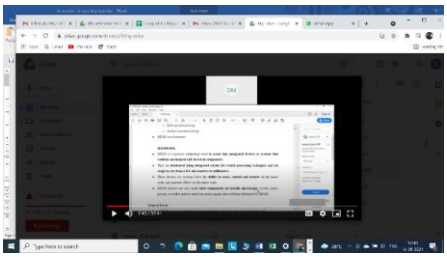
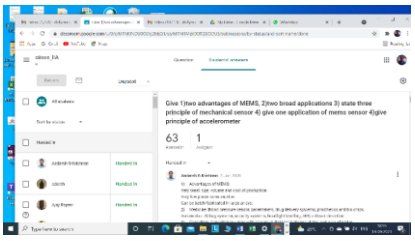
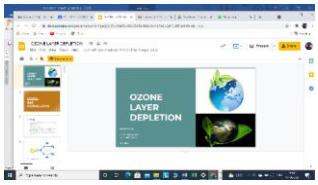
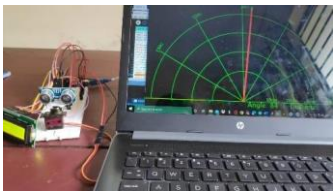
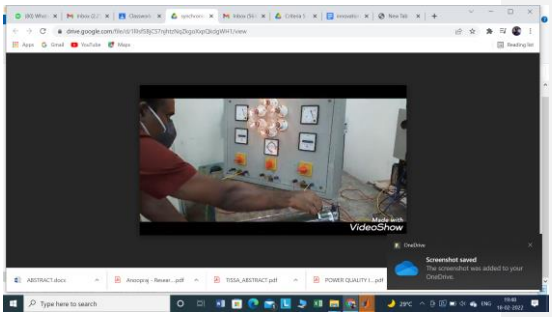
Innovation in Teaching and Learning

Table: Some Innovations by the Faculty in Teaching and Learning

Sl.No	Pedagogical method	Activity description
1	**Flipped classroom** Faculty: Dr. A. Dolly Mary Course: Industrial Instrumentation and Automation Semester: S8 Academic year: 2019-20	Study material made available in online mode through google classroom to the students prior to teaching.  Additional tests are conducted and solutions are made available online for self verification. 

2	**Collaborative learning** Faculty: Dr. A. Dolly Mary Course: Sustainable Engineering Semester: S3 Academic year: 2020-21	The students were divided into teams and activities and presentations which is a great tool for helping students learn to work together, listen carefully, communicate clearly, and think creatively was carried out. They also give your students the chance to get to know each other and work on an activity. 
3	**Think Pair Share** Faculty: Dr. A. Dolly Mary Course: Circuits and Networks Semester: S3 Academic year: 2020-21	Think-pair-share (TPS) is a collaborative learning strategy where students work together in team to solve a problem or answer a question about an assigned reading. This strategy requires students to 1. tackle a question individually. 2. then discuss the solution among the group assigned. 3.A student mentor is assigned for each group to report the progress of the group.

4	**On site learning** Faculty: Dr. A. Dolly Mary Course: Basics of Electrical Engineering Semester: S2 Academic year: 2019-20	On site learning is an effective tool where students get to know the working of electrical equipment used in field of Electrical Engineering.  
5	**Team based activity** Faculty: Dr. Johnson Mathew : Prof. Sheron George Course: Circuits and Measurements lab Semester: S3 Academic year: 2020-21	Team based activities are a great tool for helping students learn to work together, listen carefully, communicate clearly, and think creatively. They also give your students the chance to get to know each other and work on an activity. Multiple course projects like Radar detection system are carried out as part of team based activity 

6	Demonstration of Case studies/Lab Faculty: Dr. A. Dolly Mary Dr. Shanifa Beevi Course: Electrical Machines lab II Semester: S6 Academic year: 2020-21	Demonstration of laboratory course is a powerful method where the laboratory experiments of the Machines lab were shown with step by step procedure to be done. Here synchronisation was demonstrated to students.It helped the students to understand the need of synchronisation with the grid. 

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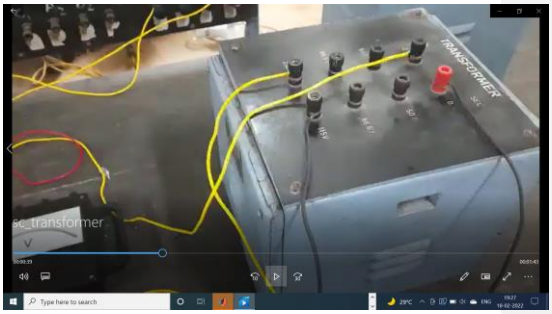
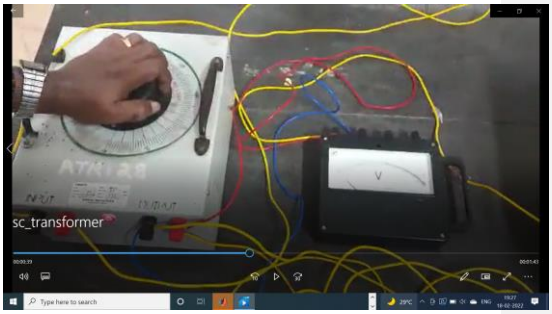
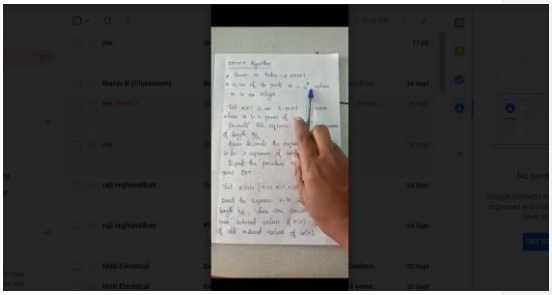
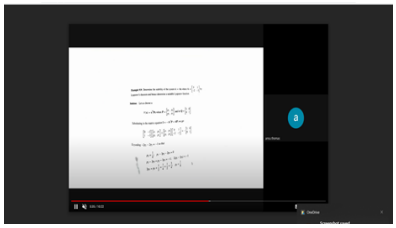
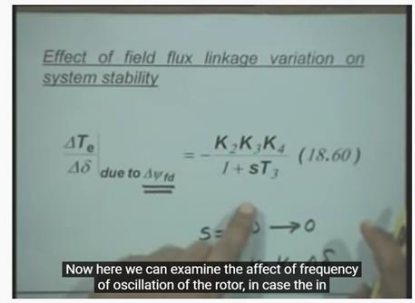
7	Seminar (Be an Evalutor) Faculty: Dr. A. Dolly Mary, Dr. Prince A. Course: Seminar Semester: S7 Academic year: 2021-22	Here a panel of students were made to act as evaluators for each presentation,other than than the faculty assigned. This helped the students think and critically evaluate the presentations thereby improving their ability to ask questions.  
8	Design Project Exhibitions Faculty: Dr. A. Dolly Mary Dr. Sunilkumar P.R	Design Project exhibitions were held after the completion and evaluation of the same. This helps the other batches of students to get motivated and develop new ideas on viewing the exhibition.

9	**Video demonstration** Faculty: Dr. A. Dolly Mary Dr. Shanifa Beevi Course: Electrical Machines lab I Semester: S4 Academic year: 2021-22	Video Demonstration of laboratory course is a effective method where the laboratory experiments of the Machines lab were shown with step by step procedure to be done. It helped the students to understand the basics of the lab.  

10	**Flipped classroom** Faculty: Raji Reghunathan Course: Digital Signal Processing Semester: S8 Academic year: 2019-20	Some algorithms must be studied for doing problems related to that topic, then students are provided with pre-recorded videos covering the algorithms and given sufficient time to go through the video. The classroom slot is then utilised for discussion on the topic and questions based on these algorithms. 
11	**Surprise Test** Faculty: Raji Reghunathan Course: Basics of Electrical Engineering Semester: S2 Academic year: 2020-21	For some very important topics after discussing the theory and related problems in one online session, on the very next day a surprise test based on this topic will be conducted. This will help to understand the regularity of the students in their studies.
12	**Flipped Classroom**	Numerical questions and their solutions were given to students in online mode through pre recorded videos

	Faculty: Ansu Thomas Course: Advanced Control Theory Semester: S6 Academic year: 2020-21	prior to teaching. Then on class time interactions and problem discussions were done to make the concepts more clear to students 
13	**Videos**	NPTEL videos were shared among students to enhance the quality of engineering education by developing concepts using video and web based courses. 
14	**online class with offline effect** Faculty: Dr Johnson Mathew Course: Internet of Things Semester: S8	Streamed the live classes using google meet. Conventional type of scribbling on Samsung flip intelligent display has been used, power point presentations and supporting videos from internet also been streamed from flip board after video captured using

	Academic year: 2020-21	HD web cam (Xiaomi make). Students could able to get the feeling of live class room effect.