



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

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 2021-2022 / 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

Certificate Course Title:	REMOTE SENSING AND GIS IN CIVIL ENGINEERING				
Resource Person:	1.Mrs. P. Dennis Flora, Assistant Professor, Department of Civil Engineering. Sri Bharathi Engineering College for Women, Kaikkurichi, Pudukkottai.		2.Ms.G.Gayathri, Assistant Professor, Department of Civil Engineering. Sri Bharathi Engineering College for Women, Kaikkurichi, Pudukkottai.		
Date of conduct from :	07.03.2022	To:	11.03.2022	Duration:	30 Hours
Organized Department :	CIVIL ENGINEERING				
Participant Year:	2/ 3 /4	Semester:	EVEN	No. of Students Registered :	20
Venue:	First Floor - Lecture Hall : 30				

TABLE OF CONTENTS

SNO	DOCUMENT	PAGE-NO
1	Certificate Course Circular	3-3
2	Certificate Course Schedule	4-4
3	List of students participants	5-6
4	Attendance Of Students	7-8
5	Certificate Course Report	9-9
6	Course Completion Certificates	10-12
7	Certificate Course Test Paper	13-15
8	Certificate Course Answer Key	16-16

9	Certificate Course Test Answer Sheet-Sample	17-25
10	Certificate Course Mark Statement	26-27



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DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022 / EVEN SEMESTER

Date: 02/03/2022

DEPARTMENT CIRCULAR

Certificate course offered by the Department of Civil Engineering for all Second , Third & Final year Civil Engineering students on “**Remote Sensing and GIS in Civil Engineering**” in our College campus from 07.03.2022 to 11.03.2022. Certificates will be issued to the eligible participants at the end of the Course.

S.No.	Name of the Course	Resource Person
1.	Remote Sensing and GIS in Civil Engineering	1.Mrs. P. Dennis Flora, Assistant Professor, Department of Civil Engineering. Sri Bharathi Engineering College for Women, Kaikkurichi, Pudukkottai.
		2.Ms.G.Gayathri, Assistant Professor, Department of Civil Engineering. Sri Bharathi Engineering College for Women, Kaikkurichi, Pudukkottai.

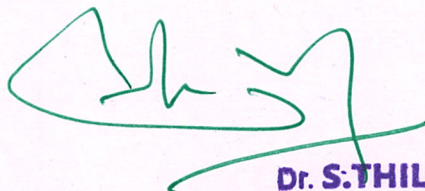
Cc:

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


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HOD / CIVIL

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PUDUKKOTTAI - 622 303



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

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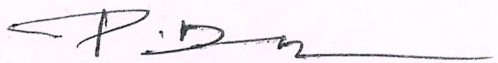
DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022 / EVEN SEMESTER

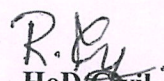
Certificate Course on “Remote Sensing and GIS in Civil Engineering”

SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE	RESOURCE PERSON
1	Historical Components of Remote Sensing Principles & methods of remote sensing - Active and Passive remote sensing - Remote Sensing platforms	3	07.03.2022	Mrs. P. Dennis Flora
2	Geosynchronous based on purpose Earth Resources satellites, communication satellite Weather satellites Spy satellites Sensors Description of sensor in landscape, spot, IRS series and current satellites	3	07.03.2022	Ms.G.Gayathri
3	Characteristics of Digital satellite image enhancement Filtering Applications of Aerial photographs and satellite imageries	3	08.03.2022	Mrs. P. Dennis Flora
4	GIS – Components of GIS – Hardware, Software and Organisational Context – Data – Spatial and NonSpatial – Maps	3	08.03.2022	Ms.G.Gayathri
5	Types of Maps – Projection – Types of Projection - Data Input – Digitizer, Scanner – Editing – Raster and Vector data structures	3	09.03.2022	Mrs. P. Dennis Flora
6	updating information on road networks and other urban infrastructure	3	09.03.2022	Ms.G.Gayathri
7	Preparation of housing typologies	3	10.03.2022	Mrs. P. Dennis Flora
8	Analysis of watersheds, Landscape development	3	10.03.2022	Ms.G.Gayathri
9	3D modeling, Infrastructure modeling and Environmental impact assessment	3	11.03.2022	Mrs. P. Dennis Flora
10	Analysis using Raster and Vector data – Retrieval, Reclassification, Overlaying, Buffering – Data Output – Printers and Plotters	3	11.03.2022	Ms.G.Gayathri
Total Hours		30	-	


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DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022 (EVEN SEM)

STUDENTS PARTICIPATION LIST-CERTIFICATE COURSE

REMOTE SENSING AND GIS IN CIVIL ENGINEERING

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/BRANCH
1	912620103001	ASWINI T	II/CIVIL
2	912620103002	GEETHA M	II/CIVIL
3	912620103003	KEERTHI S	II/CIVIL
4	912620103004	SUBATHRA S	II/CIVIL
5	912620103301	BHAVANI S	II/CIVIL
6	912620103302	MEGALA V	II/CIVIL
7	912619103001	AJITHA T	III/CIVIL
8	912619103002	ARULJENIFAR C	III/CIVIL
9	912619103003	DIVYA V	III/CIVIL
10	912619103004	MANGAIYARKARASI G	III/CIVIL
11	912619103005	MUTHULAKSHMI S	III/CIVIL
12	912619103006	PRAVEENA S	III/CIVIL
13	912619103007	PRIYADHARSHINI K	III/CIVIL
14	912619103009	RAGAVI V	III/CIVIL
15	912619103301	LILLY JOHN J	III/CIVIL
16	912619103302	BHUVANI S	III/CIVIL
17	912618103005	MEENACHI K	IV/CIVIL
18	912618103008	SATHYA M	IV/CIVIL

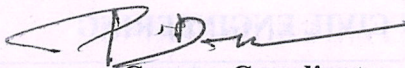
Dr. S. THILAGAVATHI M.E., Ph.D.,

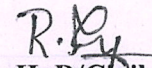
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19	912618103009	SRIVIDHYA S	IV/CIVIL
20	912618103010	UMAMAHESWARI K	IV/CIVIL


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Kaikkurchi - 622 303, Pudukkottai Dt.

Sl. No.	Name of the Student	Year/Branch
1		
2		
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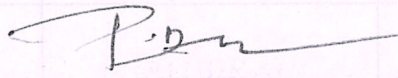
ACADEMIC YEAR 2021-2022 (EVEN SEM)

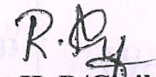
ATTENDANCE SHEET FOR CERTIFICATE COURSE - REMOTE SENSING AND GIS IN CIVIL ENGINEERING

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	DATE: 07.03.22		DATE: 08.03.22		DATE: 09.03.22		DATE: 10.03.22		DATE: 11.03.22		NO OF SESSIONS ATTENDED	SIGNATURE OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
1	912620103001	ASWINI T	II/CIVIL	1	1	1	a	1	1	1	1	1	1	9	T. Aswini
2	912620103002	GEETHA M	II/CIVIL	1	a	1	a	1	1	1	1	1	1	8	M. Geetha
3	912620103003	KEERTHI S	II/CIVIL	1	1	1	1	1	1	1	a	1	1	9	S. Keerthi
4	912620103004	SUBATHRA S	II/CIVIL	1	1	1	1	1	1	1	1	1	1	10	S. Subathra
5	912620103301	BHAVANI S	II/CIVIL	1	1	1	1	1	1	1	1	1	a	9	B. Bhavani
6	912620103302	MEGALA V	II/CIVIL	1	1	1	1	1	1	1	1	1	1	10	v. megal
7	912619103001	AJITHA T	III/CIVIL	1	1	1	1	1	1	1	1	1	1	10	A. Jitha
8	912619103002	ARULJENIFAR C	III/CIVIL	1	a	1	1	1	1	1	1	1	1	9	A. Aruljenifar
9	912619103003	DIVYA V	III/CIVIL	1	1	1	a	1	1	1	a	1	1	8	D. Divya
10	912619103004	MANGAIYARKARASI G	III/CIVIL	1	1	1	1	1	a	1	1	1	1	9	M. Mangaiyarkarasi
11	912619103005	MUTHULAKSHMI S	III/CIVIL	1	1	1	1	1	1	1	1	1	1	10	M. Muthulakshmi

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12	912619103006	PRAVEENA S	III/CIVIL	1	1	1	1	1	1	1	1	1	1	1	10	Praveena
13	912619103007	PRIYADHARSHINI K	III/CIVIL	1	1	1	1	1	1	1	1	1	a	9	Priya	
14	912619103009	RAGAVI V	III/CIVIL	1	1	1	a	1	1	1	1	1	1	9	Ragavi	
15	912619103301	LILLY JOHN J	III/CIVIL	1	a	1	1	1	a	1	1	1	1	8	Lilly	
16	912619103302	BHUVANI S	III/CIVIL	1	1	1	1	1	1	1	a	1	1	9	Bhuvan	
17	912618103005	MEENACHI K	IV/CIVIL	1	1	1	1	1	1	1	1	1	1	10	Meenachi	
18	912618103008	SATHYA M	IV/CIVIL	1	1	1	a	1	1	1	1	1	1	9	Sathya	
19	912618103009	SRIVIDHYA S	IV/CIVIL	1	1	1	1	1	1	1	1	1	1	10	Sri	
20	912618103010	UMAMAHESWARI K	IV/CIVIL	1	1	1	1	1	1	1	1	1	1	10	Umanthi	


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Report on Certificate Course

Title:	Remote Sensing and GIS in Civil Engineering				
Resource Person:	Mrs. P. Dennis Flora, Assistant Professor, Department of Civil Engineering.		Ms.G.Gayathri, Assistant Professor, Department of Civil Engineering.		
Date of conduct from :	07.03.2022	To:	11.03.2022	Duration:	30 Hours
Organized Department :	CIVIL ENGINEERING				
Participant Year:	2, 3, 4	Semester:	EVEN	No. of Students Registered :	20
Venue:	First Floor-Lecture Hall:30				

Outcome of Certificate Course (CC): Students can able to


- Explain about the Remote Sensing Data and Corrections
- Describe about the Satellite Image Corrections
- Illustrate the Digital Image Processing and its applications.
- Get knowledge about Imaging Spectroscopy , GIS and Application
- Explain the applications like updating information on road networks and other urban infrastructure, Collection and analysis of data on population density, distribution and growth, Preparation of housing typologies, Analysis of watersheds, Landscape development, 3D modeling, Infrastructure modeling and Environmental impact assessment


No. of students successfully completed the VAC course is **20 students** based on the following assessment process.

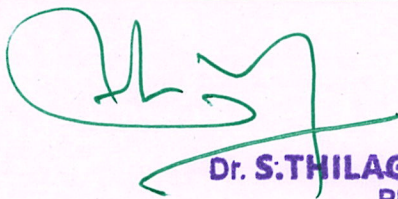
Assessment Process

- 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)


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PUDUKKOTTAI DISTRICT**

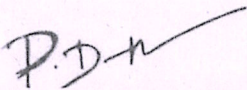


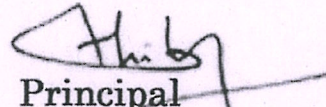
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DEPARTMENT OF CIVIL ENGINEERING CERTIFICATE OF PARTICIPATION

This is Certify that Ms. SATHYA M, B.E - Civil Engineering, IV year has successfully completed the Certificate Course on “Remote Sensing and GIS in Civil Engineering” conducted from 7th March 2022 to 11th March 2022 (5 days) during the Academic year 2021-2022.


Course Coordinator


Principal


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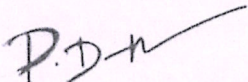


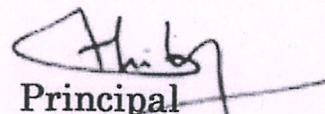
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DEPARTMENT OF CIVIL ENGINEERING CERTIFICATE OF PARTICIPATION

This is Certify that Ms. LILLY JOHN J, B.E - Civil Engineering, III year has successfully completed the Certificate Course on “Remote Sensing and GIS in Civil Engineering” conducted from 7th March 2022 to 11th March 2022 (5 days) during the Academic year 2021-2022.


Course Coordinator


Principal


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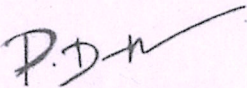


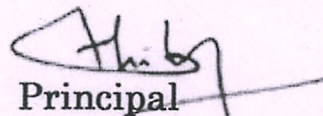
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DEPARTMENT OF CIVIL ENGINEERING CERTIFICATE OF PARTICIPATION

This is Certify that Ms. MEGALA V, B.E - Civil Engineering, II year has successfully completed the Certificate Course on “Remote Sensing and GIS in Civil Engineering” conducted from 7th March 2022 to 11th March 2022 (5 days) during the Academic year 2021-2022.


Course Coordinator


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DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022 / EVEN SEMESTER

Name of the Student :

Year/Sem:

AU Register Number:

Certificate Course on “Remote Sensing and GIS in Civil Engineering”

MCQ QUESTIONS (25X4 = 100 Marks)

1. LANDSAT is a satellite series of _____
a) Canada
b) European Union
c) USA
d) Russia
2. What is SAR ?
a) Synthetic Array Radar
b) Synthetic Aperture Radar
c) Synthetic Apron Radar
d) None of the above
3. LISS is an example of _____
a) Active Sensor
b) Passive Sensor
c) Both Active and Passive Sensor
d) None of the above
4. In _____ type of remote sensing, the Sun is primary source of energy.
a) Active
b) Passive
c) Both A and B
d) Cannot say
5. _____ reflection occurs when all of energy is directed away from surface in a single direction.
a) Mirror like
b) Specular
c) Both A and B
d) None of the above
6. Diffuse reflection occurs when all the energy is reflected _____ in all direction.
a) Randomly
b) Uniformly
c) Cannot say
d) None of the above
7. The fact that sky appears to be blue is due to _____
a) Rayleigh scattering
b) Mie scattering
c) Non selective scattering
d) All of above

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

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8. Those areas of the spectrum which are not severely influenced by atmospheric absorption and thus, are useful to remote sensors are called _____.
- a) Special bands of EM spectrum c) Radio waves
b) Atmospheric Windows d) None of the above
9. In wavelength from _____ μm clouds and snow have same reflectance and hence difficult to differentiate.
- a) 0.3 - 3.0 c) 0.03 - 0.1
b) 0.5 - 6.0 d) None of the above
10. In soil, reflectance _____ with presence of moisture, surface roughness or organic content. is equal to
- a) increases c) remains same
b) decreases d) None of the above
11. _____ are devices on which camera or sensors are mounted for viewing earth to get image or photographs.
- a) Plate forms c) Radio antenna
b) Mounting d) None of the above
12. _____ is one of most common land based plate form.
- a) Hand held c) Cherry Picker
b) wireless antenna d) All of above
13. _____ are the orbits having distance in between 2000 km to 36000 km from surface of the Earth.
- a) Low Earth orbit c) Geostationary orbit
b) Medium Earth orbit d) Crosses
14. _____ types of orbit matches with the earth rotation inclined at some angle w.r.t. equator of earth, generally not more than 45° .
- a) Sun synchronous c) Far Earth
b) Geo synchronous d) None of the above
15. GLONASS is satellite system developed by _____.
- a) Russia c) USA
b) Germany d) China
16. _____ orbit have their axis of rotation aligned to North - South pole of the earth.
- a) Sun synchronous c) Geostationary
b) Polar d) None of the above



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17. Which of following highly elliptical orbit (HEO) was developed by Soviet Union ?
a) Zara
b) Gagarin
c) Molniya
d) None of the above
18. Which vehicle was used in the launching and projection of RISAT - 2BR1 ?
a) PSLV - C45
b) PSLV - C48
c) GSLV - 4
d) GSLV - 6
19. EM energy can detected /recorded by _____.
a) Photographic system
b) Electronic system
c) Both A and B
d) None of the above
20. NOAA stands for _____
a) National Office for Airborne Administration
b) National Oceanic and Atmospheric Administration
c) National Oceanography and Atmospheric Activity
d) None of the above
21. IKONOS was launched and managed by _____
a) Roscosmos
b) NASA
c) Space imaging Inc.
d) CSA
22. Geostationary Operational Environmental Satellite (GOES) was launched by _____.
a) Roscosmos
b) NASA
c) NOAA
d) ISRO
23. Airborne Visible Infrared Imaging Spectrometer (AVIRIS) is developed by _____.
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Dr. S.THILAGAVATHI M.E., Ph.D.,
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Kaikkurchi - 622 303, Pudukkottai Dt.



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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022 / EVEN SEMESTER

Certificate Course on “Remote Sensing and GIS in Civil Engineering”

ANSWER KEY

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

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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022 / EVEN SEMESTER

Name of the Student : V. Megala

Year/Sem: II / IV

AU Register Number: 912620103302

Certificate Course on “Remote Sensing and GIS in Civil Engineering”

MCQ QUESTIONS (25X4 = 100 Marks)

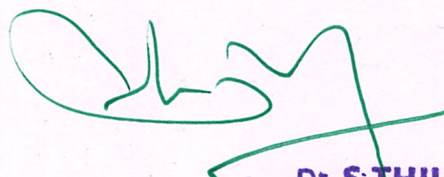
1. LANDSAT is a satellite series of _____
a) Canada b) European Union c) USA d) Russia
2. What is SAR ?
a) Synthetic Array Radar b) Synthetic Aperture Radar c) Synthetic Apron Radar d) None of the above
3. LISS is an example of _____
a) Active Sensor b) Passive Sensor c) Both Active and Passive Sensor d) None of the above
4. In _____ type of remote sensing, the Sun is primary source of energy.
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5. _____ reflection occurs when all of energy is directed away from surface in a single direction.
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6. Diffuse reflection occurs when all the energy is reflected _____ in all direction.
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8. Those areas of the spectrum which are not severely influenced by atmospheric absorption and thus, are useful to remote sensors are called _____.
- a) Special bands of EM spectrum
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9. In wavelength from _____ μm clouds and snow have same reflectance and hence difficult to differentiate.
- a) 0.3 - 3.0
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10. In soil, reflectance _____ with presence of moisture, surface roughness or organic content. is equal to
- a) increases
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11. _____ are devices on which camera or sensors are mounted for viewing earth to get image or photographs.
- a) Plate forms
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12. _____ is one of most common land based plate form.
- a) Hand held
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13. _____ are the orbits having distance in between 2000 km to 36000 km from surface of the Earth.
- a) Low Earth orbit
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14. _____ types of orbit matches with the earth rotation inclined at some angle w.r.t. equator of earth, generally not more than 45° .
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15. GLONASS is satellite system developed by _____.
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17. Which of following highly elliptical orbit (HEO) was developed by Soviet Union ?
a) Zara
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d) None of the above
18. Which vehicle was used in the launching and projection of RISAT - 2BR1 ?
a) PSLV - C45
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19. EM energy can detected /recorded by _____.
a) Photographic system
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a) National Office for Airborne Administration
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DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022 / EVEN SEMESTER

Name of the Student : *Sathya.M*

Year/Sem: *IV / VIII*

AU Register Number: *912618103008*

20
25 *P.D.K*

Certificate Course on “Remote Sensing and GIS in Civil Engineering”

MCQ QUESTIONS (25X4 = 100 Marks)

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DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022 / EVEN SEMESTER

Name of the Student : Priyadharsini K.

Year/Sem: III / VI

AU Register Number: 912619103007

Certificate Course on “Remote Sensing and GIS in Civil Engineering”

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DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022 (EVEN SEM)

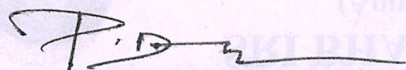
MARK SHEET FOR CERTIFICATE COURSE- REMOTE SENSING AND GIS IN CIVIL ENGINEERING

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	ATTENDANCE DETAILS		CC-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	912620103001	ASWINI T	II/CIVIL	9	90	19	76	83
2	912620103002	GEETHA M	II/CIVIL	8	100	22	88	94
3	912620103003	KEERTHI S	II/CIVIL	9	100	20	80	90
4	912620103004	SUBATHRA S	II/CIVIL	10	100	22	88	94
5	912620103301	BHAVANI S	II/CIVIL	9	80	18	72	76
6	912620103302	MEGALA V	II/CIVIL	10	90	19	76	83
7	912619103001	AJITHA T	III/CIVIL	10	100	19	76	88
8	912619103002	ARULJENIFAR C	III/CIVIL	9	90	22	88	89

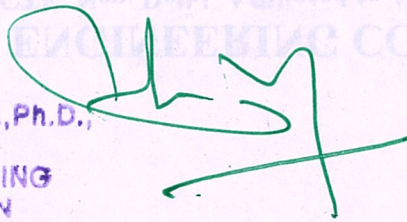
Dr. S. THILAGAVATHI, M.E., Ph.D.,
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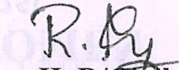
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9	912619103003	DIVYA V	III/CIVIL	8	80	17	68	74
10	912619103004	MANGAIYARKARASI G	III/CIVIL	9	90	19	76	83
11	912619103005	MUTHULAKSHMI S	III/CIVIL	10	100	23	92	96
12	912619103006	PRAVEENA S	III/CIVIL	10	90	20	80	85
13	912619103007	PRIYADHARSHINI K	III/CIVIL	9	100	22	88	94
14	912619103009	RAGAVI V	III/CIVIL	9	100	22	88	94
15	912619103301	LILLY JOHN J	III/CIVIL	8	90	19	76	83
16	912619103302	BHUVANI S	III/CIVIL	9	80	18	72	76
17	912618103005	MEENACHI K	IV/CIVIL	10	90	19	76	83
18	912618103008	SATHYA M	IV/CIVIL	9	100	20	80	90
19	912618103009	SRIVIDHYA S	IV/CIVIL	10	100	22	88	94
20	912618103010	UMAMAHESWARI K	IV/CIVIL	10	90	18	72	81


Course Coordinator

Dr. S. THILAGAVATHI M.E., Ph.D.,
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COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai DL.




HoD/Civil
HOD / CIVIL
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PUDUKKOTTAI - 622 303