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SASURIE COLLEGE OF ENGINEERING

Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai

Near NH544, Coimbatore Bypass, Near Vijayamangalam Tollgate, Tirupur 638056

NAAC DOCUMENTS

QUALITY INDICATOR FRAME WORK

CRITERION - 1

CURRICULAR ASPECTS

SUBMITTED BY

IQAC

INTERNAL QUALITY ASSURANCE CELL

SASURIE COLLEGE OF ENGINEERING





Criterion 1	Curricular Aspects	100
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1.1 Curricular Planning and Implementation (20)

1.1.1 The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of continuous internal Assessment

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Department : S&H
 Subject Code & Name : GE8291, Environmental Science and engineering
 Class & Batch : EEE, 2018-19
 Semester : II

CONTENTS – COURSE FILE

PARTICULARS

REMARKS

S.NO	PARTICULARS	REMARKS
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11	Internal test mark sheet(Consolidated)	
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17	Tutorial Class – schedule and content	
18	Assignment – schedule and paper	
19	PPT - handout	
20	Video - Animation - Soft copy	
21	Question bank	
22	Sample university question papers(min 5 QP-recent exam)	
23	Personal Log book – Updated	
24	Lecture Note	
25	Special Class if any, Approval letter, Schedule, content covered.	

Prepared By	Approved By
Sign:	
Name: J. MOHAMMED ALI	J. JEENA RAJATHY



SASURIE
College of Engineering

FACULTY NAME: **J. MOHAMMED ALI**
CLASS: EEE

CLASS TIME TABLE
Department: Science and Humanities

Semester: II (2018-2019)

HOUR	8 55 TO 9 00 a.m	I	II	III	IV	12 35 p m TO 1 20 p m	V	VI	2 50 TO 3 00	VII	VIII
DAY/ TIME		9 00 TO 9 50	9 50 TO 10 40	10 40 TO 10 55	10 55 TO 11 45	11 45 TO 12 35 p m	1 20 TO 2 05	2 05 TO 2 50	3 00 TO 3 45	3 45 TO 4 30 p m	
MONDAY	MAY 14		EVS	BREAK		LUNCH			3 00 TO 3 45		
TUESDAY											
WEDNESDAY											
THURSDAY											
FRIDAY		EVS	EVS							EVS	EVS
SATURDAY											

	Prepared by	Verified by	APPROVAL BY	Authorized by
Sign	P J - ALI P T Kiruthika	Jeena Rajathy	Mrs. P. Muthuga Priya	Dr. K Pandiarajan
Name			iQAC Auditing Head	Principal
	TIME TABLE I/C	HD		

Head of S&H Department
SASURIE
College of Engineering
Vijayamangalam Tirupur - 638 056

PRINCIPAL
SASURIE
College of Engineering
Vijayamangalam - 638 056, Tirupur (Dt).

Dr. M. VIJAYAKUMAR M.Tech., Ph.D.,
PRINCIPAL,
SASURIE COLLEGE OF ENGINEERING,
Vijayamangalam - 638 056, Tirupur (Dt).



DEPARTMENT OF SCIENCE AND HUMANITIES

NAME LIST

CLASS: I EEE

S.NO	REG.NO	STUDENTS NAME	DEPT	REMARKS
1	732418105001	BHARATHIA	EEE	
2	732418105002	JAYAPRIYA	EEE	

	Prepared by	Verified by	Authorized by
Sign			
Name	A.P.Saravanan	I Jeena Rajathy	Dr. K Pandiarajan
	Class Advisor	HD	Principal

Head of S&H Department
SASURIE
College of Engineering
Vijayamangalam, Tirupur-633 056

PRINCIPAL
SASURIE
College of Engineering
Vijayamangalam-633056, Tiruppur

Dr. M. VIJAYAKUMAR M.E., Ph.D.,
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Vijayamangalam - 633 056, Tirupur (Dt).

GE8291

ENVIRONMENTAL SCIENCE AND ENGINEERING

OBJECTIVES:

- To study the nature and facts about environment.
- To finding and implementing scientific, technological, economic and political solutions to environmental problems.
- To study the interrelationship between living organism and environment.
- To appreciate the importance of environment by assessing its impact on the human world; envision the surrounding environment, its functions and its value.
- To study the dynamic processes and understand the features of the earth's interior and surface.
- To study the integrated themes and biodiversity, natural resources, pollution control and waste management.

UNIT I ENVIRONMENT, ECOSYSTEMS AND BIODIVERSITY

14

Definition, scope and importance of environment - need for public awareness - concept of an ecosystem - structure and function of an ecosystem – producers, consumers and decomposers – energy flow in the ecosystem – ecological succession – food chains, food webs and ecological pyramids – Introduction, types, characteristic features, structure and function of the (a) forest ecosystem (b) grassland ecosystem (c) desert ecosystem (d) aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) – Introduction to biodiversity definition: genetic, species and ecosystem diversity – biogeographical classification of India – value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values – Biodiversity at global, national and local levels – India as a mega-diversity nation – hot-spots of biodiversity – threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts – endangered and endemic species of India – conservation of biodiversity: In-situ and ex-situ conservation of biodiversity. Field study of common plants, insects, birds; Field study of simple ecosystems – pond, river, hill slopes, etc.

UNIT II ENVIRONMENTAL POLLUTION

8

Definition – causes, effects and control measures of: (a) Air pollution (b) Water pollution (c) Soil pollution (d) Marine pollution (e) Noise pollution (f) Thermal pollution (g) Nuclear hazards – solid waste management: causes, effects and control measures of municipal solid wastes – role of an individual in prevention of pollution – pollution case studies - disaster management: floods, earthquake, cyclone and landslides. Field study of local polluted site Urban / Rural / Industrial /Agricultural.

UNIT III NATURAL RESOURCES 10

Forest resources: Use and over-exploitation, deforestation, case studies- timber extraction, mining, dams and their effects on forests and tribal people – Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams benefits and problems – Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies – Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies – Energy resources: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources.

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Vijayamangalam - 638 056, Tirupur (Dt).

case studies - Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification - role of an individual in conservation of natural resources - Equitable use of resources for sustainable lifestyles. Field study of local area to document environmental assets - river / forest / grassland / hill / mountain.

UNIT IV SOCIAL ISSUES AND THE ENVIRONMENT 7

From unsustainable to sustainable development - urban problems related to energy water conservation, rain water harvesting, watershed management - resettlement and rehabilitation of people; its problems and concerns, case studies - role of non-governmental organization- environmental ethics: Issues and possible solutions - climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies - wasteland reclamation - consumerism and waste products - environment production act - Air (Prevention and Control of Pollution) act - Water (Prevention and control of Pollution) act - Wildlife protection act - Forest conservation act - enforcement machinery involved in environmental legislation- central and state pollution control boards- Public awareness.

UNIT V HUMAN POPULATION AND THE ENVIRONMENT 6

Population growth, variation among nations - population explosion - family welfare programme - environment and human health - human rights - value education - HIV / AIDS - women and child welfare - role of information technology in environment and human health - Case studies.

TOTAL: 45 PERIODS

OUTCOMES:

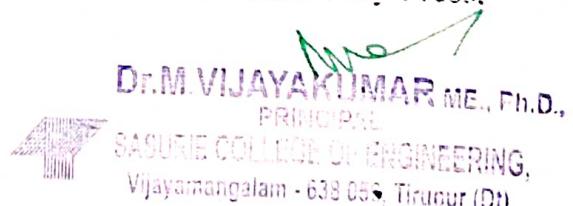
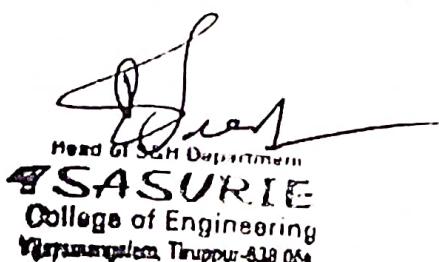
- Environmental Pollution or problems cannot be solved by mere laws. Public participation is an important aspect which serves the environmental Protection.
- One will obtain knowledge on the following after completing the course.
- Public awareness of environmental is at infant stage.
- Ignorance and incomplete knowledge has lead to misconceptions
- Development and improvement in std. of living has lead to serious environmental disasters

TEXTBOOKS:

- Benny Joseph, 'Environmental Science and Engineering', Tata McGraw-Hill, New Delhi, 2006.
- Gilbert M.Masters, 'Introduction to Environmental Engineering and Science', 2nd edition, Pearson Education, 2004.

REFERENCES :

- Dharmendra S. Sengar, 'Environmental law', Prentice hall of India PVT LTD, New Delhi, 2007.
- Erach Bharucha, "Textbook of Environmental Studies", Universities Press(I) PVT, LTD, Hyderabad, 2015.
- G. Tyler Miller and Scott E. Spoolman, "Environmental Science", Cengage Learning India PVT, LTD, Delhi, 2014.
- Rajagopalan, R, 'Environmental Studies-From Crisis to Cure', Oxford University Press, 2005.



SUBJECT INFORMATION RECORD

Department

: S&H

Subject

: Environmental Science and engineering

Year

: 2018-19

Semester

: II

Last year handled by

: S. Vijayalakshmi

Percentage of Result (last year)

: 75%

Quality Objectives

: To Produce above 80% result of this academic year.

1. Gilbert, M. Master, "Introduction to environmental engineering and science", 2nd edition Pearson education, 2004

	Prepared By	Approved By
Sign:	J. M.	
Name:	J. MOHAMMED ALI	I. JEENA RAJATHY
Faculty		HD



LESSON PLAN

Date: 21.1.19
Semester: II

Department:
Faculty Name:
Subject Code & Title:
Class:

SEMESTER EEE
J. MOHAMED ALI

GE8291 ENVIRONMENTAL SCIENCE AND ENGINEERING

1 Year

S.No.	Proposed		Details of Topic Covered	TA	Ref.	Actual		HD
	Date	Period				Date	Period	
UNIT I ENVIRONMENT, ECOSYSTEMS AND BIODIVERSITY (14 hrs / 14 periods)								
1	21.1.19	2	Definition, scope and importance of environment and need for public awareness	1.2	1,2	21.1.19	2	
2	22.1.19	1	concept of an ecosystem and structure and function of an ecosystem	1.2	1,2	22.1.19	3	
3	23.1.19	7	producers, consumers and decomposers, energy flow in the ecosystem and ecological succession	1.2	1,2	23.1.19	6	
4	23.1.19	8	food chains, food webs and ecological pyramids	1.2	1,2	23.1.19	5	
5			Introduction, types, characteristic features, structure and function of the (a) forest ecosystem (b) grassland ecosystem (c) desert ecosystem (d) aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)	1.2	1,2	23.1.19	6	
6	25.1.19	1	Introduction to biodiversity definition genetic, species and ecosystem diversity	1.2	1,2	25.1.19	7	
7	25.1.19	2	biogeographical classification of India value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values	1.2	1,2	25.1.19	8	
8	28.1.19	2	Biodiversity at global, national and local levels	1.2	1,2	25.1.19	7	
9	29.1.19	1	India as a mega-diversity nation	1.2	1,2	28.1.19	2	
10	30.1.19	7	hot-spots of biodiversity	1.2	1,2	28.1.19	8	
11	31.1.19	8	threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts	1.2	1,2	29.1.19	1	
12	1.2.19	2	endangered and endemic species of India	1.2	1,2			
13	1.2.19	2	conservation of biodiversity: In-situ and ex-situ conservation of biodiversity. Field study of common plants, insects, birds; Field study of simple ecosystems	1.2	1,2	1.2.19	2	
14	2.2.19	1	pond, river, hill slopes, etc	1.2	1,2	8.2.19	7	
UNIT II ENVIRONMENTAL POLLUTION (8 hrs / 8 periods)								
14	1.2.19	7	Definition	1.2	1,2	1.2.19	2	

Dr. M. VIJAYAKUMAR ME., Ph.D.,
PROFESSOR



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16	7.2.19	8	causes, effects and control measures of: (a) Air pollution (b) Water pollution (c) Soil pollution (d) Marine pollution (e) Noise pollution (f) Thermal pollution (g) Nuclear hazards	1.2	1,2	14.2.19	7	
17	8.2.19	1	solid waste management: causes, effects and control measures of municipal solid wastes	1.2	1,2	14.2.19	8	
18	8.2.19	2	role of an individual in prevention of pollution	1.2	1,2	15.2.19	7	
19	11.2.19	2	pollution case studies	1.2	1,2	15.2.19	8	
20	12.2.19	4	disaster management: floods, earthquake, cyclone and landslides	1.2	1,2	15.2.19	8	
21	14.2.19	7	Field study of local polluted site	1.2	1,2	15.2.19	8	
22	14.2.19	8	Urban / Rural / Industrial / Agricultural	1.2	1,2	15.2.19	9	
UNIT III NATURAL RESOURCES (10 hrs / 10 periods)								
23	15.2.19	1	Forest resources: Use and over-exploitation, deforestation, case studies- timber extraction, mining, dams and their effects on forests and tribal people	1.2	1,2	15.2.19	7	
24	15.2.19	2	Water resources: Use and over- utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems	1.2	1,2	15.2.19	8	
25	18.2.19	2	Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies	1.2	1,2	15.2.19	8	
26	21.2.19	7	Food resources: World food problems, changes caused by agriculture and overgrazing,	1.2	1,2	15.2.19	8	
27	22.2.19	8	Effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies	1.2	1,2	15.2.19	8	
28	22.2.19	7	Energy resources: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources, case studies	1.2	1,2	15.2.19	8	161
29	22.2.19	8	Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification	1.2	1,2	15.2.19	7	
30	25.2.19	2	role of an individual in conservation of natural resources	1.2	1,2	15.2.19	7	
31	26.2.19	4	Equitable use of resources for sustainable lifestyles. Field study of local area to document environmental assets	1.2	1,2	15.2.19	7	
32	26.2.19	4	River / forest / grassland / hill / mountain	1.2	1,2	15.2.19	7	
UNIT IV SOCIAL ISSUES AND THE ENVIRONMENT (7 hrs / 7 periods)								

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TEST PLAN FOR SUBJECT

Subject : ENVIRONMENTAL SCIENCE. ENGINEERING Faculty: J. MOHAMMED ALI

Semester : II Year: 2018 - 19

Department : S&E

S. No.	Description	Planned Date/Month	Actual Conducted Date / Month	Remarks
1.	Internal Test - I	26. 2. 19	26. 2. 19	
2.	Internal Test - II	24. 3. 19 to 9. 3. 19	28. 3. 19	Symposium
3.	Internal Test - III	25. 3. 19 to 30. 3. 19	8. 4. 19	,

	Prepared By	Approved By
Sign:		
Name:	J. MOHAMMED ALI	J. JEENA RAJATHY
	Faculty	

33	28.2.19	7	From unsustainable to sustainable development urban problems related to energy	1.2	1.2	19.3.19	8	
34	28.2.19	8	water conservation, rain water harvesting, watershed management and resettlement and rehabilitation of people its problems and concerns, case studies	1.2	1.2	19.3.19	8	
35	1.3.19	7	role of non-governmental organization environmental ethics: Issues and possible solutions climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies	1.2	1.2	19.3.19	8	
36	1.3.19	8	wasteland reclamation consumerism and waste products environment production act	1.2	1.2	19.3.19	8	
37	5.3.19	4	Air (Prevention and Control of Pollution) act and Water (Prevention and control of Pollution) act	1.2	1.2	27.3.19	6	
38	7.3.19	7	Wildlife protection act Forest conservation act	1.2	1.2	27.3.19	6	
39	7.3.19	8	enforcement machinery involved in environmental legislation central and state pollution control boards Public awareness	1.2	1.2	27.3.19	6	

UNIT V HUMAN POPULATION AND THE ENVIRONMENT (6 hrs / 6 periods)

40	8.3.19	7	Population growth, variation among nations	1.2	1.2	1.4.19	7	
41	8.3.19	8	population explosion family welfare programme	1.2	1.2	1.4.19	7	
42	11.3.19	2	environment and human health human rights	1.2	1.2	1.4.19	7	
43	12.3.19	4	value education HIV / AIDS	1.2	1.2	1.4.19	8	
44	14.3.19	7	women and child welfare	1.2	1.2	1.4.19	8	
45	16.3.19	6	role of information technology in environment and human health Case studies	1.2	1.2	1.4.19	8	

Reference books (Ref):

1. Dharmendra S. Sengar, "Environmental law", Prentice hall of India PVT LTD, New Delhi, 2007.
2. Erach Bharucha, "Textbook of Environmental Studies", Universities Press(I) PVT, LTD, Hyderabad, 2015.
3. Rajagopalan, R, "Environmental Studies-From Crisis to Cure", Oxford University Press, 2005.
4. G. Tyler Miller and Scott E. Spoolman, "Environmental Science", Cengage Learning India PVT, LTD, Delhi, 2014

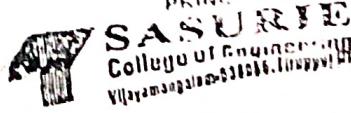
Teaching Aids (TA):

1. Black Board with Chalk
2. LCD Projector
3. Others (Field visits, Charts, Cutset Models)

Prepared by	Verified by	Authorized by
SIGN Name: T. MOHAMED NA Faculty	T. TEENA RATNAY HOD	Dr. K. PONDURAJAN Principal

Head of S&H Department
SASURIE
College of Engineering
Tirumangalam, Tirupur-634016

Dr. M. VIJAYAKUMAR M.E., Ph.D.
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RESULT ANALYSIS OF TEST & CORRECTIVE ACTION PLAN

Subject : ENVIRONMENTAL SCIENCE AND ENGINEERING Date : 28.2.19

Class : EEE

Department : S&H

Semester : II

Exam details & date : INTERNAL TEST - I, 26.2.19

Faculty : J. MOHAMMED ALI

Number of students : 02

No. of students attended : 01

No. of students absent : 01

No. of students passed : 01

No. of students failed : —

Percentage of failures : —

RESULT DATA:

Marks	0-25	26-50	51-75	76-90	91-100
No. of Students	—	—	—	1	—

	Prepared By	Approved By
Sign:		
Name:	J. MOHAMMED ALI	J. JEENA RATNATHY
	Faculty	HD

Dr. M. VIJAYAKUMAR M.E., Ph.D.

Head of the Department



SASURIE COLLEGE OF ENGINEERING,
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SASURIE

College of Engineering
Ramanathapuram, Tirupur-634 092

Date: 01/03/2019

CORRECTIVE ACTION REPORT

Dept. : SAH Year : 2018-19

Subject : Environmental Science and Semester : II
engineering

NON CONFORMANCE REPORT

achieved 100% Result.

DATE: 28/2/19 Faculty Sign

ROOT CAUSE ANALYSIS

DATE: 28/2/19 Faculty Sign

CORRECTIVE ACTION

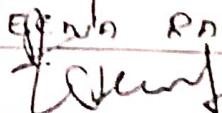
DATE: 28/2/19 Faculty Sign

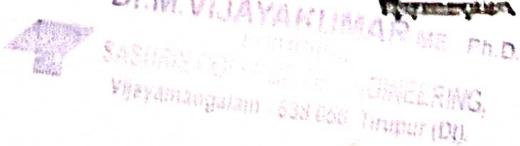
VERIFICATION OF CORRECTIVE ACTION

✓ verified



DATE: 28/2/19 Faculty Sign

	Prepared By	Approved By
Sign:	J. MOHAMED ALI	I. SENGUPTA
Name:		
	Faculty	HEAD OF SAH Department SASURIE College of Engineering Mysore Road, Titupur - 638 062



RESULT ANALYSIS OF TEST & CORRECTIVE ACTION PLAN

Subject : EVS Date : 21.3.19
 Class : EEE Department : S&H
 Semester : II
 Exam details & date : Internal Test - II
 Faculty : J. MOHAMMED ALI
 Number of students : 02
 No. of students attended : 01
 No. of students absent : 01
 No. of students passed : 01
 No. of students failed : —
 Percentage of failures : 0%.

RESULT DATA:

Marks	0-25	26-50	51-75	76-90	91-100
No. of Students	—	—	—	—	01

	Prepared By	Approved By
Sign:	J.M.	
Name:	J. MOHAMMED ALI Faculty	I. SEENO RAJAN HD



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Head of S&H Department
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 College of Engineering
 Tirumangalam, Tirupur - 641 024

CORRECTIVE ACTION REPORT

Dept. : 2.3.19

Year : 2018 - 19

Subject : EVS

Semester : II

NON CONFORMANCE REPORT

Expected 100% result obtained 100%.

DATE : 4.3.19

(J.M)
Faculty Sign

ROOT CAUSE ANALYSIS

DATE : 4.3.19

(J.M)
Faculty Sign

CORRECTIVE ACTION

DATE : 4.3.19

(J.M)
Faculty Sign

VERIFICATION OF CORRECTIVE ACTION

Veerut

Deen

DATE : 4.3.19

(J.M)
Faculty Sign

	Prepared By	Approved By
Sign:	(J.M)	
Name:	J. MOHAMMED ALI Faculty	T. DEENA RAJATHY HD

RESULT ANALYSIS OF TEST & CORRECTIVE ACTION PLAN

Subject	EVS	Date	12.4.19
Class	EEE	Department	STM
Semester	II		
Exam details & date		: Model examination	
Faculty		: J. MOHAMMED ALI	
Number of students		: 02	
No. of students attended		: 01	
No. of students absent		: 01	
No. of students passed		: 01	
No. of students failed		: 0R	
Percentage of failures		: 0T.	

RESULT DATA:

Marks	0-25	26-50	51-75	76-90	91-100
No. of Students	-	-	-	-	1

	Prepared By	Approved By
Sign:	J. M.	D. Jeena
Name:	J. MOHAMMED ALI	I. JEENA RAJATHY.
Faculty		HD

CORRECTIVE ACTION REPORT

Dept : S&H Year : 2018 - 19
 Subject : EVS Semester : II

NON CONFORMANCE REPORT

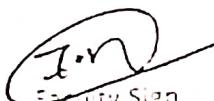
100% result was obtained

DATE : 12.4.19


Faculty Sign

ROOT CAUSE ANALYSIS

DATE : 12.4.19


Faculty Sign

CORRECTIVE ACTION

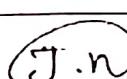
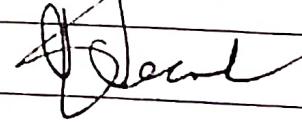
DATE : 12.4.19


Faculty Sign

VERIFICATION OF CORRECTIVE ACTION

DATE : 12.4.19


Faculty Sign

	Prepared By	Approved By
Sign:		
Name:	J. MOHAMED ALI Faculty	I. JEGNA RAJATHY HD
		

Dr. M. VIJAYAKUMAR ME, Ph.D.,

PRINCIPAL



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QUALITY OBJECTIVE MONITORING RECORD

Department : S.E.E.P
 Year : 2018-19
 Semester : II
 Subject : Environmental Science and Engineering

S.No	Quality Objective	Internal Test-I		Internal Test-II		Internal Test-III	
		Expecting result	Obtained result	Expecting result	Obtained result	Expecting Result	Obtained result
1	Expected above 85% result	100%	100%	100%	100%	100%	100%

	Prepared By	Approved By
Sign:		
Name:	M. MOHAMMED ALI Faculty	DR. VIJAYAKUMAR HD



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Register Number:



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Model Examination - I			Date/Session	08.04.2019 / FN	Marks	100			
Course code	GE8291	Course Title	Environmental Science and Engineering						
Regulation	2017	Duration	3 Hours			Academic Year 2018 - 2019			
Year	I	Semester	II			Department EEE			
COURSE OUTCOMES									
CO1:	Environmental Pollution or problems cannot be solved by mere laws. Public participation is an important aspect which serves the environmental Protection								
CO2:	One will obtain knowledge on the following after completing the course.								
CO3:	Public awareness of environmental is at infant stage.								
CO4:	Ignorance and incomplete knowledge has lead to misconceptions								
CO5:	Development and improvement in std. of living has lead to serious environmental disasters								

.No.	Question	CO	BTS
PART A (Answer all the Questions 10 x 2 = 20 Marks)			
1	Describe energy flow in an ecosystem.	CO1	U
2	Discuss about the ecological succession?	CO1	U
3	Write a note on CFC.	CO1	R
4	Mention the causes and effects of acid rain.	CO2	
5	Define deforestation.	CO2	R
6	What is mean by overgrazing? Accounts its impacts.	CO3	R
7	What are greenhouse gases?	CO3	R
8	Define environmental audit.	CO4	R
9	What is population explosion?	CO4	
10	Write its consequences of population explosion.	CO5	R

PART B

(Answer all the Questions 5 x 13 = 65 Marks)

11a	i) Write the importance of protecting the biodiversity of earth. ii) Explain the major factors that are responsible for the loss of biodiversity	(6)	CO1	R
		(7)		

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11b	i) Elucidate any one of the models of energy flow in an ecosystem. ii) With a neat sketch, interpret the oxygen cycle.	(6)	C01	R
12a	i) Write informative notes on water treatment process ii) Suggest the methods to control water pollution	(7)	C02	R
12b	i) State how acid rain is formed and what are the adverse effects on environment . ii) Enumerate the sources and removal of heavy metals.	(6)	C02	R
13 a	i) Describe the changes caused by agriculture and overgrazing? ii) Explain how is wind energy harnessed? What are the advantages and limitation.	(7)	C03	U
	OR			
13b	i) Explain the environmental effects of extracting and using mineral resources, ii) Write informative note on modern agriculture.	(7)	C03	R
14a	Enumerate on environmental ethics.	(6)	C04	R
	OR			
14b	i) Explain the major urban problems related to energy. ii) What is an NGO? Find and mention of its role in environmental protection.	(7)	C04	R
15a	What is HIV? Explain the transmission of HIV and how can it be prevented.	(6)	C05	R
	OR			
15b	What is the universal declaration of Human Rights? What is its importance in achieving the goals of equity, justice and sustainability?	(6)	C05	R
	PART C			
	(Answer all the Questions 1 x 15 = 15 Marks)			
16a	Discuss the effects of modern agriculture due to usage of fertilizers and pesticides.	(6)	C02	U
	OR			
16b	Discuss the origin of HIV, modes of transmission, symptoms and control	(6)	C05	U

J. Majeed
Course Faculty
(Name /Sign + Date)

D. J. Joseph
HOD
(Name /Sign + Date)

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Internal Assessment Test Answer Book

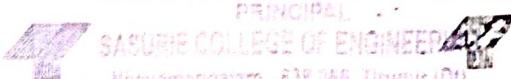
Name	JAYA PRIYA		Year/Semester/Section	I/II			
Register Number	732418105002	Date/Session	8/4/19/AJ	Department	EEE		
Course code	GIE 8291	Course Title	Environmental Science and Engineering				
Internal Assessment Test	IAT 1	<input type="checkbox"/>	IAT 2	<input type="checkbox"/>	IAT 3	<input type="checkbox"/>	Model <input checked="" type="checkbox"/>
Name and Signature of the Invigilator with date			S. VENKATESAN 8/4/19				

Instruction to the Student: Put tick mark to the question attempted in the column against question							
Part A		Part B/ Part C			Total Marks		
Q. No.	✓	Marks	Q. NO.	✓	a Marks	b Marks	
1	✓	2	11	✓	4, 6		10
2	✓	2	12	✓	7, 6		13
3	✓	2	13			✓ 10	10
4	✓	2	14	✓	13		13
5	✓	2	15	✓	13		13
6	✓	2	16	✓	7, 8		15
7	✓	2				Grand Total	74
8	✓	2				J. M. A. R. 9/4/19	
9	✓	2				J. Mohamed Ali	
10	✓	2				Name and Signature of the Examiner with date	
Total		20		94	Grand Total		

To be filled by the examiner						
Course Outcomes	1	2	3	4	5	6
Marks allotted	20	20	20	20	10	100
Marks Obtained	30	16	18	20	10	94
IQAC Audit - Remarks						
<i>Marks Verified</i>						
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DEPARTMENT OF SCIENCES AND HUMANITIES

Assignment Question Paper

Assignment - 01			Date of Issue:	18.02.2019	Marks	10
Course code	GE 8291	Course Title	Environmental Science and Engineering			
Year	I	Semester/Section	II / A & B	Date of Submission:	23.02.2019	

Q.No	Questions	CO
1	Explain about food chain in a grassland	CO1
2	Explain the process of Ecological succession	CO2

Name and Signature of the Faculty Incharge

[J. Mohammed Ali]

HoD/S&H

T. JEENA RAJATHY

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DEPARTMENT OF SCIENCES AND HUMANITIES

Assignment Answer Sheet

Name of the Student: JAYA PRIYA

AU Register Number: 732418105002

Assignment - 01			Date of Issue:	18 02 2019	Marks	10
Course code	GE 8291	Course Title	Environmental Science and Engineering			
Year	I	Semester/Section	II A & B	Date of Submission:	23 02 2019	

Q.No	Questions	CO
1	Explain about food chain in a grassland	CO1
2	Explain the process of Ecological succession	CO2

Mark Allocation

Rubrics	Marks Allocated	Marks obtained
Content Quality	6	5
Presentation Quality	2	2
Timely submission	2	2
Total marks	10	9

J. Priya
23/2/2019

Name and Signature of the Faculty Incharge

J. Mohammed Ali

1
M.A.

J. Jeenapathy

HOD/S&H

J. JEENAPATHY

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