



SREE SAKTHI ENGINEERING COLLEGE

TNEA Admission Code **2673**

OOTY MAIN ROAD, KARAMADAI, | MOB : +91 92445 04444, +91 92445 02277
COIMBATORE- 641104. INDIA | Web : www.sreesakthi.edu.in

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2.2.1

**THE INSTITUTION ASSESSES THE
LEARNING LEVELS OF THE STUDENTS
AND ORGANIZES SPECIAL PROGRAMMES
FOR ADVANCED LEARNERS AND SLOW
LEARNERS**



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DEPARTMENT OF MECHANICAL ENGINEERING

2.2.1	COACHING CLASS FOR FAILURE STUDENT
	COACHING CLASS FOR FAILURE STUDENT ATTENDANCE
	SAMPLE ASSIGNMENT
	CIRCULAR
	ADVANCED LEARNERS NPTEL COURSE DETAILS
	NPTEL COURSE DEATSILS

DR. R. PRABHU
PRINCIPAL,
SAKTHI ENGINEERING COL
COIMBATORE-641 104



SREE SAKTHI ENGINEERING COLLEGE

(Accredited by NAAC with B⁺⁺ Grade, Approved by AICTE,
Affiliated to Anna University, Chennai)
Karamadai, Coimbatore - 641104

CIRCULAR

DEPARTMENT OF MECHANICAL ENGINEERING

JULY 8th, 2022

The following students are requested to attend the slow learner's classes to the given schedule without fail.

Attendance will be taken and monitored regularly

S.NO	II YEAR	III YEAR	IV YEAR
1	KAVI BHARATHI R D	PRASANTH J	GOWTHAM R
2	JIJU WILSON	PRAVEEN B	GUNAVARASAN G
3	GANESH B	YUVARAJ K	KALIYAPERUMAL V
4	SHANTHANU J	BOOPESH S	KARTHKEYAN S
5	DHANUSH M	KAVINKUMAR I	KISHORE TK
6		VELRAJ P	JESU DHIVAKARAN
7		DHANUSH A	PRASANTHKUMAR P
8			SENTHIL BALAJI S G
9			SACRATES P

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SREE SAKTHI ENGINEERING COLLEGE, KARAAMADAI, COIMBATORE

DEPARTMENT OF MECHANICAL ENGINEERING COACHING CLASS FOR FAILURE STUDENT

II YEAR MECHANICAL ENGINEERING (ODD SEM)

S.NO	NAME	TPDE	EM	ET	FMM	EMM	MP
1	KAVI BHARATHI R D	13-07-2022					18-07-2022
2	JIJU WILSON	13-07-2022	14-07-2022		16-07.2022		
3	GANESH B		14-07-2022	15-07-2022		17-07-2022	18-07-2022
4	SHANTHANU J	13-07-2022	14-07-2022	15-07-2022	16-07.2022	14-07-2022	
5	DHANUSH M		14-07-2022				18-07-2022

III YEAR MECHANICAL (ODD SEM)

S.NO	NAME	TOM	TE	H&P		MT	ESS
1	PRASANTH J		21-07-2022	22-07-2022			24-07-22
2	PRAVEEN B	20-07-22		22-07-2022			24-07-22
3	YUVARAJ K	20-07-22	21-07-2022	22-07-2022		23-07-2022	24-07-22
4	BOOPESH S	20-07-22				23-07-2022	24-07-22
5	KAVINKUMAR I	20-07-22	21-07-2022			23-07-2022	
6	VELRAJ P		21.07.2022				24-07-22
7	DHANUSH A	20-07-22				23-07-2022	


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IV YEAR MECHANICAL (ODD SEM)

S.NO	NAME	PPE	PPCE	MECH	TOM	ROBOTICS	UCMP
1	GOWTHAM R		21-07-2022	22-07-2022	23-07-2022		25.07.2022
2	GUNAVARASAN G	20-07-2022		22-07-2022			
3	KALIYAPERUMAL V		21-07-2022	22-07-2022	23-07-2022	24.07.2022	25.07.2022
4	KARTHKEYAN S	20-07-2022				24.07.2022	
5	KISHORE TK	20-07-2022	21-07-2022		23-07-2022	24.07.2022	25.07.2022
6	JESU DHIVAKARAN		21-07-2022		23-07-2022		
7	PRASANTHKUMAR P	20-07-2022		22-07-2022		24.07.2022	
8	SENTHIL BALAJI S G				23-07-2022		25.07.2022
9	SACRATES P	20-07-2022	21-07-2022	22-07-2022	23-07-2022	24.07.2022	


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CIRCULAR

DEPARTMENT OF MECHANICAL ENGINEERING

JANUARY 5th, 2022

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4	SHANTHANU J	BOOPESH S	KARTHKEYAN S
5	DHANUSH M	KAVINKUMAR I	KISHORE TK
6		VELRAJ P	JESU DHIVAKARAN
7		DHANUSH A	PRASANTHKUMAR P
8			SENTHIL BALAJI S G
9			SACRATES P

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DEPARTMENT OF ENGINEERING COACHING CLASS FOR FAILURE STUDENT

II YEAR MECHANICAL ENGINEERING (EVEN SEM)

S.NO	NAME	TOM	TE	H&P	MT	SOM	EVSS
1	KAVI BHARATHI R D	10-01-2023				14-01-2023	15-01-2023
2	JIJU WILSON	10-01-2023	11-01-2023		13-01.2023		
3	GANESH B		11-01-2023	12-01-2023		14-01-2023	15-01-2023
4	SHANTHANU J	10-01-2023	11-01-2023	12-01-2023	13-01.2023	14-01-2023	
5	DHANUSH M		11-01-2023				15-01-2023

III YEAR MECHANICAL (EVEN SEM)

S.NO	NAME	DTS	CADM	HMT	FEA	H&P	
1	PRASANTH J		18-01-2023	19-01-2023	20-01-2023		
2	PRAVEEN B	17-01-2023		19-01-2023			
3	YUVARAJ K	17-01-2023	18-01-2023	19-01-2023	20-01-2023	21-01-2023	
4	BOOPESH S	17-01-2023			20-01-2023	21-01-2023	
5	KAVINKUMAR I	17-01-2023	18-01-2023	19-01-2023	20-01-2023	21-01-2023	
6	VELRAJ P		18-01-2023				
7	DHANUSH A	17-01-2023		19-01-2023	20-01-2023	21-01-2023	


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IVYEARMECHANICAL (EVEN SEM)

S.NO	NAME	POM	CIM				
1	GOWTHAM R	17-01-2023	18-01-2023				
2	GUNAVARASAN G	17-01-2023					
3	KALIYAPERUMAL V		18-01-2023				
4	KARTHKEYAN S	17-01-2023					
5	KISHORE TK	17-01-2023	18-01-2023				
6	JESU DHIVAKARAN						
7	PRASANTHKUMAR P		18-01-2023				
8	SENTHIL BALAJI S G	17-01-2023					
9	SACRATES P	17-01-2023	18-01-2023				


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COACHING CLASS FOR FAILURE STUDENTS ATTENDANCE (ODD)

S. No	Name of the Student	Class	Subject & Date					
			13-07-2022	14-07-2022	15-07-2022	16.07.2022	17.07.2022	18.07.2022
			TPDE	EM	ET	FMM	EMM	MP
1	KAVI BHARATHI R D	II MECH	P					
2	JIJU WILSON		P	P		P		
3	GANESH B			P	P		P	P
4	SHANTHANU J		P	P	P	P	P	
5	DHANUSH M			P				P

S.No	Name of the Student	Class	Subject & Date					
			20.7.22	21.7.22	22.7.22	23.7.22	24.7.22	25.7.22
			TOM	TE	H&P		MT	ESS
1	PRASANTH J	III MECH		P	P			P
2	PRAVEEN B		P		P			P
3	YUVARAJ K		P	P	P		P	P
4	BOOPESH S		P				P	P
5	KAVINKUMAR I		P	P			P	
6	VELRAJ P			P				P
7	DHANUSH A		P				P	


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HOD

S.No	Name of the Student	Class	Subject & Date					
			20.7.22	21.7.22	22.7.22	23.7.22	24.7.22	25.7.22
			PPE	PPCE	MECH	TOM	ROBOTICS	UCMP
1	GOWTHAM R	IV MECH		P	P	P		P
2	GUNAVARASAN G		P		P			
3	KALIYAPERUMAL V			P	P	P	P	P
4	KARTHKEYAN S		P				P	
5	KISHORE TK		P	P		P	P	P
6	JESU DHIVAKARAN			P		P		
7	PRASANTHKUMAR P		P		P		P	
8	SENTHIL BALAJI S G					P		P
9	SACRATES P		P	P	P	P	P	


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DEPARTMENT OF MECHANICAL ENGINEERING

COACHING CLASS FOR FAILURE STUDENT ATTENDANCE (EVEN)

S.No	Name of the Student	Class	Subject & Date					
			10-01-2023	11-01-2023	12-01-2023	13.01.2023	14.01.2023	15.01.2023
			TOM	TE	H&P	MT	SOM	EVSS
1	KAVI BHARATHI R D	II MECH	P				P	P
2	JIJU WILSON		P	P		P		
3	GANESH B			P	P		P	P
4	SHANTHANU J		P	P	P	P	P	
5	DHANUSH M		P					P
S.No	Name of the Student	Class	Subject & Date					
			17.01.23	18.01.23	19.01.23	20.01.23	21.01.23	
			DTS	CADM	HMT	FEA	H&P	
1	PRASANTH J	III MECH		P	P	P		
2	PRAVEEN B		P		P			
3	YUVARAJ K		P	P	P	P	P	
4	BOOPESH S		P			P	P	
5	KAVINKUMAR I		P	P	P	P	P	
6	VELRAJ P			P				
7	DHANUSH A		P		P	P	P	


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HOD

ASSIGNMENT - 05

Name Balavignesh S

Roll no 20 ME 308

Year III Year

Branch Mechanical

Subject Name Metrology And Measurements

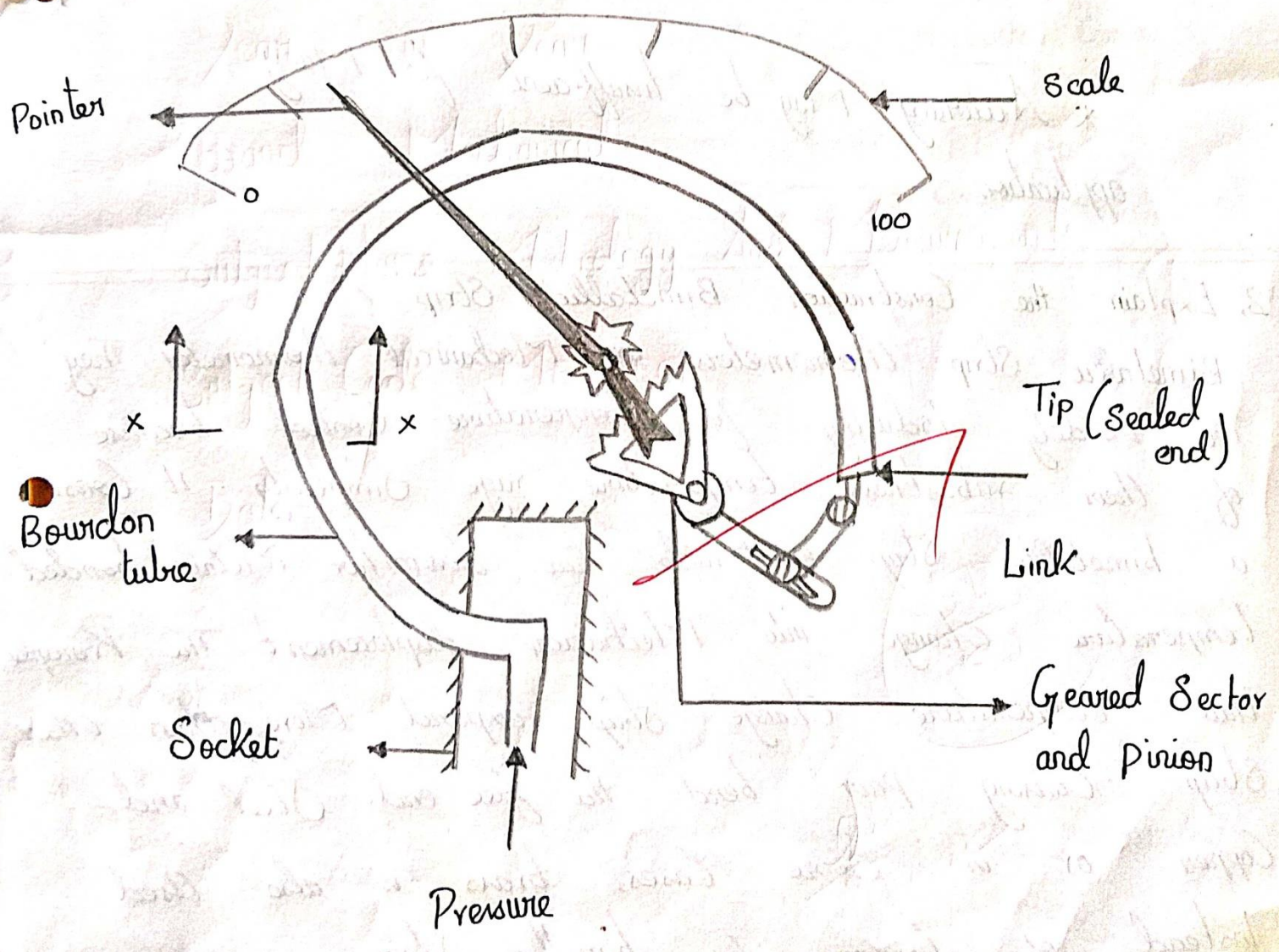
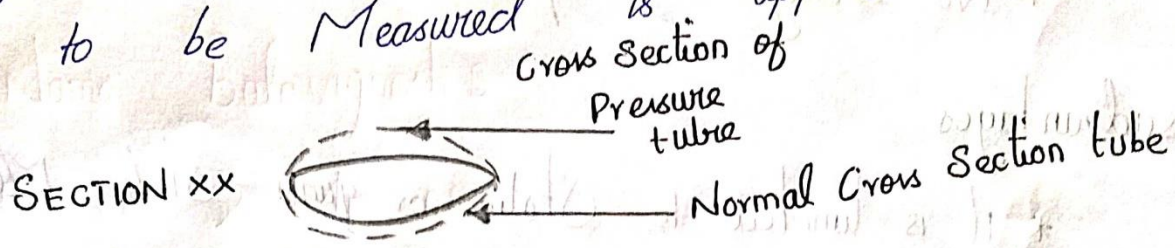
Subject Code ME 8501

Date

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1, Define Bourdon tube Pressure Gauge?
 Bourdon tube a simple tube will be expand when it is exposed to pressure. This expansion the measure of pressure. A Bourdon tube, one end called tip of tube sealed, it is also called free end. The other end of tube is fixed to a socket. Where the pressure to be measured is applied.



To Increase this Sensitivity, Bourdon tube elements can be extended into Spirals or helical Coils.

Advantages:-

- * It is the Portable one
- * It is more Convenient to Use
- * No leveling is required.

Disadvantages

- * It is limited to Static or quasi-Static Measurement.
- * Accuracy May be Insufficient for Many application.

2. Explain the Construction Bimetallic Strip ?

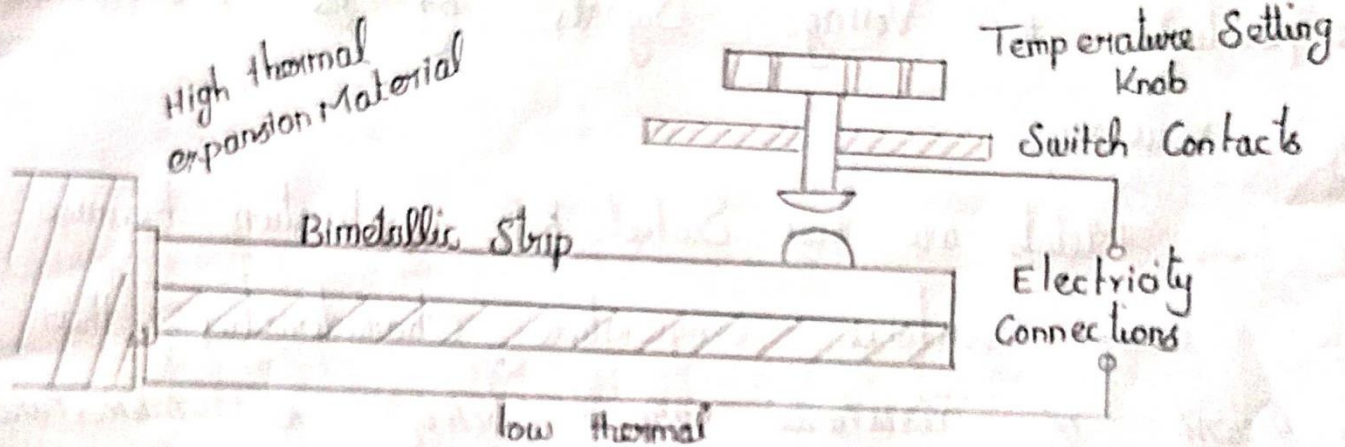
Bimetallic Strip thermometers are Mechanical thermometer. They are Widely Industry for temperature Control because of their robustness, temperature range Simplicity. It consists a bimetallic strip is Made two dissimilar Metals, bonded temperature change into Mechanical displacement. The Principle that temperature change strip expand More than other strip causing pair bend the free end. Steel and Copper or in Some Cases, brass is also Used Instead of Copper for bimetallic strip.

It Cause the Strip to bend Upward in Making Contact. So the Current Can flow by adjusting the size of the gap between Strip and Contact, the temperature Can be adjusted or set.

Application

* Bimetallic Strips are frequently Used Simple ON-OFF Switches

* The bimetallic Strips are also Used in Control Switches



Advantage:

- * Cost is low
- * Power Source is not required
- * It is robust construction

Disadvantage:

- * It is less accurate
- * It is limited to application where Manual reading is acceptable.

3. explain electrical resistance thermometer or resistance temperature detectors (RTDs)?

When a metal wire is heated, resistance increase. So, a temperature can be measured using resistance of a wire. RTD incorporates pure metals or certain alloys that increase resistance the temperature increase it conversely decreases resistance as temperature decreases. RTDs similar an electrical transducer it converts the temperature to voltage signals by the measurement of resistance.

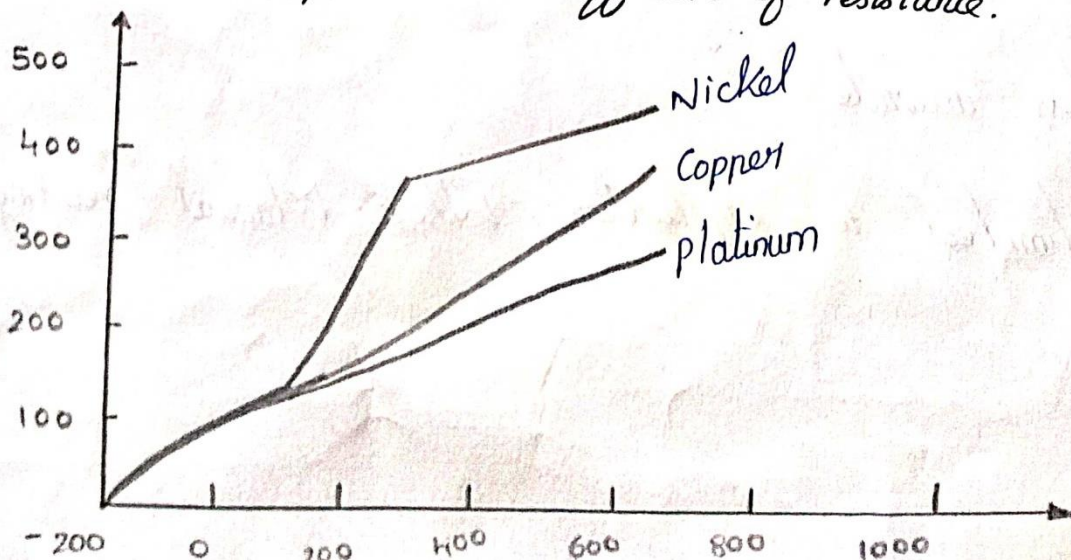
These metals are best suited RTD application because of their linear resistance - temperature characteristics, their high coefficient of resistance and ability to withstand repeated temperature cycles. The linear relationship of resistance - temperature is given by following equation.

$$R = R_0(1 + \alpha T)$$

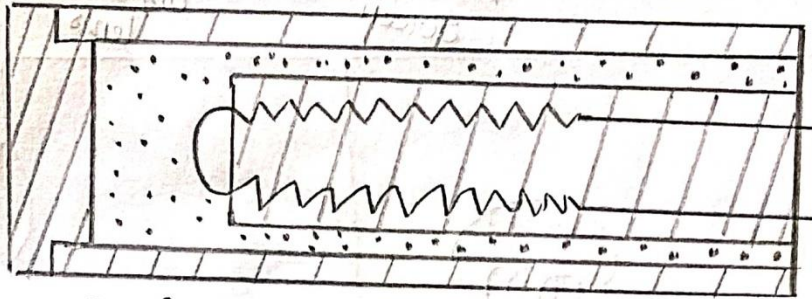
R is resistance at temperature $T^\circ\text{C}$

R_0 is resistance at 0°C

α is temperature Co-efficient of resistance.



The Coefficient of resistance is the change in resistance per degree change in temperature. Usually expressed as a percentage per degree of temperature. The material used must be capable of being drawn into fine wire so that the element can be easily constructed.



platinum Wires

Porcelain Insulator

Inconel Sheath

Alumina Powder

This change in resistance is then measured by a precision resistance measuring device which is calibrated to give proper temperature reading. This device normally bridge circuit.

Advantages:

- * It is suitable for measuring high temperatures

- * It has high degree of accuracy

- * It ensures good stability and repeatability.

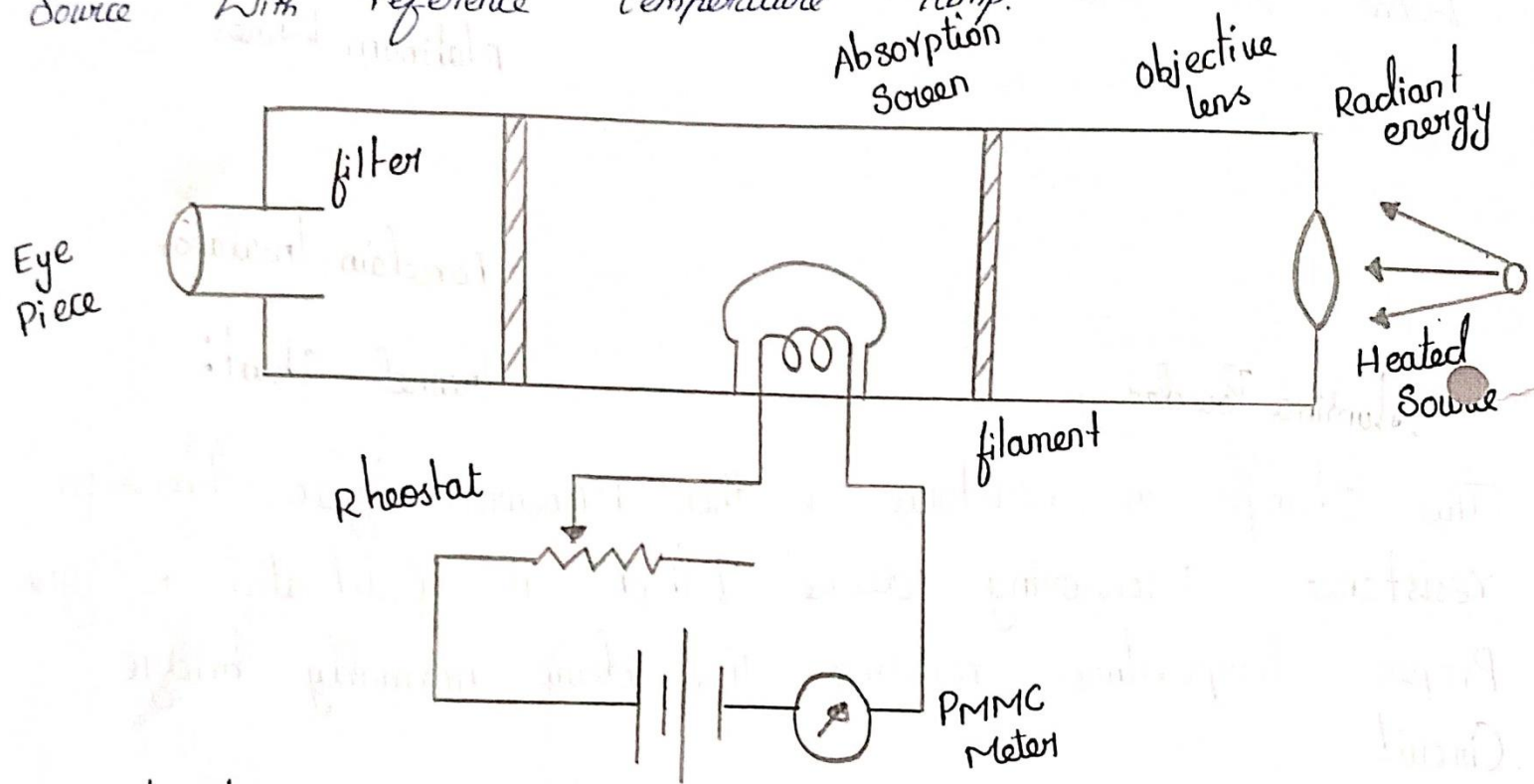
Disadvantage

- * Size is more than the thermocouple.

- * Power supply is required.

4. Explain neat Sketch Optical Pyrometer?

Principle: This Method refers Identification of temperature of a Surface with colour of radiation emitted. The Optical Pyrometer compares the brightness of image produced by the temperature source with reference temperature lamp.



Construction:

The Optical Pyrometer has eyepiece one end and objective lens at other end. In between objective lens Standard lamp and an absorption filter placed it is used to increase the range of temperature. A battery, ammeter and rheostat are connected to a Standard lamp.

Working

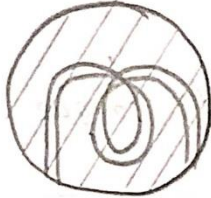
1. The filament disappears, if the filament is having equal brightness with source temperature.

2, The filament appear bright, if the filament is hotter than temperature source.

3, The filament will appear dark, if the filament is cooler than the source temperature.



equal
brightness



More
brightness



More darkness

Application

- * It is used to measure the furnace temperature

- * It is widely used to measure temperature of molten metals or heated materials.

Advantages:

- * It is relatively inexpensive

- * The instrument is easy to operate

- * It does not depend on surface properties of the material

Disadvantage

- * Adjustment of standard lamp temperature is done manually, so, it will make some error in the measurement.

1, What are the load Cells?

A load Cell is an electromechanical transducer. It converts load/force acting on it into an analog electrical signal. Load cells provide accurate measurement of compressive or tensile load/forces.

2, Differentiate between force and torque?

S.no	Force	Torque
1,	Force is the linear load acting on the member.	Torque is just rotational force or force through a distance.
2,	The mechanical quantity which tends to change the motion or shape of a body to which it is applied is called force.	It is defined as the measure of the tendency of a force to rotate a body about an axis.

3, What is the principle involved in fluid expansion thermometer?

In a fluid expansion thermometer, the change in pressure in the bulb is taken as an indication of the temperature.

4, Define thermocouple?

A thermocouple is a sensor used to measure temperature. It consists of two wire legs made from different metals.



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CIRCULAR

DEPARTMENT OF MECHANICAL ENGINEERING

AUGUST 16th, 2022

The NPTEL course links / videos are shared for second year, third year and final years' students with this circular.

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DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR-(2022-2023) EVEN SEMESTER

ADVANCED LEARNERS NPTEL VIDEOS LINK

ONLINE NPTEL COURSE LINK (ODD SEM)

S.NO	COURSE NAME	COURSE URL
1.	Theory of machines	https://onlinecourses.nptel.ac.in/noc23_ce65/preview
2.	Thermal engineering	https://onlinecourses.nptel.ac.in/noc23_me101/preview
3.	Strength of materials	https://onlinecourses.nptel.ac.in/noc24_oe01/preview
4.	Design of transmission system	https://onlinecourses.nptel.ac.in/noc24_me58/preview
5.	Finite element analysis	https://onlinecourses.nptel.ac.in/noc24_me25/preview
6.	Computer integrated manufacturing	https://onlinecourses.nptel.ac.in/noc24_me17/preview

ONLINE NPTEL COURSE LINK (EVEN SEM)

S.NO	COURSE NAME	COURSE URL
1.	Theory of machines	https://onlinecourses.nptel.ac.in/noc23_ce65/preview
2.	Thermal engineering	https://onlinecourses.nptel.ac.in/noc23_me101/preview
3.	Strength of materials	https://onlinecourses.nptel.ac.in/noc24_oe01/preview
4.	Design of transmission system	https://onlinecourses.nptel.ac.in/noc24_me58/preview
5.	Finite element analysis	https://onlinecourses.nptel.ac.in/noc24_me25/preview
6.	Computer integrated manufacturing	https://onlinecourses.nptel.ac.in/noc24_me17/preview



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DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR-(2021-2022) EVEN SEMESTER

ADVANCED LEARNERS NPTEL VIDEOS LINK

SUBJECT NAME: DESIGN OF MACHINE ELEMENTS

IIT Bombay:

https://onlinecourses.nptel.ac.in/noc24_me71/preview

Design of Mechanical Transmission Systems
By Prof. Ramkumar P | IIT Madras

Join Learners enrolled: 173

ABOUT THE COURSE:
The design of mechanical transmission systems deals with the design of mechanical components involved in transmitting power among systems. The beginning of this course deals with the design of machine tool gearboxes, followed by the design of automobile gearboxes by considering the significance of weight constraint, ray and kinematic diagrams construction, gear material selection, lubricant selection, and design of the gearbox casing. Further, discussed the design of different types of Brakes, dynamic and thermal analysis of two-axle vehicle including selection of friction materials based on vehicle dimensions. Similarly, clutch system by considering the different types, thermal analysis, and selection of friction lining material. Further, design of belt drives is explained. Thus, this course plays a vital role in the safe design of Mechanical Transmission Systems.

Summary

Course Status :	Upcoming
Course Type :	Elective
Duration :	12 weeks
Category :	o Mechanical Engineering
Credit Points :	3
Level :	Postgraduate

IIT Delhi:

https://onlinecourses.nptel.ac.in/noc24_me29/preview

Dynamics and Control of Mechanical Systems
By Prof. Ashitava Ghosal | IISc Bangalore

Join Learners enrolled: 99

Summary

Course Status :	Upcoming
Course Type :	Core
Duration :	12 weeks
Category :	o Mechanical Engineering
Credit Points :	3
Level :	Undergraduate/Postgraduate
Start Date :	22 Jan 2024
End Date :	12 Apr 2024
Enrollment Ends :	29 Jan 2024

IIT Madras:

https://onlinecourses.nptel.ac.in/noc24_me32/preview

Finite Element Modeling Of Welding Processes
By Prof. Swarup Bag | IIT Guwahati

Join Learners enrolled: 74

Summary

Course Status :	Upcoming
Course Type :	Elective
Duration :	12 weeks
Category :	+ Mechanical Engineering + Advanced Mechanics + Manufacturing Processes and Technology + Computational Mechanics + Materials Joining
Credit Points :	3

SUBJECT NAME:THERMODYNAMICS

IITDelhi:

https://onlinecourses.nptel.ac.in/noc24_me62/preview


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Thermal Engineering: Basic and Applied

By Prof. Pranab K. Mondal | IIT Guwahati

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Thermal Engineering: Basic and Applied
Prof. Pranab K. Mondal
Mechanical Engineering, IIT Guwahati

Summary

Course Status :	Upcoming
Course Type :	Core
Duration :	12 weeks
Category :	+ Mechanical Engineering
Credit Points :	3
Level :	Undergraduate/Postgraduate
Start Date :	22 Jan 2024
End Date :	12 Apr 2024
Enrollment Ends :	29 Jan 2024
Exam Registration Ends :	16 Feb 2024
Exam Date :	28 Apr 2024 IST

Note: This exam date is subjected to change based on seat availability. You can check final exam date on your hall ticket.

ABOUT THE COURSE: This course focuses on different aspects of applied thermodynamics, which include fundamental analysis of steam power cycle starting from thermodynamics to its application in different practical processes, analysis of the internal combustion engines, Gas turbine cycle, and the Refrigeration cycle. Thus, this course would provide an understanding on several aspects of thermal engineering from the basics to applied parts and would unveil several physical issues concerning with the fundamental analysis and operational principle.

https://onlinecourses.nptel.ac.in/noc24_me37/preview


swayam

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Heat Transfer and Combustion in Multiphase Systems

By Prof. Saptarshi Basu | IISc Bangalore

[Join](#) Learners enrolled: 48



Introductory video

Summary

Course Status :	Upcoming
Course Type :	Core
Duration :	8 weeks
Category :	+ Mechanical Engineering
Credit Points :	2
Level :	Undergraduate/Postgraduate
Start Date :	22 Jan 2024
End Date :	15 Mar 2024
Enrollment Ends :	29 Jan 2024
Exam Registration Ends :	16 Feb 2024
Exam Date :	24 Mar 2024 IST

Note: This exam date is subjected to change based on seat availability. You can check final exam date on your hall ticket.

ABOUT THE COURSE: Multiphase systems are ubiquitous to many domains ranging from large scale power generation to microscale surface patterning. The course as outlined aims to offer insights and fundamentals into such multiphase systems. The course will first cover the basics of thermodynamics and transport processes in generalized multiphase systems along with analyses of interfacial transport mechanisms. Subsequently in the later modules, it will offer in depth analyses of transport processes and

IITMadras:

https://onlinecourses.nptel.ac.in/noc24_me03/preview

swayam

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Applied Thermodynamics

By Prof. V. Raghavan | IIT Madras

[Join](#) Learners enrolled: 206

ABOUT THE COURSE:

Objectives: Analysis of practical devices/applications using first and second law, applications such as steam and gas turbine power plants, vapor compression refrigeration devices, spark ignition and compression ignition IC engines, psychrometry, combustion of fuels and compressible flow through nozzles.

Outcomes: Students should be able to (1) carry out a thermodynamic analysis of any device and evaluate the first law and second law efficiencies and any other thermodynamic property of interest (2) compute thermodynamic properties of interest at the throat of a nozzle with air or steam as the working substance.

INTENDED AUDIENCE: Under Graduate students

PREREQUISITES: Engineering Thermodynamics or Basic thermodynamics

Summary

Course Status :	Upcoming
Course Type :	Core
Duration :	12 weeks
Category :	+ Mechanical Engineering
Credit Points :	3
Level :	Undergraduate
Start Date :	22 Jan 2024
End Date :	12 Apr 2024
Enrollment Ends :	29 Jan 2024
Exam Registration Ends :	16 Feb 2024
Exam Date :	28 Apr 2024 IST

Note: This exam date is subjected to change based on seat availability.

SUBJECT NAME: FINITE ELEMENT ANALYSIS

IITKanpur:


https://onlinecourses.nptel.ac.in/noc24_me25/preview

swayam About Swayam | All Courses | SIGN-IN / REGISTER

Basics of Finite Element Analysis - II

By Prof. Nachiketa Tiwari | IIT Kanpur

Join Learners enrolled: 147



Summary

Course Status :	Upcoming
Course Type :	Elective
Duration :	8 weeks
Category :	<ul style="list-style-type: none">Mechanical EngineeringAdvanced Mechanics
Credit Points :	2
Level :	Undergraduate/Postgraduate
Start Date :	22 Jan 2024
End Date :	15 Mar 2024
Enrollment Ends :	29 Jan 2024
Exam Registration Ends :	16 Feb 2024

ABOUT THE COURSE:
This course is intended for all those who want to learn FEA from an application standpoint. Currently, many users of FEA have limited understanding of theoretical foundation of this powerful method. The

IITDelhi:


https://onlinecourses.nptel.ac.in/noc24_me08/preview

swayam About Swayam | All Courses | SIGN-IN / REGISTER

Failure Analysis And Prevention

By Prof. D K Dwivedi | IIT Roorkee

Join Learners enrolled: 133



Summary

Course Status :	Upcoming
Course Type :	Elective
Duration :	8 weeks
Category :	<ul style="list-style-type: none">Mechanical Engineering
Credit Points :	2
Level :	Undergraduate/Postgraduate
Start Date :	22 Jan 2024
End Date :	15 Mar 2024
Enrollment Ends :	29 Jan 2024
Exam Registration Ends :	16 Feb 2024
Exam Date :	23 Mar 2024 IST

About the course:
The course content is designed to systematic understanding on various aspects related with failure such as fundamental sources of failure of mechanical components, industrial engineering tools relevant to failure and failure analysis, general procedure of failure analysis through cause-effect, reflection, prevention and

Note: This exam date is subjected to change based on seat

IITBombay:


https://onlinecourses.nptel.ac.in/noc24_me32/preview

swayam About Swayam | All Courses | SIGN-IN / REGISTER

Finite Element Modeling Of Welding Processes

By Prof. Swarup Bag | IIT Guwahati

Join Learners enrolled: 74



Summary

Course Status :	Upcoming
Course Type :	Elective
Duration :	12 weeks
Category :	<ul style="list-style-type: none">Mechanical EngineeringAdvanced MechanicsManufacturing Processes and TechnologyComputational MechanicsMaterials Joining
Credit Points :	3
Level :	Undergraduate/Postgraduate

ABOUT THE COURSE : The welding process involves complex interaction of several mechanisms. The fundamental understanding relied on basic mechanisms such as heat transfer and/or fluid flow, and residual stress generation including the effect of metallurgical transformation for


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Dr. R. PRABHU
PRINCIPAL,
SAKTHI ENGINEERING COL
COIMBATORE-641 104



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TNEA Admission Code **2673**

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CIRCULAR

DEPARTMENT OF MECHANICAL ENGINEERING

JUNE 20th, 2022

The following students are assigned to meet their corresponding mentor's as per class schedule.

MENTOR'S DETAILS FOR II YEAR

REG No	NAME	MENTOR
713621114001	AKASH M	MR. VARATHARAJ
713621114002	ARON V	
713621114003	ARUL MURUGAN.A	
713621114005	DHANUSH M	
713621114006	GANESH B	
713621114008	KAVI BHARATHI R.D	
713621114009	NAVEEN KUMAR N	
713621114011	SHANTHANU J	
713621114301	ABIRAM S	
713621114302	AKASH N	
713621114303	ANBARASU D	
713621114304	ANTHONI SAMY T	
713621114305	ARAVINTH KUMAR K	
713621114306	ARUN KUMAR K	
713621114307	ARUN PRAKASH M	
713621114309	BALAKRISHNA RAJ V	Mr.MIDHUN
713621114310	BALASUBRAMANIAN N	
713621114311	BHARATHI RAJAN J	
713621114312	BHARATHRAJ M	
713621114313	BHUVANESWARAN Y	
713621114314	BISMI RAHMAN M F	
713621114315	DEEPAK K	
713621114316	DEVARAJ S	
713621114317	DHANUSHSURYA K	
713621114318	DHARANITHARAN M	
713621114319	DHILIP S	Dr .CHELLIAH
713621114320	DHILIP KUMAR B	
713621114321	DINAKARAN V	
713621114322	GNANAPRAKASAM A	
713621114323	GOWTHAM M	
713621114324	HARIHARAN R	
713621114325	HARIHARAN S	
713621114326	HARIKARASUDHAN P	
713621114327	HARIPRASAD V	
713621114329	JANAGARAJ C	

713621114331	JIJU WILSON S D		
713621114332	KALIDAS A	MR. LOKESH	
713621114333	KALIDASS P		
713621114335	KARTHI S		
713621114336	KAVIN S		
713621114337	KAVIYARASAN S		
713621114338	KIRANKUMAR S		
713621114339	MAHENDRAN T		
713621114340	MANIKANDAN C		
713621114341	MANIKANDAN S		
713621114342	MANOJ KUMAR G		
713621114343	MOHAMED SAFI M		
713621114344	MOORTHI K		
713621114345	NAVASSHERIF F		
713621114346	NIRMALKUMAR K		
713621114347	NITHIYAPRASATH K		MR. SHIVA SHANKAR
713621114348	PRAKASH K		
713621114349	PRANEESH S		
713621114350	PRAVIN C		
713621114351	PREMKUMAR S		
713621114352	RAJA R		
713621114353	RAJINI D		
713621114354	RAMESH BABU A		
713621114355	RAVIVARMA G		
713621114356	ROMAL CRESHEK C		
713621114357	SAKTHIVEL M		
713621114358	SAKTHIVEL M		
713621114359	SAKTHIVEL S		
713621114360	SANJAIKUMAR S	MR.ANTONY	
713621114362	SANTHOSH R		
713621114363	SARANRAJ A		
713621114364	SATHISWARAN R		
713621114365	SATHYA PRAKASH A		
713621114366	SEDUPATHI B		
713621114367	SELVAKUMAR P		
713621114368	SENTHIL KUMAR K K		
713621114369	SHANMUGARAJ K		
713621114370	SIVA BALAJI S		
713621114371	SIVABALAN B		
713621114372	SUBASH S V		
713621114373	SULAIMAN Z		
713621114374	SURESH P		
713621114375	SURESH R		
713621114376	SURYA S		
713621114377	SURYAPRAKASH N		
713621114378	SYED SABEER S		
713621114379	THANGAVEL P		

MENTOR'S DETAILS FOR III YEAR

REG No	NAME	MENTOR
713620114002	GOWTHAM M	MR. VARATHARAJ
713620114003	HARIHARAN A	
713620114004	KALEESWARAN P	
713620114005	PRADHAP M	
713620114006	PRAKASH R	
713620114007	PRASANTH J	
713620114008	PRAVEEN B	
713620114011	VIVEK I	
713620114012	YUVARAJ K	
713620114301	AJITH KUMAR R	
713620114302	AKASH S	
713620114303	ARIPRASATH V	
713620114304	ASHU K R	
713620114305	ASHWIN RAJ A	
713620114306	BALAMURUGAN A	
713620114307	BALA MURUGAN S	
713620114308	BALAVIGNESH S	
713620114309	BHARATH S	
713620114310	BOOBASEKUMAR P	
713620114311	BOOPESH S	
713620114312	DENNIS M	
713620114313	DHANUSH A	
713620114314	DHINAKARAN D	
713620114316	GOWTHAM C	Dr .CHELLIAH
713620114317	GOWTHAM M	
713620114318	HARIPRASANTH K	
713620114319	INNIARAJ D	
713620114320	JAGADISH S	
713620114321	JAISURIYA P	
713620114322	JONATHAN R	
713620114323	KAMAL M	
713620114324	KAMALRAJ T	
713620114325	KANAKARAJ T	
713620114326	KARTHICK T	
713620114327	KARTHIK K	
713620114328	KARTHIKEYAN G	
713620114329	KAVINKUMAR I	
713620114330	KISHORE A	MR. LOKESH
713620114331	KISHORE S	
713620114332	KOWSIK R	
713620114333	LOGESH M	
713620114334	LOGESH R	
713620114335	LOKESH K	
713620114337	MATHAN KUMAR D	
713620114338	MOHAMMED MUBEEN A	
713620114339	MOHANKUMAR A	
713620114340	MOHAN PRASATH M	
713620114341	NAGARAJ E	
713620114342	NARESH R	
713620114343	NAVANEETHAKRISHNAN N	
713620114344	NAVIN R	

713620114345	PARTHASARATHI C M	MR.ANTONY
713620114346	PRAKASHKUMAR K	
713620114347	PRASANNA G	
713620114349	PRAVIN V M	
713620114350	PREMKUMAR K	
713620114351	PREMKUMAR M	
713620114352	PRINCE A	

MENTOR'S DETAILS FOR IV YEAR

REG No	NAME	MENTOR
713619114001	AHAMED RINEESH	MR. SHIVA SHANKAR
713619114002	AKASH R	
713619114003	ASHIQ SALMAN	
713619114005	GOPINATH M	
713619114006	GOWTHAM M	
713619114007	GOWTHAM R	
713619114008	GUNAVARASAN G	
713619114009	KALIYAPERUMAL V	MR.ANTONY
713619114010	KARTHKEYAN S	
713619114011	KISHORE TK	
713619114012	LIBIN SAMSOM L	
713619114013	MANNAN A	
713619114014	POOVARASAN V	
713619114015	PRAKASH RAJ.MP	
713619114016	SACRATES P	MR. VARATHARAJ
713619114019	SANTHOSH V	
713619114020	SARAVANA KUMAR N	
713619114021	SARAVANAN M	
713619114023	SIVABALAN S	
713619114024	SRIDHARAN R	
713619114026	SURYA KANTH M	
713619114027	VARUN KUMAR U	Mr.MIDHUN
713619114028	VIKRAM N	
713619114301	JAYARAJ P	
713619114302	JESU DHIVAKARAN	
713619114304	PRASANTHKUMAR P	
713619114305	SENTHIL BALAJI S G	

To

All MECH/ SERVICE FACULTY MEMBERS

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DEPARTMENT OF CIVIL ENGINEERING

ADVANCED LEARNERS NPTEL COURSE LIST:

S.NO	CLASS	NAME OF THE STUDENT	COURSE NAME	URL
1	II CIVIL	P ANITHA	FLUID MECHANICS	https://www.youtube.com/watch?v=AdhWBb7j55c&list=PLwdnzlV3ogoV-ATGY2ptuLS9mwLFOJoDw&index=2
2.	III CIVIL	E SAKTHIVEL	STRUCTURAL ANALYSIS I	https://www.youtube.com/watch?v=oa5ojjGEUSw&list=PLUogGZJOiMtNou85Tq1zNvg9EU3aJ8VO
3.		YADUKRISHAN MI		
4.	IV CIVIL	ANJU R	RAILWAYS, AIRPORTS, DOCKS AND HARBOUR ENGINEERING	https://www.youtube.com/watch?v=o4OvDr4Ayb0&list=PLiEKlwwpk5F3B6JjpDQPA38DtOjynPe6l
5.		MARGARET SONA M		

ONLINE NPTEL COURSE LINK:

S.NO	COURSE NAME	COURSE URL
1.	Fluid Mechanics	https://onlinecourses.nptel.ac.in/noc23_ce65/preview
2.	Principles Of Construction Management	https://onlinecourses.nptel.ac.in/noc23_ce62/preview
3.	Design Of Reinforced Concrete Structures	https://onlinecourses.nptel.ac.in/noc23_ce78/preview

ASSIGNMENT-1

NAME : G. GOKULAN

REG. NO : 713620103303

SUBJECT CODE : CE8591

SUBJECT : FOUNDATION ENGINEERING

DATE : 27-08-2022

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Kavya
29/8/22

PART-A

the field tests commonly used in subsurface investigation?

Penetration Test This test is used for resistance offered by soil to penetration of standard split spoon sample, resistance is co-related with properties of soil such as density, bearing capacity etc...

1) What is the objective of soil exploration?

i) To determine the basic properties of soil which affect the design and safety of span structure i.e., compressibility, strength and hydrological conditions

ii) To determine the extent and properties of the material to be used for construction

2) What is site reconnaissance?

Site reconnaissance is the first stage of site investigation.

In this stage, visual inspection of the site is done and information

about topographical and geological features of the site are collected.

3) Why the electrical resistivity method is not as reliable as seismic method?

The electrical resistivity method is found to be less reliable than the seismic-refraction method, since the resistivity of a particular soil or rock can vary over a wide range of values depending on the density, voids or fractures, and degree of saturation of the soil

5) Determine the preparation for soil sample with 51mm and 108mm inner diameters respectively

sample is affected by type of soil, it is difficult to get samples in cohesionless soil, sensitive clays can be affected at depth of sampling, method of sampling area ratio, inside clearance of sampler ect...

6) What are the limitations of hand augers in soil exploration?

1) The auger boring method is not suitable for cobbles, boulders, other obstructions that prevent that drilling of the borehole

2) The main disadvantage of auger boring is that the soil samples are highly disturbed

3) In the auger boring it is difficult to locate the exact changes in soil strata

7) What are the guidelines in terms of inside clearance and outside clearance for obtaining undisturbed sample?

An undisturbed sample is that in which the natural structure and properties remain preserved. The inside clearance should be between 1 to 3% and the outside clearance 0 to 2%.

(2)

It is meant by a non-representative sample?
sample that is not selected in such a way as to be representative of the population

What are the advantages and disadvantages of static cone penetration, the stress bearing and sampling?

Advantages of Static cone Penetration Test

The Dutch cone penetrometer test (static cone penetration test) is most useful where the soil properties get disturbed by the boring or due to bias.

It is useful in bearing capacity determination at different depths below the foundation level.

Disadvantage of Static cone Penetration Test

In the cone penetration test (CPT), end of a cone is pushed into the ground at a constant rate and measurements of the resistance to penetration of the cone and of a surface beneath are made continuously.

10) In a rock core drilling, the sum of length of rock pieces having length more than 100mm is 750mm. If the length of run is 1m find R.Q.D.

The investigation shall be carried out to the point at which the vertical stress due to proposed structure is equal to or less than 10% of original effective stress at the point before the structure is constructed.

PART-B

1) Why SPT 'N' value recorded in sand at different depths corrected for overburden and submergence? How are the corrections applied?

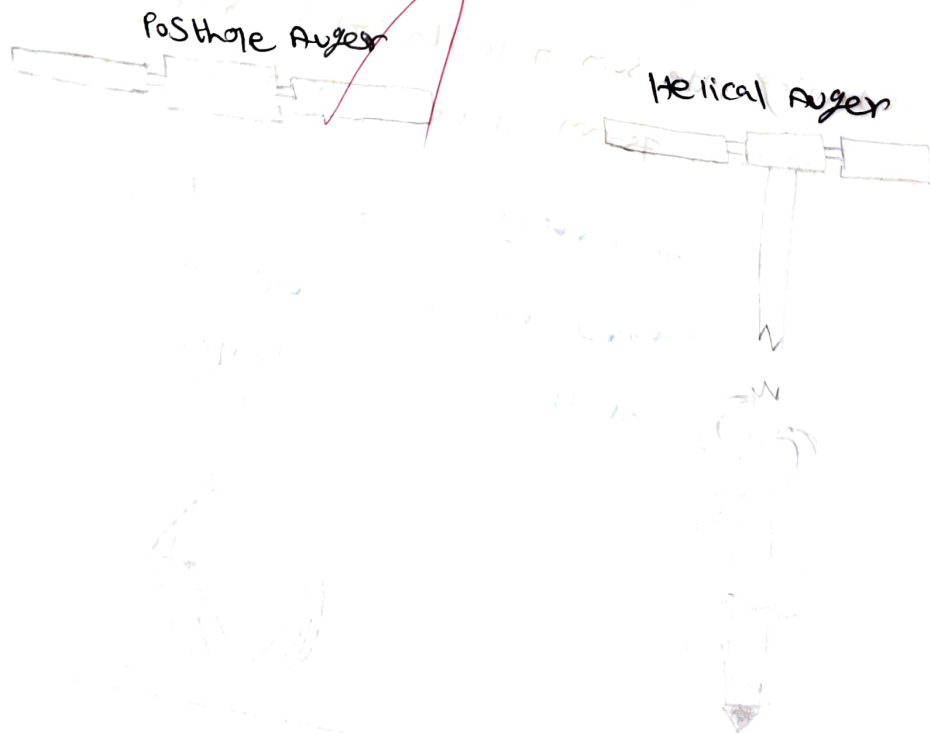
The different types of boring methods are:

- 1) Auger boring
- 2) Wash boring
- 3) Rotary drilling
- 4) Percussion drilling

Auger boring

Manual Boring

It is suitable upto a depth of 6 to 8m. The soil samples obtained from auger borings are highly disturbed. In some non-cohesive soils having low cohesion the wall of the bore hole will not stand unsupported. In such cases metal pipes are used as a casing to prevent the soil from caving in.



Auger

The method of exploration and sampling
is either driven or hand operated

It is suitable in all soils above groundwater table but only in
resistive soil below groundwater table

Hollow stem augers used for sampling and conducting standard
penetration tests.

Mechanical Auger

Mechanical Auger means power operated augers. The power required to
rotate the auger depends on the type and size of auger and the type of

soil. Downwards pressure can be applied hydraulically, mechanically or dead

weight.
3) Bore hole depths up to 50m are possible with continuous flight
augers

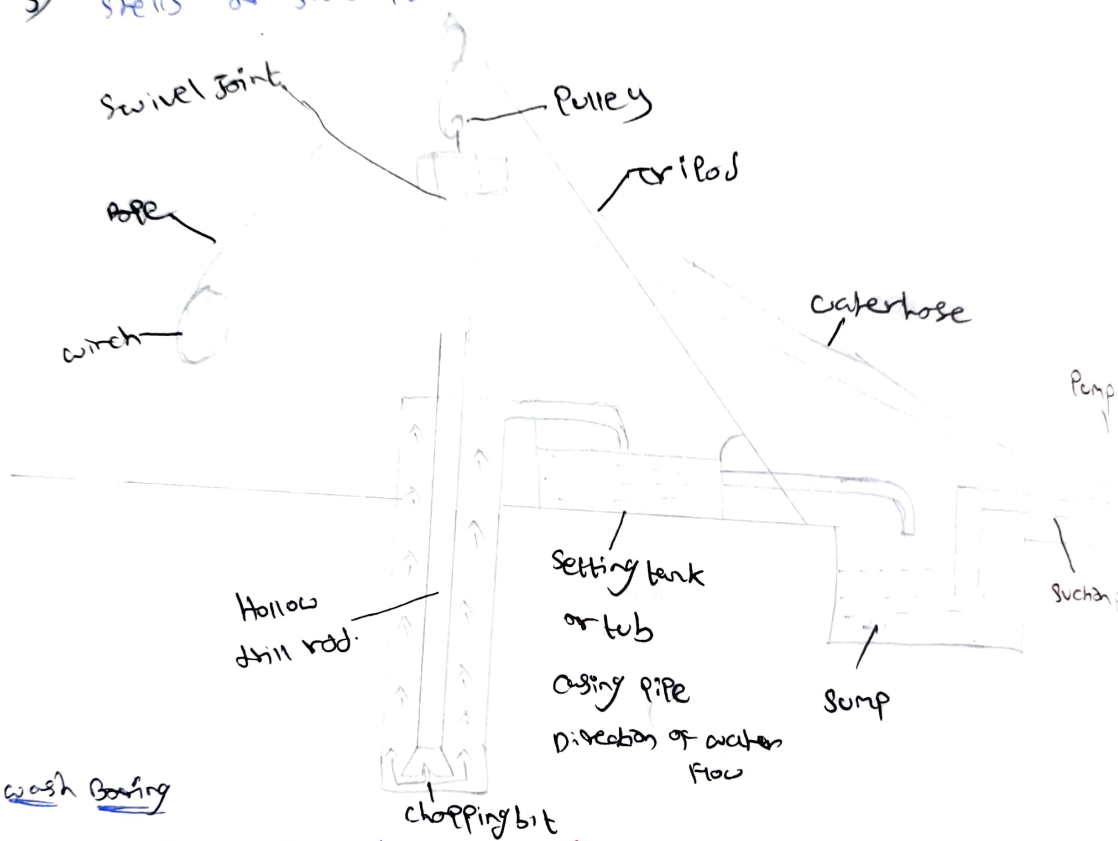
4) If bed rock is reached drilling can also take place through the
hollow stem.

5) The presence of cobbles and boulders create problems with small-
sized augers

6) There is a possibility that different soil types may become mixed
as they rise to the surface and it may be difficult to determine
the depths of changes of strata. Experienced drillers can however
detect the changes of strata by the change of speed and the
sound of drilling.

Shell and Auger Boring

- 1) cylindrical augers and shells with cutting edge or teeth can be used for making deep borings
- 2) Hand operated rigs - 25m and mechanized rigs up to 100m
- 3) Augers are suitable for soft to stiff clays.
- 4) Shells for very stiff and hard clays, and
- 5) shells or sand pumps for sandy soils



Wash Boring

- 1) water with high pressure pumped through hollow boring rods is released from narrow holes in a chisel attach to the lower end of the rods.
- 2) The soil is loosened and broken by the water jet and the up-down movement of the chisel
- 3) the soil particles are carried in suspension to the surface between the rock and the bore hole sides
- 4) This method is unacceptable for obtaining soil sample

advantage is that the soil immediately behind the hole
is relatively undisturbed

Core Drilling

The coring bit is fixed to the lower end of a core

primarily intended for investigation in rock but also used in soils

The drilling tool, (cutting bit or a coring bit) attached to the
lower end of hollow drilling rods

open-hole drilling, which is generally used in soils and weak
rock, just for advancing the hole.

core drilling, which is generally used rods can then be removed
to allow tube sample to be taken or in-situ tests to be
performed out

Advantages:

1) The advantage of rotary drilling in soils is that progress is much faster
than with other investigation methods and disturbance of the soil below the
borehole is slight

Limitations:

- 1) The method is not suitable if the soil contains a high percentage of
fine sand / cobbles, as they tend to rotate beneath the bit and are not broken up.
- 2) The natural water content of the material is liable to be increased due
to contact with the drilling fluid

ASSIGNMENT - II

Name:- S. Pranav

Reg no:- 713619103005

Subject code:- CE8702

Subject Title:- Railway, airports, docks and harbour
Engineering

Branch:- Civil Engineering.

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50

S. Pranav

1. What are the purpose of signaling?

1. To provide the adequate safety to trains
2. To give direction indicators of trains at diverging junction
3. To maintain safety distance of train
4. To provide the necessary facilities
5. To permit the trains to the restricted speed

2. What is marshalling yard?

The main function of a marshalling yard to sort out wagons received from the centres to their respective destination. further all empty wagons are stored and allocated as and when needed.

3. Define Heel Divergence?

This is the distance between the orange faces of the stock rail and the tongue rail at the heel of the switch. It is to specify made up of flange way clearance and the width of the tongue rail head lies at the heel.

4. What are the sources of moisture in the track?

1. By gravity
2. By capillary action
3. From adjacent areas
4. By hygroscopic action.

5. What is meant by ^{Track} circuiting?

Track circuiting is an electric circuiting formed by combining running rail, signal and cabin. its prime function is to specify the presence of the any train or the vehicle on the track. various types of circuiting

1. D.C Track Circuiting
2. A.C Track Circuit
3. electric track circuit.

6. Modern methods of track maintenance?

1. Track maintenance
2. measured shovel packing
3. Direct Track maintenance

7. What is meant by interlocking?

Interlocking is a system meant to ensure the safety of the trains. By interlocking it is meant the various lever operating the signals and points follow a certain defined mechanical relationship such that no adverse effects are possible.

8. What is meant by interlocking by interlocking signal?

Based on the signal and telecommunication equipment is provided, interlocking standards are specified by Indian Railways based on the speed of passing train.

Q. What are the advantages of using through sleepers?
Through sleepers are provided for the entire length of wherever points and crossing are provided on a track. Through sleepers main train several rail at the same level. Further it is possible to fix the alignment of the curved track in relation to the straight track.

Q. What is co acting signal
Due to some obstruction if the vision of the signal is prevented then another signal is used in its place, preferably on the same post. Such a signal is called as co-acting signal which is an exact replica of the original.

Part-B

Draw a neat diagram and explain the signals used at various locations along the standard prescribed for such location.

Definition:

Signaling is used to ~~access~~ the safety of a route in the real sense signaling forms a medium of communication between the station master to the driver.

Objective of signaling

To provide the adequate safety to trains

To give direction indicators to train at diverging junction.

To maintain safety distance of train

To provide the necessary facilities.

To prevent the trains to the restricted speed.

Types of Signaling

1. Signal based on function
2. Signal based on location
3. Special signal

1. Signal based on function:-

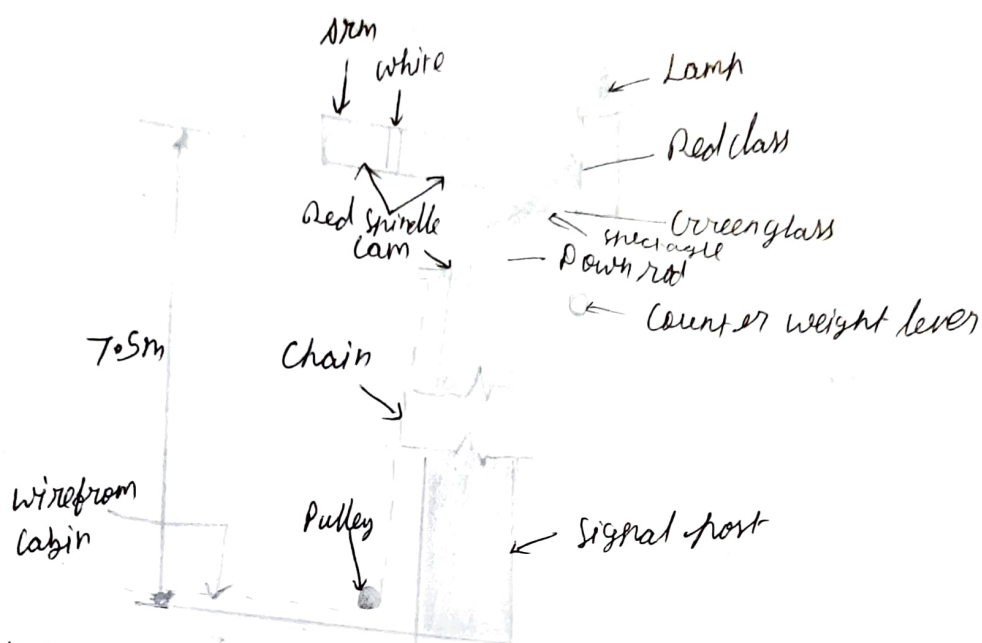
The signal comprises of the signaling the driver of a signal to stop, move casually, proceed and to carry out shunting operation.

1. Stop signal
2. warning signal
3. Disk of wround signal
4. Colored light signal

1. Stop signal:-

Stop signals are fixed signals which are also as semaphore signals. The semaphore signals function in following way.

1. The semaphore arm is capable of making two position
2. The horizontal position of the signal indicates a stop or danger and said to be 'on position'
3. When it is lowered at an angle of 45° - 65° it indicates proceed and is said to be 'off-position'
4. The important features of the this type, if anything fails to be with the apparatus, the signal should show the stop position.



② Warner signal:-

Warner signals are similar to semaphore signals with a difference that a V-notch is provided at the free end. The signal is placed ahead of semaphore signals. The main function of the signaling is to warn the driver about the presence of a stop signal ahead.

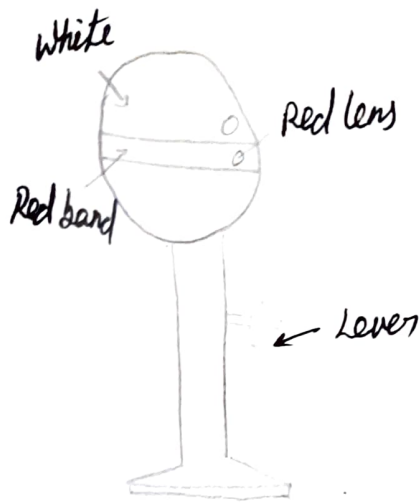
Working position of signal

- ① When in horizontal or in "on position" it signifies that the signal ahead is stop or danger position.
- ② When in inclined position it signifies that the signal ahead is off-position, i.e. the driver can proceed at speed without any danger.

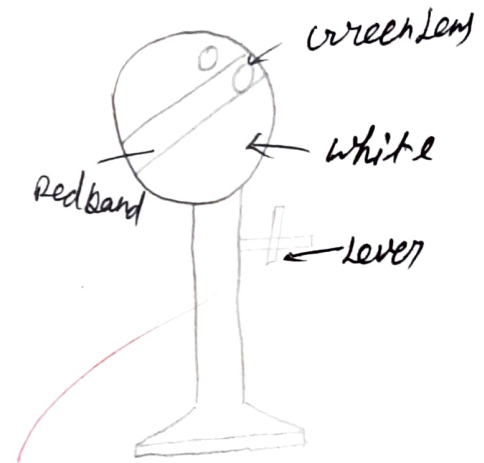
③ Disk or ground signal:-

Disk or ground signals are miniature signals which are used for shunting of vehicles in station yards these are called shunting signals.

The disk is removed by a suitable arrangement. Two holes on it are provided one for red lamp and the other for the green lamp.



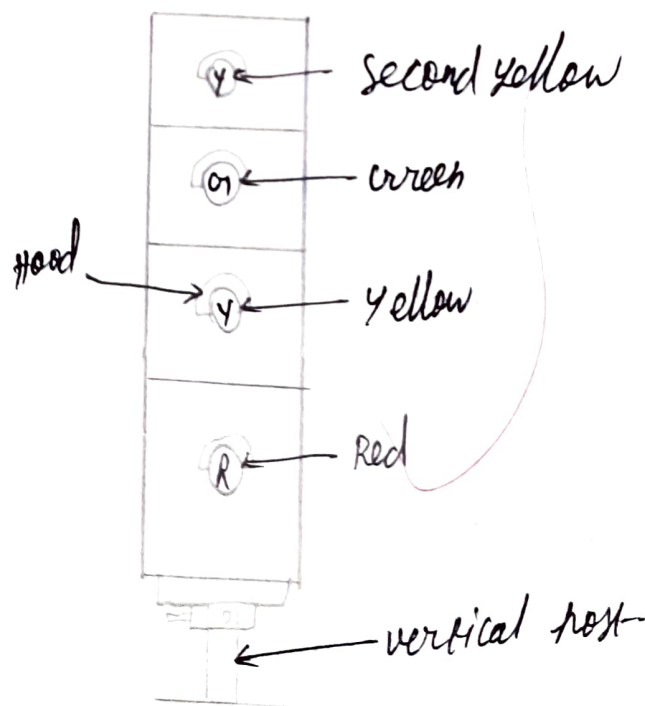
(a) Stop position



(b) Proceed position.

(4) Colored light signal

In order to signify the track conditions to the driver at all times, these signals use colored light. Further to ensure good visibility of the lights even in day time special electrical connection using lenses are made.



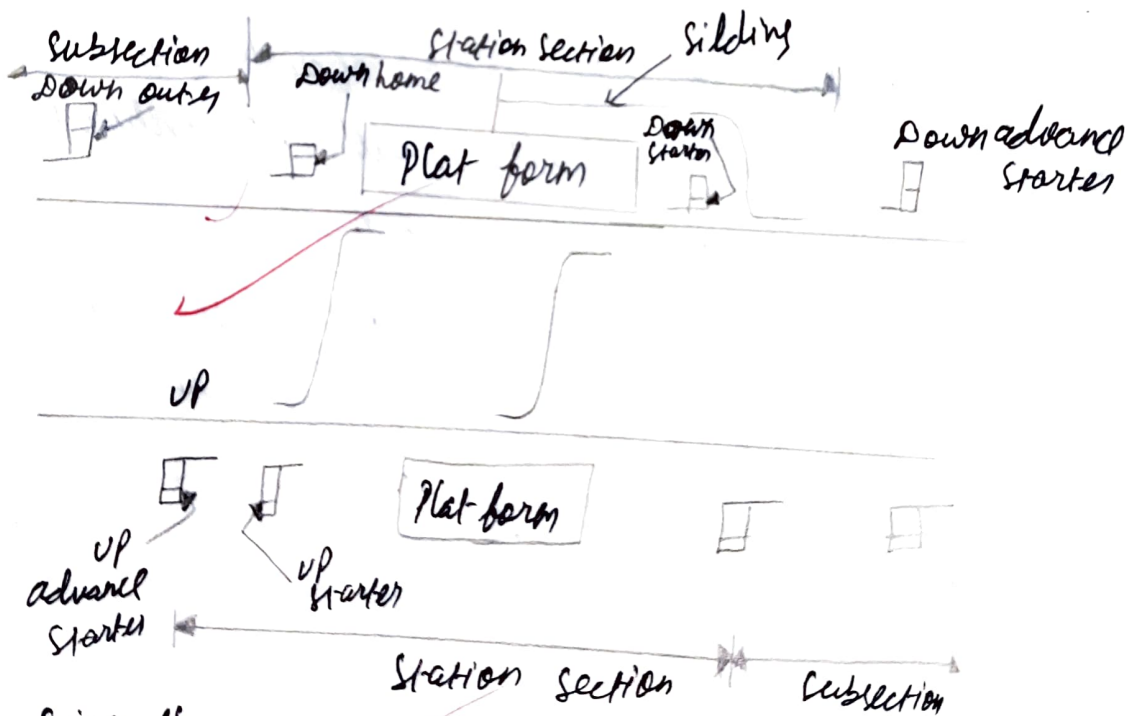
Types

1. two aspect, namely red and green
2. three aspect, namely red, yellow and green
3. four aspect - namely red and green, yellow (twice)

a. Signalling based on the function.

These signals are based placed around a station yard occupying certain defined location. different types of signal under this category are.

1. Outer signal
2. Home signal
3. Starter signal
4. Advance Starter signal



① Outer Signal:-

Bringing a train in motion to a stop depends on the weight of the train, brake the power the locomotive, speed of the train and gradient at the site.

only home signals permit the train to enter platform. The unprotected distance between the home signal and points is a maximum of 180m.

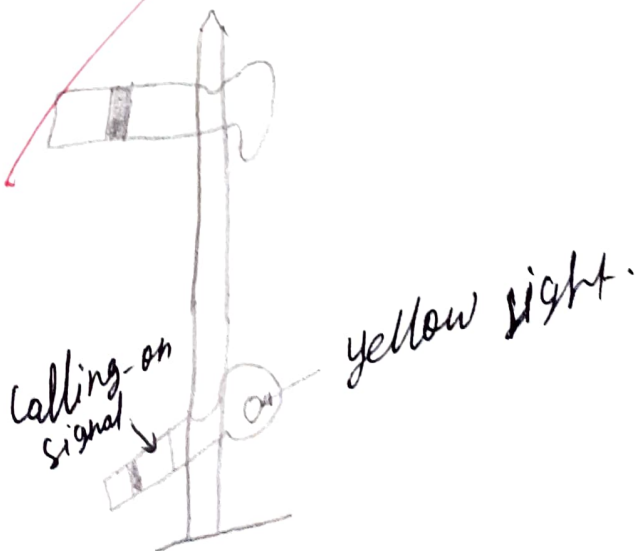
3. Starter signal:-

This signal is located at the forward end of the platform. its function is to control the movement of the trains as they leave the stations.

4. Advance starter signal:-

This signal is provided to carry out shunting operation with its protection. these signals may be of disk types signals, may be of disk types signals, small semaphores or any suitable form of ~~small~~ small lights.

it is necessary to provide sufficient space between signals and the siding so as to allow the maximum likely length of the train.



2. Explain the various types of level crossings and remedial measures. Give all in detail.

Definition:-

Railway lines to cross the road at the different elevation. If the level of the passing and traffic is the same as that of the railway track, the crossing is called as the level crossing.

Types of level crossing.

Level crossing are may be guarded or unguarded. In the case of guarded some method of preventing the movement of the train of the road vehicles is done this method may be swing type gates.

These gates of of manned crossing are either operated automatically or by watchman of rails. in case of unguarded leveling no watchman is provided.

Classifications:-

1. Special class level crossing
2. Class A level crossing
3. Class B level crossing
4. Class C level crossing
5. Class D level crossing.



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II ECE NAMELIST		
S.NO	REG. NO	STUDENT NAME
1	713621106001	DEVA R
2	713621106002	DINESH KUMAR R
7	713621106007	KIRTHICK ROSHAN
8	713621106008	LOGESH S
9	713621106009	MANIKANDAN R
10	713621106010	MATHAN GURU V
11	713621106011	NATHISH KUMAR N
12	713621106012	NIRMALA DEVI
13	713621106013	SANDEEP K
14	713621106017	TAMILVANI E
15	713621106018	VINISHA S
16	713621106301	AKIL R L
17	713621106302	ARAVINDHAN T
18	713621106303	ARUN KUMAR.P

SOPH

HOD



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III ECE NAMELIST

S.NO	REG. NO	STUDENT NAME
1	713620106002	RAJESH KUMAR M
2	713620106301	ANEESHA M
3	713620106302	BALA MUTHU B
5	713620106303	BASKAR P
6	713620106304	CHANDRU S
7	713620106305	KARTHIKEYAN R
8	713620106306	PRAVEENKUMAR T
9	713620106307	SABARISHMADHAN G
10	713620106309	THIRU R
11	713620106501	MUTHU VELU NACHIAR S

SOP

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STUDENTS NAMELIST IV ECE NAMELIST

S.NO	REG. NO	STUDENT NAME
1	713619106003	ANANTH J
2	713619106004	GOKULAKRISHNAN C
7	713619106011	KIRUTHIKA B
8	713619106012	LIBI NANDHINI N
9	713619106013	MOHAN K
10	713619106015	PANTHALARAJAN M
11	713619106016	PRIYADHARSHINI R
12	713619106017	RAMKUMAR M
13	713619106018	ROSHANAPRIYA S
14	713619106019	SANJULA M
15	713619106020	SOWMYA A
16	713619106022	YASWANTH H
17	713619106302	SUDHARSHAN B

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Department of Electronics & Communication Engineering

Academic Year (2022-2023) ODD SEMESTER

MENTOR SYSTEM DETAILS

S.No	Register Number	Name of the Student	Class	Name of the Faculty
1	713621106003	GAYATHIRI S	II	Mrs.S.SASIKALA
2	713621106017	TAMILVANI E	II	
3	713620106305	KARTHIKEYAN R	III	
4	713620106304	CHANDRU S	III	
5	713619106005	GOPINATH R	IV	
6	713619106013	MOHAN K	IV	
7	713619106302	SUDHARSHAN B	IV	
8	713621106002	DINESH KUMAR R	II	
9	713621106007	KIRTHICK ROSHAN	II	Ms.E.ELAKKIYA
10	713620106302	BALA MUTHU B	III	
11	713620106303	BASKAR P	III	
12	713619106003	ANANTHI J	IV	
13	713619106015	PANTHALARAJAN M	IV	
14	713619106018	ROSHANAPRIYA S	IV	
15	713621106001	DEVA R	II	Mrs.MAGIMA MOHAN
16	713621106006	KEERTHANA S	II	
17	713621106011	NATHISH KUMAR N	II	
18	713620106002	RAJESH KUMAR M	III	
19	713620106306	PRAVEENKUMAR T	III	
20	713619106004	GOKULAKRISHNAN C	IV	
21	713619106020	SOWMYA A	IV	
22	713621106004	GOPALAKRISHNAN S	II	Ms.P.ROCK FELLER SINGH RUSSELLS
23	713621106005	HARINEES C	II	
24	713621106012	NIRMALA DEVI	II	
25	713620106301	ANEESHA M	III	
26	713619106008	KANIPRIYA P	IV	
27	713619106011	KIRUTHIKA B	IV	
28	713619106017	RAMKUMAR M	IV	
29	713621106008	LOGESH S	II	Mr.P.RANGASAMY
30	713621106009	MANIKANDAN R	II	
31	713620106308	SUBATHRA R	III	
32	713619106009	KARTHICKSHANKAR S	IV	
33	713619106012	LIBI NANDHINI N	IV	
34	713619106019	SANJULA M	IV	
35	713619106022	YASWANTH H	IV	Ms.PRIYADHARSHINI
36	713621106010	MATHAN GURU V	II	
37	713621106013	SANDEEP K	II	
38	713620106307	SABARISHMADHAN G	III	
39	713620106309	THIRU R	III	
40	713619106010	KEERTHANA K	IV	
41	713619106016	PRIYADHARSHINI R	IV	
42	LATERAL	SANDEEP S	II	

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S.No	Register Number	Name of the Student	Class	Name of the Faculty
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11	713620106303	BASKAR P	III	
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13	713619106015	PANTHALARAJAN M	IV	
14	713619106018	ROSHANAPRIYA S	IV	
15	713621106001	DEVA R	II	Mrs. N.ABIRAMI
16	713621106006	KEERTHANA S	II	
17	713621106011	NATHISH KUMAR N	II	
18	713620106002	RAJESH KUMAR M	III	
19	713620106306	PRAVEENKUMAR T	III	
20	713619106004	GOKULAKRISHNAN C	IV	
21	713619106020	SOWMYA A	IV	
22	713621106004	GOPALAKRISHNAN S	II	Ms.P.ROCK FELLER SINGH RUSSELLS
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27	713619106011	KIRUTHIKA B	IV	
28	713619106017	RAMKUMAR M	IV	
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35	713619106022	YASWANTH H	IV	
36	713621106010	MATHAN GURU V	II	Ms.DEEPIKA
37	713621106013	SANDEEP K	II	
38	713620106307	SABARISHMADHAN G	III	
39	713620106309	THIRU R	III	
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42	LATERAL	SANDEEP S	II	



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REMEDIAL COACHING

REF: SSEC/ECE/CIR/01/2022-2023/ODD

DATE: 25.08.2022

CIRCULAR

This is to inform the II, III, IV Year remedial classes for the odd semester of 2022-2023 is to be held as per the schedule given below. Students are requested to utilize these classes.

IA1

S. NO	Date	Time	Subject / Code	Year / Sem
1	05.9.2022	5.00PM-7.00PM	EC8501/DIGITAL COMMUNICATION	III/V
2	05.09.2022	5.00PM-7.00PM	EC8701/ANTENNA AND MICROWAVE ENGINEERING	IV/VII
3	06.9.2022	5.00PM-7.00PM	EC8553/DISCRETE-TIME SIGNAL PROCESSING	III/V
4	06.09.2022	5.00PM-7.00PM	EC8751/OPTICAL COMMUNICATION	IV/VII
5	07.09.2022	5.00PM-7.00PM	EC8552/COMPUTER ARCHITECTURE AND ORGANIZATION	III/V
6	07.09.2022	5.00PM-7.00PM	EC8791/EMBEDDED REAL TIME SYSTEMS	IV/VII
7	08.09.2022	5.00PM-7.00PM	EC8551/COMMUNICATION NETWORKS	III/V
8	08.09.2022	5.00PM-7.00PM	EC8702/ADHOC AND WIRELESS SENSOR NETWORKS	IV/VII
9	09.09.2022	5.00PM-7.00PM	EC8073 /MEDICAL ELECTRONICS	III/V
10	09.09.2022	5.00PM-7.00PM	GE8075/DISASTER MANAGEMENT	IV/VII

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Sree Sakthi Engineering College

Karamadai, Coimbatore - 641104

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Anna University, Chennai)

REF: SSEC/ECE/CIR/01/2022-2023/ODD

DATE: 25.08.2022

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4	06.09.2022	5.00PM-7.00PM	EC8751/OPTICAL COMMUNICATION	IV/VII
5	07.09.2022	5.00PM-7.00PM	EC8552/COMPUTER ARCHITECTURE AND ORGANIZATION	III/V
6	07.09.2022	5.00PM-7.00PM	EC8791/EMBEDDED REAL TIME SYSTEMS	IV/VII
7	08.09.2022	5.00PM-7.00PM	EC8551/COMMUNICATION NETWORKS	III/V
8	08.09.2022	5.00PM-7.00PM	EC8702/ADHOC AND WIRELESS SENSOR NETWORKS	IV/VII
9	09.09.2022	5.00PM-7.00PM	EC8073 /MEDICAL ELECTRONICS	III/V
10	09.09.2022	5.00PM-7.00PM	GE8075/DISASTER MANAGEMENT	IV/VII

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III YEAR ECE

S.NO	REGISTER NUMBER	NAME	5/9	6/9	7/9	8/9	9/9
1	713620106002	RAJSH KUMAR	Rajsh	Rajsh	Rajsh	Rajsh	Rajsh
2	713620106302	BALAMUTHU	Balamuthu	Balamuthu	Balamuthu	Balamuthu	Balamuthu

IV YEAR ECE

S.NO	REGISTER NUMBER	NAME	10/10	11/10	12/10	13/10	14/10
1	713619106003	ANANTH J	An	An	An	An	An
2	713619106004	GOKULAKRISHNAN C	Gokul	Gokul	Gokul	Gokul	Gokul
3	713619106005	GOPINATH R	Gop	Gop	Gop	Gop	Gop
4	713619106008	KANIPRIYA P	Kan	Kan	Kan	Kan	Kan
5	713619106009	KARTHICKSHANKAR S	Karthick	Karthick	Karthick	Karthick	Karthick
6	713619106010	KEERTHANA K	Keer	Keer	Keer	Keer	Keer
7	713619106011	KIRUTHIKA B	Kir	Kir	Kir	Kir	Kir
8	713619106012	LIBI NANDHINI N	Libi	Libi	Libi	Libi	Libi
9	713619106013	MOHAN K	Moh	Moh	Moh	Moh	Moh
10	713619106015	PANTHALARAJAN M	Panth	Panth	Panth	Panth	Panth
11	713619106016	PRIYADHARSHINI R	Priya	Priya	Priya	Priya	Priya
12	713619106017	RAMKUMAR M	Ram	Ram	Ram	Ram	Ram
13	713619106019	SANJULA M	San	San	San	San	San
14	713619106020	SOWMYA A	Sow	Sow	Sow	Sow	Sow
15	713619106022	YASWANTH H	Yas	Yas	Yas	Yas	Yas
16	713619106302	SUDHARSHAN B	Sud	Sud	Sud	Sud	Sud

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REF: SSEC/ECE/CIR/01/2022-2023/EVEN

DATE: 11/2/2023

CIRCULAR

This is to inform the II, III, IV Year remedial classes for the odd semester of 2022-2023 is to be held as per the schedule given below. Students are requested to utilize these classes.

S. NO	Date	Time	Subject / Code	Year / Sem
1	14.02.2023	5.00PM-7.00PM	EC8691/MICROPROCESSORS & MICROCONTROLLERS	III/V
2	15.02.2023	5.00PM-7.00PM	EC8095/VLSI DESIGN	III/V
3	16.02.2023	5.00PM-7.00PM	EC8652/WIRELESS COMMUNICATION	III/V
4	17.02.2023	5.00PM-7.00PM	MG8591/PRINCIPLES OF AMANGEMENT	III/V
5	18.02.2023	5.00PM-7.00PM	EC8651/TRANSMISSION LINES & RF SYSTEMS	III/V

S. NO	Date	Time	Subject / Code	Year / Sem
1	14/03/2023	5.00PM-7.00PM	EC8691/MICROPROCESSORS & MICROCONTROLLERS	III/V
2	15/03/2023	5.00PM-7.00PM	EC8095/VLSI DESIGN	III/V
3	16/03/2023	5.00PM-7.00PM	EC8652/WIRELESS COMMUNICATION	III/V
4	17/03/2023	5.00PM-7.00PM	MG8591/PRINCIPLES OF AMANGEMENT	III/V
5	18/03/2023	5.00PM-7.00PM	EC8651/TRANSMISSION LINES & RF SYSTEMS	III/V


HOD

IA-2

S. NO	Date	Time	Subject / Code	Year / Sem
1	10.10.2022	5.00PM-7.00PM	EC8501/DIGITAL COMMUNICATION	III/V
2	10.10.2022	5.00PM-7.00PM	EC8701/ANTENNA AND MICROWAVE ENGINEERING	IV/VII
3	11.10.2022	5.00PM-7.00PM	EC8553/DISCRETE-TIME SIGNAL PROCESSING	III/V
4	11.10.2022	5.00PM-7.00PM	EC8751/OPTICAL COMMUNICATION	IV/VII
5	12.10.2022	5.00PM-7.00PM	EC8552/COMPUTER ARCHITECTURE AND ORGANIZATION	III/V
6	12.10.2022	5.00PM-7.00PM	EC8791/EMBEDDED REAL TIME SYSTEMS	IV/VII
7	13.10.2022	5.00PM-7.00PM	EC8551/COMMUNICATION NETWORKS	III/V
8	13.10.2022	5.00PM-7.00PM	EC8702/ADHOC AND WIRELESS SENSOR NETWORKS	IV/VII
9	14.10.2022	5.00PM-7.00PM	EC8073 /MEDICAL ELECTRONICS	III/V
10	14.10.2022	5.00PM-7.00PM	GE8075/DISASTER MANAGEMENT	IV/VII

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III YEAR ECE

S.NO	REGISTER NUMBER	NAME	14/2	15/2	16/2	17/2	18/2
1	713620106002	RAJSH KUMAR	Rajsh Kumar	Rajsh Kumar	Rajsh Kumar	Rajsh Kumar	Rajsh Kumar
2	713620106302	BALAMUTHU	Bud	Bud	Bud	Bud	Bud

S.NO	REGISTER NUMBER	NAME	14/3	15/3	16/3	17/3	18/3
1	713620106002	RAJSH KUMAR	Rajsh Kumar	Rajsh Kumar	Rajsh Kumar	Rajsh Kumar	Rajsh Kumar
2	713620106302	BALAMUTHU	Bud	Bud	Bud	Bud	Bud

[Signature]

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DEAPERTMENT OF COMPUTER SCIENCE AND ENGINEERING

2.2.1	COACHING CLASS FOR FAILURE STUDENT
	COACHING CLASS FOR FAILURE STUDENT ATTENDANCE
	SAMPLE ASSIGNMENT
	CIRCULAR
	ADVANCED LEARNERS NPTEL COURSE DETAILS
	NPTEL COURSE DEATSILS



DEPARTMENT OF CSE

19.09.2023 TO 25.09.2023 STUDENTS EVENING COACHING CLASS SCHEDULE

S.No	Date	Day	Timming	Class	Name of the Subjet	Name of the Staff	Remarks
1	20.09.2023	Wednesday	5.30 pm to 7.30 pm	III CSE	Computer Networks	Ms.S.Vinothini, AP /CSE	
			5.30 pm to 7.30 pm	IV CSE	Multicore Architecture and Programming		
2	21.09.2023	Thursday	5.30 pm to 7.30 pm	III CSE	Compiler Design	Mr.S.Kumaravel, HOD / CSE	
			5.30 pm to 7.30 pm	IV CSE	****		
3	22.09.2023	Friday	5.30 pm to 7.30 pm	III CSE	Crypto graphy and cyber security	Mrs.P.Archana AP / CSE	
			5.30 pm to 7.30 pm	IV CSE	rptography and Network securit		
4	23.09.2023	Saturday	5.30 pm to 7.30 pm	III CSE	Distributed Computing	Mrs.S.Swetha AP /CSE	
			5.30 pm to 7.30 pm	IV CSE	Supply Chain Management	Mrs.P.Prema AP /CSE	
5	25.09.2023	Monday	5.30 pm to 7.30 pm	III CSE	Business Analytics	Mr.R.Midhun AP / Mech	
			5.30 pm to 7.30 pm	IV CSE	Principles of Management	Mrs.S.KeerthiPriya AP /CSE	

COMPILER DESIGN

ASSIGNMENT-2

By

P. POORNIMA

713621104028

PART - A

1. What are the types of intermediate representation

Various types of intermediate represents are

- * Abstract syntax tree
- * Polish Notation
- * Three Address

2. Apply the rules used to define a regular Expression

ϵ is a regular expression that denotes the set containing empty string.

If R_1 and R_2 are regular Expression then $R = R_1 + R_2$ is also regular Expression.

Ex: $RE = (a+b)^*$

$L = \{ \epsilon, a, aa, ab, b, ba, bab \dots \text{any of } a \text{ and } b \}$

3. Define code generation

\Rightarrow Code generation is a final phase in the process of compilation

\Rightarrow It takes intermediate code as an input and generate target machine code as output.

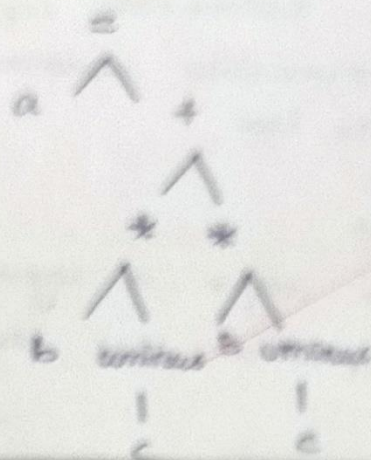
\Rightarrow The position of code generation is compilation process is illustrate.

4. State the problem in the code generation

The input to the code generation phase must be complete and error-free intermediate code as an input and generate target machine code as output.

The target code being generated from code generation phase must be assembly language code or machine language code.

5. Draw Abstract Tree for the expression $a + b * c + b * c$



6. What is the role of type checking?

- * Each identifier must be declared before the use.
- * The use of identifier must be within the scope.
- * An identifier must not have multiple declaration.

7. Write short notes on advanced type checking

=> Type checking is used to check the correctness of program.

=> Its main purpose is to check the correctness and type assignment, whether it is syntactically correct or not.

8. Define Activation tree

* An activation tree tells the flow of execution of program.

* It represents the flow in graphical manner.

* It is used in managing a stack of activation records.

9. Give the ways of representing two address statement
- * Abstract syntax tree
 - * Polish Notation
 - * Three address code

10. Differentiate parse tree and syntax tree

Parse tree	Syntax tree
An ordered rooted tree that represents the syntax structure of a string according to some context free grammar.	A tree represent of the abstract syntactic structure of source code written in a programming language.
Contains records of the rule to match input text.	Contains record of the syntax of programming language.

PART - B

1. Explain about the different type of three address code.

Three address code

Three address code is an abstract form of intermediate code that can be implemented as a record with the address fields.

There are the three representation used for three address code such as quadruples, triples and indirect triples.

Quadruple representation

The quadruple is a structure with at the most four field as Op, arg 1, arg 2, result.

The OP field is used to represent the internal code for operation, the arg 1 and arg 2 represent the two operands used and result field used and it is used to result of expression.

Example :

$$x := a * b + a - * b$$

$$t_1 := \text{uminus } a$$

$$t_2 := t_1 * b$$

$$t_3 := -a$$

$$t_4 := t_2 + t_3$$

$$x := t_5$$

Num	operator	opnd 1	opnd 2	result
0	uminus	a		t ₁
1	*	t ₁	b	t ₂
2	uminus	a		t ₃
3	*	t ₂	t ₃	t ₄
4	+	t ₂	t ₄	t ₅
5	:=	t ₅		x

Triples :

In the triples representation the use of temporary variables is avoided by referring pointer.

Example: $x := -a * b + -a * b$

Number	Operator	Operand 1	Operand 2
0	uminus	a	
1	*	(0)	b
2	uminus	a	
3	*	(2)	b
4	+	(1)	(3)
5	:=	x	(4)

Indexed triples :

⇒ In the Indexed triples representation the listing of triples is been done.

⇒ And listing pointers are used listed of using statement.

Num	operator	operand 1	operand 2
0	uminus	a	
1	*	(1)	b
2	uminus	(a)	
3	*	(b)	b
4	+	(12)	14
5	:=	x	15

	Statement
0	11
1	12
2	13
3	14
4	15
5	16

2. Define intermediate code generation and Explain in brief different form of intermediate code generation.

Intermediate language :

The task of compiler is to convert the source program into machine program. This activity can be done directly, but it is not always possible to generate such a machine code directly in one pass.

Benefits of Intermediate Code generation

- A compiler for different machines
- A compiler for different source language
- A machine independent code optimizer.

Properties of Intermediate Code generation

- Easy form of source language
- Effective mediate
- Flexible.

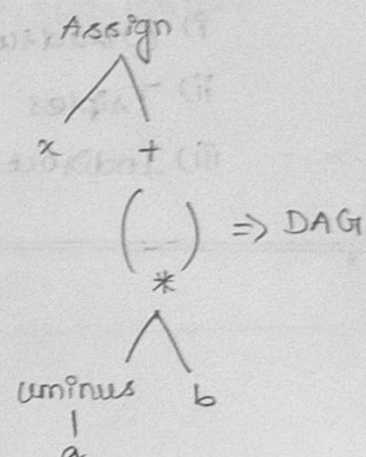
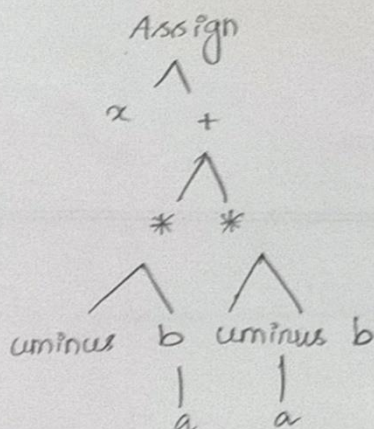
Forms of Intermediate language :

There are mainly three types of intermediate code generation.

Abstract Syntax tree

Polish Notation

Three Address Code.



Abstract Syntax tree:

* The natural hierarchical structure is represented by syntax tree.

* Directed Acyclic graph or DAG is very much similar to syntax tree but they are in more compact form.

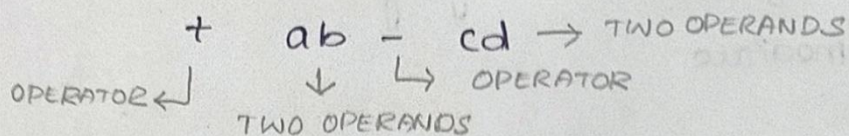
* Consider the input string $x := -a * b + -c * b$ for the syntax tree and DAG represent,

Polish Notation

* Basically, the linearization of syntax tree is polish notation.

* This is the most natural way of representation in expression evaluation.

$$(a + b) * (c - d)$$



Three address code :

* Three Address Code is an abstract form of Intermediate Code that can be implemented as record with the address fields.

* Three types of Three Address code are.

i) Quads

ii) Triples

iii) Indirect Triples

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3	713620104003	ANJALI K				
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