INDIAN INSTITUTE OF TECHNOLOGY MADRAS

Roll No: EP21B015 **Name: HARICHARAN B**

Department : Physics

Dual Degree (B.Tech in Engineering Physics & M.Tech in Electrical Engineering)

Term No	Course	Title	Credit	Grade	Attendance	Year Of Passing
01	ID1200	Ecology and Environment	0	P	VG	2021
01	MA1101	Functions of Several Variables	10	B	VG	2021
01	GN1101	Life Skills 1	0	P	VG	2021
01	PH1010	Physics I	10	A	VG	2021
02	CY1001	Chemistry I: Structure, Bonding & Reactivity	10	B	VG	2022
02	CY1051	Chemistry II: Introduction to Spectroscopic Methods	9	S	VG	2022
02	EE2001	Digital Systems & Lab	16	S	VG	2022
02	PH1050	Foundation of Computational Physics	12	A	G	2022
02	GN1102	Life Skills 2	0	P	VG	2022
02	NS1020	NSO	0	P	G	2022
02	PH1020	Physics II	10	A	VG	2022
02	PH1030	Physics Laboratory I	4	A	VG	2022
02	MA1102	Series and Matrices	10	S	VG	2022
02	EE1101	Signals and Systems	10	A	VG	2022
02	PH1080	Thermodynamics and Kinetic Theory	10	A	VG	2022
03	CY1002	Chemistry Lab I	3	B	VG	2022
04	EE5120	Applied Linear Algebra I for EE	12	S	G	2022
04	EP2102	Classical Dynamics	9	S	VG	2022
04	EE2015	Electric Circuits & Networks	11	S	VG	2022
04	EP2090	Engineering Physics Lab I	4	A	VG	2022
04	EP2110	Introduction to Mathematical Physics	10	S	VG	2022
04	HS3002C	Principles of Economics	9	S	G	2022
04	MA2040	Probability, Statistics and Stochastic Process	9	S	VG	2022
05	EE2019	Analog Systems and Lab	17	S	VG	2023
05	EE2004	Digital Signal Processing	11	S	VG	2023
05	EP3190	Engineering Physics Lab II	8	B	G	2023
05	EP2210	Principles of Quantum Mechanics	9	S	G	2023
05	EE3001	Solid State Devices	11	A	VG	2023
06	CS6841	Approximation Algorithms	12	A	VG	2023
06	EE5121	Convex Optimization	12	S	VG	2023
06	EP3110	Electromagnetics and Applications	9	S	G	2023
06	EE6133	Multirate Digital Signal Processing	9	S	VG	2023
06	ID5841	Quantum Computing Lab	3	A	VG	2023
06	EP3120	Statistical Physics and Applications	9	B	G	2023
07	CS6130	Advanced Graph Algorithms	12	S	VG	2024
07	EE5150	Communication Networks	12	S	VG	2024
07	ID4100	Creative Engineering Project	9	S	VG	2024
07	EP3291	Engineering Physics Lab IV	4	A	VG	2024
07	EE5143	Information Theory	9	S	VG	2024
07	CS5210	Linear Programming and Combinatorial Optimization	12	A	VG	2024
07	EE4901	Mini Project 1	9	S	VG	2024
07	EP3220	Solid State Physics	9	S	VG	2024
08	EE6143	Advanced Topics in Communications	9	S	VG	2024
08	HS5760	Climate Economics	9	A	G	2024
08	EP3290	Engg Physics Lab III	4	S	G	2024
08	BT1010	Life Sciences	9	A	VG	2024

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Term No	Course	Title	Credit	Grade	Attendance	Year Of Passing
08	EE4902	Mini Project 2	9	S	VG	2024
08	CS6101	Parameterized Algorithms	12	S	VG	2024
08	EP4140	Project	9	S	VG	2024
08	EP4040	Seminar	3	S	VG	2024
08	HS5703	Statistical Inference	10	S	VG	2024

*** End of Statement ***.

Total Credits : 438

ϕ Transfer credits are not included in Earned Credits and not considered for CGPA calculation. Transfer credits + Earned Credits should meet the Total Credit requirement.

Cumulative grade point average secured considering only the successfully completed courses(credits) is **9.54**

This certificate is digitally generated. To verify the certificate, kindly scan the QR code.

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Grade		Remarks
Code	Points	
S	10	—
A	9	—
B	8	—
C	7	—
D	6	—
E	4	—
U	0	—
P	0	Pass
F	0	Fail
W	0	Failure due to insufficient attendance in course
I	0	Withheld

Attendance Code w.e.f. Jul-Nov 2009		
Attendance Rounded to%	Remarks	Code
≥ 95%	Very Good	VG
85 - 94%	Good	G
<85%	Poor	P

Attendance Code w.e.f. Jan-May 2023		
Attendance Rounded to %	Remarks	Code
≥ 95%	Very Good	VG
80 - 89%	Good	G
75 - 79%	Marginal	M
< 75%	Poor	P

Grades 'S' to 'E' and 'P' indicate successful completion of Course.

The grade of course(s) under the Pass/Fail category are not included towards CGPA calculation.

$$\text{CGPA} = \frac{\sum_i (C_i \times GP)}{\sum_i C_i}$$

Where C_i is the credit of the Course

GP is the Grade Point for that course, and

$\sum_i$ is the sum over all registered courses successfully cleared during all the semesters including those in which the student obtained 'U' and 'W' grades but not cleared.

The medium of instruction is English at this Institute

The formula for converting CGPA to percentage is **Percentage = CGPA x 10**