# EXAMINATION DEPARTMENT DAYALBAGH EDUCATIONAL INSTITUTE DAYALBAGH, AGRA-282005

**NOTICE** 

Subject: Lateral Entry (LE) Scheme for Admission to Second Year of B.Tech (2024-25).

The Lateral Entry (LE) scheme for admission to the second year of B.Tech. is one of the lateral pathways that the Institute offers to its meritorious students of various Diploma level and prescribed B.Voc. Programmes. The students who fulfill the below-mentioned eligibility criteria shall be allowed to appear in the selection process of the LE scheme for possible upward mobility from Diploma/ Vocational-Diploma/ B.Voc. Level programmes (Source Programme) to B.Tech. Programme (Target Programme).

## **Eligibility Criteria for Short-listing Students from Source Programme:**

- 1. Diploma in Engineering (High School Students):
  - Top 20% of students as per CGPA of 6 semesters of each centre in the order of merit with a minimum of 6 CGPA.
- 2. Diploma in Engineering (Intermediate Students):
  - Top 20% of students as per CGPA of 4 semesters of each centre in the order of merit with a minimum of 6 CGPA.
- 3. Prescribed B.Voc. Programmes:
  - Top 20% of students as per CGPA of 4 semesters of each centre in the order of merit with a minimum of 6 CGPA.

#### **Further Instructions:**

- 1. A provisional list of students (Annexure-1) eligible for the Lateral Entry Scheme is notified on the website and Faculty Notice Boards. In case any student has a query regarding his/ her name not appearing in the list, they may send an email to <a href="mailto:ardeiexam@dei.ac.in">ardeiexam@dei.ac.in</a>.
- 2. The schedule of the lateral entry test shall be notified later on.
- 3. All eligible students as per attached list must attend the Mathematics coaching in the Science Faculty Hall from 08-Jul-2024 to 19-Jul-2024. The timings of the coaching shall remain from 10:30 AM to 12.15 PM. The coaching shall be organized by the Mathematics Department of the Faculty of Science. All the enlisted students shall be informed for the coaching schedule by the Dean, Faculty of Engineering through email. The results of the B.Voc. programs in (i) Automobile, (ii) Digital Manufacturing, (iii) Agricultural Technology, & (iv) Internet of Things are still awaited. As a result, the merit list for these branches cannot be prepared until the results are declared. In the meantime, all students from these four B.Voc. branches, who anticipate being included in the tentative merit list, be allowed to attend the scheduled coaching sessions. However, it should be made clear to them that attending these coaching sessions does not confer eligibility to appear in the Lateral Entry Examination. Their eligibility will be contingent upon their inclusion in the final merit list once the results are declared.
- 4. The syllabus of Lateral Entry Test is attached herewith as Annexure-2.

Assistant Registrar (Exam.)
For Registrar

Date: 04-Jul-2024

Copy to:

The Dean, Faculty of Arts, Commerce, Education, Engineering, Science, Social Sciences

The Principal, Technical College

The Head, Department of Mathematics

The Incharge, CART

The Assistant Registrar (DEP)

The Head, DEI Computer Centre, with the request to upload entire document/ files on the DEI website.

Copy also to the following:

The Director, DEI, & The Registrar, DEI.

Entity	B.Voc.	Roll No.	Student Name	Father Name	M/F	Sem-1	Sem-2	Sem-3	Sem-4	CGPA
Engineering	AI & Robotics	2206006	SAHIL JOUHARI	DEEPAK JOUHARI	M	9.759	9.625	9.717	9.800	9.724
Engineering	AI & Robotics	2205961	ABHINAV SIKARWAR	ANIL SIKARWAR	M	9.575	9.704	9.650	9.200	9.535
Engineering	AI & Robotics	2205983	KAJAL KUSHWAH	YOGENDRA KUSHWAH	F	9.250	9.790	9.842	9.059	9.490
Engineering	AI & Robotics	2205997	PRIYANSHI SHARMA	ANIL KUMAR SHARMA	F	8.659	9.227	9.150	9.059	9.027
Engineering	AI & Robotics	2206003	RIYA KUSHWAH	YUVRAJ SINGH KUSHWAH	F	8.434	8.860	9.225	8.800	8.830
Engineering	AI & Robotics	2205965	AMAN RAJ	RAJ BABOO	M	8.484	9.000	8.934	8.625	8.765
Engineering	AI & Robotics	2205995	POORVI SATSANGI	HEMANT KUMAR SATSANGI	F	8.375	9.196	9.075	8.150	8.707
Engineering	AI & Robotics	2205969	ANJALI SHARMA	PAWAN KUMAR PACHAURI	F	8.600	9.086	9.259	7.550	8.632
Engineering	AI & Robotics	2205982	KAJAL GOYAL	PAWAN GOYAL	F	7.892	9.313	9.334		8.609
Engineering	AI & Robotics	2206000	RICHA ASTHANA	VIVEK ASTHANA	F	8.267	8.993	8.675	7.867	8.460
Engineering	Renewable Energy	2206602	PRAGATI UPADHYAY	RAJEEV UPADHYAY	F	9.217	9.292	9.634	9.217	9.340
Engineering	Renewable Energy	2206608	PRIYANKA BHARANGAR	ARJUN SINGH	F	9.175	8.575	9.459	8.884	9.023
Engineering	Renewable Energy	2206618	VINAY SHARMA	VINOD SHARMA	M	8.542	8.625	9.659	8.100	8.732
Engineering	Renewable Energy	2206603	PRASHANT SHARMA	SUBHASH SHARMA	M	8.800	8.767	9.300	7.800	8.667
Engineering	Renewable Energy	2206583	ANCHAL RATHORE	SANJEEV KUMAR	F	8.392	8.134	8.292	7.350	8.042
Engineering	Renewable Energy	2206595	MANJEET SINGH	SURENDRA SINGH	M	7.592	7.475	8.517	8.492	8.019
Engineering	Water, Sani.&Waste Mgmt.	2204874	VARUN DEV SHARMA	GAJENDRA KUMAR SHARMA	M	8.517	8.875	9.097	8.550	8.763
Engineering	Water, Sani.&Waste Mgmt.	2204862	KM NEETU SHARMA	SATYA PRAKASH SHARMA	F	7.417	8.617	9.250	8.500	8.453
Engineering	Water, Sani.&Waste Mgmt.	2204855	KM TANYA GAUTAM	PRADEEP GAUTAM	F	7.675	8.342	8.307	8.267	8.149
Engineering	Water, Sani.&Waste Mgmt.	2204847	ANUSHKA DIXIT	DHIRAJ DIXIT	F	7.267	7.892	8.299	8.509	7.994
Engineering	Water, Sani.&Waste Mgmt.	2204859	MANVI SHARMA	RAJESH KUMAR SHARMA	F	7.000	8.259	8.009	8.525	7.949
Science	Dairy Technology	2204193	TRAPTI SHIROMANI	AVNISH KUMAR SHIROMANI	F	8.150	8.909	9.455	8.831	8.851
Science	Dairy Technology	2204198	YOGESH KUMAR	JAGAT SINGH	M	8.475	8.250	8.690	8.420	8.464
Science	Dairy Technology	2204168	LAKHAN SARASWAT	PAWAN KUMAR	M	8.334	8.384	8.478	8.130	8.333
Science	Dairy Technology	2204167	KAJAL BAGHEL	MR OMPRAKASH BAGHEL	F	7.692	8.409	8.629	8.323	8.273
Science	Dairy Technology	2204194	VINAY VERMA	POORAN SINGH	M	8.059	8.167	8.440	7.525	8.053
Science	Dairy Technology	2204171	NITIN SHARMA	JITENDRA SHARMA	M	7.059	7.634	8.644	8.315	7.934
Science	Dairy Technology	2204176	RAHUL KUMAR	VISHNU KUMAR	M	6.834	7.642	8.523	8.404	7.871
Science	Dairy Technology	2204173	PRABHAKAR SINGH	VANSHIDHAR SINGH	M	7.725	8.242	8.440	6.952	7.847
Science	Telecommunication	2204317	TARUN SHUKLA	VINAY KUMAR	M	8.409	8.592	8.592	8.477	8.517
Science	Telecommunication	2204314	SHASHANK GOYAL	ARUN GOYAL	M	8.809	8.009	8.375	7.829	8.248
Science	Telecommunication	2204303	NEETESH	RAM NIVAS	M	7.550	7.459	8.467	8.961	8.123
Science	Telematics	2204337	GUNGUN SHARMA	RAJESH KUMAR SHARMA	F	8.117	8.967	9.359	8.725	8.792
Science	Telematics	2204342	MONU VERMA	LAJJARAM VERMA	M	7.717	8.259	8.392	8.084	8.113
Science	Telematics	2204346	RAHUL SHARMA	CHANDRA KISHOR	М	6.567	7.909	8.075		7.417
Science	Telematics	2204354	YASHPAL SINGH	MR GULAB SINGH	М	7.459	6.592	7.834	7.267	7.288

Sn1	Sn2	Entity	Program	Roll No.	Student Name	Gender	SM1	SM2	SM3	SM4	SM5	SM6	CGPA	Admission basis	CurrentSem
1	1	AdanBagh	D.E. Electronics	2205396	SHIVAM SHRIVASTAV	М	7.275	6.407	6.448	7.250			6.838	Intermediate	Fourth
2	2	AdanBagh	D.E. Electronics	2205386	ADITYA SOLANKI	М	7.863	6.371	5.740	7.300			6.821	Intermediate	Fourth
3	3	AdanBagh	D.E. Electronics	2205398	TUSHAR SHARMA	М	7.491	6.541	5.605	7.240			6.729	Intermediate	Fourth
4	1	AdanBagh	V.D. I.T.	2205684	VIKAS BAGHEL	М	7.298	6.074	4.592	6.089			6.031	Intermediate	Fourth
5	1	AgraCity	D.E. Electrical	2205190	KARAN KUMAR	М	6.697	7.505	6.030	6.831			6.788	Intermediate	Fourth
6	2	AgraCity	D.E. Electrical	2205187	GAUTAM PRAKASH	М	7.050	7.358	5.830	6.286			6.644	Intermediate	Fourth
7	1	Dedhgaon	D.E. Automobile	2204964	MANISH YADAV	М	5.937	5.969	5.750	6.907			6.158	Intermediate	Fourth
8	1	Jamshedpur	D.E. Automobile	2204998	ROHIT PAL	М	8.888	8.880	7.978	8.386			8.525	Intermediate	Fourth
9	2	Jamshedpur	D.E. Automobile	2204992	PRASHANT SHARAN	М	8.040	8.630	8.296	8.314			8.326	Intermediate	Fourth
10	1	Noida	D.E. Electronics	2205414	SACHIN KAUSHIK	М	7.496	7.273	7.094	8.420			7.566	Intermediate	Fourth
11	1	Siwan	D.E. Electrical	2205233	ADITYA KUMAR SAH	М	6.589	6.701	6.020	6.545			6.474	Intermediate	Fourth
12	1	Timarni	D.E. Automobile	2205347	SAGAR PATRE	М	7.471	6.621	6.600	6.937			6.896	Intermediate	Fourth
13	1	Tech.College	D.E. Automobile	2205095	VISHAL	М	8.285	9.000	8.991	7.937			8.549	Intermediate	Fourth
14	2	Tech.College	D.E. Automobile	2205046	CHANDRA SHEKHAR	М	8.863	8.067	8.360	7.958			8.295	Intermediate	Fourth
15	3	Tech.College	D.E. Automobile	2205056	JATIN GAUTAM	М	8.319	8.340	8.428	8.102			8.293	Intermediate	Fourth
16	4	Tech.College	D.E. Automobile	2205099	VIVEK	М	7.594	7.701	8.087	7.810			7.801	Intermediate	Fourth
17	5	Tech.College	D.E. Automobile	2205074	PRAYANSHU SHARMA	М	7.481	8.000	7.819	7.645			7.740	Intermediate	Fourth
18	6	Tech.College	D.E. Automobile	2205078	RAHUL KUMAR	М	7.765	8.192	7.737	7.217			7.720	Intermediate	Fourth
19	7	Tech.College	D.E. Automobile	2205061	LOVE GAUTAM	М	7.451	7.956	7.614	7.327			7.586	Intermediate	Fourth
20	1	Tech.College	D.E. Civil	2205133	DUSHYANT	М	8.285	8.983	8.823	8.819			8.734	Intermediate	Fourth
21	2	Tech.College	D.E. Civil	2205148	PRASHANT	М	8.157	8.880	8.978	8.819			8.709	Intermediate	Fourth
22	3	Tech.College	D.E. Civil	2205170	UDITWANT SINGH	М	8.628	8.643	9.106	8.518			8.704	Intermediate	Fourth
23	4	Tech.College	D.E. Civil	2205114	AKASH KUMAR	М	8.035	7.884	7.967	9.018			8.252	Intermediate	Fourth
24	5	Tech.College	D.E. Civil	2205128	DEV DIWAKAR	М	7.795	7.858	7.739	8.380			7.961	Intermediate	Fourth
25	6	Tech.College	D.E. Civil	2205152	PRAYANSHU	М	7.221	8.536	7.912	7.544			7.809	Intermediate	Fourth
26	1	Tech.College	D.E. Electrical	2205151	PRAVEEN SHARMA	М	8.525	9.322	9.120	8.215			8.793	Intermediate	Fourth
27	2	Tech.College	D.E. Electrical	2205261	SHAGUN GUPTA	F	9.201	8.809	9.050	8.143			8.785	Intermediate	Fourth
28	3	Tech.College	D.E. Electrical	2205339	RAJA SANTANI	М	9.152	9.041	8.190	8.375			8.693	Intermediate	Fourth
29	4	Tech.College	D.E. Electrical	2205153	PREM SHANKAR	М	8.898	9.184	8.660	7.840			8.639	Intermediate	Fourth
30	5	Tech.College	D.E. Electrical	2205628	ADARSH SHARMA	М	8.889	8.758	8.940	8.224			8.562	Intermediate	Fourth
31	6	Tech.College	D.E. Electrical	2205324	NITIN ADHIKARI	М	8.407	9.139	8.340	7.983			8.472	Intermediate	Fourth
32	7	Tech.College	D.E. Electrical	2205257	NALINI SINGH	F	8.937	7.978	7.980	8.331			8.301	Intermediate	Fourth
33	8	Tech.College	D.E. Electrical	2205259	RITIKA KUMARI	F	9.231	8.291	7.540	8.054			8.277	Intermediate	Fourth
34	9	Tech.College	D.E. Electrical	2205283	BHUPENDRA TYAGI	М	8.466	8.576	8.270	7.358			8.158	Intermediate	Fourth
35	10	Tech.College	D.E. Electrical	2205272	ANIKET	М	8.128	8.608	8.270	7.375			8.090	Intermediate	Fourth
36	11	Tech.College	D.E. Electrical	2205436	PRIYA CHANDEL	F	8.422	7.612	8.090	8.125			8.053	Intermediate	Fourth
37	12	Tech.College	D.E. Electrical	2204932	RADHA RATHORE	F	8.667	7.692	8.140	7.581			7.845	Intermediate	Fourth
38	13	Tech.College	D.E. Electrical	2205280	BADAL TRIVEDI	М	7.883	8.715	7.820	6.902			7.829	Intermediate	Fourth

Sn1	Sn2	Entity	Program	Roll No.	Student Name	Gender	SM1	SM2	SM3	SM4	SM5	SM6	CGPA	Admission basis	CurrentSem
39	1	Tech.College	D.E. Electronics	2205435	MANVI JAIN	F	8.819	8.625	8.698	8.300			8.611	Intermediate	Fourth
40	2	Tech.College	D.E. Electronics	2205477	ROHAN	М	7.417	8.349	8.532	8.120			8.104	Intermediate	Fourth
41	3	Tech.College	D.E. Electronics	2205475	RAHUL	М	8.050	8.018	7.532	8.300			7.981	Intermediate	Fourth
42	4	Tech.College	D.E. Electronics	2205434	KAUSHAMBI	F	8.040	7.742	7.500	7.850			7.786	Intermediate	Fourth
43	5	Tech.College	D.E. Electronics	2205473	PRIYANSHU GAUTAM	М	7.888	7.264	7.657	7.720			7.622	Intermediate	Fourth
44	6	Tech.College	D.E. Electronics	2205456	DILEEP KUMAR	М	8.270	7.349	6.938	7.110			7.424	Intermediate	Fourth
45	1	Tech.College	D.E. Mechanical	2205542	GYANENDRA	М	8.383	8.835	7.710	8.428			8.360	Intermediate	Fourth
46	2	Tech.College	D.E. Mechanical	2205521	ANSH SAXENA	М	8.692	8.362	7.878	8.450			8.354	Intermediate	Fourth
47	3	Tech.College	D.E. Mechanical	2205533	DEEPAK SISODIYA	М	7.491	8.375	8.148	8.234			8.075	Intermediate	Fourth
48	4	Tech.College	D.E. Mechanical	2205511	ABHAY PRATAP SINGH BHARTI	М	8.226	8.108	7.516	7.941			7.955	Intermediate	Fourth
49	5	Tech.College	D.E. Mechanical	2205544	HIMANSHU DUBEY	М	7.677	7.465	7.949	7.708			7.692	Intermediate	Fourth
50	6	Tech.College	D.E. Mechanical	2205534	DEEPAK VERMA	М	7.804	7.666	7.439	7.628			7.637	Intermediate	Fourth
51	7	Tech.College	D.E. Mechanical	2205541	GULSHAN BAGHEL	М	7.157	8.063	6.929	7.195			7.352	Intermediate	Fourth
52	1	Tech.College	Dip. L.T.F.(casd)	2205599	AMIT GARG	М	6.667	7.590	6.380	7.900			7.212	Intermediate	Fourth
53	2	Tech.College	Dip. L.T.F.(casd)	2205602	GITESH SHARMA	М	7.015	6.817	6.380	7.943			7.113	Intermediate	Fourth
54	1	Tech.College	Dip.Architecture Assist.	2204918	KM PRACHI	F	7.447	6.925	7.234	8.025			7.443	Intermediate	Fourth
55	2	Tech.College	Dip.Architecture Assist.	2204926	MONIKA SHARMA	F	7.349	7.219	6.450	7.529			7.145	Intermediate	Fourth
56	1	Tech.College	V.D. Automobile	2205625	SONI UPADHYAY	F	7.929	7.695	7.892	8.261			7.948	Intermediate	Fourth
57	2	Tech.College	V.D. Automobile	2205661	VIKAS	М	7.651	7.166	7.818	8.120			7.694	Intermediate	Fourth
58	3	Tech.College	V.D. Automobile	2205658	SUJAL	М	7.306	7.545	7.788	8.078			7.690	Intermediate	Fourth
59	4	Tech.College	V.D. Automobile	2205642	MANOJ KUMAR	М	7.338	7.184	7.833	7.916			7.575	Intermediate	Fourth
60	1	Tech.College	V.D. I.T.	2205712	DEEPAK KUMAR	М	8.826	8.287	8.267	7.573			8.242	Intermediate	Fourth
61	2	Tech.College	V.D. I.T.	2205705	ANUKOOL SINGH	М	8.254	7.853	7.234	7.823			7.799	Intermediate	Fourth
62	3	Tech.College	V.D. I.T.	2205751	YOGESH	М	8.124	7.883	7.334	7.202			7.646	Intermediate	Fourth
63	4	Tech.College	V.D. I.T.	2205728	KRISHNA GARG	М				7.428			7.528	Intermediate	Fourth
64	1	AdanBagh	D.E. Electronics	2104986	NISHANT KUMAR	М	6.300	7.070	6.584	6.710	6.587	6.900	6.702	HighSchool	Sixth
65	2	AdanBagh	D.E. Electronics	2104991	SHIVAM KUMAR	М	6.520	6.590	6.886	6.160	6.429	7.128	6.627	HighSchool	Sixth
66	1	AgraCity	D.E. Electrical	2105012	NISHANT SINGH	М	6.030	6.500	6.830	6.670	6.459	7.365	6.650	HighSchool	Sixth
67	2	AgraCity	D.E. Electrical	2105017	SACHIN KUMAR	М	6.880	6.300	6.220	6.447	6.125	7.141	6.521	HighSchool	Sixth
68	1	Amritsar	D.E. Electrical	2105031	AYUSH RAJ	М	6.000			7.277				HighSchool	Sixth
69	1		D.E. Automobile		TEJASH YADAV	М				5.395				HighSchool	Sixth
70	1	Jamshedpur	D.E. Automobile	2105084	AMRIT DARSHAN	М	7.320	7.350	7.155	6.534	7.425	8.159	7.334	HighSchool	Sixth
71	1	Murar	D.E. Electrical	2105121	AVANISH GOSWAMI	М	6.310	7.570	5.190	5.527	5.575	7.036	6.223	HighSchool	Sixth
72	1	Noida	D.E. Electronics	2105102	AYUSH DUBEY	М				7.310				HighSchool	Sixth
73	1	SN Delhi	V.D. I.T.	2105073	HARSH KUAMR	М	7.250	7.870	8.175	7.984	7.214	7.918	7.738	HighSchool	Sixth
74	1	Timarni	D.E. Electrical	2105151	KASAK GIRI	F				5.331				HighSchool	Sixth
75	1	Timarni	D.E. Mechanical		ARPIT GOUR	М				6.017				HighSchool	Sixth
76	1	Tech.College	D.E. Automobile	2104485	ADITYA LODHE	М	7.110	7.150	7.573	8.306	7.850	7.322	7.556	HighSchool	Sixth

Sn1	Sn2	Entity	Program	Roll No.	Student Name	Gender	SM1	SM2	SM3	SM4	SM5	SM6	CGPA	Admission basis	CurrentSem
77	2	Tech.College	D.E. Automobile	2104481	ABHISHEK	М	7.560	5.460	8.078	7.721	7.236	7.247	7.212	HighSchool	Sixth
78	3	Tech.College	D.E. Automobile	2104498	DEEPAK KUMAR	М	6.710	5.870	6.919	7.234	6.883	7.338	6.840	HighSchool	Sixth
79	1	Tech.College	D.E. Civil	2104533	AKHIL KUMAR UPADHYAY	М	8.560	9.160	9.795	9.613	9.577	8.867	9.243	HighSchool	Sixth
80	2	Tech.College	D.E. Civil	2104575	SHANTANU DIWAKAR	М	6.920	7.020	8.156	8.548	8.796	9.238	8.131	HighSchool	Sixth
81	3	Tech.College	D.E. Civil	2104584	VISHWASH BHARDWAJ	М	8.020	7.690	8.289	8.444	7.955	8.355	8.128	HighSchool	Sixth
82	4	Tech.College	D.E. Civil	2104542	ARPIT SOLANKI	М	7.170	7.310	8.595	7.707	8.475	8.155	7.877	HighSchool	Sixth
83	1	Tech.College	D.E. Electrical	2104606	ADITYA SARASWAT	М	7.750	7.890	8.830	8.733	9.255	9.097	8.598	HighSchool	Sixth
84	2	Tech.College	D.E. Electrical	2104690	SHUBHAM MAHOR	М	6.770	7.050	8.090	7.911	9.116	8.426	7.901	HighSchool	Sixth
85	3	Tech.College	D.E. Electrical	2104695	SURYANSH GUPTA	М	6.700	6.630	7.770	7.599	9.186	8.514	7.741	HighSchool	Sixth
86	4	Tech.College	D.E. Electrical	2104601	SWARNIMA GUPTA	F	7.840	7.440	6.250	7.670	8.227	8.667	7.706	HighSchool	Sixth
87	5	Tech.College	D.E. Electrical	2104678	RANJEET SINGH	М	7.870	7.200	7.110	7.170	8.204	8.150	7.619	HighSchool	Sixth
88	6	Tech.College	D.E. Electrical	2104459	SANDHYA JADON	F	7.500	8.120	7.020	7.143	7.625	7.443	7.481	HighSchool	Sixth
89	7	Tech.College	D.E. Electrical	2104609	AKASH SINGH	М	7.020	6.670	7.440	7.643	8.389	7.579	7.457	HighSchool	Sixth
90	8	Tech.College	D.E. Electrical	2104450	NISHA KUMARI	F	7.120	7.460	7.280	7.197	7.593	7.658	7.389	HighSchool	Sixth
91	9	Tech.College	D.E. Electrical	2104652	HIMESH SONI	М	8.420	6.810	6.690	7.188	7.436	7.680	7.365	HighSchool	Sixth
92		,	D.E. Electronics	2104731	HARSH CHAUHAN	М	8.650	8.680	9.178	8.890	9.552	9.027	8.985	HighSchool	Sixth
93	2	Tech.College	D.E. Electronics	2104721	ANSHUL DUBEY	М	7.460	6.630	7.990	7.560	8.164	7.522	7.530	HighSchool	Sixth
94	3	Tech.College	D.E. Electronics	2104744	OM KANT MISHRA	М	7.400	6.540	6.625	7.400	7.536	8.150	7.283	HighSchool	Sixth
95	1	Tech.College	D.E. Mechanical	2104843	VISHAL KUMAR	М	8.160	8.800	9.036	9.187	8.203	7.933	8.543	HighSchool	Sixth
96	2	Tech.College	D.E. Mechanical	2104825	MAYANK MISHRA	М	8.150	7.700	9.296	9.102	9.123	7.806	8.502	HighSchool	Sixth
97	3	Tech.College	D.E. Mechanical	2104883	HIMESH NIRMAL	М	8.270	8.030	8.143	8.267	8.633	8.032	8.261	HighSchool	Sixth
98	4	Tech.College	D.E. Mechanical	2104581	VIBHANSH BHARADWAJ	М	7.270	7.360	6.853	7.577	8.571	8.461	7.711	HighSchool	Sixth
99	5	Tech.College	D.E. Mechanical	2104823	MAYANK GUPTA	М	8.240	7.300	8.077	7.750	6.916	7.056	7.531	HighSchool	Sixth
100	1	Tech.College	Dip. L.T.F.(casd)	2104779	CHIRAG SAXENA	М	6.610	5.600	7.210	8.458	8.337	8.130	7.450	HighSchool	Sixth
101	1	Tech.College	Dip.Architecture Assist.	2104439	KARISHMA SHRIVASTAV	F	7.590	6.820	8.525	8.479	8.420	7.944	7.994	HighSchool	Sixth
102	1	Tech.College	V.D. Automobile	1805033	VINEET GUPTA	М	7.760	7.610	7.280	8.395	8.789	8.384	8.043	HighSchool	Sixth
103	2	Tech.College	V.D. Automobile	2104891	PARAS DURWAR	М	7.040	6.600	6.049	6.768	7.235	7.204	6.817	HighSchool	Sixth
104	1	Tech.College	V.D. I.T.	2104943	CHIRAG AGRAWAL	М	6.120	6.400	7.192	8.113	9.065	8.679	7.597	HighSchool	Sixth
105	2	Tech.College	V.D. I.T.	2104936	ANKUSH RAJ	М	8.140	7.560	6.850	6.863	7.089	6.943	7.243	HighSchool	Sixth

# ENGINEERING MATHEMATICS SYLLABUS FOR SCREENING TEST FOR LATERAL ENTRY TO B.TECH.

**Vector Calculus:** Differentiation and Integration of vectors, Gradient of a scalar point function, Divergence and curl of a vector point function and their physical meaning, line, surface and volume integrals, Gauss and Stoke's theorems (without proof), Simple applications.

### **Ordinary & Partial Differential Equations:**

- (i) **ODE**: Method of variation of parameters, Ordinary differential equations of second order, Solution in series, Legendre's and Bessel's equations and their recurrence relations.
- (ii) **PDE**: Simultaneous and total differential equations, elementary partial differential equations of first order, homogeneous and non-homogeneous partial difference equations with constant coefficients. Solution for wave, heat conduction and transmission equations.

**Statistics:** Moments, Moment generating functions, mathematical expectation, Binomial, Poisson's and Normal distribution, curve fitting, correlation and regression.

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#### SYLLABUS FOR WRITTEN TEST FOR LATERAL ENTRY TO B.TECH.

#### (1) BASIC ELECTRICAL ENGINEERING

CIRCUIT ANALYSIS: Review of basic concepts of units, voltage, current, energy, etc. R, L, and C - their geometrical, electrical and energy view point. Ohm's law, KVL, KCL, Mesh Analysis and Nodal Analysis. Thevenin's and Norton's Superposition theorem. Maximum Power Transfer Theorem. Star Delta conversion.

AC CIRCUITS: Principles of single phase and three phase generation (qualitative treatment only). Steady state analysis of RC, RL and RLC circuits for sinusoidal excitation. Phasor notation, RMS Values, Power Factor. Resonance. Complex Power, active and reactive power. 3-phase (balanced & unbalanced) system.

MAGNETIC CIRCUITS AND TRANSFORMERS: Ampere's Circuital law and Constant Flux Theorem. B-H curve, Magnetic circuit calculations. Hysteresis and Eddy Current losses. Transformers: construction emf-equation ratings phasor diagram on No-load and Full-load, e.g. circuits, Open circuits and short circuit test, efficiency and regulation operation of auto transformers.

ELECTRICAL MACHINES: Classification, construction, emf and torque production. Characteristics of DC motors and generators, application. Induction motors: revolving magnetic field, principle of torque production, ratings, construction (squirrel cage and would rotor) Torque speed characteristics. Application.

ELECTRICAL MEASUREMENTS: PMMC meters, moving iron ammeter and voltmeter. Dynamometer wattmeter, AC energy meter. Extension of instrument ranges.

#### (2) ENGINEERING THERMODYNAMICS

Basic Concepts and Definitions: System. Introduction and definition of thermodynamics; Dimensions and units, Microscopic and Macroscopic approaches; System, surroundings and universe, Concept of continuum, Control system boundary, control volume and control surface. Properties and state, Thermodynamic properties, Thermodynamic path, process and cycle, Thermodynamic equilibrium, Reversibility and irreversibility, Quasi static process, Energy and its forms, Work and hear. Gas laws, Idea gas, Specific Heats and their calculations.

Zeroth Law of Thermodynamics: Zeroth law of thermodynamics, Temperature and its measurement, Temperature scales.

First Law of Thermodynamics: Thermodynamic definition or work, Thermodynamic processes, Calculation of work in various processes and sign convention, Non-flow work and flow work, Joules' experiment, First law of thermodynamics, Internal energy and enthalpy, First law of thermodynamics applied to open systems, Steady flow systems and their analysis, Steady flow energy equation, Application of equation to Boiler, Condenser, Evaporator, Turbine, Nozzle, Compressor (Rotary & Reciprocating), Throttling process etc., Introduction to unsteady processes such as filling and evacuation of vessels with and without heat transfer, PMM-I.

Second Law of Thermodynamics: Limitations of first law of thermodynamics, Devices converting heat to work, Thermal reservoir, Heat engines, Efficiency, Devices converting work to heat, Heat pump, refrigerator, Coefficient of Performance, Reversed heat engine, Kelvin's-Plank's statement of second law of thermodynamics, Clausius statement of second law of thermodynamics, Equivalence of two statements of second law of thermodynamics, Reversible and irreversible processes, Carnot cycle and Carnot engine, Carnot theorem and it's corollaries. Thermodynamic temperature scale, PMM-II.

Entropy: Clausius inequality, Concept of Entropy, Entropy change in different thermodynamic processes, Tds equation, Principle of entropy increase, T-S diagram, Statement of the third law of thermodynamics.

Availability and Irreversibility: Available and unavailable energy, Availability and Irreversibility, Second law efficiency.

Properties of Steam: Pure substance, Property of steam, Triple point, Critical point, Sub-cooled liquid, Saturation states, Superheated states, Phase transformation process of water, Graphical representation of pressure, volume and temperature (P-V-T surfaces), P-T & P-V diagrams. T-S and H-S diagrams, use of property diagram. Steam-Tables&Mollier charts, Dryness fraction and its measurement.

Real Gases: Deviation of real gases from ideal gases. Different forms of the equation of state. Reduced properties. Compressibility factors chart. Maxwell relations. Joule-Thomson coefficient, Clapeyron's equation.

Engines: Steam Engines- Constructional details and working.

Introduction of IC Engines: Otto and Diesel cycle (No numerical), Working of compression Ignition engines, spark Ignition engines, 2 stroke and 4 stroke engines, Theoretical & actual indicator diagrams and valve timing diagrams.

#### (3) ENGINEERING MECHANICS

Vector. Unit vector. Components of a vector. SI units and their notations. Concurrent force system. Resultant & equilibrant.

GENERAL FORCE SYSTEM: Moments of a force and of a couple. Resultant of a coplanar force system. Single force equivalent. Resultant of a general force system. Wrench. Free body diagram. Equilibrium of a rigid body. Static indeterminacy.

STRUCTURES: Trusses. Method of joints. Method of sections. Force analysis of frames and machines.

DISTRIBUTED FORCES: Gravitational forces. Surface loadings.

STATICS OF LIQUIDS: Hydrostatic pressure. Centre of pressure. Bouyancy.

FRICTION: Dry friction. Systems involving sliding or tipping. Wedges. Square threaded screws. Belt friction.

INTERNAL FORCES:Bending of beams. Differential relationships between rate of loading, Shear Force and Bending Moment. Beams and cantilevers. Shear force, bending moment and axial force diagrams for horizontal beams with concentrated (vertical and inclined), uniformly distributed and uniformly increasing loads and moments. Inclined beams. Beams floating on water.

VIRTUAL WORK: Principle of Virtual work Potential energy, Stability.

MOMENTS OF INERTIA: Area moments of inertia. Parallel axis theorem. Transformation of axes.

#### (4) ENGINEERING MATHEMATICS

Matrices: Adjoint and inverse of a matrix, rank of a matrix, characteristic roots and vectors.

**Differential Calculus:** Differentiation of a product of two functions, quotient of two functions, function of a function, parametric and implicit functions, logarithmic differentiation.

Application of differential calculus to problems of rate, velocity, acceleration, small errors, gradient and in co-ordinate geometry for tangent, normal, sub-tangent, sub-normal etc.

Successive differentiation, Leibnitz's Theorem, MacLaurin's and Taylor's theorems, Polar coordinates, derivative of an arc, radius of curvature, partial differentiation of functions of two and three variables only. Problems of maximum and minimum values.

**Integral Calculus:** Formulae for the integration of  $x^n$ ,  $e^x$ ,  $x^{-1}$ , Sin x, Cos X,  $1/\sqrt{(1-x^2)}$ ,  $1/\sqrt{(x^2-1)}$ ,  $1/(1+x^2)$ ,  $Sec^2x$ ,  $Cosec^2x$ 

Problems of integration by substitution, by parts and by partial fractions. Definite integrals and Gamma function. Use of the above integration formulae for area, volume, mean values and problems of engineering subjects.

#### **Differential Equations:**

- 1. First-order, variables separable.
- 2. Homogeneous differential equations
- 3. First-order linear differential equations
- 4. Exact differential equations
- 5. n<sup>th</sup> order linear differential equations with constant coefficients and homogeneous linear differential equations

**Vector Analysis:** Definition, representation, mod, null and unit vectors. Addition, subtraction, dot product & cross product of two vectors, application to work, area linear and angular velocity, vector differentiation and integration.

**Vector Calculus:** Differentiation and Integration of vectors, Gradient of a scalar point function, Divergence and curl of a vector point function and their physical meaning, line, surface and volume integrals, Gauss and Stoke's theorems (without proof), Simple applications.

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