



# SRI BHARATHI

ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)  
Kaikkurichi, Pudukkottai -622 303

[www.sbec.edu.in](http://www.sbec.edu.in)

## NAAC DOCUMENTS



Quality Indicator Frame Work

Criterion – 2

Teaching-Learning and Evaluation

Submitted by

**IQAC**

**Internal Quality Assurance Cell**

**Sri Bharathi Engineering College for Women**



**Criteria 2**

**Teaching-Learning and Evaluation**

**350**

**Key Indicator- 2.3. Teaching- Learning Process (40)**

**2022-2023**

**PROBLEM SOLVING  
CIVIL ENGINEERING**

<b>Activity</b>	<b>Number of Students attended</b>	<b>Page No.</b>
<b>Tutorial</b>	<b>14</b>	<b>3</b>
<b>Mini Project</b>	<b>10</b>	<b>8</b>
<b>TOTAL STUDENTS ATTENDED</b>	<b>24</b>	<b>-</b>



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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

**Criteria 2**

**Teaching-Learning and Evaluation**

**350**

**Key Indicator- 2.3. Teaching- Learning Process (40)**

**2022-2023**

**CIVIL ENGINEERING**

**PROBLEM SOLVING**

**TUTORIAL**



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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

## DEPARTMENT OF CIVIL ENGINEERING

### Problem Solving Methodology

List of Students II year Civil-Problem Solving Method

Academic Year (2022-2023)

S.No	Register No	Name	Year/Sem	Name of the learning method
1	912621103001	Akila G	II/IV	<b>Problem Solving Method- Tutorial</b> CE 3401/ Applied Hydraulic Engineering
2	912621103003	Jayabharathi R		
3	912621103004	Jaya Manohari B		
4	912621103005	Priyadharshini A		
5	912621103006	Rabia Banu M		
6	912621103007	Sherlin Kavya B		
7	912621103301	Jenifar A		
8	912621103302	Kalaiarasi G		

Name and Signature of the Faculty Incharge

*A. Sivaraj*  
{A. SIVAYOGARAJ}

*S. Thilagavathi*  
**Dr. S.THILAGAVATHI M.E., Ph.D.,**  
**PRINCIPAL**  
**SRI BHARATHI ENGINEERING**  
**COLLEGE FOR WOMEN**  
**Kaikkurichi - 622 303, Pudukkottai Dt.**

*Rledy*  
**HoD/Civil**  
**HO D / CIVIL**  
**SRI BHARATHI ENGINEERING**  
**COLLEGE FOR WOMEN**  
**KAIKKURICHI,**  
**PUDUKKOTTAI - 622 303**



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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

## DEPARTMENT OF CIVIL ENGINEERING

### Tutorial Answer sheet

Name of the Student : Akila. G

AU Register Number: 9126 21 103001

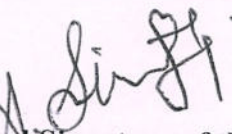
Tutorial – 02		Date of Issue:	10.02.2023	Marks	10
Course code	CE 3401	Course Title	Applied Hydraulics Engineering		
Year	II	Semester	IV	Date of Submission:	14.02.2023

Q.No	Questions	CO
1.	(i) Define specific energy. How would you express the specific energy for a wide rectangular channel with depth of flow ' $d$ ' and velocity of flow ' $V$ '? Draw the typical specific energy diagram and explain its features. (ii) Calculate the specific energy, critical depth and velocity for the flow of $10 \text{ m}^3/\text{s}$ in a cement lined rectangular channel 2.5 m wide with 2 m depth of water. Is the given flow subcritical or supercritical?	C210.1
2.	(i) Define Froude number $Fr$ . Describe the flow for $Fr=1$ , $Fr>1$ and $Fr<1$ . Represent a discharge versus depth curve for a constant specific energy and explain its features. (ii) A trapezoidal channel has a bottom width of 6.1 m and side slopes of 2 H : 1 V. When the depth of flow is 1.07 m, the flow is $10.47 \text{ m}^3/\text{s}$ ? What is the specific energy of flow? Is the flow tranquil or rapid?	C210.1
3.	Water flows at rate of 20 cumecs in a rectangular channel 14 m wide at a velocity of 1.8m/s. Determine the specific energy of the flowing water, critical velocity and minimum specific energy corresponding to this discharge, the Froude number and state whether the flow is subcritical or supercritical.	C210.1

### Mark Allocation

Rubrics	Marks Allocated	Marks obtained
Problem solving approach	6	4
Correction of answer	2	1
Timely submission	2	2
Total marks	10	7

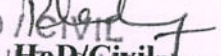
Name and Signature of the Faculty Incharge

  
P.A. SIVAYOGARAJ

  
Dr. S. THILAGAVATHI M.E., Ph.D.,

PRINCIPAL

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KAIKKURICHI,



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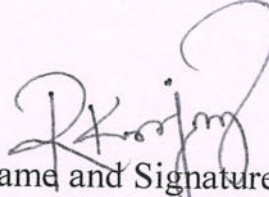
## DEPARTMENT OF CIVIL ENGINEERING

### Problem Solving Methodology

List of Students III year Civil-Problem Solving Method

Academic Year (2022-2023)

S.No	Register No	Name	Year/Sem	Name of the learning method
1.	912620103001	Aswini T	III/VI	Problem Solving Method- Tutorial CE 8602/Structural Analysis II
2.	912620103002	Geetha M		
3.	912620103003	Keerthi S		
4.	912620103004	Subathra S		
5.	912620103301	Bhavani S		
6.	912620103302	Megala V		

  
Name and Signature of the Faculty Incharge  
[R. KAYALVIZHI].

  
Dr. S. THILAGAVATHI M.E., Ph.D.,  
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Kaikkurichi - 622 303, Pudukkottai Dt.

  
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DEPARTMENT OF CIVIL ENGINEERING

**Tutorial Answer sheet**

Name of the Student : *Muthulakshmi S*

AU Register Number: *912619 03005*

Tutorial – 01		Date of Issue:	13.02.2023	Marks	10
Course code	CE8602	Course Title	Structural analysis II		
Year	III	Semester	VI	Date of Submission:	15.02.2023

Q.No	Questions	CO
1.	Draw the influence line for $M_B$ for the continuous beam ABC simply supported at A and C using Muller Breslau's principle. AB=3m, BC=4m. EI is constant.	C311.1
2.	Determine the influence line diagram for bending moment at a point D, the midpoint of span AB of a continuous beam ABC of span AB=6m and BC=4m simply supported at supports A, B and C. Compute the ordinates at every 1m interval.	C311.1
3.	The warren girder of 25m span is made of 5 panels of 5m each. The diagonals are inclined at $60^\circ$ to the horizontal. Draw the influence line diagram for force in upper chord member in the second panel from left. Hence evaluate the forces in it when there is load of 60 kN at each lower joint.	C311.1

**Mark Allocation**

Rubrics	Marks Allocated	Marks obtained
Problem solving approach	6	<i>3</i>
Correction of answer	2	<i>2</i>
Timely submission	2	<i>1</i>
Total marks	10	<i>06</i>

Name and Signature of the Faculty Incharge

*[R. KAYALAKSHI]*

HoD/Civil

HOD / CIVIL

SRI BHARATHI ENGINEERING  
COLLEGE FOR WOMEN  
KAIKKURICHI,  
PUDUKKOTTAI - 622 303

**Dr. S. THILAGAVATHI M.E., Ph.D.,**

**PRINCIPAL**

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**Kaikkurichi - 622 303, Pudukkottai Dt.**



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**Criteria 2**

**Teaching-Learning and Evaluation**

**350**

**Key Indicator- 2.3. Teaching- Learning Process (40)**

**2022-2023**

**CIVIL ENGINEERING**

**PROBLEM SOLVING**

**MINI PROJECT**





# SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

## DEPARTMENT OF CIVIL ENGINEERING


### Problem Solving Methodology

List of Students IV year Civil-Problem Solving Method

Academic Year (2022-2023)

Batch No	Register No	Name	Year/Sem	Topic	Name of the learning method
1	912619103002	Aruljenifar C	IV/VII	Planning & design of Taluk office building	Problem Solving Method- Mini Project
	912619103006	Praveena S			
	912619103301	Lilly John J			
2	912619103005	Muthulakshmi S	IV/VII	Planning & design of Rural police station	
	912619103007	Priyadharshini K			
	912619103302	Bhuvani S			
3	912619103001	Ajitha T	IV/VII	Planning & design of Proposed fire station	
	912619103003	Divya V			
	912619103004	Mangaiyarkarasi G			
	912619103009	Ragavi V			

  
**Dr. S. THILAGAVATHI M.E., Ph.D.,**  
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Kaikkurichi - 622 303, Pudukkottai Dt.

  
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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

## DEPARTMENT OF CIVIL ENGINEERING

### Problem Solving Methodology

#### IV Year/VII Semester Mini Project Batch List (2022-2023)

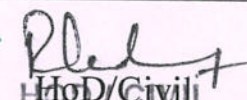
Batch No	Register Number	Students Name	Project Title	Guide Name
1	912619103002	Aruljenifar C	Planning & design of Taluk office building	Ms.G.Gayathri AP/CIVIL
	912619103006	Praveena S		
	912619103301	Lilly John J		
2	912619103005	Muthulakshmi S	Planning & design of Rural police station	MRS.P DENNIS FLORA AP/CIVIL
	912619103007	Priyadharshini K		
	912619103302	Bhuvani S		
3	912619103001	Ajitha T	Planning & design of Proposed fire station	MR.A.SIVAYOGARAJ AP/CIVIL
	912619103003	Divya V		
	912619103004	Mangaiyarkarasi G		
	912619103009	Ragavi V		

Project Coordinator

  
**Dr. S. THILAGAVATHI M.E., Ph.D.**

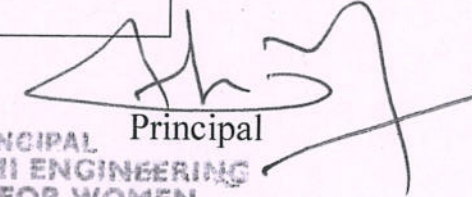
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HoD/Civil

**SRI BHARATHI ENGINEERING  
COLLEGE FOR WOMEN  
KAIKKURICHI,  
PUDUKKOTTAI - 622 303**

PRINCIPAL

  
Principal

**SRI BHARATHI ENGINEERING  
COLLEGE FOR WOMEN  
KAIKKURICHI - 622 303.  
PUDUKKOTTAI DISTRICT**



## PLANNING AND DESIGN OF TALUK OFFICE BUILDING

A PROJECT REPORT

Submitted by

C. ARULJENIFAR	912619103002
S. PRAVEENA	912619103006
J. LILLY JOHN	912619103301

In partial fulfilment for the award of the degree  
Of

**BACHELOR OF ENGINEERING**

IN

**CIVIL ENGINEERING**

**SRI BHARATHI ENGINEERING COLLEGE FOR  
WOMEN KAIKKURICHI, PUDUKKOTTAI-622303**

**ANNA UNIVERSITY: CHENNAI - 600 025**

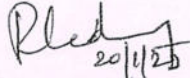
**JANUARY-2023**

  
**DR. S. THILAGAVATHI M.E., P.H.D.,**  
**PRINCIPAL**  
**SRI BHARATHI ENGINEERING**  
**COLLEGE FOR WOMEN**  
**Kaikkurichi - 622 303, Pudukkottai Dt.**

ANNA UNIVERSITY: CHENNAI 600025

BONAFIDE CERTIFICATE

Certificate that this project report "PLANNING AND DESIGN OF TALUK OFFICE BUILDING" is the bonafide C.ARULJENIFAR (912619103002), S.PRAVEENA (912619103006), J.LILLY JOHN (912619103301) who carried out the Project work under my supervision.



SIGNATURE

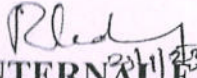
Mrs. R. PADMA RANI, M.E  
HEAD OF THE DEPARTMENT,  
Department of Civil Engineering,  
Sri Bharathi Engineering  
College for Women,  
Pudukkottai - 622303.



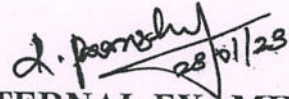
SIGNATURE

Ms. G. GAYATHRI, M.E  
SUPERVISOR,  
Department of Civil Engineering,  
Sri Bharathi Engineering  
College for Women ,  
Pudukkottai - 622303.

Submitted for the project viva – voice examination held on 23/01/2023 (FN)



INTERNAL EXAMINER



EXTERNAL EXAMINER

ii  


Dr. S. THILAGAVATHI M.E., Ph.D.,  
PRINCIPAL  
SRI BHARATHI ENGINEERING  
COLLEGE FOR WOMEN  
Kalkkurchi - 622 303, Pudukkottai Dt.



# PLANNING AND DESIGN OF RURAL POLICE STATION

A PROJECT REPORT

Submitted by

S.MUTHULAKSHMI 912619103005

K.PRIYADHARSHINI 912619103007

S.BHUVANI 912619103302

In partial fulfillment for the award of degree  
Of

**BACHELOR OF ENGINEERING**

IN

**CIVIL ENGINEERING**

**SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN  
KAIKKURICHI, PUDUKKOTTAI-622303**

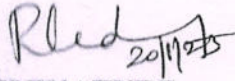
**ANNA UNIVERSITY: CHENNAI - 600 025**

**JANUARY-2023**

**Dr. S. THILAGAVATHI M.E., Ph.D.,  
PRINCIPAL  
SRI BHARATHI ENGINEERING  
COLLEGE FOR WOMEN  
Kaikkurichi - 622 303, Pudukkottai Dt.**

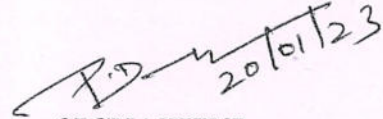
## BONAFIDE CERTIFICATE

Certificate that this project report "PLANNING AND DESIGN OF RURAL POLICE STATION" is the bonafide S.MUTHULAKSHMI (912619103005), K.PRIYADHARSHINI (912619103007), S.BHUVANI (912619103302) who carried out the Project work under my supervision.



SIGNATURE

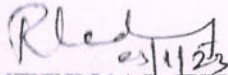
Mrs. R. PADMA RANI, M.E  
HEAD OF THE DEPARTMENT,  
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Pudukkottai - 622303.



SIGNATURE

Mrs.P.DENNIS FLORA, M.E  
SUPERVISOR,  
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Pudukkottai - 622303.

Submitted for the project viva – voice examination held on 23.01.2023 (FN)



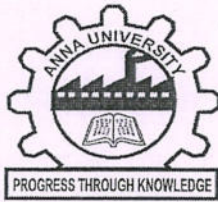
INTERNAL EXAMINER



EXTERNAL EXAMINER



Dr. S. THILAGAVATHI M.E., Ph.D.,  
PRINCIPAL  
SRI BHARATHI ENGINEERING  
COLLEGE FOR WOMEN  
Kaikkurchi - 622 303, Pudukkotta! Dt.



# PLANNING AND DESIGN OF PROPOSED FIRE STATION

A PROJECT REPORT

Submitted by

T. AJITHA	912619103001
V. DIVYA	912619103003
G. MANGAIYARKARASI	912619103004
V. RAGAVI	912619103009

*In partial fulfillment for the award of the degree*

*of*

BACHELOR OF ENGINEERING  
IN  
CIVIL ENGINEERING

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN  
KAIKKURICHI, PUDUKKOTTAI-622303

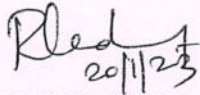
ANNA UNIVERSITY: CHENNAI - 600 025

JANUARY-2023

**Dr. S. THILAGAVATHI M.E., Ph.D.,**  
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SRI BHARATHI ENGINEERING  
COLLEGE FOR WOMEN  
Kaikkurichi - 622 303, Pudukkottai - Dt.

## BONAFIDE CERTIFICATE

Certificate that this project report "PLANNING AND DESIGNING OF PROPOSED FIRE STATION" is the bonafide T. AJITHA (912619103001) V. DIVYA (912619103003) K. MANGAIYARKARASI (912619103004), V. RAGAVI (912619103009) who carried out the project work under my supervision.

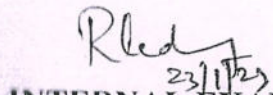
  
20/1/23  
SIGNATURE


Mrs. PADMARANI M.E.,  
(HEAD OF THE DEPARTMENT),  
Department of Civil Engineering,  
Sri Bharathi Engineering  
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Pudukkottai-622303

  
13/1/23  
SIGNATURE

Mr. A. SIVAYOGARAJ M.E, AMIE.,  
(SUPERVISOR),  
Department of Civil Engineering,  
Sri Bharathi Engineering  
College for Women  
Pudukkottai - 622303

Submitted for the project viva – voice examination held on. 23/1/2023 - FN

  
23/1/23  
INTERNAL EXAMINER

  
22/01/23  
EXTERNAL EXAMINER

  
Dr. S. THILAGAVATHI M.E., Ph.D.,  
PRINCIPAL  
SRI BHARATHI ENGINEERING  
COLLEGE FOR WOMEN  
Kaikkurchi - 622 303, Pudukkottai: Dt.