



# 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 – 1

CURRICULAR ASPECTS

Submitted by

**IQAC**

**Internal Quality Assurance Cell**

Sri Bharathi Engineering College for Women



# SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25

KAIKKURUCHI, PUDUKOTTAI – 622 303

DEPARTMENT OF CIVIL ENGINEERING

**ACADEMIC YEAR 2019-2020 / EVEN SEMESTER**

## 1.2 Academic Flexibility (30)

1.2.1 Number of Certificate/Value added courses offered and online courses of MOOCs, SWAYAM, NPTEL etc. (where the students of the institution have enrolled and successfully completed during the last five years)

AND

1.2.2 Percentage of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

<b>VAC Title:</b>	<b>SOIL POLLUTION AND RESTORATION</b>				
<b>Resource Person:</b>	Er.M.Pradeep, M.E., Approved Valuer &Chartered Engineer, PMP Consultant, Trichy.				
<b>Date of conduct from :</b>	<b>09.12.2019</b>	<b>To:</b>	<b>14.12.2019</b>	<b>Duration:</b>	<b>36 Hours</b>
<b>Organized Department :</b>	<b>CIVIL ENGINEERING</b>				
<b>Participant Year:</b>	<b>2/ 3 /4</b>	<b>Semester:</b>	<b>EVEN</b>	<b>No. of Students Registered :</b>	<b>27</b>
<b>Venue:</b>	<b>First Floor - Lecture Hall : 30</b>				

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## DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2019-2020 / EVEN SEMESTER

Date: 04/12/2019

### DEPARTMENT CIRCULAR

This is to inform you that Value Added Course offered by the Department of Civil Engineering for all Second, Third & Final year Civil Engineering students on “Soil pollution and Restoration” in association with “PMP Consultants” from 09.12.2019 to 14.12.2019. Certificates will be issued to the eligible participants at the end of the Course.

S.No.	Name of the Course	Resource Person
1.	Soil pollution and Restoration	Er.M.Pradeep, M.E., Approved Valuer & Chartered Engineer, PMP Consultant, Trichy.

Cc:

- Principal's Office
- IQAC Coordinator
- Class In charges - II, III & IV-year of Civil Engineering
- II, III & IV-year Civil Engineering Students
- Notice Board

R. S. Srinivasan  
HoD/Civil

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

Dr. S. THILAGAVATHI M.E., Ph.D.,  
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## DEPARTMENT OF CIVIL ENGINEERING

### ACADEMIC YEAR 2019-2020 / EVEN SEMESTER


#### Value Added Course on “Soil pollution and Restoration”

#### SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE
1	General Consideration, physical and chemical, weathering of bedrock	3	09.12.2019
2	Importance of land reclamation, rehabilitation, ecological Restoration	3	09.12.2019
3	Dumping of large quantities of solid waste, Deforestation and soil erosion	3	10.12.2019
4	Indiscriminate use of pesticides, insecticides and herbicides, Chemicals released by industrial wastes	3	10.12.2019
5	Effects on agriculture, urban areas, Ecological imbalance	3	11.12.2019
6	Changes in Soil Structure, Effect on Ecosystem and Biodiversity.	3	11.12.2019
7	Process of increasing soil fertility by innovative approaches, Reducing chemical fertilizer and pesticide use	3	12.12.2019
8	Reusing of materials, Solid waste treatment, Recycling and recovery of material	3	12.12.2019
9	Strengthening of soil structure, Sustainable Practices, Integrated farming	3	13.12.2019
10	Chemical remediation, Remediation of soil pollution using Electrokinetic method.	3	13.12.2019
11	Urban soil degradation waste induced pollution	3	14.12.2019
12	Soil fallout radionuclide contamination	3	14.12.2019
<b>Total Hours</b>		<b>36</b>	

  
VAC Coordinator

  
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## DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2019-2020 (EVEN SEM)

STUDENTS PARTICIPATION LIST-VAC PROGRAM

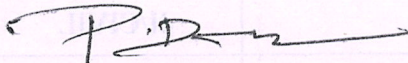
SOIL POLLUTION AND RESTORATION

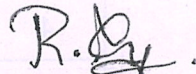
S.NO	REG.NO	NAME OF THE STUDENT	YEAR/BRANCH
1	912618103003	MAHESHWARI V	II/CIVIL
2	912618103005	MEENACHI K	II/CIVIL
3	912618103008	SATHYA M	II/CIVIL
4	912618103009	SRIVIDHYA S	II/CIVIL
5	912618103010	UMAMAHESWARI K	II/CIVIL
6	912617103001	CHANDRIKA C	III/CIVIL
7	912617103002	DHESIKAPARTHI D	III/CIVIL
8	912617103003	KARTHIKA K	III/CIVIL
9	912617103004	KASTHURI K	III/CIVIL
10	912617103005	MONIKA K	III/CIVIL
11	912617103006	MUTHUMEENA P	III/CIVIL
12	912617103007	POTHUMPEN A	III/CIVIL
13	912617103008	PRIYADHARSHINI S	III/CIVIL
14	912617103009	RAJESWARI J	III/CIVIL
15	912617103010	SIVAPRIYA S	III/CIVIL
16	912617103701	LAKSHMI A	III/CIVIL
17	912616103001	AARTHI G	IV/CIVIL
18	912616103002	ANANTHI S	IV/CIVIL

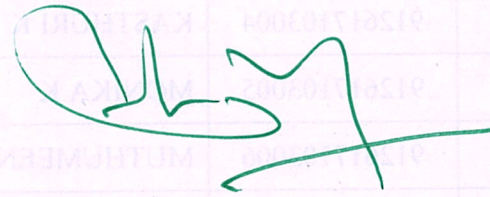
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19	912616103004	KANIMOZHI P	IV/CIVIL
20	912616103005	LAVANYA K	IV/CIVIL
21	912616103006	MASILAMANI M	IV/CIVIL
22	912616103007	MENAKA R	IV/CIVIL
23	912616103008	PRAVEENA M	IV/CIVIL
24	912616103301	GOWSIKA N	IV/CIVIL
25	912616103302	KALISWARI M	IV/CIVIL
26	912616103303	MAHESWARI M	IV/CIVIL
27	912616103304	SARATHAPRITHA S	IV/CIVIL

  
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DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2019-2020 (EVEN SEM)

## ATTENDANCE SHEET FOR VALUE ADDED COURSE- SOIL POLLUTION AND RESTORATION

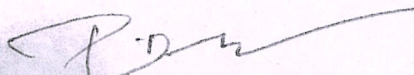
S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	DATE: 09.12.19		DATE: 10.12.19		DATE: 11.12.19		DATE: 12.12.19		DATE: 13.12.19		DATE: 14.12.19		NO OF SESSIONS ATTENDED	SIGNATURE OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
1	912618103003	MAHESHWARI V	II/CIVIL	/	/	/	/	/	a	/	/	/	a	/	/	10	Menh
2	912618103005	MEENACHI K	II/CIVIL	/	/	/	/	/	/	/	a	/	/	/	/	11	Meenal
3	912618103008	SATHYA M .	II/CIVIL	/	/	/	/	/	/	/	/	/	/	/	/	12	Sathya
4	912618103009	SRIVIDHYA S	II/CIVIL	/	/	/	/	/	/	/	/	/	/	/	/	12	Sriyaf.
5	912618103010	UMAMAHESWARI K	II/CIVIL	/	a	/	/	/	/	/	/	/	/	/	/	11	Umarh
6	912617103001	CHANDRIKA C	III/CIVIL	/	/	/	/	/	/	/	/	/	a	/	/	11	C. char
7	912617103002	DHESIKAPARTHI D	III/CIVIL	/	/	/	/	/	/	/	/	/	/	/	/	12	D. Dheerika
8	912617103003	KARTHIKA K	III/CIVIL	/	/	/	a	/	/	/	/	/	/	/	/	11	K. karthika
9	912617103004	KASTHURI K	III/CIVIL	/	/	/	/	/	a	/	/	/	/	/	/	11	Kasthuri
10	912617103005	MONIKA K	III/CIVIL	/	/	/	/	/	/	/	/	/	/	/	/	12	Monika
11	912617103006	MUTHUMEENA P	III/CIVIL	/	/	/	/	/	/	/	/	/	/	/	/	12	Muthumeena

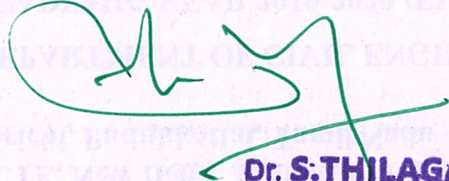
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12	912617103007	POTHUMPEN A	III/CIVIL	1	1	1	1	1	a	1	1	1	1	1	1	11	Pothu
13	912617103008	PRIYADHARSHINI S	III/CIVIL	1	1	1	a	1	1	1	1	a	1	1	1	10	Priyath
14	912617103009	RAJESWARI J	III/CIVIL	1	1	1	1	1	a	1	1	1	1	1	1	11	Rajeshwari
15	912617103010	SIVAPRIYA S	III/CIVIL	1	a	1	1	1	1	a	1	1	1	1	1	10	S. Sivapriya
16	912617103701	LAKSHMI A	III/CIVIL	1	1	1	a	1	1	1	1	1	1	1	1	11	Lakshmi
17	912616103001	AARTHI G	IV/CIVIL	1	1	1	1	1	1	a	1	1	1	a	1	10	Arthi
18	912616103002	ANANTHI S	IV/CIVIL	1	a	1	1	1	a	1	1	1	1	1	1	10	Ananthi
19	912616103004	KANIMOZHI P	IV/CIVIL	1	1	1	1	1	1	1	1	1	1	1	1	12	Kanimozhi
20	912616103005	LAVANYA K	IV/CIVIL	1	1	1	1	1	1	1	1	1	1	1	1	12	Lavanya
21	912616103006	MASILAMANI M	IV/CIVIL	1	1	1	1	1	1	a	1	1	1	1	1	11	Masilamani
22	912616103007	MENAKA R	IV/CIVIL	1	a	1	1	1	1	1	1	1	1	1	1	11	Menaka
23	912616103008	PRAVEENA M	IV/CIVIL	1	1	1	1	1	1	1	1	1	1	1	1	12	Preethi
24	912616103301	GOWSIKA N	IV/CIVIL	1	1	1	1	1	1	1	1	1	1	1	1	12	Gowri
25	912616103302	KALISWARI M	IV/CIVIL	1	1	1	1	1	1	1	1	1	1	1	1	12	Kalishwari
26	912616103303	MAHESWARI M	IV/CIVIL	1	1	1	a	1	1	1	1	1	1	a	1	10	Maheshwari
27	912616103304	SARATHAPRITHA S	IV/CIVIL	1	1	1	1	1	a	1	1	1	1	1	1	11	Sarathapriya

  
VAC Coordinator



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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

**Report on Value Added Course**

Title: Soil pollution and Restoration

Resource Person: Er.M.Pradeep, M.E.,  
Approved Valuer & Chartered Engineer,  
PMP Consultant,  
Trichy.

Date of conduct from : 09.12.2019 To: 14.12.2019 Duration: 36 Hours

Organized Department : CIVIL ENGINEERING

Participant Year: 2, 3, 4 Semester: EVEN No. of Students Registered : 27

Venue: First Floor: Lecture Hall:30


**Outcome of Value Added Course (VAC): Students are able to**


- Apply knowledge of soil structure and soil formation to address soil environment issues.
- Apply physical and chemical parameters of soil environment in the process of soil degradation and pollution assessment.
- Evaluate the soil degradation, advantages and disadvantages of preventing and improving methods for soil pollution.
- Assess the causes and sources of pollution to treat soil contamination.
- compare remediation technology and improve the remediate.
- Conceive ideas of soil environment improvement in soil degradation and pollution.

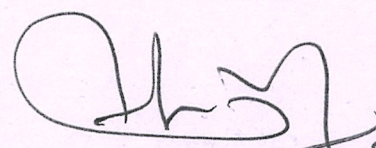
No. of students successfully completed the VAC course is **27 students** based on the following assessment process.

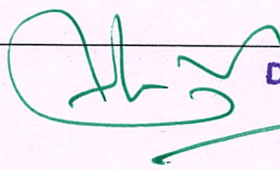
**Assessment Process**

- Students securing **more than 60% on total score** and secured more than 75% in attendance is eligible to receive the certificate for the VAC course conducted
- Total Score = (0.5 \* Attendance in VAC out of 100 percentage + 0.5 \* Test mark in VAC out of 100 marks)

  
VAC Coordinator

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

  
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## **CERTIFICATE OF PARTICIPATION**

This is to certify that

**MUTHUMEENA P, B.E - CIVIL ENGINEERING, III YEAR**  
from Sri Bharathi Engineering College for Women,  
has successfully participated 6 days Value Added Course on  
“Soil pollution and Restoration”

during

09.12.2019-14.12.2019

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**COLLEGE FOR WOMEN**  
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**Registered Structural**  
**Engineer**





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## **CERTIFICATE OF PARTICIPATION**

This is to certify that

**UMAMAHESWARI K, B.E - CIVIL ENGINEERING, II YEAR**

from Sri Bharathi Engineering College for Women,

has successfully participated 6 days Value Added Course on

**“Soil pollution and Restoration”**

**during**

09.12.2019-14.12.2019

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

PRINCIPAL

**SRI BHARATHI ENGINEERING  
COLLEGE FOR WOMEN**

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

**Registered Structural  
Engineer**





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## **CERTIFICATE OF PARTICIPATION**

This is to certify that

LAVANYA K, B.E - CIVIL ENGINEERING, IV YEAR

from Sri Bharathi Engineering College for Women,

has successfully participated 6 days Value Added Course on

“Soil pollution and Restoration”

during

09.12.2019-14.12.2019

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

**Registered Structural  
Engineer**





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**DEPARTMENT OF CIVIL ENGINEERING**

**ACADEMIC YEAR 2019-2020 / EVEN SEMESTER**

**Name of the Student :**

**Year/Sem:**

**AU Register Number:**

**Value Added Course on “Soil pollution and Restoration”**

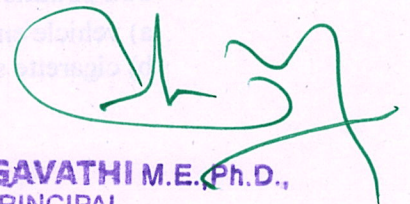
**MCQ QUESTIONS (25X4 = 100 Marks)**

1. What is negative Soil Pollution?
  - a) It indicates a reduction in soil productivity due to erosion and overuse
  - b) Reduction in soil productivity due to the addition of pesticides
  - c) Converting fertile land into hardened land by dumping ash, sludge and garbage
  - d) None of the above
2. The quantity of DDT at each trophic level in the Food Chain
  - a) Decreases
  - b) Remains the same
  - c) Increases
  - d) Changes
3. DDT is a major contributor to Pollution because of
  - a) It kills useful microorganisms
  - b) It destroys valuable species of worms
  - c) It is non-biodegradable
  - d) It interferes with pesticides
4. The chemicals released due to unsustainable agricultural practices and cause Soil Pollution are
  - a) Pathogens
  - b) Chemical fertilizers
  - c) Strontium-90
  - d) Weedicides
5. Slash and burn agriculture, which is not a healthy technique of farming and depletes soil of the important nutrients, is a part of which of the following?
  - a) Striping farming
  - b) Intercrop farming
  - c) Jhum cultivation
  - d) None of the above
6. How are PAHs related to Soil Pollution?
  - a) They are carcinogenic organic compounds
  - b) They are fertilizer wastes
  - c) They are inorganic wastes from industries
  - d) They are harmful metals that pollute the soil
7. Soil pollution due to PAHs can be sourced to
  - a) vehicle emissions
  - b) cigarette smoke
  - c) extraction of shale oil
  - d) All of the above

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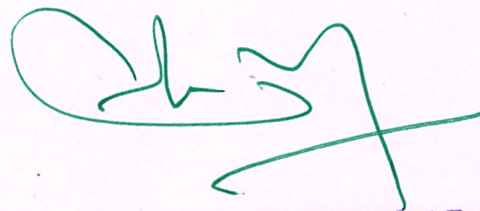
8. Benzene and Methylbenzene the major Soil Pollutants mostly from the Petroleum Industries are
- a) Heavy organic pollutants  
b) Inorganic pollutants  
c) Carcinogenic pollutants  
d) None of the above
9. Which of these pollutants is a Herbicide?
- a) PHPs  
b) Amides  
c) Chlorinated hydrocarbons  
d) Copper Sulfate
10. Which of the following serves as an indicator of Atmospheric Pollution
- a) Fern  
b) Liverworts  
c) Hornworts  
d) Epiphytic lichens
11. Why is area treatment important for Soil?
- a) To reduce the impact of raindrops on the soil  
b) To maximize surface run-off  
c) Not treating the upper catchment and proceeds towards an outlet  
d) Not storing surplus rainwater
12. Which type of land/soil pollution cause makes soil unfit for cultivation due to high salt content?
- a) Carbonisation  
b) Oxygenation  
c) Salinization  
d) Desertification
13. Phosphorus uptake in alkali soil in the form of \_\_\_\_\_
- a)  $\text{H}_2\text{PO}_4^-$   
b)  $\text{HPO}_4^{2-}$   
c)  $\text{PO}_4^{3-}$   
d)  $\text{H}_3\text{PO}_4$
14. Which fertilizer produce acidity in soil
- a) Ammonium sulfate  
b) Sodium nitrate  
c) Calcium ammonium nitrate  
d) Calcium nitrate
15. Maximum N content found in N fertilizer
- a) Urea  
b) Anhydrous ammonia  
c) Sodium nitrate  
d) Ammonium sulphate
16. The phenomenon slickenside found in which soil
- a) Inceptisol  
b) Vertisol  
c) Gelisol  
d) Spodosol
17. pF scale for Field capacity is \_\_\_\_\_
- a) 2  
b) 2.5  
c) 3.5  
d) 4.5
18. What main kind of pollution affects the health of plants?
- a) Minerals  
b) Roots  
c) Soil Pollution  
d) Plant health
19. Which soil horizon contains decomposed plants and animals?
- a) A Horizon  
b) B Horizon  
c) C Horizon  
d) O Horizon



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20. Which of these factors is not a cause in an increase in land pollution?  
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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2019-2020 / EVEN SEMESTER

Value Added Course on “Soil pollution and Restoration”

## ANSWER KEY

1	a	6	a	11	a	16	b	21	c
2	c	7	d	12	c	17	b	22	b
3	c	8	c	13	c	18	c	23	a
4	b	9	a	14	a	19	d	24	a
5	c	10	b	15	b	20	c	25	d

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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2019-2020 / EVEN SEMESTER

Name of the Student : Meenachi . K Year/Sem: II / IV

AU Register Number: 912618103005

Value Added Course on “Soil pollution and Restoration”

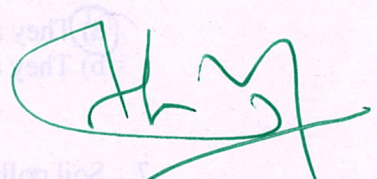
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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2019-2020 / EVEN SEMESTER

Name of the Student : *Sarathapriya.S* Year/Sem: *IV / VIII*

AU Register Number: *912616103304*

Value Added Course on “Soil pollution and Restoration”

## MCO QUESTIONS (25X4 = 100 Marks)

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*22*  
*25*

*[Signature]*  
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**DEPARTMENT OF CIVIL ENGINEERING**

**ACADEMIC YEAR 2019-2020 / EVEN SEMESTER**

Name of the Student : A. Pothumpen

Year/Sem: III / VI

20  
25

AU Register Number: 912617103007

Value Added Course on “Soil pollution and Restoration”

**MCQ QUESTIONS (25X4 = 100 Marks)**

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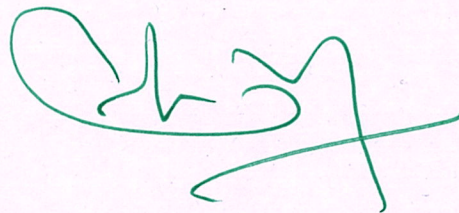
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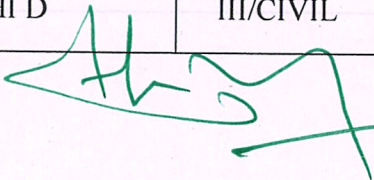
Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2019-2020 (EVEN SEM)

MARK SHEET FOR VALUE ADDED COURSE- SOIL POLLUTION AND RESTORATION

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	ATTENDANCE DETAILS		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No of Sessions Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
1	912618103003	MAHESHWARI V	II/CIVIL	10	83	18	72	78
2	912618103005	MEENACHI K	II/CIVIL	11	92	19	76	84
3	912618103008	SATHYA M	II/CIVIL	12	100	20	80	90
4	912618103009	SRIVIDHYA S	II/CIVIL	12	100	21	84	92
5	912618103010	UMAMAHESWARI K	II/CIVIL	11	92	18	72	82
6	912617103001	CHANDRIKA C	III/CIVIL	11	92	20	80	86
7	912617103002	DHESIKAPARTHI D	III/CIVIL	12	100	19	76	88

  
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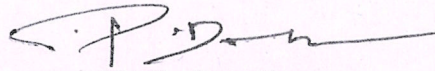


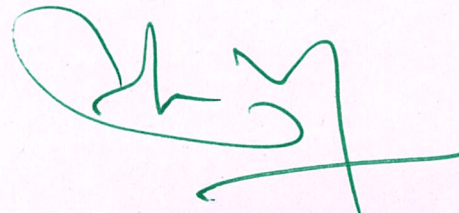
8	912617103003	KARTHIKA K	III/CIVIL	11	92	22	88	90
9	912617103004	KASTHURI K	III/CIVIL	11	92	20	80	86
10	912617103005	MONIKA K	III/CIVIL	12	100	20	80	90
11	912617103006	MUTHUMEENA P	III/CIVIL	12	100	21	84	92
12	912617103007	POTHUMPEN A	III/CIVIL	11	92	20	80	86
13	912617103008	PRIYADHARSHINI S	III/CIVIL	10	83	19	76	80
14	912617103009	RAJESWARI J	III/CIVIL	11	92	22	88	90
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16	912617103701	LAKSHMI A	III/CIVIL	11	92	21	84	88
17	912616103001	AARTHI G	IV/CIVIL	10	83	17	68	76
18	912616103002	ANANTHI S	IV/CIVIL	10	83	18	72	78
19	912616103004	KANIMOZHI P	IV/CIVIL	12	100	20	80	90
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21	912616103006	MASILAMANI M	IV/CIVIL	11	92	17	68	80

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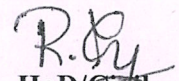


22	912616103007	MENAKA R	IV/CIVIL	11	92	20	80	86
23	912616103008	PRAVEENA M	IV/CIVIL	12	100	20	80	90
24	912616103301	GOWSIKA N	IV/CIVIL	12	100	18	72	86
25	912616103302	KALISWARI M	IV/CIVIL	12	100	19	76	88
26	912616103303	MAHESWARI M	IV/CIVIL	10	83	21	84	84
27	912616103304	SARATHAPRITHA S	IV/CIVIL	11	92	22	88	90

  
VAC Coordinator



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