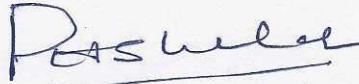


**REPORT OF RAILWAY KAUSHAL VIKAS YOJANA ATTENDED AND COMPLETED BY JOGESHWARI EDUCATION SOCIETY'S COLLEGE OF COMMERCE SCIENCE AND INFORMATION TECHNOLOGY**

This Program is an entry level Skill Development Training Program in various trades i.e. AC Mechanic, Carpenter, CNSS, Computer Basics etc. This training helps candidates in getting an employment and becoming self employed too. It is introduced by Indian Government. The Ministry of Railways took up the responsibility of organizing this Rail Kaushal Vikas Yojana under which 50,000 young people got instructions under the training.

The training program was for 100 hours. The dates were 8<sup>th</sup> May to 27<sup>th</sup> May 2023. 16 students of B.Sc. IT registered under this training program from which 9 students completed the training and were awarded the certificate.



  
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COLLEGE OF COMMERCE SCIENCE  
& INFORMATION TECHNOLOGY  
Caves Road, Jogeshwari (E), Mumbai-400 060.

# SYLLABUS OF TRAINING OF RAILWAY KAUSHAL VIKAS YOJANA

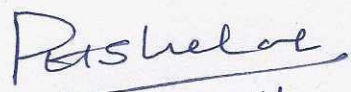
## Trades Details Summary

Trade Name	Description	Duration (Days)
<b>Electronics &amp; Instrumentation</b>	<b>To give Technical Training in Electronics &amp; Instrumentation trade</b>	<b>18</b>

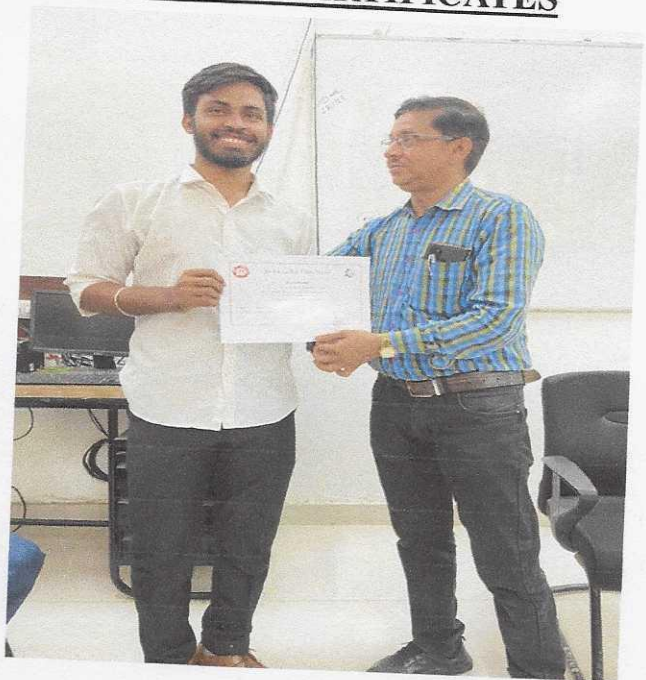
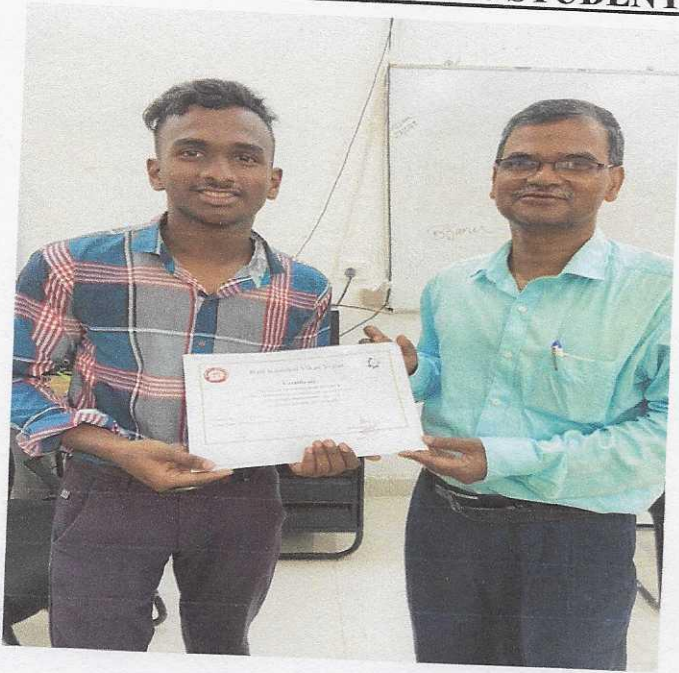
## Theory (Electronics & Instrumentation)

Topic	Keylearning Outcomes	Equipment Required	Duration
Registration of participants	*Self-declaration of Covid-19 measures guidelines *Participants Profile. *Describe the role of an Electronics Technician.	White Board	2:0
Material Handling	Movement of Raw Material. Movement of Finished Material. Waste Segregation. Cleanliness. Stacking.	Audio-Video	2:0
Electronics safety & Knowledge about PPEs	What is Safety? Awareness about General Safety. Electronics Safety. Use of PPEs. Advantages of Safety. Do's & Don'ts.	Power Presentations	2:0
Introduction of Electrical terms	Basic terms such as electric charges, Potential difference, Voltage, Current, Resistance, Basics of AC & DC. Various terms such as +ve cycle, -ve cycle, Frequency, Time period, Insulators, conductors and semiconductor properties.	Power Presentations	2:0
Introduction of Electronics	Brief about Electronics Trade. Introduction of Electronics. Basic knowledge of Electronics. Important Symbols used in Electronics. Knowledge of general Electronics Instruments. Knowledge about Resistance, Inductance & Capacitance	Power Presentations	1:0
Passive Elements	Resistors; types of resistors, specific use, color-coding. Equivalent Resistance of series parallel circuits. Principles of induction, inductive reactance. Types of inductors, applications and energy storage concept. Capacitance and Capacitive Reactance, Impedance. Types of capacitors, applications. Dielectric constant. Significance of Series parallel connection of capacitors.	Power Point Presentations	2:0
Semiconductors applications and	Semiconductor materials. PN Junction, Forward and Reverse biasing of diodes. Different diodes, Rectifier configurations, Filter components and their role in reducing ripple. Working principles of Zener diode, varactor diode, their applications. Working and application of LED, IR LEDs, Photo diode, photo transistor, their applications.	Power Point Presentations	3:0
Power supply	Regulated Power supply using 78XX series, 79XX series. Op-amp regulator, 723 regulator, (Transistorized & IC based). Voltage regulation.	Power Point Presentations	1:30
Transistors applications and its	Construction, working of a PNP and NPN Transistors, purpose of E, B & C Terminals. Need for Biasing of Transistor. Different types of biasing, various configurations of transistor (C-B, C-E & C-C), their characteristics and applications. Transistor applications as switch and amplifier. Construction of FET & JFET, difference with BJT.	Power Point Presentations	3:0
Operation Amplifier	Block diagram and Working of Op-Amp, importance, advantages and applications. Schematic diagram of 741, symbol.	Power Point Presentations	2:0
Digital electronics	Introduction to Digital Electronics. Difference between analog and digital signals. Number systems (Decimal, binary, octal, Hexadecimal). Various Logic Gates and their truth tables.	Power Presentations	3:0
Instrumentation	Introduction to electrical and electronic measuring instruments. Basic principle and parts of simple meters. MC and MI meters. Range extension, need of calibration. Characteristics of meters and errors in meters. Multi meter, use of meters in different circuits. Use of CRO, Function generator, LCR meter	Power Point Presentations	3:30
Valedictory	Work Ethics. Personal Financial Planning. Health.	Power Point Presentations, White Board	2:0
Effective Communication	Subordinates. Peers. Superiors. Customers.	Audio-Video	3:0
First Aid	Electrocution Cut. Bleeding. Faint. Bandage. Resuscitation. * Ambulance.	Audio-Video	2:0



  
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**PHOTOS OF STUDENTS COLLECTING CERTIFICATES**

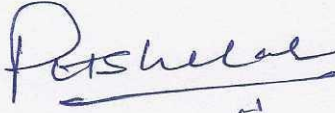


*D. Shelke*

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# Rail Kaushal Vikas Yojna



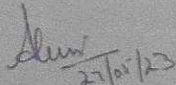
## Certificate

This is to certify that Mr. Kartik Mangesh Chandoskar  
(Aadhar No. N/A) has successfully cleared assessment for the role of  
Trade Electronics & Instrumentation - Entry Level  
Training duration from 08-05-2023 to 27-05-2023

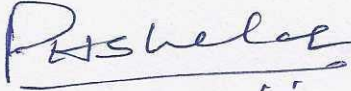
Certificate No.: 223 2023 3454 248083

Institute Name: ELECTRICAL TRAINING CENTRE, VIRAR

27-05-2023  
Date

  
27/05/23  
Head of the Institute  
पारमेश्वरी  
विद्युत परिशोधन केंद्र  
विरार 401303



  
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