Roll Number:	180070032	Academic Unit: Electrical Engineering
Name of the Student:	Mantri Krishna Sri Ipsit	Joining Month & Year: July 2018
Programme:	Bachelor of Technology (B.Tech.)	

Code	Name	Credits	Tag	Grade/Marks	Code	Name	Credits	Tag	Grade/Marks

Academic Year: 2018 – 2019, Term: Semester Autumn

Code	Name	Credits	Tag	Grade/Marks	Code	Name	Credits	Tag	Grade/Marks
CH 105	Organic & Inorganic Chemistry	4.0	MA	AA	ME 113	Workshop Practice	4.0	MA	AA
CH 107	Physical Chemistry	4.0	MA	AA	NOCS01	NCC/NSS/NSO	0.0	MA	PP
CS 101	Computer Programming and Utilization	6.0	MA	BB	PH 107	Quantum Physics and Application	6.0	MA	AB
EE 111	Introduction to Electrical Systems	6.0	MA	AA	PH 117	Physics Lab	3.0	MA	AB
MA 105	Calculus	8.0	MA	BB					

SPI= 9.10/10   CPI= 9.10/10

Academic Year: 2018 – 2019, Term: Semester Spring

Code	Name	Credits	Tag	Grade/Marks	Code	Name	Credits	Tag	Grade/Marks
BB 101	Biology	6.0	MA	AA	MA 108	Differential Equations	4.0	MA	AA
CH 117	Chemistry Lab	3.0	MA	AB	ME 119	Engineering Graphics & Drawing	5.0	MA	AB
EE 112	Introduction to Electronics	6.0	MA	AA	NOCS02	NCC/NSS/NSO	0.0	MA	PP
MA 106	Linear Algebra	4.0	MA	AB	PH 108	Basics of Electricity & Magnetism	6.0	MA	AA

SPI= 9.65/10   CPI= 9.35/10

Academic Year: 2019 – 2020, Term: Semester Autumn

Code	Name	Credits	Tag	Grade/Marks	Code	Name	Credits	Tag	Grade/Marks
CS 228	Logic for Computer Science	6.0	MI	BB	EE 236	Electronic Devices Lab	3.0	MA	AA
EE 207	Electronic Devices & Circuits	6.0	MA	BB	HS 101	Economics	6.0	MA	AA
EE 223	Data Analysis and Interpretation	6.0	MA	AB	MA 205	Complex Analysis	4.0	MA	BB
EE 225	Network Theory	6.0	MA	AA	MA 207	Differential Equations II	4.0	MA	AB

SPI= 9.14/10   CPI= 9.28/10

Academic Year: 2019 – 2020, Term: Semester Spring

Code	Name	Credits	Tag	Grade/Marks	Code	Name	Credits	Tag	Grade/Marks
CS 213	Data Structures and Algorithms	6.0	MI	BB	EE 224	Digital Systems	6.0	MA	AA
EE 204	Analog Circuits	6.0	MA	AA	EE 230	Analog Lab	3.0	MA	PP
EE 210	Signals and Systems	6.0	MA	PP	EE 234	Machines Lab	4.0	MA	AA
EE 214	Digital Circuits Lab	3.0	MA	PP	EE 692	R & D Project	6.0	MA	AB
EE 222	Electrical Machines and Power Electronics	6.0	MA	AA					

SPI= 9.79/10   CPI= 9.38/10

Academic Year: 2020 – 2021, Term: Semester Autumn

Code	Name	Credits	Tag	Grade/Marks	Code	Name	Credits	Tag	Grade/Marks
CS 224	Computer Networks	6.0	MI	CC	EE 309	Microprocessors	6.0	MA	AA
CS 663	Fundamentals of Digital Image Processing	6.0	MI	AB	EE 325	Probability and Random Processes	6.0	MA	AB
EE 301	Electromagnetic Waves	6.0	MA	AA	EE 338	Digital Signal Processing	6.0	MA	AA
EE 308	Communication Systems	6.0	MA	AA	HS 301	Philosophy	6.0	MA	AB

SPI= 9.67/10   CPI= 9.44/10

Academic Year: 2020 – 2021, Term: Semester Spring

Code	Name	Credits	Tag	Grade/Marks	Code	Name	Credits	Tag	Grade/Marks
CS 419	Introducing to Machine Learning	6.0	MI	AB	EE 334	Power Systems	6.0	MA	BB
CS 754	Advanced Image Processing	6.0	MI	AB	EE 337	Microprocessors Laboratory	3.0	MA	AA
EE 302	Control Systems	6.0	MA	BB	EE 340	Communications Lab	3.0	MA	AA
EE 324	Control Systems Lab	3.0	MA	AB	EE 344	Electronic Design Lab	6.0	MA	AB
EE 328	Digital Communications	6.0	MA	AA	EE 678	Wavelets	6.0	MI	AB

SPI= 9.00/10   CPI= 9.37/10

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Signature valid

Digitally signed by
Umesh Ramchandra
Korade
Date: 2022.04.29
12:50:01 +05:30
Reason: IIT BOMBAY
NAD
Location: IIT BOMBAY

Name of the Student: Mantri Krishna Sri Ipsit   Roll Number : 180070032

Code	Name	Credits	Tag	Grade/Marks	Code	Name	Credits	Tag	Grade/Marks

Academic Year: 2021 - 2022, Term: Semester Autumn

Code	Name	Credits	Tag	Grade/Marks	Code	Name	Credits	Tag	Grade/Marks
CS 747	Foundations of Intelligent and Learning Agents	6.0	MI	BC	ES 200	Environmental Studies: Science and Engineering	3.0	MA	BC
DS 203	Programming for Data Science	6.0	MI	AA	GNR638	Machine Learning for Remote Sensing - II	6.0	MA	AB
EE 491	BTP I	6.0	MA	AA	HS 200	Environmental Studies	3.0	MA	BC
EE 740	Advanced Data Network	6.0	MA	BB					

SPI=8.50/10   CPI=9.28/10

Academic Year: 2021 - 2022, Term: Semester Spring

Code	Name	Credits	Tag	Grade/Marks	Code	Name	Credits	Tag	Grade/Marks
CS 347	Operating Systems	6.0	MI	AB	EE 492	BTP II	12.0	MA	AA
CS 726	Advanced Machine Learning	6.0	MA	AA	EE 613	Nonlinear Dynamical Systems	6.0	MA	AA
CS 769	Optimization in Machine Learning	6.0	MA	AA	GC 101	Gender in the workplace	0.0	MA	PP

SPI=10.00/10   CPI=9.36/10

Mandatory Course Credits (MA)	= 261.0	Overall CPI	= 9.36/10
Overall Credits Completed	= 321.0		
Overall Grade Points	= 2948.0		

Final Result

The student has completed the academic requirements of the programme in the month of May 2022 for the award of

Bachelor of Technology in Electrical Engineering and Minor in (1) Computer Science and Engineering (2) Artificial Intelligence and Data Science

Signature & Seal of Transcript Issuing Authority:

Joint/Assistant Registrar (Academic), IIT Bombay
Date: 13-August-2022
Place: Mumbai

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General Information

The medium of instruction at the Institute is English.

Course credits and grade: Each course is associated with credits which are an indicator of its relative weight in calculating the academic performance. A two-letter grade is awarded to students on the basis of their performance in examinations and assignments of a specific course. The letter grades have numerical equivalents on a 0-10 scale as given below.

Letter Grade	AP	AA	AB	BB	BC	CC	CD	DD	FF	FR	W	DX	PP	NP	AU
Numerical Equivalent	10	10	9	8	7	6	5	4	0	0	–	–	–	–	–

FF: Fail, FR: Fail and repeat, W: Withdrawn, DX: Insufficient attendance, AU: Satisfactory performance in an audit course, PP: Pass, NP: Not Pass. The minimum passing grade in a course is DD. The grade AP is awarded to students with exceptional performance in core courses of a programme. Numerical equivalents of letter grades are referred to as grade points.

The numerical grade points are not convertible into marks or percentages.

Performance Indicators: The performance of a student in a semester is given by a number called the Semester Performance Index (SPI),which is the weighted average of the earned grade points in the courses during the semester.

If a student has courses with credits $C_1, C_2,..., C_n$, with grade points of $G_1, G_2,..., G_n$ respectively, then

Semester Credits = $C_1 + C_2 + ... + C_n$	Semester Grade Points = $C_1G_1 + C_2G_2 + ... + C_nG_n$	SPI = Semester Grade Points ÷ Semester Credits

Cumulative Performance Index (CPI) is the weighted average of the grade points in the courses in all semesters. The indices SPI and CPI are calculated upto two decimal places.

Courses are tagged as MA: Mandatory (Core/Elective), MI: Minor, HO: Honours, AL: Additional Learning, AU: Audit

- Each degree programme has mandatory credits consisting of core courses, elective courses, and non credit courses. These courses are tagged as MA.
- For calculation of SPI and CPI, grades obtained only in mandatory courses (MA) are considered.
- Students can supplement the learning experience by crediting additional courses. Credits earned in these courses, when appropriate, can earn additional credentials either in the form of "Honours" (HO) in the chosen discipline or "Minor" (MI) in another discipline or both.
- "Honours" is not indicative of proficiency, and can be earned by completing the additional prescribed set of advanced core and elective courses in the chosen discipline. "Minor" can be earned by completing the prescribed set of courses in a discipline other than the chosen discipline. Additional courses that are not used for earning "Honours" or "Minor" are tagged as "Additional Learning" (AL).
- The AU is awarded based on satisfactory attendance and fulfilling the minimum requirements as set by the course instructor.It carries no grade points and does not figure in SPI or CPI calculations.
- PP or NP is awarded in some credit courses that are not earmarked with a letter grade. Correspondingly, PP/NP does not carry a grade point.
- O-IITB is/are the Course(s) completed by a student outside IIT Bombay (NPTEL/ Swayam/ Semester Exchange). These course(s) contribute towards the completion of credits for a degree requirement. However, grades/marks earned for such course(s) is/are not considered for SPI / CPI calculation.

The Institute does not award any class or division. Notionally, the CPI may be multiplied by a factor of 10 to obtain a numerical percentage.

The veracity of this document can be ascertained by using the verification ticket number in the URL given at the bottom of this page.

END OF TRANSCRIPT   Roll Number: 180070032