2.3.1-Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

Institution has adopted various learning methodologies such as experiential learning, participative learning and problem solving to create interest **amongst the students in the teaching learning process.**

Experiential Learning

Industrial visits and hands-on training by the industrial experts are arranged for the students to make them updated with the recent technological trends. Various certificate/add-on courses are conducted for the students to enhance their technical skills and employment opportunities. Students are encouraged to undertake internships/implant trainings for getting industrial working experience. Laboratory courses provide the students with better understanding of the concepts taught in the class.

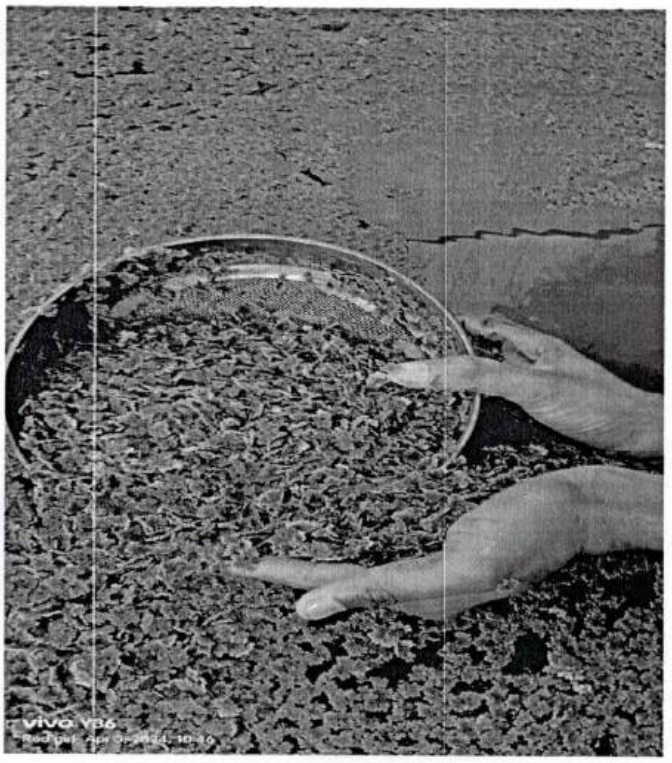
Participative Learning

Students are encouraged to participate in symposiums, intra/inter collegiate events, seminars, guest lectures and contests to bring-out their technical skills and innovative capabilities. Students are encouraged to participate in group discussions and seminars during the class hours. Students are also encouraged to undertake NPTEL courses in recent technologies.

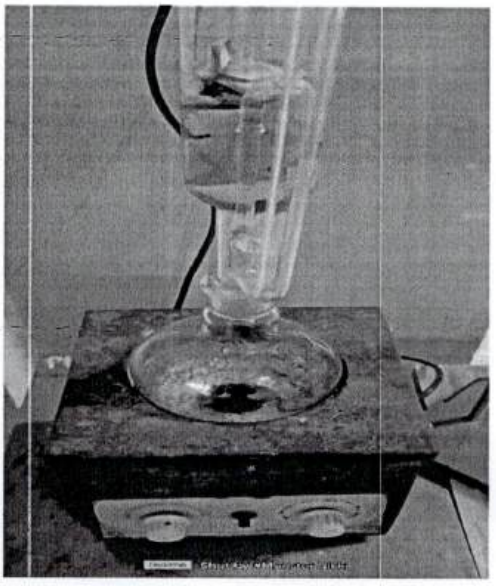
Problem Solving Methodologies

The project courses enable the students to identify societal problems and provide user-friendly/environment-friendly and economically feasible solutions using their innovative and creative thinking capabilities. Students are provided with problem solving assignments for better understanding the theatrical concepts. Tutorial classes are conducted for problem-oriented subjects to students for enhancing their problem-solving abilities.

NAME OF THE MATERIAL: - AZOLLA - Azolla, a remarkable aquatic fern, is revolutionizing agriculture. Its rapid growth and nitrogen-fixing ability make it a natural fertilizer, enriching soil health. Farmers are increasingly using Azolla to boost crop yields, reduce chemical dependency, and support sustainable farming practices.



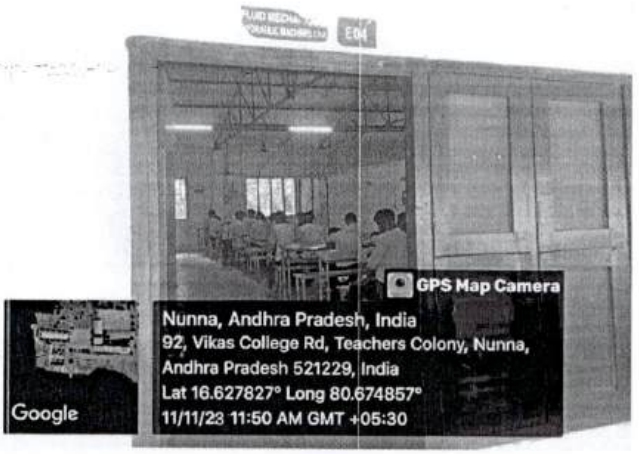
TOPIC:- OIL EXTRACTION FROM AZOLLA



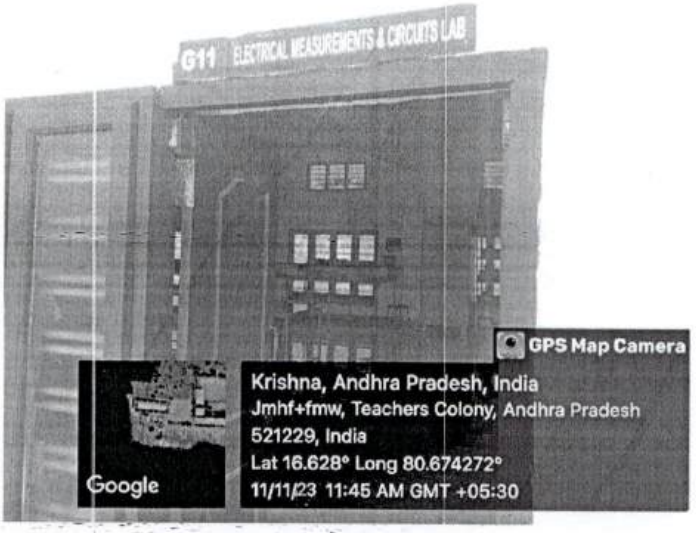
PRINCIPAL
VIKAS COLLEGE OF ENGG. TECH.
NUNNA - 521 212
Vijayawada Rural, NTR Dist., A.P.

1. 1. LABORATORY COURSES

FLUID MECHANICS AND HYDRAULICS MACHINES LAB



ELECTRICAL MEASUREMENTS & CIRCUITS LAB



PRINCIPAL
VIKAS COLLEGE OF ENGG. TECH.
NUNNA - 521 212
Vijayawada Rural, NTR Dist., A.P.

LAB : SUDHAMURTHY LAB

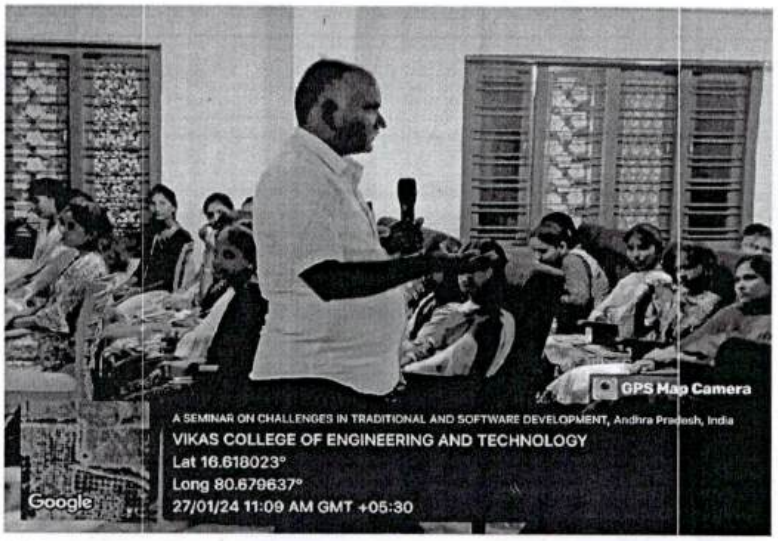
FIELDWORK

FIELDWORK

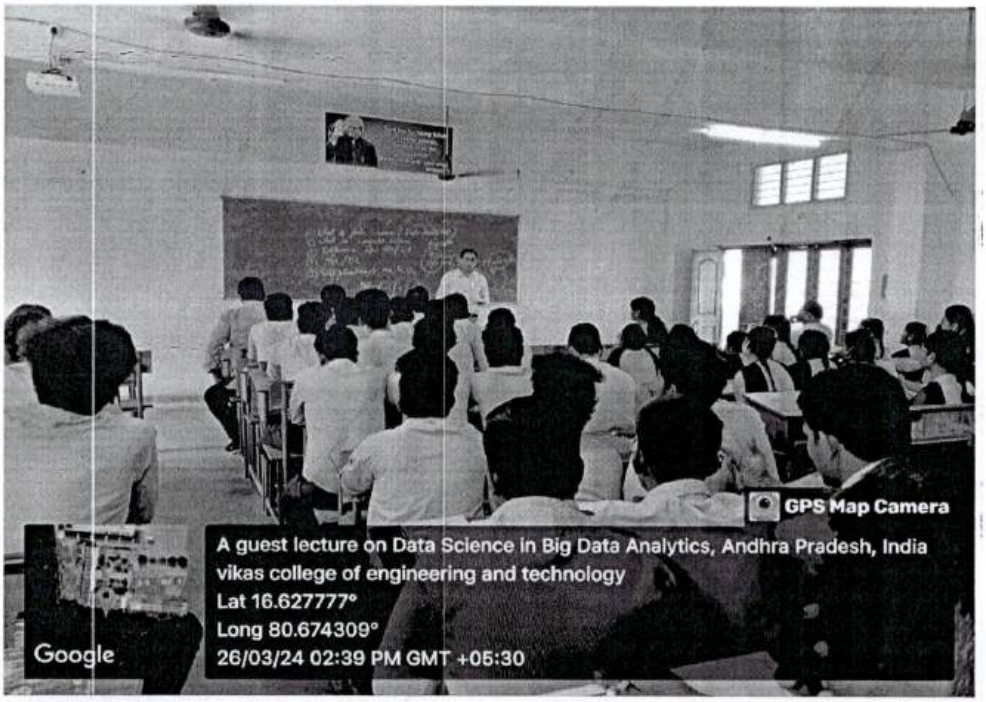
PRINCIPAL
VIKAS COLLEGE OF ENGG. TECH.
NUNNA - 521 212
Vijayawada Rural, NTR Dist., A.P.

2. PARTICIPATIVE LEARNING

SEMINAR TOPIC : - CHALLENGES INTRADITIONAL AND SOFTWARE DEVELOPMENT
DATE:-27/01/24



GUEST LECTURE TOPIC: DATA SCIENCE IN BID DATA ANALYTICS
GUEST FACULTY
DATE: - 26/03/24



PRINCIPAL
VIKAS COLLEGE OF ENGG. TECH.
NUNNA - 521 212
Vijayawada Rural, NTR Dist.

2.1 PARTICIPATIVE LEARNING

NPTEL
TOPIC: - MAINTENANCE AND REPAIR OF CONCRETRE STRUCTURES

GROUP DISCUSSIONS
TOPIC :- ADVANCED

3. PROBLEM SOLVING METHODOLOGIES

MAJOR PROJECT

DEPT: - ECE
TOPIC: - SMART WALLET AI –INFUSED IOT DEVICES FOR FINANCIAL SECURITY

VIKAS COLLEGE OF ENGINEERING AND TECHNOLOGY NUNNA
VIJAYAWADA RURAL, KRISHNA (DIST.), A.P.
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

This is to certify that the project entitled **"SMART WALLET AI-INFUSED IOT DEVICES FOR FINANCIAL SECURITY "** is the bonified work done by

M. REVANTH	:20NQ1A0418
A. R. VALLABHA RAYUDU	:20NQ1A0401
P. SANTOSH KUMAR	:20NQ1A0425
A. VENU GOPAL	:20NQ1A0403
M. ARAVIND	:20NQ1A0413

Students of IV B. Tech-II semester, in the department of ECE, **VIKAS COLLEGE OF ENGINEERING AND TECHNOLOGY, NUNNA** during the academic year 2023-2024 in partial Fulfilment for the award of bachelor degree of Technology, **JNTU-KAKINADA.**

SIGNATURE OF INTERNAL GUIDE
Mr. P. V. L. N. PHANI,
Sr. Assistant Professor

SIGNATURE OF HOD
Mr. B. V. REDDY M. Tech (Ph. D),
Associate Professor

SIGNATURE OF EXTERNAL EXAMINER

PRINCIPAL
VIKAS COLLEGE OF ENGG. TECH.
NUNNA - 521 212
Vijayawada Rural, NTR Dist., A.P.

DEPT: - CIVIL

TOPIC: - AN EXPERIMENTAL STUDY ON PARTIAL REPLACEMENT OF FINE AGRREGATE WITH WASTE RUBBER TYRE CRUMBS

CERTIFICATE

This is to certify the project work entitled, "AN EXPERIMENTAL STUDY ON PARTIAL REPLACEMENT OF FINE AGGREGATES WITH WASTE RUBBER TYRE CRUMBS" is a bonified work

Submitted by

N. SANJANI	20NQ1A0112
K. BHAGYASRI	20NQ1A0104
M. SANDEEP	20NQ1A0110
R. SRIRAM NAIK	20NQ1A0115
M. JAGAN SAI	21NQ5A0114

V. ANUSHA
PROJECT GUIDE

KKD VARA PRASAD RAO
HOD

EXTERNAL EXAMINER
15/5/24

PRINCIPAL
IKAS COLLEGE OF ENGG. TE
NUNNA - 521 212
Vijayawada Rural, NTR Dist., A.P.

DEPT: - MECH

TOPIC: - PREPARATION OF BIOMASS BRIQUESTTES USING VARIOUS AGRO WASTES

"PREPARATION OF BIOMASS BRIQUETTES USING VARIOUS AGRO WASTES"

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

KAKINADA

A project Submitted In partial fulfilment of the Requirements for the award of the

Degree of

BACHELOR OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

Submitted by

K. VAMSI DURGA PRASAD	21NQ5A0305
T. REVANTH	21NQ5A0314
K. CHANIKYA	21NQ5A0304
Y. PAVAN	21NQ5A0317
R. LAKSHMI KIRAN	21NQ5A0312

Under the guidance of

Mrs L.BINDU,

Asst.Professor

Department of Mechanical Engineering

VIKAS COLLEGE OF ENGINEERING AND TECHNOLOGY

(Affiliated to JNTU Kakinada, Approved by AICTE) Nunna, Vijayawada -521212, Andhra Pradesh

www.vikasinstitutions.org

PRINCIPAL
VIKAS COLLEGE OF ENGG. TE...
NUNNA - 521 212
Vijayawada Rural, NTR Dist., A.P.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY,KAKINADA

KAKINADA

"PRODUCTION OF BIOETHANOL FROM CATTAIL PLANTS"

A project Submitted In partial fulfilment of the Requirements for the award of

the Degree of

BACHELOR OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

Submitted by

21NQ5A0313	SHAIKARIF
21NQ5A0308	MOGHALAMIR BAIG
21NQ5A0315	VADLAMUDI JAYARAM
21NQ5A0311	PODTHULUSIVANARESH KUMAR
20NQ1A0305	LINGINENIMANIKANTA

Under the guidance of

Mr.T.MASTHANAIAH,

Associate Professor

Department of Mechanical Engineering

VIKAS COLLEGE OF ENGINEERINGAND TECHNOLOGY

(Affiliated to JNTU Kakinada, Approved by AICTE)

Nunna, Vijayawada -521212, Andhra Pradesh

INTERNSHIP (MINIPROJECT)

DEPT: - MECH

TOPIC: ANSYS WORKBENCH VIRTUAL

INTERNSHIP

Completion Certificate

28/07/2024

This is to certify that

KALLAGUNTA VAMSI CHANDRA

Student ID:22NQ5A0304

College: VIKAS COLLEGE OF ENGINEERING AND TECHNOLIGY

has successfully Completed Internship on Ansys Workbench Virtual Internship, during 3rdJune to 27thJuly-2024 at Naresh Technologies and Consultancy Services.

During this period, the intern has served as a Developer and has displayed remarkable exceptional coordination skills and effective communication abilities. Intern has consistently approached new assignments and challenges with enthusiasm towards Ansys Workbench. Intern has commitment and willingness to acquire new knowledge and skills have been evident throughout internship.

Internship Details:

Internship ID	:	Ansys Workbench
Location	:	Virtual
Duration	:	3rd June to 27th July-2024
Certificate ID	:	62Dh83634c2666509376

Best regards,

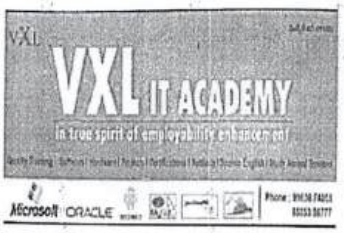
Authorized Signatory

MICRO, SMALL & MEDIUM ENTERPRISES
सूक्ष्म, लघु एवं मध्यम उद्यम
OUR STRENGTH • हमारी शक्ति

www.nareshtandcs.com info@nareshtandcs.com

PRINCIPAL
VIKAS COLLEGE OF ENGG. TECH.
NUNNA - 521 212
Vijayawada Rural, NTR Dist.,

DEPT :- CSE
TOPIC :- FULL STOCK DEVELOPMENT



FULL STACK DEVELOPMENT

Creating a "Website site with Full stack with portfolio

SUBMITT

VELAGALETI PRASANTHI

GuidanceandInternshipLocation

VXL IT SOLUTIONS

-Vijayawada, Labbipe520010

PRINCIPAL
IKAS COLLEGE OF ENGG. TECH.
NUNNA - 521 212
Vijayawada Rural, NTR Dist., A.P.

DEPT :- CSE
TOPIC :- RED HAT ENTERPRISE LINUX

An Internship Report on

RED HAT ENTERPRISE LINUX

Submitted in accordance with the requirement for the degree of

Under the Faculty Guideship of

MR. VIJAY KOMARAPU

Department of Computer Science and Engineering

Vikas College of Engineering and Technology

Submitted by :

Pothuraju Akshayarani

Reg No.: 22NQ1A0572

Department of Computer Science and Engineering

Vikas College of Engineering and Technology

(Name of the College)

PRINCIPAL
VIKAS COLLEGE OF ENGG. TECH.
NUNNA - 521 212
Vijayawada Rural, NTR Dist., A.P.

DEPT: - CIVIL

TOPIC: STAAD PRO DRAFTING USING AUTO CAD

DL CONSTRUCTIONS
DESIGN OF LIFE
ENGINEERS & ASSOCIATION

Cell: 97037 23230
M. Surya Narayana
Licensed Civil Engineer, License No: CE-5/21
Consultants for VMC Plans, CRDA Plans,
Structural Drawings, Estimations & Elevations

CERTIFICATE OF INTERNSHIP

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Kondaveeti Praveen Kumar (23NQ5A0106)** has done his Internship at DL CONSTRUCTIONS, Vijayawada from 03-06-2024 to 30-07-2024.

He has worked on a project titled Analysis and Design of Building using STAAD Pro. This project was aimed at complete design of a building. As a part of the project, he has done Analysis and design of building using STAAD Pro and Drafting using AutoCAD.

During his internship he has demonstrated his skills with self-motivation to learn new skills. His performance exceeded our expectations and he was able to complete the project on time. We wish him all the best for his upcoming career.

(M.SURYANARAYANA)
Proprietor

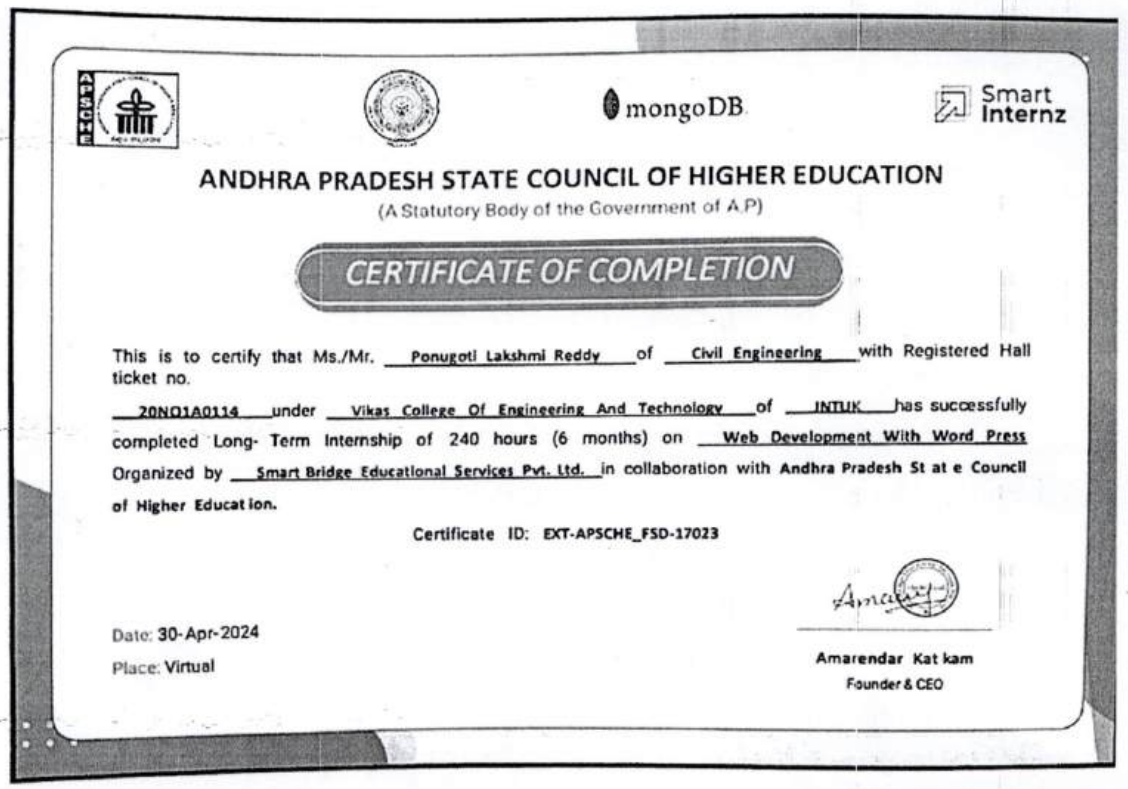
M. SURYANARAYANA, B.Tech.
LICENSED CIVIL ENGINEER
VMC Licence No: CE-05/2021
APCRDA Regd. No. MAU61-DPOVIJ(LE)/2/2023
Gandhinagar, VIJAYAWADA-520 003,
Cell: 9703723230, 9573720922.

26-16-13, Vuyyuru Jamindar Street, Gandhi Nagar, Vijayawada, NTR District, Pin: 520003
Email: suryakannakvr@gmail.com

PRINCIPAL
..KAS COLLEGE OF ENGG. TECH.
NUNNA - 521 212
Vijayawada Rural, NTR Dist., A.P.

DEPT: - CIVIL

TOPIC: WEB DEVELOPMENT WITH WORD PRESS



ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION

(A Statutory Body of the Government of A.P)

CERTIFICATE OF COMPLETION

This is to certify that Ms./Mr. Ponugoti Lakshmi Reddy of Civil Engineering with Registered Hall ticket no. 20NQ1A0114 under Vikas College Of Engineering And Technology of JNTUK has successfully completed Long- Term Internship of 240 hours (6 months) on Web Development With Word Press Organized by Smart Bridge Educational Services Pvt. Ltd. in collaboration with Andhra Pradesh St at e Council of Higher Educat ion.

Certificate ID: EXT-APSCHE_FSD-17023

Date: 30-Apr-2024

Place: Virtual

Amarendar Kat kam

Founder & CEO

PRINCIPAL

VIKAS COLLEGE OF ENGG. TECH.

NUNNA - 521 212

Vijayawada Rural, NTR Dist., A.

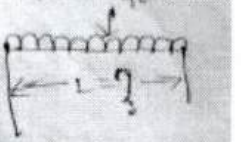
PROBLEM SOLVING ASSIGNMENTS

SUBJECT: - STRENGTH OF MATERIALS

1) A Beam is simply supported Beam and carries a uniformly distributed load 40kN/m across the whole span. the section of the beam is rectangular having depth as 500mm 120 N/mm² and moment of inertia of the section 7×10^8 mm⁴ find the span of the Beam.

given data:

UDL = (w) = 40kN/m ⇒ 40 kN/m = 7.40×10^3 N/m



Depth = 500mm

max stress (σ_{max}) = 120N/mm²

moI of section (I) = 7×10^8 mm⁴

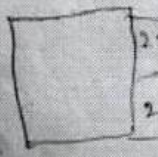
I as L = ?

solution:

section modulus for a max. Bm

$m = \sigma_{max}$

section modulus of the section



$Z = \frac{I}{y_{max}}$

$= \frac{d}{2}$

$= \frac{500}{2}$

$y_{max} = 250mm$

$Z = \frac{7 \times 10^8}{250}$

$Z = 2.8 \times 10^5 mm^4$

max. BM for a SSB carrying UDL

$$m = \frac{wL^2}{8}$$

$$= \frac{10000 \times L^2}{8}$$

$$= 5000L^2 \text{ mm}$$

$$m = 5000L^2 \times 1000 \text{ N-mm}$$

Put all varlou's sub in equtian no: (1)

$$m = \sigma_{max} \cdot Z$$

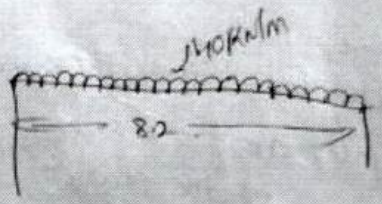
$$5000L^2 \times 1000 = 120 \times (2.8 \times 10^5)$$

$$L^2 = \frac{120 \times (2.8 \times 10^5)}{5000 \times 1000}$$

$$= \sqrt{67.2} \quad = 67.2$$

$$= 8.197 \text{m say } 8.2 \text{ m}$$

$L = 8.2 \text{m}$

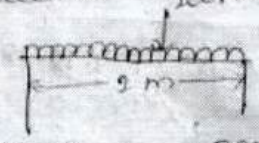


1 (B)

A beam supported at it's ends has a span of 2m and carries a UDL of 200KN/m over the entire span the cross section of the beam is T-section having flange width 125mm flange thickness 25mm & web thickness 25mm & overall depth 200mm. calculate maximum shear stress in the beam and draw shear stress distribution diagram

Given data:

$L = 2m \Rightarrow 2000mm$



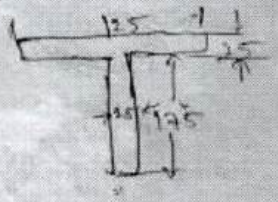
Solution:

The given carries UDL covers it's entire span

$$R_A = R_B = \frac{wL}{2}$$

$$= \frac{200 \times 2}{2} = \frac{2 \times 200}{2}$$

$$R_A = R_B = 200$$



Shear force (F) = 200KN

$$\bar{y} = \frac{A_1 y_1 + A_2 y_2 + \dots}{A_1 + A_2}$$

$A_1 = 25 \times 175 = 4375mm$ | $y_1 = \frac{175}{2} = 87.5mm$

$A_2 = 125 \times 25 = 3125mm$ | $y_2 = 175 + \frac{25}{2} = 187.5mm$

$$= \frac{(4375 \times 87.5) + (3125 \times 187.5)}{4375 + 3125} \quad \bar{y} = 129.17mm$$

Now,

moI of the section about NA

$I = I_1 + I_2$

I_1 = moI of web about NA

$= \frac{bd^3}{12} + A_1(\bar{y}_1 - y_1)^2$

$= \frac{25 \times 175^3}{12} + 4375 \times (129.19 - 87.5)^2$

$I = 18.76 \times 10^6 mm^4$

similple load

I_2 = moI TOP flange about NA

$= \frac{bd^3}{12} + A_2(\bar{y} - \bar{y}_2)^2$

$= \frac{125 \times 25^3}{12} + (3125)(129.19 - 187.5)^2$

$= 10.787 \times 10^6 mm^4$

$I = I_1 + I_2$

$= 18.76 \times 10^6 + 10.787 \times 10^6$

$= 29.54 \times 10^6 mm^4$

Now,

for given T-section maximum stress will be as the NA

$\tau_{max} = F \frac{A\bar{y}}{Ib}$

F = 200 kN

A = 129.17 × 25

= 3229.25

$\bar{y} = \frac{129.17}{2}$

$\bar{y}$ = 64.5 mm

b = 25mm

put all value sin equn (1)

$\tau_{max} = 200 \times 10^3 \times \frac{3229.25 \times 64.59}{(29.56 \times 10^6) \times 25}$

$\tau_{max} = 56.4 N/mm^2$