

Department of Information Technology

Academic Year – 2020-21	Class: Second Year
Semester – I	Date : 23/12/2020 to 28/12/2020
CO : 1,2,3,4,5,6	PO: 1,2,5,9,10,12

Innovative Teaching Methods

Title of Innovation method/activity: Case study on "Applications of Digital Electronics"

1. Name of Faculty: Ms. S. J. Suryawanshi

2. Subject: Logic Design & Computer Organization

3. Objective of Method:

- To get detailed knowledge of applications of Digital electronics.
- To improve report writing skill and to learn team work.

4. Topic Covered through Group Discussion Activity:

1. Smart card.
2. Density Based Traffic Signal with Remote Override in Emergency.
3. Simple Combination lock.
4. Remotely Controlled Android Based Electronic Notice Board.
5. Digital smart watch.
6. Wireless Power Transfer in 3D Space.
7. Ultra Fast Acting Electronic Circuit Breaker.
8. Car parking control.
9. Automatic Irrigation System on Sensing Soil Moisture Content.
10. Cyclo Converter using Thyristors.
11. Minimizing Penalty in Industrial Power Consumption by Engaging APFC Unit.
12. Digital electronics Safe box (Locker).
13. Solar Powered LED Street Light with Intensity Control.
14. SVPWM Space Vector Pulse Width Modulation.
15. Long Range FM Transmitter with Audio Modulation.

16. Cyclo Converter using Thyristors.
17. Cathode Ray Oscilloscope (Medical Services).
18. Minimizing Penalty in Industrial Power Consumption by Engaging APFC Unit.

5. Description of method with Benefits (8 – 10 lines) :

In this method topic for case study is assigned to individual student. He/she prepare report on assigned case study by searching content on internet, book or research paper. Faculty does the assessment at the time of report submission.

- **The method Impact:**

This activity helps students to generate new ideas, enhance self-learning, communication & report writing skills, analytical skills, team work and ethical practices etc.

Roles and Responsibilities

- **Teacher**

- Prepare the group of 4-5 students.
- Assigned the topics to each group.
- Define rubrics for the assessment of the activity
- Assess the reports.

- **Student**

- Go through the provided topic.
- Once topic assigned understand and gain expertise on topic through collaboration.
- Actively participate in group and contribute by means of information gathering related to the topic.
- Prepare the report.

6. Assessment Tools & Rubrics:

- **Understanding**

- Good knowledge regarding the topic should be checked

- **Involvement of students**

- Involvement of the individual student should be checked by taking oral..

- **Oral**

- To check the knowledge regarding the subject, oral should be taken..

- **Timely Submission**

- Student should follow the given deadline.

Rubrics for Assessment of Group Discussion

Sr. No	Name of Method	Evaluation Criteria	SC	Excellent (100%)	Satisfactory (60%)	Poor (20%)
01	Case Study	Understanding	10	<ul style="list-style-type: none"> • Good knowledge of the issues, • Complete analysis 	<ul style="list-style-type: none"> • Adequate knowledge of the issues, • Partial analysis 	<ul style="list-style-type: none"> • Inadequate knowledge of the issues, • Incomplete analysis
		Involvement of students	05	<ul style="list-style-type: none"> • Active participation • Good defending & convincing skill • Effective summarization 	<ul style="list-style-type: none"> • Active participation • Moderate defending & convincing skill • Effective summarization 	<ul style="list-style-type: none"> • Passive participation • Moderate defending & convincing skill • Effective summarization
		Oral	05	<ul style="list-style-type: none"> • Appropriate Answers to Questions. 	<ul style="list-style-type: none"> • Answers questions, but often with little insight. 	<ul style="list-style-type: none"> • Inappropriate Answer
		Timely Submission	05	<ul style="list-style-type: none"> • Submission within deadline 	<ul style="list-style-type: none"> • Submission within week 	<ul style="list-style-type: none"> • Late submission

7. Evaluation Sheet

Sr. No.	Group No	Group Members	Topic	Understanding of concept (10)	Involvement of students (5)	Oral (5)	Timely Submission(5)	Total (25)
1	1	Mehul Mulchandani	Smart card	7	4	3	4	18
2		Prasanna Kedare		7	4	4	4	19
3		Shobhit Mohadikar		6	4	4	4	18
4		Saurav Pardeshi		6	4	3	4	17
5	2	Krishna khandhar	Density Based Traffic Signal with Remote Override in Emergency	8	3	4	3	18
6		Khushi jadhav		8	3	3	3	17
7		Tejashree jadhav		7	3	4	3	17
8		Neha bagul		7	3	3	3	16

9	3	Anjali Sanjay Rajole	Simple Combination lock	7	4	4	4	19
10		Hrutika Bharat Sawant		7	4	4	4	19
11		Prachi Bhausaheb Gangurde		6	4	3	4	17
12		Megha Bharat Shinde		8	4	3	4	19
13	4	Pooja Sanklecha	Remotely Controlled Android Based Electronic Notice Board	8	4	3	4	19
14		Pooja Jain		8	4	4	4	20
15		Payal Kishor Rohra		9	4	4	4	21
16		Shrutika gosavi		7	4	3	4	18
17	5	Nishigandha shirsath	Digital smart watch	9	4	4	4	21
18		Shweta Bhaskar Gangurde		8	4	3	4	19
19		Sayali patil		8	4	4	4	20
20		Mansi salunkhe		8	4	3	4	19
21	6	Shrutika badgujar	Wireless Power Transfer in 3D Space	9	4	4	4	21
22		Shreya bachhav		8	3	4	4	19
23		Vaibhav ahire		8	4	3	4	19
24		Prajwal aher		8	3	3	4	18
25	7	Khan samina parvez	Ultra Fast Acting Electronic Circuit Breaker	9	4	4	5	22
26		Jagtap snehal rajesh		8	4	3	5	20
27		Patil purvi kishor		8	4	4	5	21
28		Patil bhagyashri ujwal		7	4	4	5	20
29		Rahul chavhan		10	4	5	5	24
30	8	Kanhaiya chalase	Car parking control	10	4	5	5	24
31		Prasad Aher		9	4	4	5	22
32		Gopal Malani		9	4	3	5	21
33		Darshan Jaywant Borse		9	4	4	5	22
34		Rohit Anarthe		9	4	4	5	22
35	9	Tejas Hadole	Automatic Irrigation System on Sensing Soil Moisture Content	10	4	5	5	24
36		Sachin Borse		9	4	3	5	21
37		Zulfeen Taiyyab Shaikh		10	4	4	5	23
38		Priyanka Balasaheb Vidhate		9	4	4	5	22
39	10	Rajashree Prashant Shinde	Cyclo Converter	9	4	5	4	22

40		Srushti Raosaheb Patil	using Thyristors	9	4	4	4	21	
41		Swati Vishnu Zagade		9	4	3	4	20	
42		Akshada Pandhrinath Gahile		8	4	3	4	19	
43	11	Nikita Pralhad Borse	Minimizing Penalty in Industrial Power Consumption by Engaging APFC Unit	8	4	3	4	19	
44		Vibhuti Raosaheb Gudaghe		8	4	3	4	19	
45		Kameshbhai Suryavanshi		8	4	4	4	20	
46		Prathamesh shirsath		9	4	4	4	21	
47	12	Akshay wagh	Digital electronics Safe box (Locker)	8	4	4	5	21	
48		Chinamy sinerkar		9	4	5	5	23	
49		Saloni Thete		9	4	4	5	22	
50		Sakshi Thete		8	4	4	5	21	
51	13	Pooja vinchu	Solar Powered LED Street Light with Intensity Control	8	4	4	4	20	
52		Prajakta wankhede		8	4	3	4	19	
53		Chetana Chaudhari		8	4	3	4	21	
54		Ishika Gaikwad		8	4	3	4	20	
55		Dnyaneshwari Gaikwad		9	4	4	4	24	
56	14	Prachi Bhat	SVPWM Space Vector Pulse Width Modulation	7	4	3	4	18	
57		Tejal Bhoi		7	4	3	4	18	
58		Kunal Dashpute		7	4	3	4	18	
59		Nikita Gaikwad		8	4	3	4	19	
60	15	sarthak khalkar	Long Range FM Transmitter with Audio Modulation	0	0	0	0	0	
61				kartik narayane	0	0	0	0	0
62				prarabdha Nathe	0	0	0	0	0
63		Yuvraj Nemade	Cyclo Converter using Thyristors	6	4	3	4	17	
64				Chetan Ner	6	4	3	4	17
65				Aditya Nikam	0	0	0	0	0
66									
67	16	Raj Nikam	Cathode Ray Oscilloscope (Medical Services)	6	3	3	4	16	
68		kartik narayane		6	3	3	4	16	
69		avishkar patil		6	4	3	4	17	
70		mayur patil		6	3	3	4	16	
71		sahil patil		6	4	4	4	18	
72		aniket Saindre		5	3	3	4	15	
73	17	shreyas jadhav	Minimizing Penalty in Industrial Power Consumption	6	4	3	4	17	
74		harshal shinde		6	4	3	4	17	
75		Mayur Thoke		6	3	3	4	16	
76		manas jadhav		6	4	3	4	17	

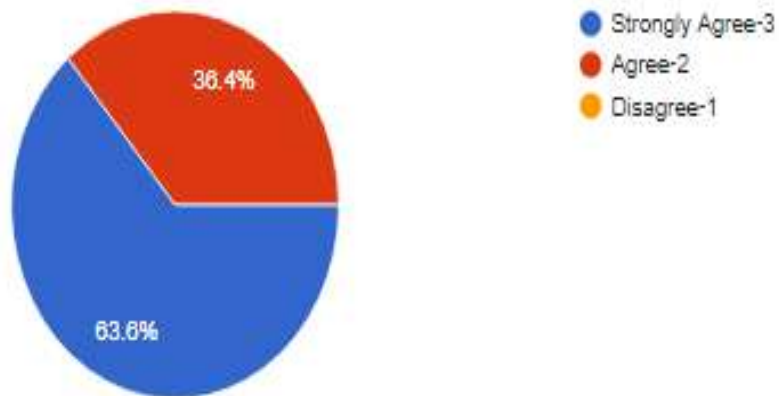
SN	Result Analysis	
1	Total Student Present Student	76
2	Number of Student Scoring above 60%	72
3	Percentage of student Scoring above 60%	94.73

8. Impact Analysis

SN	3- Excellent	2- Good	1- Satisfactory
Was the activity helpful?	42	24	00
Are you able to find application / use of concept covered?	36	30	00
Grade the activity in terms of communication skill improvement	35	31	00

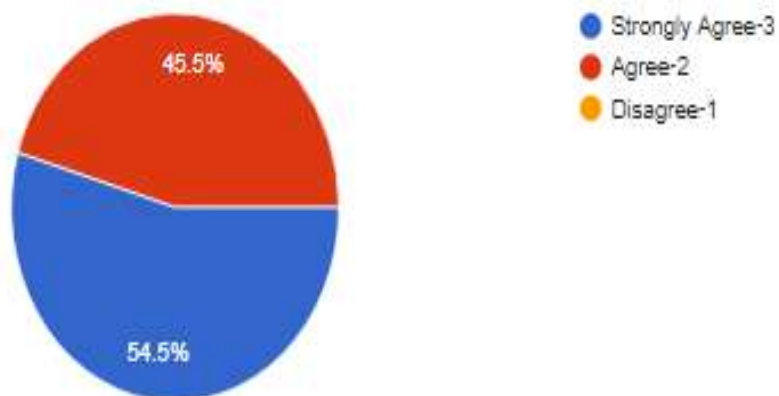
Was the Activity helpful?

66 responses



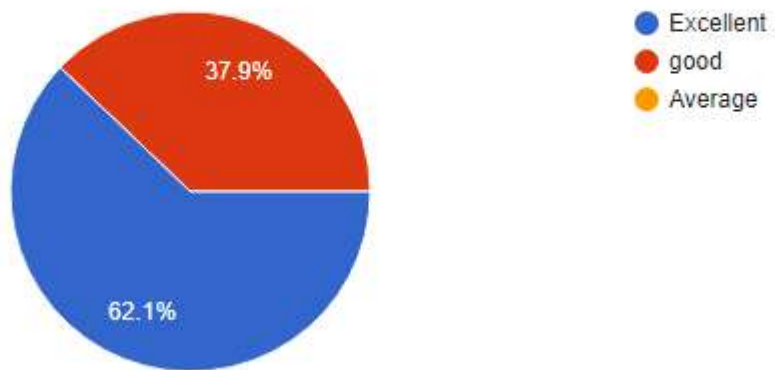
Are you able to find application / use of concept covered ?

66 responses

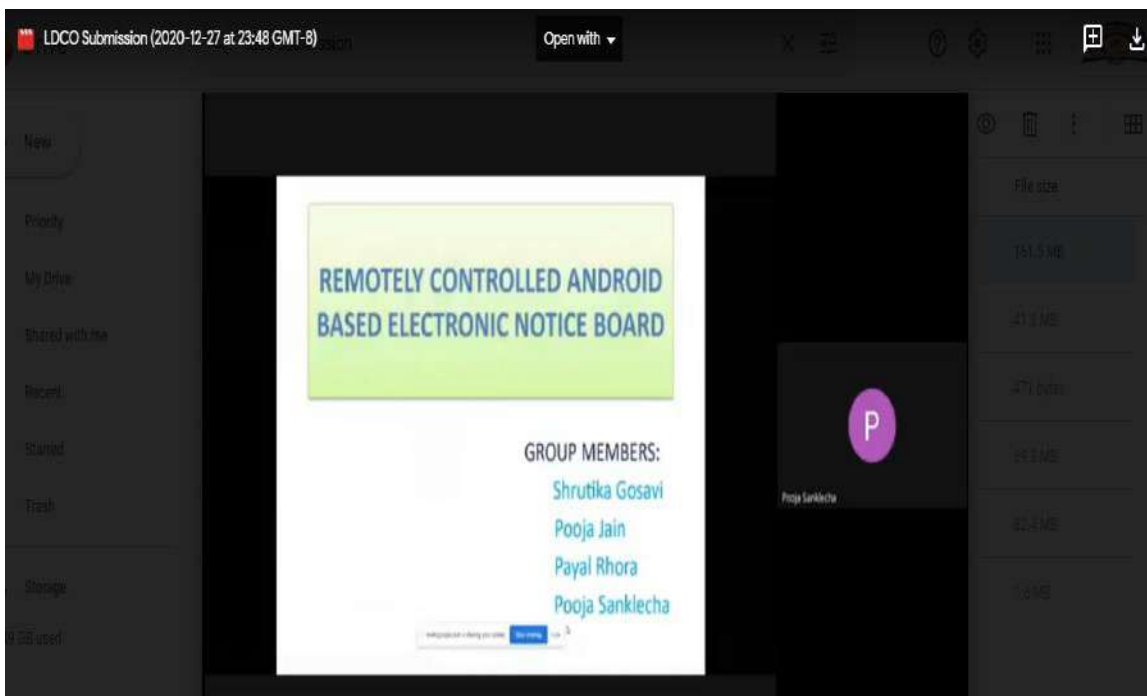


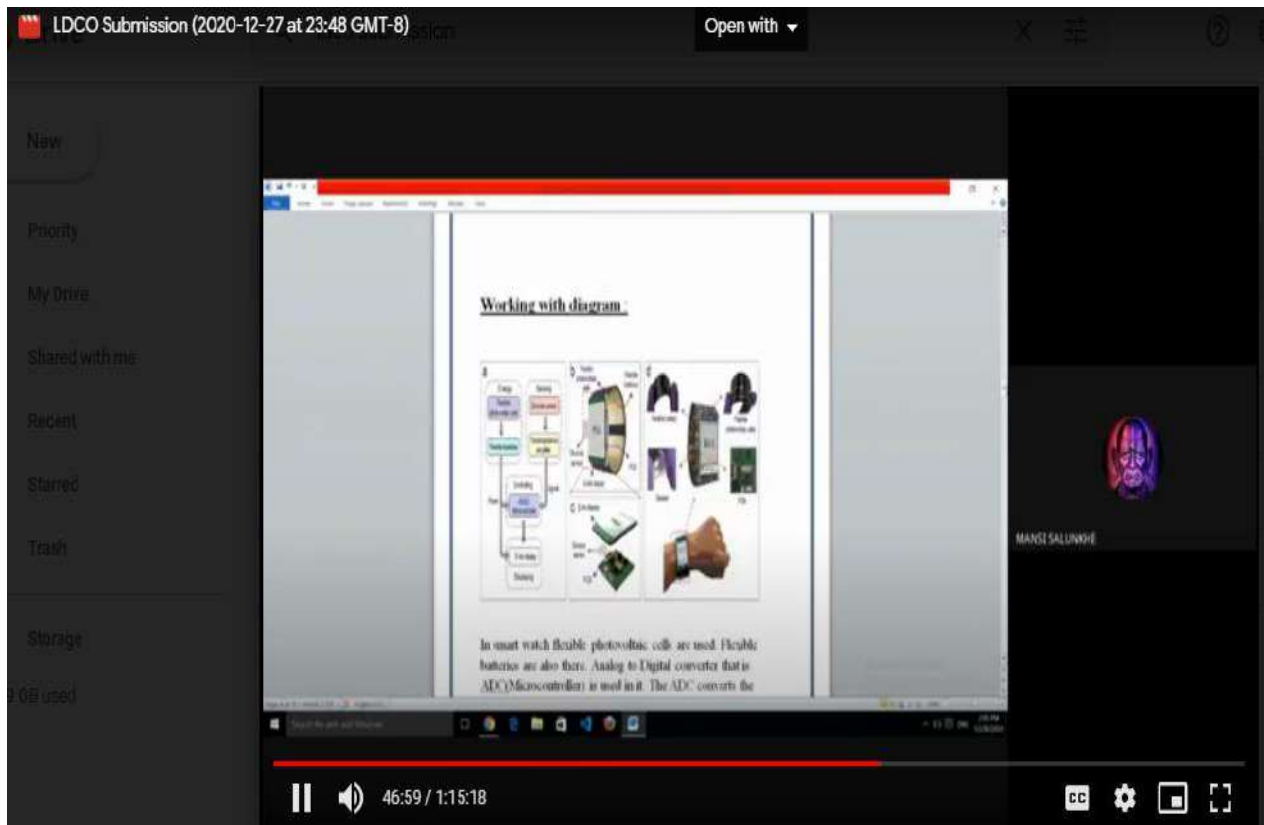
Grade the activity in terms of communication skill improvement

66 responses



9. Activity Picture





Recorded Video Link:

<https://drive.google.com/drive/search?q=ldco%20submission>

<https://drive.google.com/drive/search?q=ldco%20submission>

10. For review and critique contact: e-mail address of faculty and HOD

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