### EE 240 – Power Engineering Lab

Spring Semester, 2023-24

**Instructors:** 

Prof. Sandeep Anand, Office: Ground Floor, Tel: 7409

Email: sa@ee.iitb.ac.in

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Email: soman@ee.iitb.ac.in

Prof. Shiladri Chakraborty, Office: Ground Floor, Tel: (022) 2576 9409

Email: shiladri@ee.iitb.ac.in

Prof. Anil Kulkarni, Office: Ground Floor, Tel: 7416

Email: anil@ee.iitb.ac.in

**RAs:** (Role: Lab/equipment support, demonstration on a feedback system, overall coordination)

Name	Roll No	Role / Day
Dhruv Kachhiya	213079005	Corresponding RA, Tuesday
Rajat Sankhla	213079008	Tuesday, Friday
Sagar De	22M1160	Monday, Thursday
Adarsh A	22M1158	Tuesday, Friday
Sandesh Narsale	23M1165	Monday, Thursday

**TAs:** (Role: Practice lab, conducting experiments, viva etc.)

Name	Roll No.	Day
Abhijeet Vijaykumar Deshmukh	23M1092	Monday, Friday
Sanyam Vaidya	23M1102	Monday, Thursday
S Suraj	23D0560	Monday, Thursday

Pushpraj Chandrakar	22M1095	Friday, Thursday
Gutturu Praveen Kumar	23D0523	Monday, Thursday
Nikhil Lekhra	23M1103	Monday, Thursday
Chirag Kishor Sarode	22M1094	Friday, Thursday
Alan Mathew Peringalloor	22M1093	Tuesday, Thursday
Kishore Seshadri	23D0561	Tuesday, Monday
Biswajit Sahoo	214070031	Tuesday, Friday
Yajush Sihag	23M1217	Tuesday, Friday
Aithagani Mithila	23D0532	Tuesday, Friday
Mrinal Kanti Dey	23D0563	Friday, Tuesday
Jay Joshi	23M1104	Monday, Thursday
Goradiya Disha Rameshbhai	23D0517	Tuesday, Friday
Saneesh Subhash Ganvir	23M1100	Monday, Tuesday

**Lecture Slot:** Wed 2:00 - 3:30 pm, Venue: LH101 (exact days mentioned in schedule below)

**Lab Slot**: Monday, Tuesday, Thursday, Friday, 2-5 pm, Venue: Machines Lab, Ground Floor, EE dept. (exact days mentioned in the schedule below)

#### **Distribution of Marks:**

Pre-lab work  $\rightarrow$  15 % (3 marks each lab) Post-lab work  $\rightarrow$  20 % (4 marks each lab) Viva  $\rightarrow$  25 % (5 marks each lab)

End Sem  $\rightarrow$  40%

#### **Experiments:**

- 1. Power measurement in balanced 3 phase circuits.
- 2. Open circuit and short circuit tests on single-phase transformers
- 3. Characteristics of separately excited DC motor
- 4. Speed control of 3-phase Induction Motor

#### **Demos:**

- 1. Synchronous generator and its characteristics
- 2. Brushless DC motor operations

#### **Instruction for Pre-Lab Report Format:**

Kindly go through the experiment manual in detail before coming to the lab. Also, prepare the pre-lab report. The following points are to be written by the student in their individual manual sheets prior to the experiment before coming to the lab on the experiment day. It needs to be submitted to TA as soon as you enter the lab.

- 1. Name of the Experiment
- 2. Aim of the Experiment
- 3. Circuit Diagram
- 4. Required Important Formulae
- 5. Format of Observation Table

#### **Instruction for Post-Lab format:**

- 1. On the day of the experiment TAs will sign the readings filled in by each student in the observation table, for each student.
- 2. Students must complete the required calculations/phasors and write conclusions at the end of the experiment.
- 3. Report Submission after the completion of calculations/phasors and conclusion must be submitted by the student to their corresponding TA. (or a week after conducting the experiment at the machine's lab between 4:30 to 5:00 pm).

#### **VIVA**

1. Viva based on the ongoing experiment will be taken either during the experiment or at the end of the experiment.

#### **Logistics / Instructions:**

- 1. Lectures will be conducted may or may not on each Wednesday (please, refer to the lab schedule for more information).
- 2. No entry will be given to students without proper shoes, ensuring complete feet coverage from all sides. (CROCS are not allowed)
- 3. The lab will be conducted as per the schedule. No exchange of lab slots is allowed.
- 4. Students will not be allowed to enter the lab after 5 min of the scheduled lab start timings and no excuses will be entertained.
- 5. **80% attendance** is mandatory for the lectures and lab failing which students will get a '**DX'** grade.
- 6. Makeup lab will be arranged only in case of a medical emergency, with approval from the instructor. Makeup labs will be conducted once all the experiments are completed and no request will be entertained in the middle of the experiment slot.
- 7. Get your doubts clarified in the lectures and laboratory sessions. In case any doubt is not clarified during the interaction session due to time constraints, you may email the instructor and fix a mutually agreeable time for a meeting/discussion. Avoid requesting meetings/discussions just before the end-sem exam.
- 8. We will use Moodle for announcements, marks etc.

## Lab Schedule

	Day	Date	Batch / Slot	Experiment	
	Wed	17-Jan-2024	Lecture-1		
	Thu	18-Jan-2024	Thu Batch-1		
	Fri	19-Jan-2024	Fri Batch-1		
Week 1	Sat	20-Jan-2024	Fri Batch-2 Compensation of Republic Day	Experiment -1	
	Mon	22-Jan-2024	Mon Batch-1	Power measurement in	
	Tue	23-Jan-2024	Tue Batch-1	balanced 3-phase circuits.	
	Thu	25-Jan-2024	Thu Batch-2		
	Fri	26-Jan-2024	Republic Day		
Week 2	Mon	29-Jan-2024	Mon Batch-2		
	Tue	30-Jan-2024	Tue Batch-2		
	Wed	31-Jan-2024	Lecture-2	Experiment-2	
	Thu	1-Feb-2024	Thu Batch-1		
Week 3	Fri	2-Feb-2024	Fri Batch-1		
	Mon	5-Feb-2024	Mon Batch-1	Open circuit and short circuit	
	Tue	6-Feb-2024	Tue Batch-1	tests on single-phase transformers	
	Thu	8-Feb-2024	Thu Batch-2	transformers	
	Fri	9-Feb-2024	Fri Batch-2		
Week 4	Mon	12-Feb-2024	Mon Batch-2	Demo	
	Tue	13-Feb-2024	Tue Batch-2	B-H curve of magnetic core	
	Wed	14-Feb-2024	Lecture-3		
	Thu	15-Feb-2024	Thu Batch-1		
	Fri	16-Feb-2024	Fri Batch-1	Experiment-3 Characteristics of separately	
Week 5	Mon	19-Feb-2024	Mon Batch-1	excited DC motor	
	Tue	20-Feb-2024	Tue Batch-1	Demo:	

	Wed	21-Feb-2024	Fri Batch-2 Compensation of Maha Shivratri		
Midsem week	Fri	23-Feb-2024		Mid Sem	
	Sat	2-Mar-2024			
	Thu	7-Mar-2024	Thu Batch-2	Experiment-3	
	Fri	8-Mar-2024	Maha Shivratri	Characteristics of separately excited DC motor	
Week 5	Mon	11-Mar-2024	Mon Batch-2		
	Tue	12-Mar-2024	Tue Batch-2	Demo: Working of DC motor	
	Wed	13-Mar-2024	Lecture-4		
	Thu	14-Mar-2024	Thu Batch-1		
	Fri	15-Mar-2024	Fri Batch-1	Experiment-4	
Week 6	Sat	16-Mar-2024	Mon Batch-2 Compensation of Holi	Speed control of 3 phase Induction Motor	
	Mon	18-Mar-2024	Mon Batch-1		
	Tue	19-Mar-2024	Tue Batch-1	Demo:	
	Thu	21-Mar-2024	Thu Batch-2	Winding configuration of 3	
\\\\- = \ . 7	Fri	22-Mar-2024	Fri Batch-2	phase induction motor	
Week 7	Mon	25-Mar-2024	Holi		
	Tue	26-Mar-2024	Tue Batch-2		
	Wed	27-Mar-2024	Lecture-5		
	Thu	28-Mar-2024	Thu Batch-1 (2:00 to 3:30 pm)		
	Tilu	26-IVId1-2024	Thu Batch-2 (3:30 to 5:00 pm)		
	Fri	29-Mar-2024	Good Friday		
Week 8	Sat	30-Mar-2024	Fri Batch-1 (2:00 to 3:30 pm)	Demo-1	
	Sat	30 Wai 2024	Fri Batch-2 (3:30 to 5:00 pm)	Synchronization of Alternator	
	Mon	1-Apr-2024	Mon Batch-1 (2:00 to 3:30 pm)		
	WIOII	1 / (ρ) 2027	Mon Batch-2 (3:30 to 5:00 pm)		

	Tue	2-Apr-2024	Tue Batch-1 (2:00 to 3:30 pm)		
	ide	2-Αμι-2024	Tue Batch-2 (3:30 to 5:00 pm)		
	Wed	3-Apr-2024	Lecture-6		
	Thu	4-Apr-2024	Thu Batch-1 (2:00 to 3:30 pm)		
	Tilu	4-Αμι-2024	Thu Batch-2 (3:30 to 5:00 pm)		
	Fri	E Apr 2024	Fri Batch-1 (2:00 to 3:30 pm)		
Week 9	FII	5-Apr-2024	Fri Batch-2 (3:30 to 5:00 pm)	Demo-2	
week 9	Mon	8-Apr-2024	Mon Batch-1 (2:00 to 3:30 pm)	Brushless DC motor operation	
			Mon Batch-2 (3:30 to 5:00 pm)		
	Tue	4/9/2024	Gudi Padwa		
	Wed	10-Apr-2024	Tue Batch-1 (2:00 to 3:30 pm)		
		10-Apr-2024	Tue Batch-2 (3:30 to 5:00 pm)		
	Thu	11-Apr-2024	ld-ul-Fitr		
	Mon	15-Apr-2024	Mon Batch	Make up lab	
Makeup lab	Tue	16-Apr-2024	Tue Batch	Make up lab	
ινιακευρ ιαυ	Thu	18-Apr-2024	Thu Batch	Make up lab	
	Fri	19-Apr-2024	Fri Batch	Make up lab	
Endsem Week	Mon	22-Apr-2024		End sem	
LINGSCIII WEEK	Thu	2-May-2024	Ella Selli		

## Batch Allotment

	EE240- Monday Batch-1				
			_	Group/Table	
		First name	Last name	No.	
1	22B3901	Hardik	Jangir		
2	22B3902		Tripurwar	Group-1 / TA1	
3	22B3903	Sahil Kalpesh	Desai		
4	22B3904	Devtanu	Barman		
5	22B3906	Borra Lokesh	Chandra	Group -2 / TA2	
6	22B3907	Shiwani	Mishra		
7	22B3908	Bhuvansh	Goyal		
8	22B3910	Utkarsh	Maurya	Group -3 / TA3	
9	22B3911	Kaluguri	Yashaswini	]	
10	22B3912	Mohammad Samiuddin	Shafi		
11	22B3914	Aman	Rishal.C.H.	Group- 4 / TA4	
12	22B3915	Gogineni Venkat	Sumanth	]	
13	22B3916	Bharath	Sreejith		
14	22B3917	Arnav	Agarwal	Group-5 / TA5	
15	22B3918	Oviya	S	]	
16	22B3919	Sanat Kumar	Agrawal		
17	22B3921	Sthiti	Padhi	Crown 6/TA6	
18	22B3922	Jatin	Kumar	Group- 6 / TA6	
19	22B3923	Sarthak	Niranjan	7	
20	22B3924	Suyash Jitendra	Majhi		
21	22B3925	Jadhav Saurabh	Arun	Crown 7/TA7	
22	22B3927	Aryan	Tamboli	Group- 7 / TA7	
23	22B3928	Utkarsh	Prakash	]	
24	22B3929	Aman	Verma		
25	22B3930	Bhavya	Mittal	Group-8 / TA8	
26	22B3931	Praveen	Praveen		

	EE240- Monday Batch-2				
				Group/Table	
S.No.	Roll No.	First name	Last name	No.	
1	22B3932	Shaik Rehna	Afroz		
2	22B3933	Deepika	Meena	Group-1 / TA1	
3	22B3934	Krishna Kant	Naik		
4	22B3935	Samridhi	Sahay		
5	22B3936	Sravan K	Suresh	Group -2 / TA2	
6	22B3937	Cherish	Jain		
7	22B3938	Akash	Akash		
8	22B3940	Anuj	Gautam	Group -3 / TA3	
9	22B3941	Aaditya	Gupta		
10	22B3942	Harsh Sanjay	Roniyar		
11	22B3943	Anisha	Saini	Group- 4 / TA4	
12	22B3944	Madhur	Kholia		
13	22B3945	Pranav	Prakash		
14	22B3946	Vavilala Sathvik	Reddy	Group-5 / TA5	
15	22B3947	Naresh Kumar	Meena		
16	22B3949	Mehta Virti	Rohit		
17	22B3950	Anuj	Yadav	Group 6/TA6	
18	22B3951	Keshav	Maheshwari	Group- 6 / TA6	
19	22B3952	Keshav	Samdani		
20	22B3953	Patil Swarup	Dasharath		
21	22B3954	Hardik	Khariwal	Group 7/TA7	
22	22B3956	Pramiti	Kumar	- Group- 7 / TA7	
23	22B3957	Nitin	Yadav		
24	22B3958	Garima Ashok	Gopalani		
25	22B3959	Saarthak	Krishan	Group 0 / TAO	
26	22B3905	Saurabh	Kumar	Group-8 / TA8	
27	22B3960	Divyansh	Ranjan		

	EE240- Tuesday Batch-1					
S.No.	Roll No.	First name	Last name	Group/TA		
1	22B1201	Shah Aagam	Gautam			
2	22B1202	Chiransh	Somani	Group-1 / TA1		
3	22B1203	Atharva Jayant	Kolte			
4	22B1204	Bhogaraju L M Shashank	Vaibhav			
5	22B1206	Ayush	Timan	Group -2 / TA2		
6	22B1207	Anshu	Arora			
7	22B1208	Veda	Raju			
8	22B1210	Chirag	Jindal	Group -3 / TA3		
9	22B1211	Angad	Singh			
10	22B1212	Chinmay	Moorjani			
11	22B1213	Sachi Mukesh	Deshmukh	Group- 4 / TA4		
12	22B1214	Aashish	Chandra			
13	22B1215	N V Navaneeth	Rajesh			
14	22B1216	Moon Aman	Milind	Group-5 / TA5		
15	22B1217	Preetish Shailendra	Sathawane			
16	22B1218	Vidisha	Agarwal			
17	22B1219	Abhineet	Agarwal	  - Group- 6 / TA6		
18	22B1221	Yannakula Naga Sasi	Bhushan	Group- o / TAo		
19	22B1222	Shrutika Pandurang	Mohalkar			
20	22B1223	Sania	Mandal			
21	22B1224	Yaddala Ravi	Teja	Group 7/TA7		
22	22B1225	Pravesh	Khaparde	Group- 7 / TA7		
23	22B1226	Kuldeep	Meena			
24	22B1228	Kaustav	Saha			
25	22B1229	Kirthan	Kamble	Group 8 / TAS		
26	22B1230	Arin Prashant	Weling	Group-8 / TA8		
27	22B1231	Akshat	Singhvi			

	EE240- Tuesday Batch-2					
S.No.	Roll No.	First name	Last name	Group/TA		
1	22B1232	Nimay Upen	Shah			
2	22B1233	Atmakuri Venkata Madhava	Sriram	Group-1 / TA1		
3	22B1234	Shubhi	Ajmera			
4	22B1235	Himanshi	Shende			
5	22B1236	Takshit	Aggarwal	Group -2 / TA2		
6	22B1237	Chavva Krishna Koushik	Reddy			
7	22B1238	Saumya Dharmesh	Shah			
8	22B1239	Vanka	Mahithanvitha	Group -3 / TA3		
9	22B1240	Rushil Rajendra	Malode			
10	22B1241	Raghav Shreevardhan	Sapre			
11	22B1242	Jainam	Ravani	Group- 4 / TA4		
12	22B1243	Avinash	Meena			
13	22B1244	Saima Faiyaz	Patharwat			
14	22B1245	Aastha Singh	Chouhan	Group-5 / TA5		
15	22B1246	K. P.	Lakshmeesh			
16	22B1247	Aditya Singh	Bhadoria			
17	22B1248	Payghan Samarth	Prakash	Group 6/TA6		
18	22B1249	Harsh	Anand	Group- 6 / TA6		
19	22B1251	Anirudh Kumar	Jangid			
20	22B1253	Agrawal Manav	Harishbhai			
21	22B1254	Bhanoth	Preetam	Group 7/TA7		
22	22B1255	Anay	Malviya	Group- 7 / TA7		
23	22B1258	Saptarshi	Biswas			
24	22B1259	Yashomati Purushottam	Sarnaik			
25	22B1261	Prayash Kumar	Sahu	Group-8 / TA8		
26	22B1262	Uday	Singh			

	EE-240 Thursday Batch-1				
				Group/Table	
S.No.	Roll No.	First name	Last name	No.	
1	22B3961	Rahul	Agarwal		
2	22B3962	Rishabh	Bhardwaj	Group-1 / TA1	
3	22B3963	Neil	George		
4	22B3964	Aditya	Singh		
5	22B3965	Shivam	Panwar	Group -2 / TA2	
6	22B3966	Mrunali Subhash	Barapatre		
7	22B3967	Jatin	Gupta		
8	22B3968	Krishna Kumar	Singh	Group -3 / TA3	
9	22B3969	Patni Devavrat	Sonal	]	
10	22B3970	Prince	Chouhan		
11	22B3971	Pagare Amol	Milind	Group- 4 / TA4	
12	22B3972	Kanak	Dudi		
13	22B3973	Ayush	Gaur		
14	22B3974	Tanish Anant	Raghute		
15	210070036	Jayesh	Bagul	Group-5 / TA5	
			Vijayarajasekh		
16	22B3975	Praveen	aran		
17	22B3976	Rahul	В		
18	22B3977	Saujanya	Chandra	Group 6/TA6	
19	22B3978	Sanjay Kumar	Meena	Group- 6 / TA6	
20	22B3979	Prerna	Khobragade		
21	22B3980	Subhanshu	Choudhary		
22	22B3981	Aniket	Patel	Group 7/TA7	
23	22B3982	Anupam	Rawat	- Group- 7 / TA7	
24	22B3983	Hemraj	Meena		
25	22B3984	Dishant	Dishant		
26	22B3985	Aditya Vema Reddy	Kesari	Group 0 / TAO	
27	20D070038	Himanshu	Meena	Group-8 / TA8	
28	22B3987	Abhinav	Kumar		

	EE-240 Thursday Batch-2				
				Group/Table	
S.No.	Roll No.	First name	Last name	No.	
1	22B3988	Samarth	Sirsat		
2	22B3989	Manoj Kumar	Murmu	Group-1 / TA1	
3	22B0412	Reeyansh Hiten	Shah		
4	22B0688	Moondra Shikhar	Ashutosh		
5	22B0005	Kakadiya Aayush	Anilbhai	Group -2 / TA2	
6	22B2209	Shetty Sathwik	Prakash		
7	22B2405	Archisman	Bhattacharjee		
8	22B0769	Aayush	Kumar	Group -3 / TA3	
9	22B0010	Kattirsitti Jeet	Govindrao		
10	22B2156	Aviral Vishesh	Goel		
11	22B4246	Prajwal	Nayak	Group- 4 / TA4	
12	22B4217	Hrishikesh	S		
13	22B1515	Yajan	Agarwal		
14	22B0721	Rajwardhan Dhanaji	Toraskar	Group 5 / TA 5	
15	21D070084	Uvesh	Mohammad	Group-5 / TA5	
16	22B2502	Sawant	Varun		
17	22B2144	Nishant Jayesh	Bhave		
18	22B0305	Mitul	Tandon	Crown 6/TA6	
19	22B4232	Sarvadnya	Sarvadnya	Group- 6 / TA6	
20	22B1227	Ashwajit	Singh		
21	22B1281	Jay Haresh	Mehta		
22	22B1257	Abhimanyu	Kumar	Group 7/TA7	
23	22B1220	Parv	Maheshwari	Group- 7 / TA7	
24	22B1265	Saarthak Ritesh	Laturiya		
25	22B1250	Viraansh	Sontakkey		
26	22B1252	Pentapalli Mithin	Kumar	Group-8 / TA8	
27	18D070025	Rohit	Rajwansi	_ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
28	22B1209	Aditya	Sisodiya		

EE240- Friday Batch-1								
S.No.	Roll No.	First name	Last name	Group/Table No.				
1	22B1263	Pawar Sanskriti	Vijay					
2	22B1264	Sachin	Awasthi	Group-1 / TA1				
3	22B1266	Ankit Kumar	Maurya					
4	22B1267	Anushka	Sharma					
5	22B1268	Aditya Gyanprakash	Nirmale	Group -2 / TA2				
6	22B1269	Srivastava						
7	22B1270	Arkadeep	Saha					
8	22B1271	Juluva	Yashwanth	Group -3 / TA3				
9	22B1272	Satyam	Gupta					
10	22B1273	Manisha	Sahu					
11	22B1274	Gajjala Venkata Sreekar	Reddy	Group- 4 / TA4				
12	22B1275	Harsh	Tripathi					
13	22B1276	Kaushal Deepak	Malpure					
14	22B1277	Jatin	Singhal	Group-5 / TA5				
15	22B1260	Harshil	Singla					
16	22B1279	Dhruv Kumar	Meena					
17	22B1283	R K Sai Mayura		Crown 6/TA6				
18	22B1284	Saatwik	Patnaik	Group- 6 / TA6				
19	22B1285	Khushi Ravindra	Wandile					
20	22B1286	Parinay	Dewangan					
21	22B1287	Medhansh	Sharma					
22	22B1288	Shruti	Ghoniya	Group- 7 / TA7				
23	22B1289							
24	22B1290	Utkarsh	Meshram					
25	22B1291	Piyush Sihag		Croup 9 / TA 9				
26	22B1292	Tiwari Sakshi	Umashankar	Group-8 / TA8				
27	22B1293	Gohil Hardik	Pratap					

EE240- Friday Batch-2								
				Group/Table				
S.No.	Roll No.	First name	Last name	No.				
1	22B1294	Saurabh	Srivastava					
2	22B1295	Preet	Gehlot	Group-1 / TA1				
3	22B1296	Dattaraj Mandar	Salunkhe					
4	22B1297	Gowshik	L					
5	22B1298	Neel Bhavesh	Rambhia	Group -2 / TA2				
6	22B1299	Jaswant	S					
7	22B1300	Khushbu	Sahu					
8	22B1301	Nistala	Sreechandana	Group -3 / TA3				
9	22B1302	Immaraju Bhanu	Harsha	1				
10	22B1303	Ramandeep	Singh					
11	22B1304	Pratham	Sonekar	Group- 4 / TA4				
12	22B1305	Pyla	Ramya	]				
13	22B0014	Amitesh	Shekhar					
14	22B0396	Vatsal	Melwani	1				
		Tulasi Kameswara Sai		Group-5 / TA5				
15	22B1278	Subrahmanya	Ashok					
16	22B0651	Yug Pashupatinath	Agarwal					
17	22B1810	Aaina	Parmar					
18	22B1814	Suchet	Gopal	Croup 6/TA6				
19	22B1829	Kshitij Yogesh	Vaidya	- Group- 6 / TA6				
20	22B1856	Priyansh	Singh					
21	22B2110	Akshat	Thakur					
22	22B2234	Toshan Achintya	Golla					
23	22B3303	Tanay Pradyumna	Bhat	Group- 7 / TA7				
24	22B3913	Samar	Perwez					
25	22B3939	Arora Anay	Sandeep					
26	22B3955	Raunak	Mukherjee	Croup 0 / TAO				
27	22B4514	Kushal	Jain	Group-8 / TA8				
28	22B4241	Siddick Mohammed Hamza	Khatri	]				

# TA Allotment per Experiment

TA Name	TA1	TA2	TA3	TA4	TA5	TA6	TA7	TA8
Monday EXP-1	Abhijeet Vijaykuma r Deshmukh	Sanyam Vaidya	S Suraj	Gutturu Praveen Kumar	Nikhil Lekhra	Kishore Seshadri	Jay Joshi	Saneesh Subhash Ganvir
Tuesday EXP-1	Mrinal Kanti Dey	Saneesh Subhash Ganvir	Alan Mathew Peringallo or	Kishore Seshadri	Biswajit Sahoo	Yajush Sihag	Aithagani Mithila	Goradiya Disha Rameshbh ai
Thursday EXP-1	Sanyam Vaidya	S Suraj	Pushpraj Chandraka r	Gutturu Praveen Kumar	Nikhil Lekhra	Chirag Kishor Sarode	Alan Mathew Peringallo or	Jay Joshi
Friday EXP-1	Pushpraj Chandraka r	Chirag Kishor Sarode	Abhijeet Vijaykuma r Deshmukh	Mrinal Kanti Dey	Biswajit Sahoo	Yajush Sihag	Aithagani Mithila	Goradiya Disha Rameshbh ai
Monday EXP-2	Saneesh Subhash Ganvir	Abhijeet Vijaykuma r Deshmukh	Sanyam Vaidya	S Suraj	Gutturu Praveen Kumar	Nikhil Lekhra	Kishore Seshadri	Jay Joshi
Tuesday EXP-2	Goradiya Disha Rameshbh ai	Mrinal Kanti Dey	Saneesh Subhash Ganvir	Alan Mathew Peringallo or	Kishore Seshadri	Biswajit Sahoo	Yajush Sihag	Aithagani Mithila
Thursday EXP-2	Jay Joshi	Sanyam Vaidya	S Suraj	Pushpraj Chandraka r	Gutturu Praveen Kumar	Nikhil Lekhra	Chirag Kishor Sarode	Alan Mathew Peringallo or
Friday EXP-2	Goradiya Disha Rameshbh ai	Pushpraj Chandraka r	Chirag Kishor Sarode	Abhijeet Vijaykuma r Deshmukh	Mrinal Kanti Dey	Biswajit Sahoo	Yajush Sihag	Aithagani Mithila
Monday EXP-3	Jay Joshi	Saneesh Subhash Ganvir	Abhijeet Vijaykuma r Deshmukh	Sanyam Vaidya	S Suraj	Gutturu Praveen Kumar	Nikhil Lekhra	Kishore Seshadri
Tuesday EXP-3	Aithagani Mithila	Goradiya Disha Rameshbh ai	Mrinal Kanti Dey	Saneesh Subhash Ganvir	Alan Mathew Peringallo or	Kishore Seshadri	Biswajit Sahoo	Yajush Sihag

Thursday EXP-3	Alan Mathew Peringallo or	Jay Joshi	Sanyam Vaidya	S Suraj	Pushpraj Chandraka r	Gutturu Praveen Kumar	Nikhil Lekhra	Chirag Kishor Sarode
Friday EXP-3	Aithagani Mithila	Goradiya Disha Rameshbh ai	Pushpraj Chandraka r	Chirag Kishor Sarode	Abhijeet Vijaykuma r Deshmukh	Mrinal Kanti Dey	Biswajit Sahoo	Yajush Sihag
Monday EXP-4	Kishore Seshadri	Jay Joshi	Saneesh Subhash Ganvir	Abhijeet Vijaykuma r Deshmukh	Sanyam Vaidya	S Suraj	Gutturu Praveen Kumar	Nikhil Lekhra
Tuesday EXP-4	Yajush Sihag	Aithagani Mithila	Goradiya Disha Rameshbh ai	Mrinal Kanti Dey	Saneesh Subhash Ganvir	Alan Mathew Peringallo or	Kishore Seshadri	Biswajit Sahoo
Thursday EXP-4	Chirag Kishor Sarode	Alan Mathew Peringallo or	Jay Joshi	Sanyam Vaidya	S Suraj	Pushpraj Chandraka r	Gutturu Praveen Kumar	Nikhil Lekhra
Friday EXP-4	Yajush Sihag	Aithagani Mithila	Goradiya Disha Rameshbh ai	Pushpraj Chandraka r	Chirag Kishor Sarode	Abhijeet Vijaykuma r Deshmukh	Mrinal Kanti Dey	Biswajit Sahoo
Monday EXP-5	Nikhil Lekhra	Kishore Seshadri	Jay Joshi	Saneesh Subhash Ganvir	Abhijeet Vijaykuma r Deshmukh	Sanyam Vaidya	S Suraj	Gutturu Praveen Kumar
Tuesday EXP-5	Biswajit Sahoo	Yajush Sihag	Aithagani Mithila	Goradiya Disha Rameshbh ai	Mrinal Kanti Dey	Saneesh Subhash Ganvir	Alan Mathew Peringallo or	Kishore Seshadri
Thursday EXP-5	Nikhil Lekhra	Chirag Kishor Sarode	Alan Mathew Peringallo or	Jay Joshi	Sanyam Vaidya	S Suraj	Pushpraj Chandraka r	Gutturu Praveen Kumar
Friday EXP-5	Biswajit Sahoo	Yajush Sihag	Aithagani Mithila	Goradiya Disha Rameshbh ai	Pushpraj Chandraka r	Chirag Kishor Sarode	Abhijeet Vijaykuma r Deshmukh	Mrinal Kanti Dey
Monday EXP-6	Gutturu Praveen Kumar	Nikhil Lekhra	Kishore Seshadri	Jay Joshi	Saneesh Subhash Ganvir	Abhijeet Vijaykuma r Deshmukh	Sanyam Vaidya	S Suraj

Tuesday EXP-6	Kishore Seshadri	Biswajit Sahoo	Yajush Sihag	Aithagani Mithila	Goradiya Disha Rameshbh ai	Mrınal Kanti Dev	lSubhash	Alan Mathew Peringallo or
Thursday EXP-6	Gutturu Praveen Kumar	Nikhil Lekhra	Chirag Kishor Sarode	Alan Mathew Peringallo or	Jay Joshi	Sanyam Vaidya	S Suraj	Pushpraj Chandraka r
Friday EXP-6	Mrinal Kanti Dey	Biswajit Sahoo	Yajush Sihag	Aithagani Mithila	Goradiya Disha Rameshbh ai	Chandraka	Chirag Kishor Sarode	Abhijeet Vijaykuma r Deshmukh