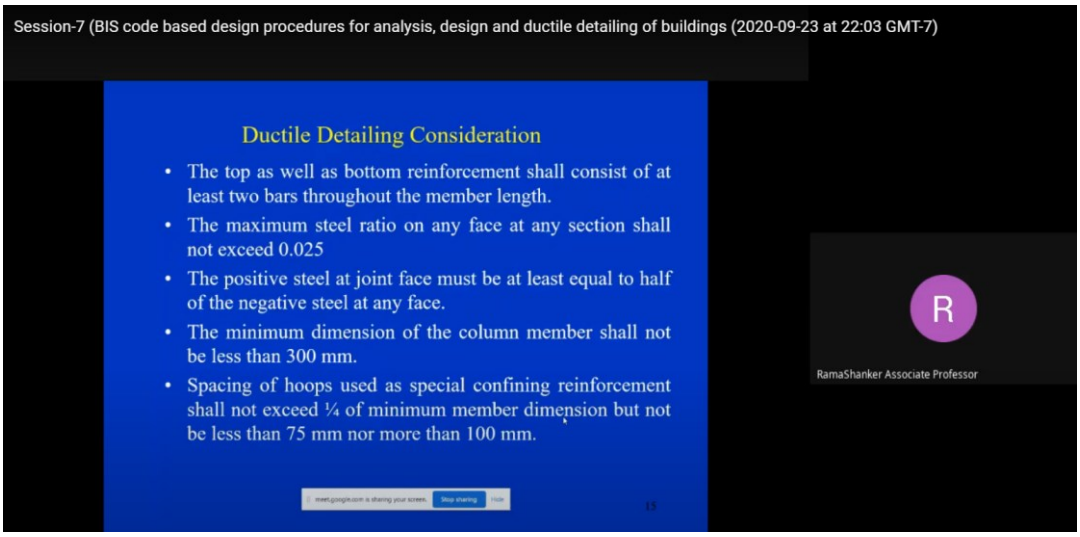

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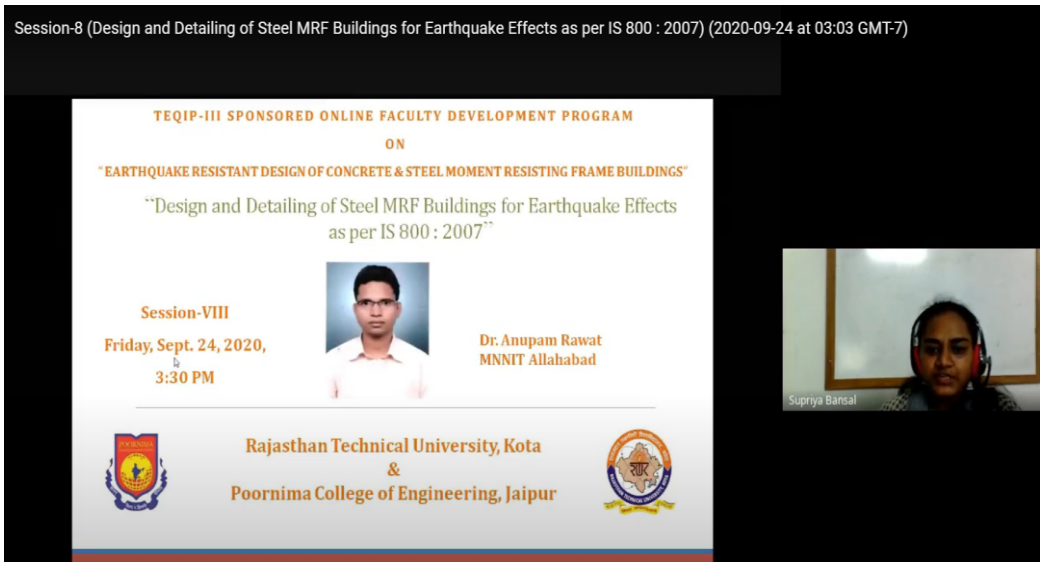
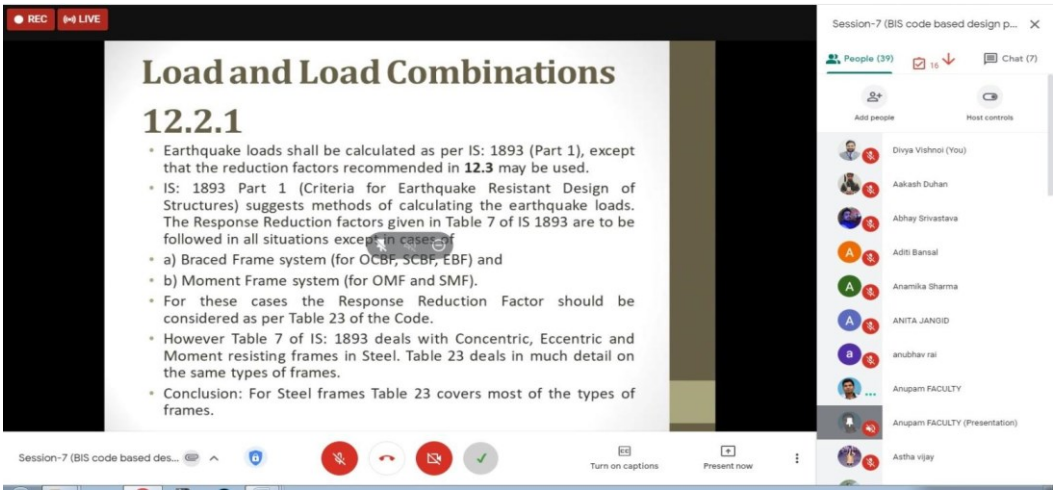
Session 8





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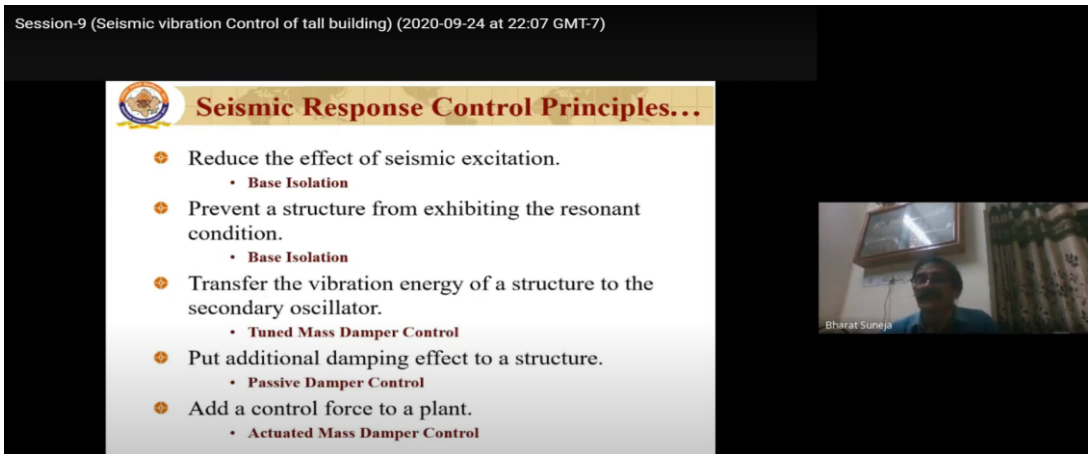
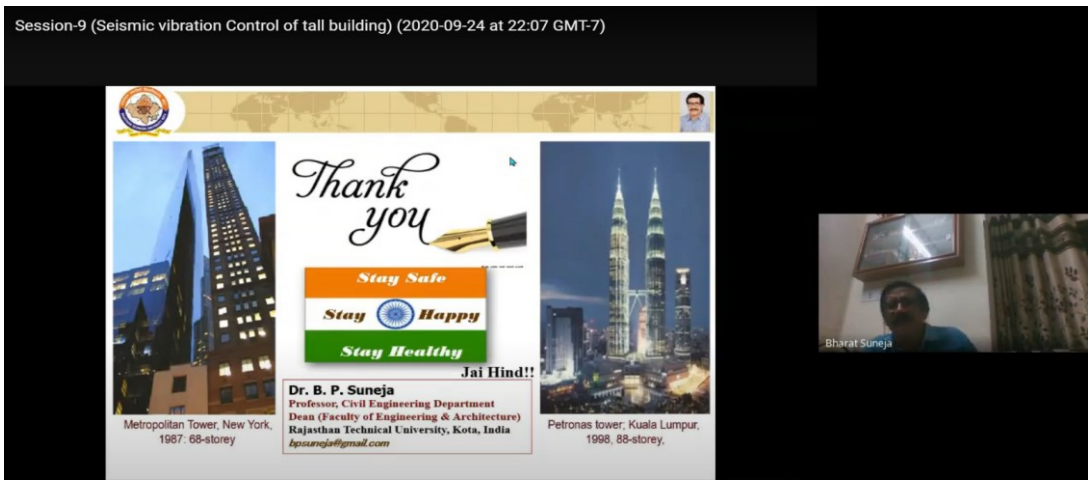
Date 25 September 2020

Session 9





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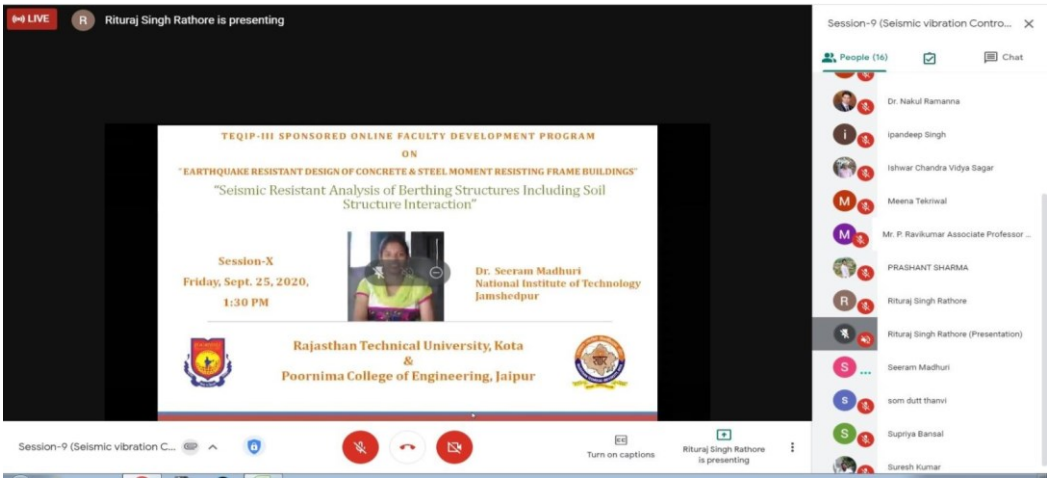
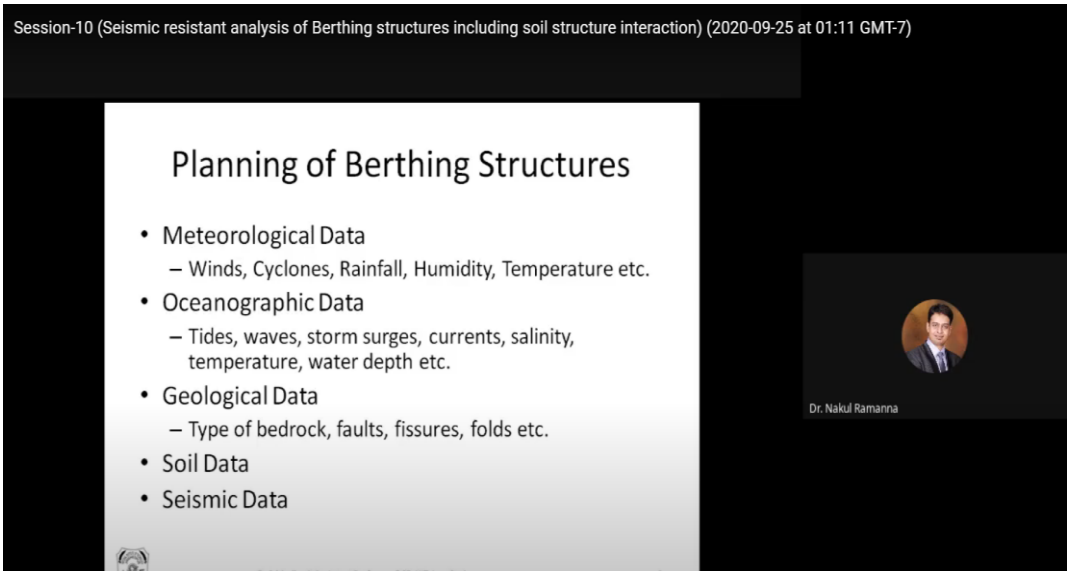
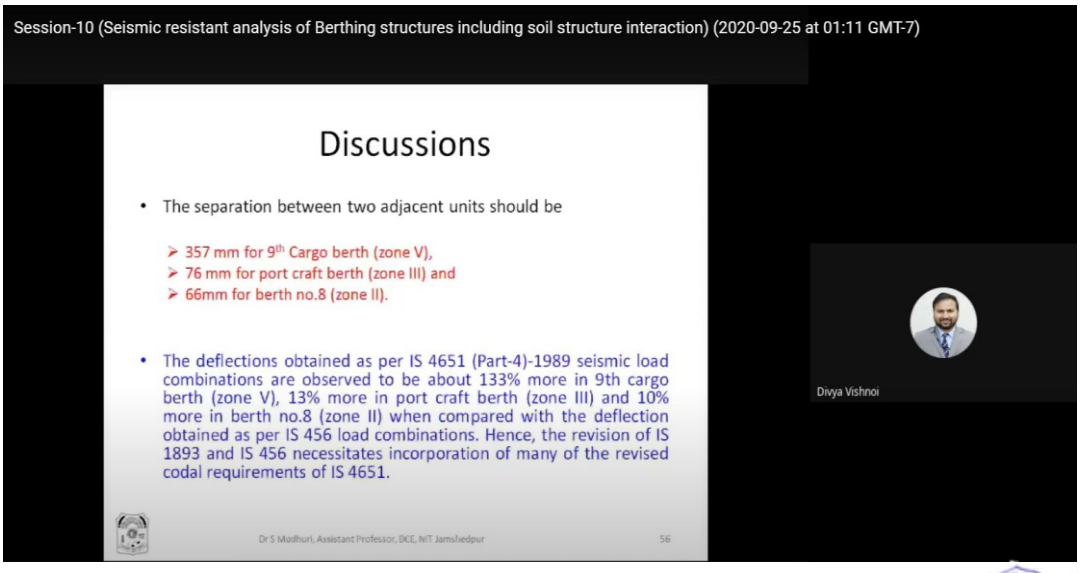
Session 10







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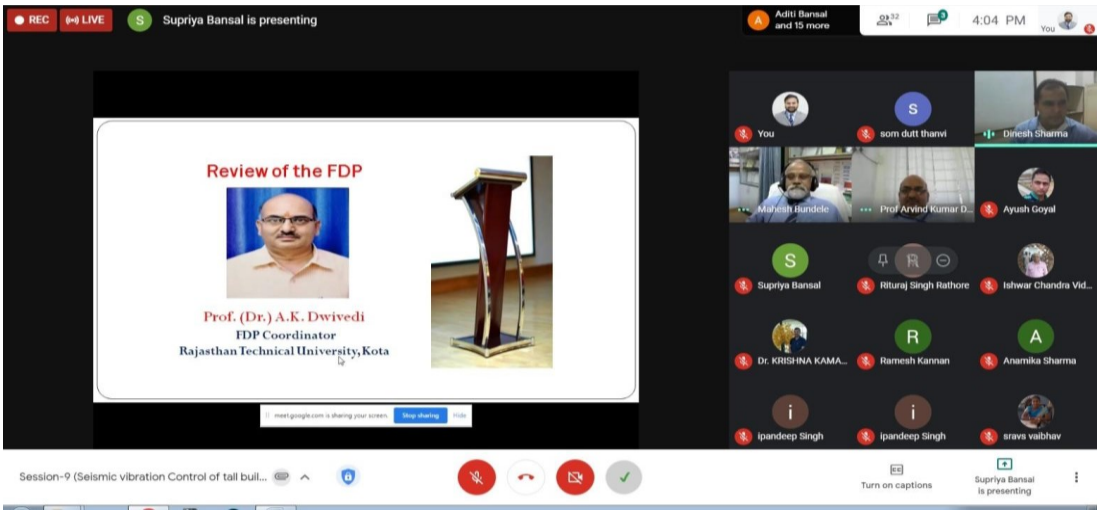
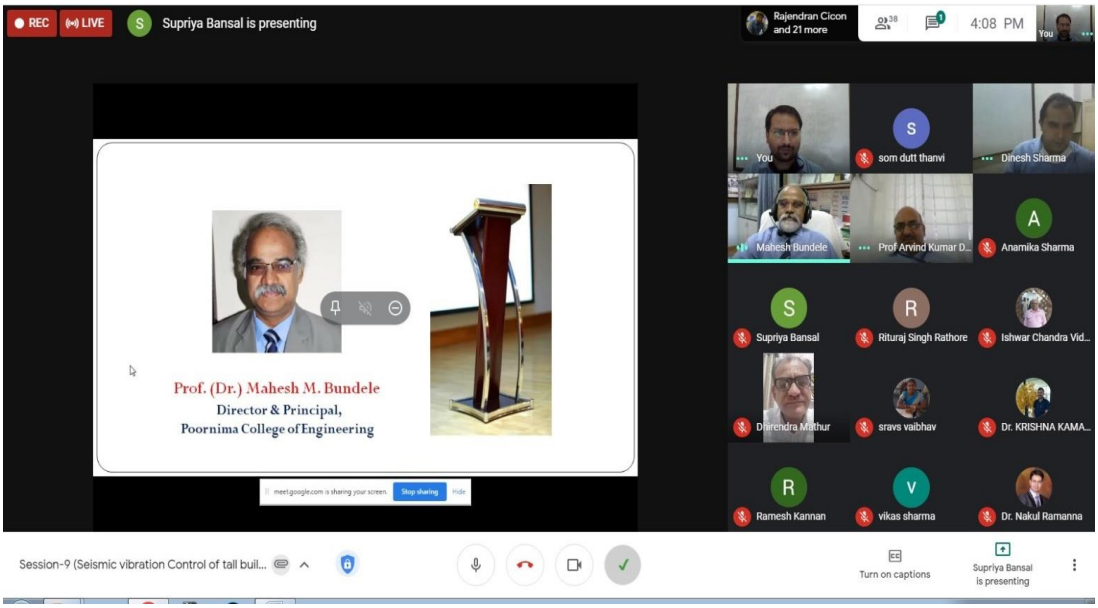
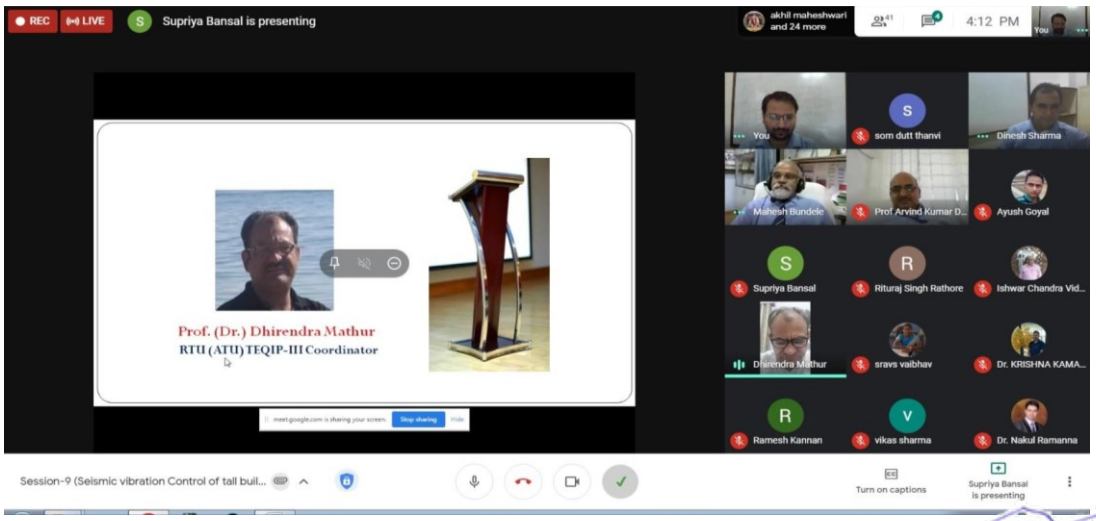
Valediction Session







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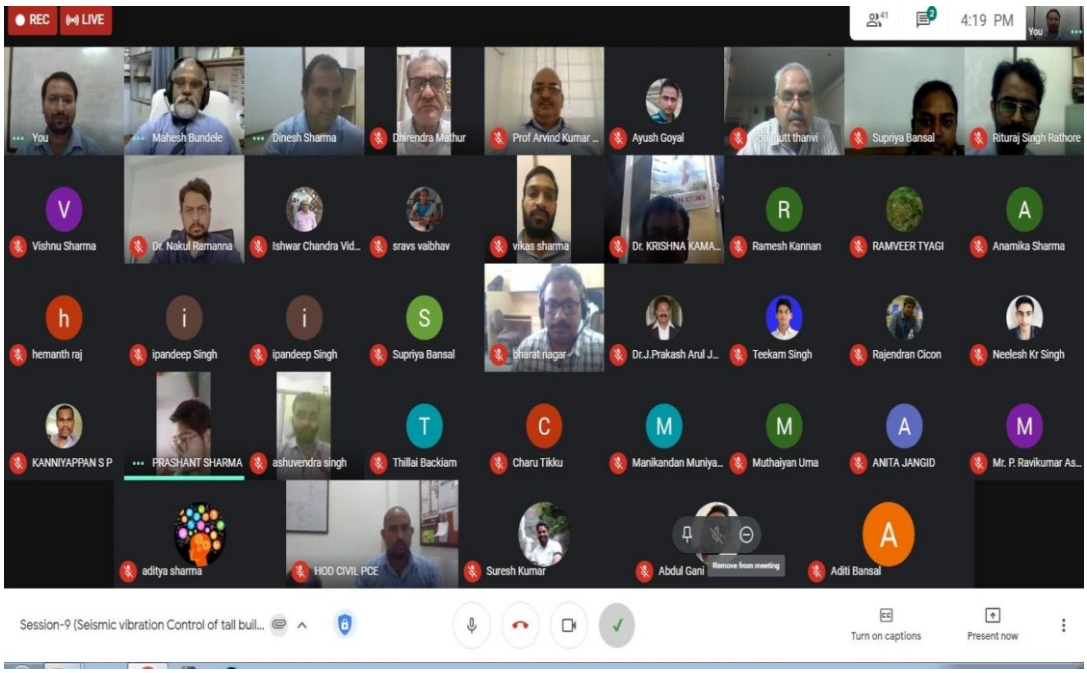

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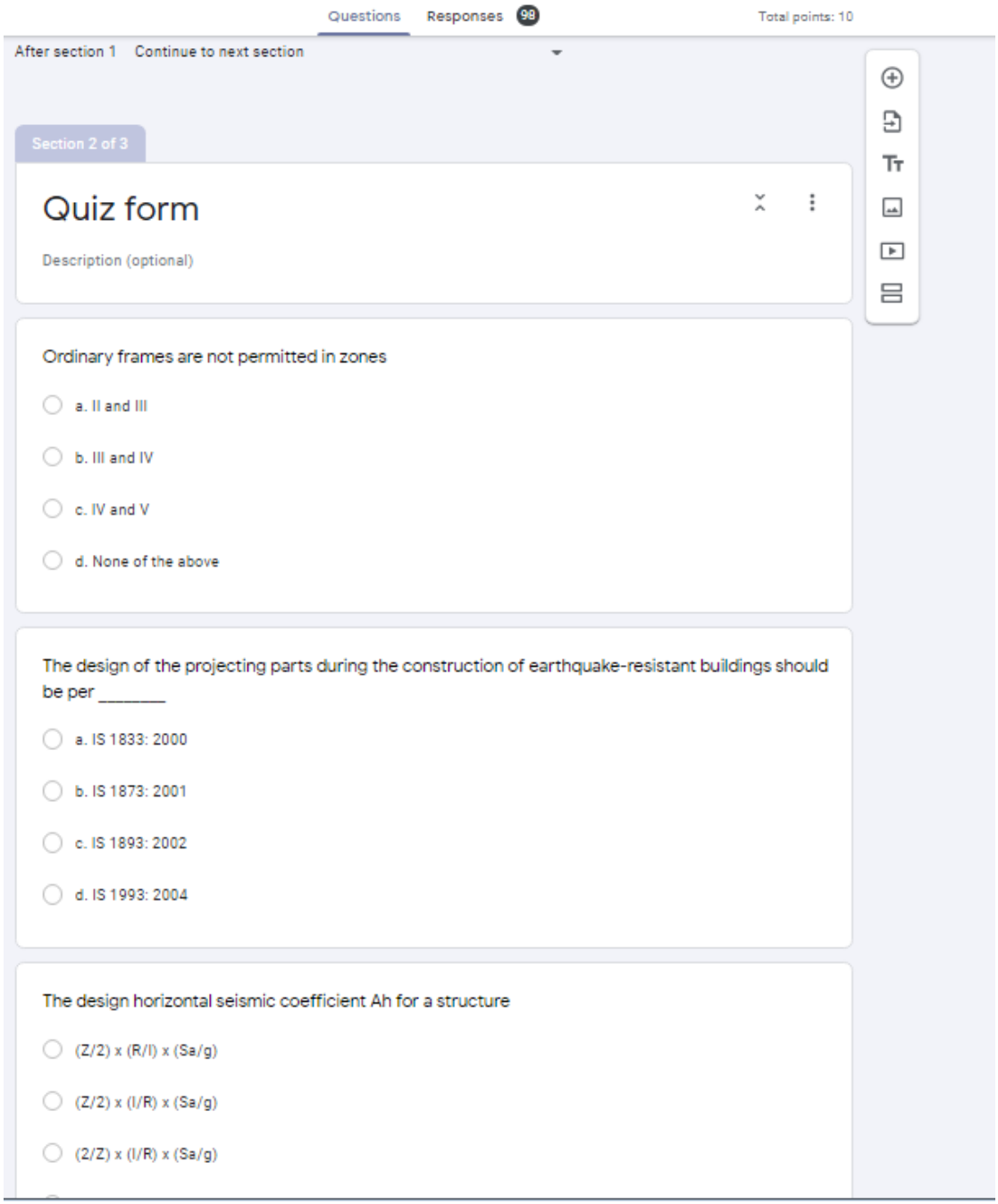
5. ASSESSMENT



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Questions Responses 98 Total points: 10

India is divided into _____ seismic zones

- 2
- 3
- 4
- 5

The ends of stirrup is bend at angle

- 45°
- 90°
- 135°
- 180°

Importance factor for buildings such as hospitals, railway station, monumental buildings etc

- a. 1.0
- b. 1.2
- c. 1.5
- d. 2.0

The advantages of using steel for earthquake resistant structure is

- a. Ability to withstand reversal of stresses
- b. Ductility
- c. Energy dissipation capacity

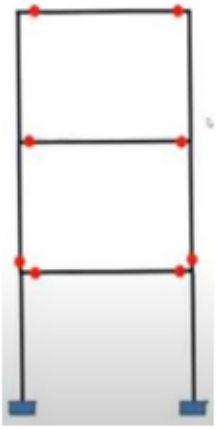
Earthquake is displacement loading not force loading

- True
- False

Response reduction factor for special frame as per IS 1893 (2016) for RC and steel are:

- a. RC: 5, Steel : 5
- b. RC: 3, Steel : 5
- c. RC: 5, Steel : 3
- d. RC: 3, Steel : 3

Is this moment resisting frame acceptable? (Red circle denoted Hinges)



- No
- Yes

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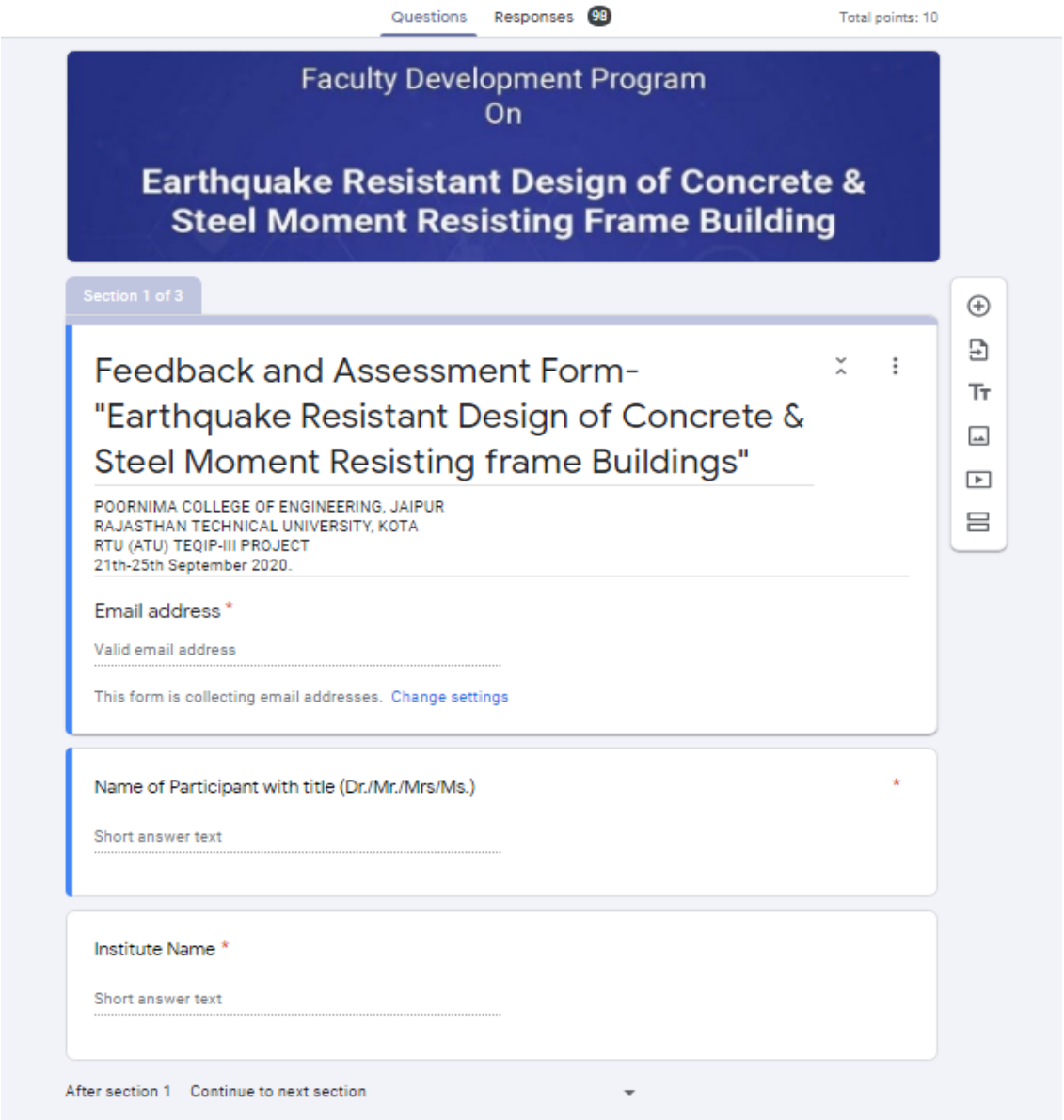
6. FEEDBACK FORM FORMAT



Questions Responses 99 Total points: 10

Faculty Development Program
On

Earthquake Resistant Design of Concrete & Steel Moment Resisting Frame Building

Section 1 of 3

Feedback and Assessment Form- "Earthquake Resistant Design of Concrete & Steel Moment Resisting frame Buildings"

POORNIMA COLLEGE OF ENGINEERING, JAIPUR
RAJASTHAN TECHNICAL UNIVERSITY, KOTA
RTU (ATU) TEQIP-III PROJECT
21th-25th September 2020.

Email address *

Valid email address

This form is collecting email addresses. Change settings

Name of Participant with title (Dr./Mr./Mrs/Ms.) *

Short answer text

Institute Name *

Short answer text

After section 1 Continue to next section

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Sitapura, JAIPUR

Questions Responses 98 Total points: 10

Section 3 of 3

Feedback Form

Description (optional)

Kindly provide us your valuable feedback about the course (10 is the highest grade).

Description (optional)

Your experience about the course. *

1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○

Knowledge enhancement. *

1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○

Relevancy of topics. *

1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○

About speakers. *

1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○

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Questions Responses 98 Total points: 10

General Arrangement *

1 2 3 4 5 6 7 8 9 10

In future do you want to attend such courses conducted by this Institute (Poornima College of Engineering)? *

- Yes
- No

If No, Why?

Long answer text

Topic that can be covered in the next course? *

Short answer text

Knowledge gain by the course. *

Short answer text

Overall experience of the course. *

Short answer text

Suggestions *

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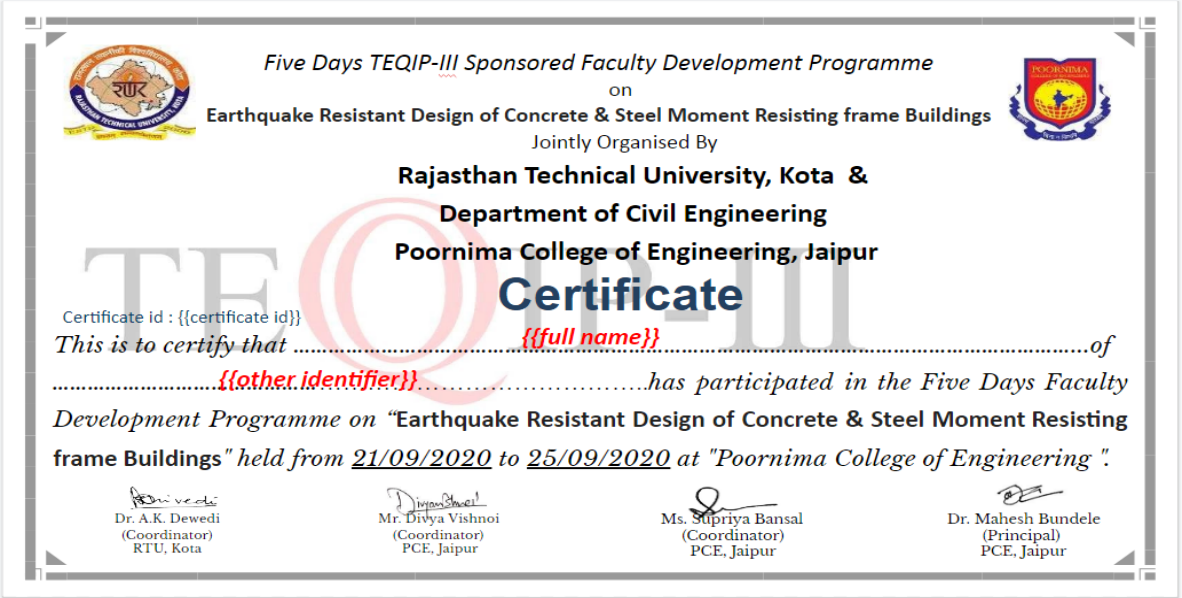
Sitapura, JAIPUR

7. CERTFICATE FORMATE



Five Days TEQIP-III Sponsored Faculty Development Programme
on
Earthquake Resistant Design of Concrete & Steel Moment Resisting frame Buildings
Jointly Organised By
Rajasthan Technical University, Kota &
Department of Civil Engineering
Poornima College of Engineering, Jaipur

Certificate

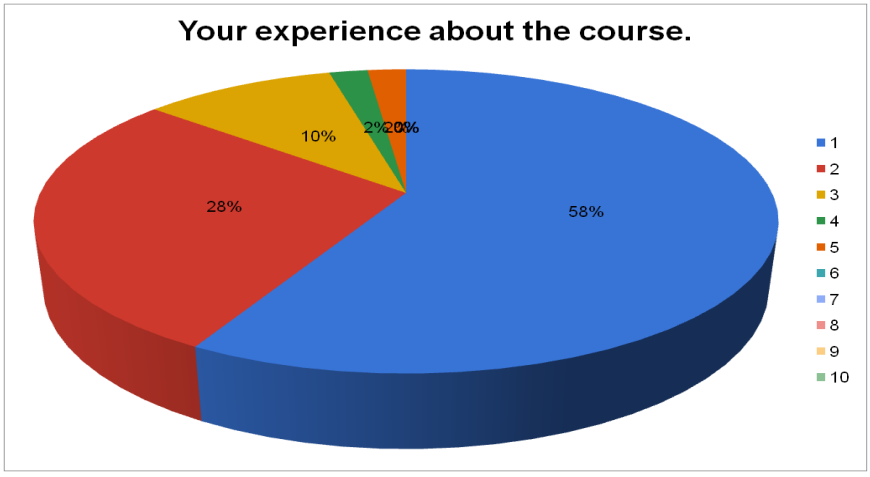
Certificate id : {{certificate id}}

This is to certify that ..... {{full name}} ..... *of* ..... {{other identifier}} ..... *has participated in the Five Days Faculty Development Programme on* "**Earthquake Resistant Design of Concrete & Steel Moment Resisting frame Buildings**" *held from* 21/09/2020 *to* 25/09/2020 *at "Poornima College of Engineering ".*

Dr. A.K. Dewedi	Mr. Divya Vishnoi	Ms. Supriya Bansal	Dr. Mahesh Bundele
(Coordinator)	(Coordinator)	(Coordinator)	(Principal)
RTU, Kota	PCE, Jaipur	PCE, Jaipur	PCE, Jaipur

8. FEEDBACK ANALYSIS

Note: Questions were asked on a scale of 1 to 10



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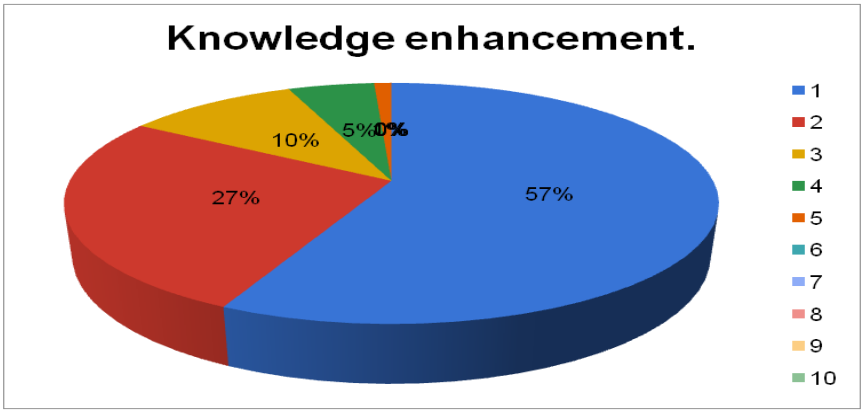

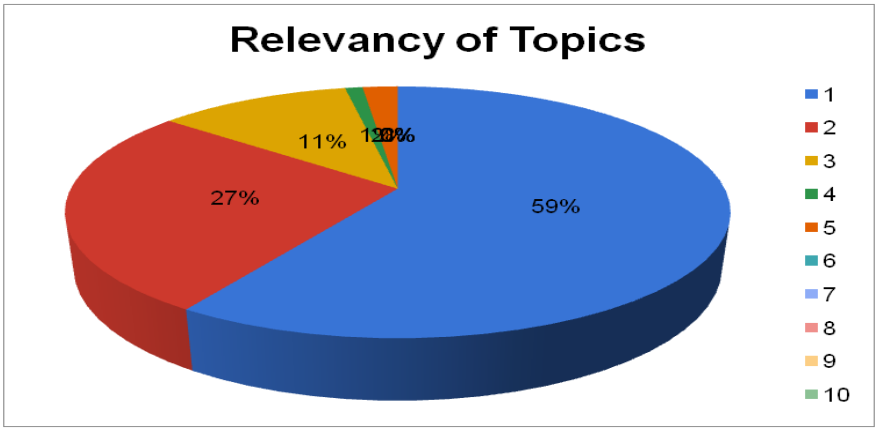

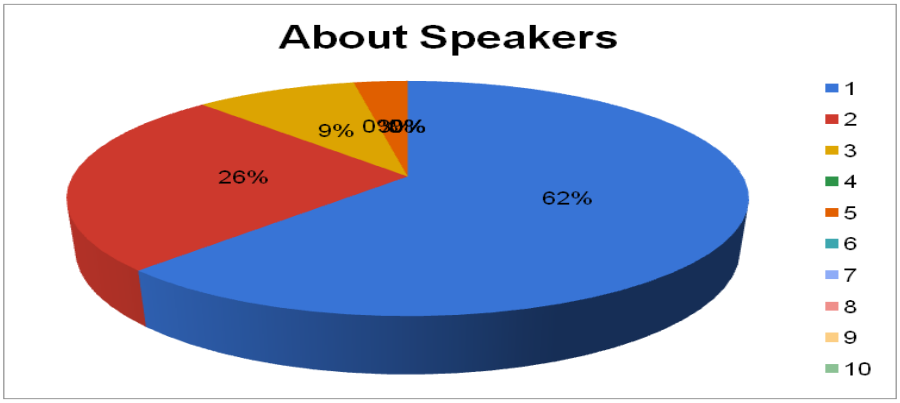

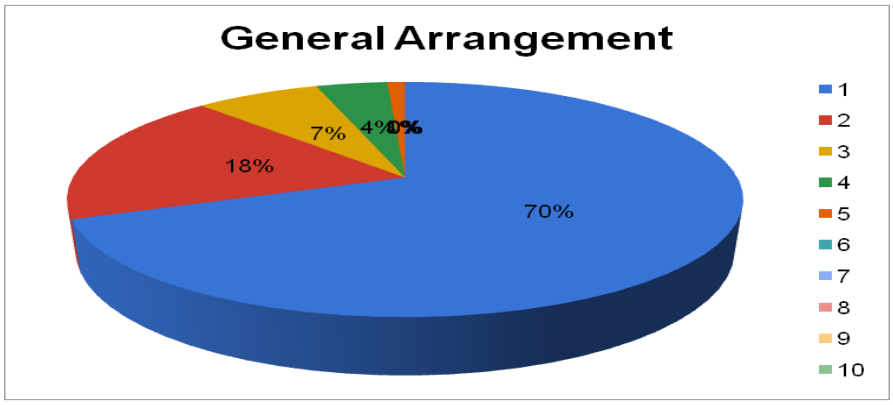

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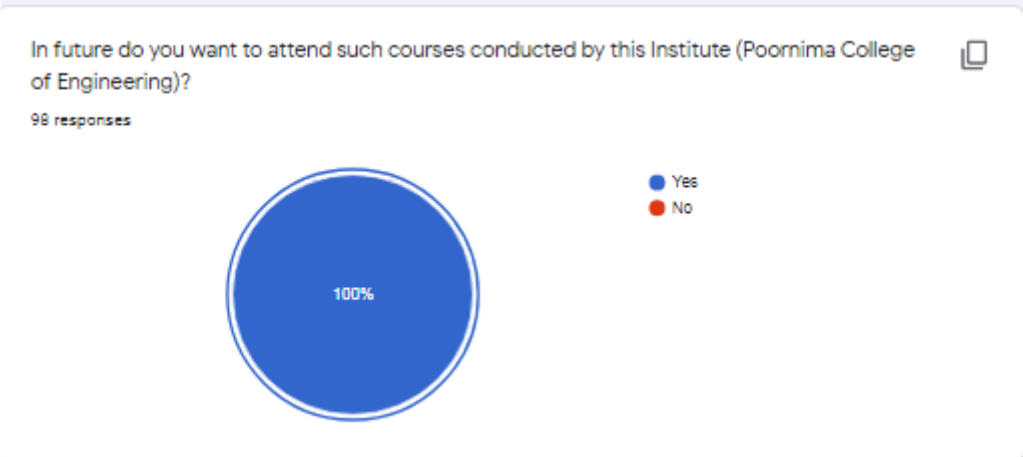
When asked whether they would like to attend such courses in future if conducted by the institute, all participants said a Yes.



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Questions Responses 98 Total points: 10

Topic that can be covered in the next course?

98 responses

Any

Cad software

Program on gis

More about different states under sesmic zones

Characterization Techniques of concrete and quality control

any innovative

Tensile fibre structure

Finite element analysis

Design of Concrete Structures and Design of Steel Structures

Knowledge gain by the course.

98 responses

Very nicely CONDUCTED sessions

Great academic & practical knowledge with relevance to earthquake resisting frames. Also the stability and strengthen our structure situated in various zones. The design philosophy and approach to safeguard & increase durability of sturture is clearly understood.

HIGHLY BOOSTING

Na

Earthquake resistant building design and structures.

Very good

learn more information about tall building

Sufficient

100%

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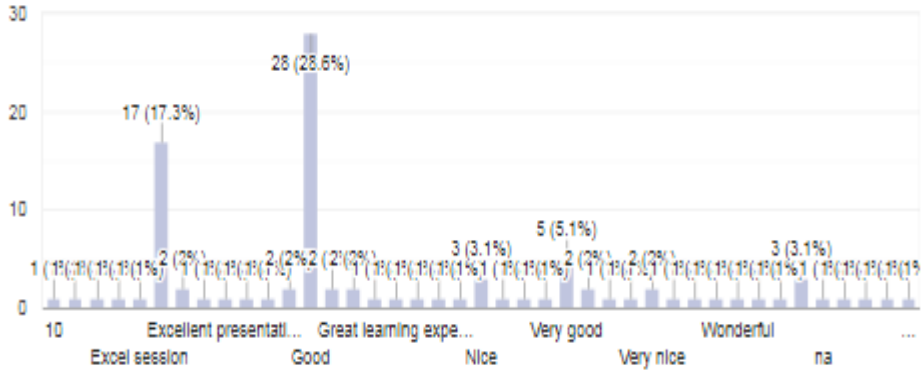
Questions Responses 98 Total points: 10

Enlightened regarding earthquake design resistant building

Overall experience of the course.

98 responses



Suggestions

98 responses

- Nice session
- provide webinars on fem
- Not such
- Arrange Again next program
- Excellent
- It was good
- More such fdp should be organized
- THANKS A LOT SIR
- There should be some knowledge software for earthquake resisting building

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