



**Mahatma Gandhi Mission's College of Engineering and Technology,
Kamothe
Department of Electronics and Telecommunication Engineering
A.Y. 2018-19**

Report on Virtual Lab

The **virtual labs** are fully interactive simulations in which students perform experiments, collect data, and answer questions to assess their understanding. The **labs** combine animations, illustrations, and videos to convey key information and engage students in the process of science.

Quick learners of all classes were selected for performing virtual lab practical. One subject was selected for virtual lab for each class. Details of this shown in Table 1.1

Table: 1.1 Class wise subject distributions for virtual lab

| Class | Subject | Virtual Lab | Faculty Assigned |
|-------|---------------------------|---------------|-----------------------|
| S.E. | Digital Electronics | IIT Kharagpur | Prof. Dayanand Jadhav |
| T.E. | Digital Signal Processing | IIT Kharagpur | Prof. Kanchan Dhole |
| B.E | Image Processing | IIT Hydrebad | Prof. P. Shilpa Vijay |

All students have performed practical as per instruction or procedure provided on line and also shown output of their assigned practical. They also cleared their doubts and provided conclusion by doing trouble shooting.

Following is list of quick learner that have successfully completed assigned practical with the help of respective assigned professor

| CLASS | SR. NO | UID | NAME |
|-------|--------|------------|-------------------------------------|
| SE | 1 | 117ET1310B | PATIL KETAKI JAYAWANT |
| | 2 | 117ET1308A | PATHAK ANKIT RAKESH KUMAR |
| | 3 | 117ET1267B | BANERJEE OINDRILLA |
| | 4 | 117ET1268A | BHARDWAJ NAKUL SANJIV |
| | 5 | 117ET1281A | GUPTA ANAND MAKSUDAN |
| | 6 | 117ET1339B | YADAV MADHU ANILKUMAR RANI |
| TE | 1 | 116ET1173B | ARDU SAMIKSHA KAILASH HEMLATA |
| | 2 | 116ET1117B | BAMANE SHRUTI SHASHIKANT SHWETA |
| | 3 | 116ET1154A | VARMA SANKET UMASHANKAR MUNNI |
| | 4 | 116ET1299A | YADAV PRAKASH KRISHNAKANT SHEELDEVI |
| | 5 | 116ET1174A | SINGH ABHISHEK JITENDRA SUMAN |
| | 6 | 116ET1048B | JADHAV ISHA ASHOK JYOTI |
| BE(A) | 1 | 115ET1414A | JADHAV VAIBHAV SHIRISH SHAKUNTALA |
| | 2 | 115ET1284A | KUMAR HARSH PRASAD MAYA |
| BE(B) | 3 | 116ET2311B | SANAS AISHWARYA MARUTI SUREKHA |
| | 4 | 115ET1185B | SHAIKH TANZILA AYAZ TANVEER |
| BE(C) | 5 | 415ET1184A | THAKUR ROHIT NITIN NILAM |
| | 6 | 414ET1047A | RANSINGH ADITYA DATTATRAYA SUNITA |

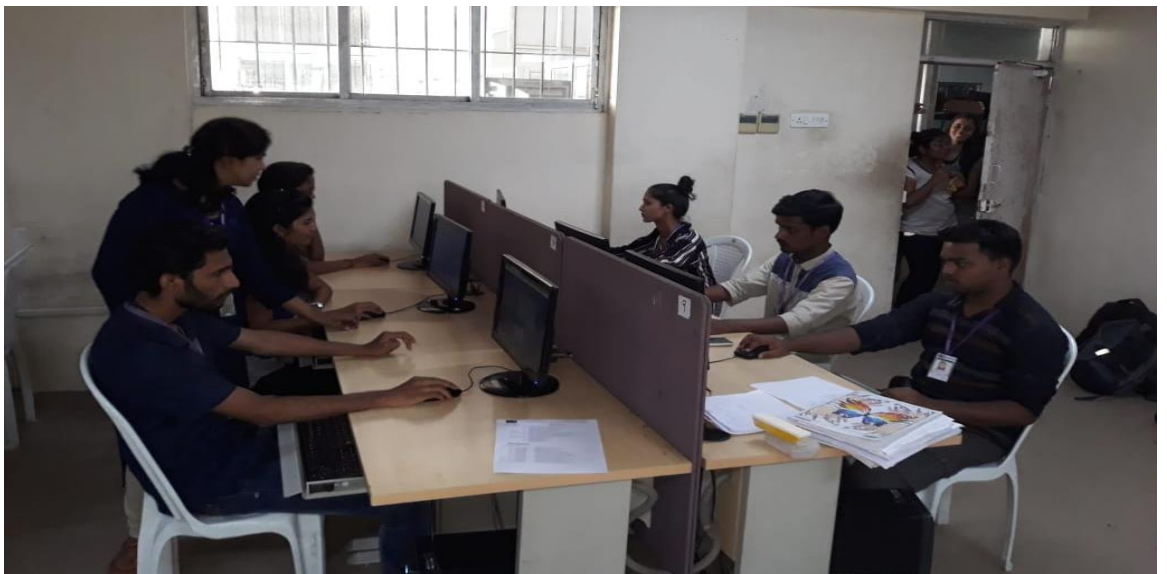
Following table shows list of the experiments performed by quick learner

| Class | Subject | List of Experiments | |
|-------|---------------------------|---------------------|--|
| SE | Digital Electronics | 1 | Implementation of Adder Circuit |
| | | 2 | Implementation of Multiplexer |
| | | 3 | Implementation of Decoder with 7-Segment Display |
| | | 4 | Implementation of ALU with function |
| | | 5 | Implementation of Latch and Flip Flops |
| | | 6 | Implementation of Registers |
| TE | Digital Signal Processing | 1 | Study of sampling theorem, effect of under sampling. |
| | | 2 | Study of Quantization of continuous-amplitude, discrete-time analog signals. |
| | | 3 | Study of different types of Companding Techniques |
| | | 4 | Study of properties of Linear time-invariant system. |
| | | 5 | Study of convolution: series and parallel system. |
| | | 6 | Study of Discrete Fourier Transform (DFT) and its inverse. |
| BE | Image Processing | 1 | Distance and Connectivity |
| | | 2 | Neighborhood Operations |
| | | 3 | Image Histogram |
| | | 4 | Fourier Transform |
| | | 5 | Morphological Operations |
| | | 6 | Image Segmentation |

Following is details of conduction of virtual labs by respected faculty members

| Class | Subject | Virtual Lab Conduction Date and Time | Faculty Assigned |
|-------|---------------------------|--------------------------------------|-----------------------|
| S.E. | Digital Electronics | 19/9/18 [3pm to 5pm] | Prof. Dayanand Jadhav |
| T.E. | Digital Signal Processing | 19/9/18 [9:30 am to 11:30 am] | Prof. Kanchan Dhole |
| B.E | Image Processing | 21/9/2018[3pm to 5pm] | Prof. P. Shilpa Vijay |

Glimpse of Virtual Lab Conducted





We would like to give sincere thanks to Honorable DG sir, Dr. K.G. Narayankhedekar, Principal S.K. Narayankhedeka and Head of the Electronics and Telecommunication department Dr. Indra Vijay Singh