

The Annual Quality Assurance Report (AQAR) of the IQAC
School of Energy and Environmental Studies

Part – A

1. Details of the Institution

1.1 Name of the Institution

School of Energy and Environmental Studies

1.2 Address Line 1

Devi Ahilya Vishwavidyalaya

Address Line 2

Takshila Campus, Khandwa Road

City/Town

Indore

State

Madhya Pradesh

Pin Code

452001

Institution e-mail address

spsanjali@gmail.com

Contact Nos.

0731-2460309 (O)

Name of the Head of the Institution:

Dr S.P. Singh

Tel. No. with STD Code:

0731-2460309

Mobile:

+919424009418

Name of the IQAC Co-ordinator:

Dr S.P. Singh

Mobile:

+919424009418

IQAC e-mail address:

spsanjali@gmail.com

1.3 NAAC Track ID (For ex. MHCOGN 18879) EC/66/RAR/146 dated 21-02-2014

1.4 Website address:

<http://www.dauniv.ac.in/>

Web-link of the AQAR:

<http://www.iqac.dauniv.ac.in/>For ex. <http://www.ladykeanecollege.edu.in/AQAR201213.doc>

1.5 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1 st Cycle	Four Star		20/09/2000	“Five Years”
2	2 nd Cycle	B grade	2.57 out of 4	16/09/2008	“Five Years”
3	3 rd Cycle	A	3.09	21 .2. 2014	“Five Years”
4	4 th Cycle	N.A	N.A	N.A	N.A

1.6 Date of Establishment of IQAC :

DD/MM/YYYY

21/11/2008

1.7 AQAR for the year (for example 2010-11)

2015-16

1.8 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC ((for example AQAR 2010-11 submitted to NAAC on 12-10-2011)

- i. AQAR _____ Feb 2013 June 2013 _____ (DD/MM/YYYY)4
- ii. AQAR _____ 2013-14 _____ (DD/MM/YYYY)
- iii. AQAR _____ 2014-15 _____ (DD/MM/YYYY)
- iv. AQAR _____ (DD/MM/YYYY)

1.9 Institutional Status

University State Central Deemed Private

Affiliated College Yes No

Constituent College Yes No

Autonomous college of UGC Yes No

Regulatory Agency approved Institution Yes No

(eg. AICTE, BCI, MCI, PCI, NCI)

Type of Institution Co-education Men Women

Urban Rural Tribal

Financial Status Grant-in-aid UGC 2(f) UGC 12B

Grant-in-aid + Self Financing Totally Self-financing

1.10 Type of Faculty/Programme

Arts **Science** Commerce Law PEI (Phys Edu)

TEI (Edu) **Engineering** Health Science Management

Others (Specify)

1.11 Name of the Affiliating University (for the Colleges)

N.A

1.12 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc

Autonomy by State/Central Govt. / University

University with Potential for Excellence

UGC-CPE

DST Star Scheme

UGC-CE

UGC-Special Assistance Programme

No

DST-FIST

No

UGC-Innovative PG programmes

No

Any other (*Specify*)

No

UGC-COP Programmes

No

2. IQAC Composition and Activities

2.1 No. of Teachers

03

2.2 No. of Administrative/Technical staff

Nil

2.3 No. of students

01

2.4 No. of Management representatives

N.A

2.5 No. of Alumni

01

2.6 No. of any other stakeholder and
community representatives

Nil

2.7 No. of Employers/ Industrialists

01

2.8 No. of other External Experts

01

2.9 Total No. of members

07

2.10 No. of IQAC meetings held

04

2.11 No. of meetings with various stakeholders:

No.

02

Faculty

06

Non-Teaching Staff

06

Students

Alumni

02

Others

01

2.12 Has IQAC received any funding from UGC during the year?

Yes

No

If yes, mention the amount

2.13 Seminars and Conferences (only quality related)

(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

Total Nos. International National State Institution Level

(ii) Themes

2.14 Significant Activities and contributions made by IQAC

Curriculum revision and addition of advanced topics
Promotion of Research in the department

2.15 Plan of Action by IQAC/Outcome

The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year *

Plan of Action	Achievements
Induction Programme for the new students	Induction programme was conducted to welcome all the new enrolled students in the department for all the old and New students
Time Table and Course Plan	Time table and scheduling of lectures were provided to students including Syllabus. Syllabus was also loaded on website.
Anti Ragging and Other discipliner cells are formed	Routinely get together of the students and faculties were conducted to check about ragging, discipline and any other problems of the students. No case of ragging and molestation was reported..
Syllabi Updating	Syllabus was updated and passed by Board of Studies (BOS) during the year.
Examination conduction	Examinations for both the semesters Odd and Even were done on time (Dec- 2015 for odd Semesters & May-2016). Checked copies and Result were shown to students.

** Attach the Academic Calendar of the year as Annexure.*

2.15 Whether the AQAR was placed in statutory body Yes No

Management Syndicate Any other body

Provide the details of the action taken

AQAR submitted to IQAC cell for further actions.

Part – B

Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD	02	Nil	NIL	As per UGC Course work
PG	02	Nil	01*	Nil
UG	Nil	Nil	Nil	Nil
PG Diploma	Nil	Nil	Nil	Nil
Advanced Diploma	01	Nil	01*	Nil
Diploma				
Certificate				
Others M. Phil	01	Nil	Nil	Nil
Total	06	Nil	02	Nil
Interdisciplinary	06	Nil	02	Nil
Innovative				

* MBA and Advance Diploma in Distance Mode

1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	04: (02 CBCS)
Trimester	
Annual	

1.3 Feedback from stakeholders* Alumni Parents Employers Students
(On all aspects)Mode of feedback : Online Manual Co-operating schools (for PEI)

*Please provide an analysis of the feedback in the Annexure

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

- | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Few Latest Topics are added in the syllabi of M. Tech and M. Phil students. Case Studies in Energy Conservation and in Pinch Technology were included. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

1.5 Any new Department/Centre introduced during the year. If yes, give details.

No

Criterion – II**2. Teaching, Learning and Evaluation**

2.1 Total No. of permanent faculty	Total	Asst. Professors	Associate Professors	Professors	Others
	03	Promoted	01	02	00

2.2 No. of permanent faculty with Ph.D.

03

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
01	01	01	01	01	02	0	0	03	04

2.4 No. of Guest and Visiting faculty and Temporary faculty

00

00

04* (on Contract)

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	0	0	0
Presented papers	0	0	0
Resource Persons	0	0	02

2.6 Innovative processes adopted by the institution in Teaching and Learning:

- Balanced proportions in all aspects of theory and practical's covered in Teaching.
- Preparing the manpower for research and skill development through specific courses in the our department.
- Minor and Major Projects for creativity, research and skill development through specific courses in the National/Multinationals/ industries/organisations to make better employability..
- Field/industrial visits on alternate Saturday of students of all courses to industries, ETP plants and renewable system sites provide the much better insight of the systems and processes.
- Discussions were held after seeing the technical CD/DVDs of the concerned topic/system/process in the class room.

2.7 Total No. of actual teaching days during this academic year

234

2.8 Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation, Photocopy, Online Multiple Choice Questions)

Internal Evaluation as per Ordinance 31 and checked copies shown to students

2.9 No. of faculty members involved in curriculum restructuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development workshop

03

01 external

01 Student

2.10 Average percentage of attendance of students

86 %

2.11 Course/Programme wise distribution of pass percentage :

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
M. Tech	10	60%	30%	10%		100%
M. Phil	0	0	0	0	0	0

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

Through Meetings, Feedback , preparation of notes and Power point Presentations and Results of Students

2.13 Initiatives undertaken towards faculty development

<i>Faculty / Staff Development Programmes</i>	<i>Number of faculty benefitted</i>
Refresher courses	Nil
UGC – Faculty Improvement Programme	Nil
HRD programmes	Nil
Orientation programmes	Nil
Faculty exchange programme	03
Staff training conducted by the university	N.A
Staff training conducted by other institutions	nil
Summer / Winter schools, Workshops, etc.	nil
Others	nil

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily
Administrative Staff	02	0	0	01
Technical Staff				01

Criterion – III**3. Research, Consultancy and Extension**

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

- Research Policy was promoted to enhance the quality of research.
- Two papers should be communicated by each teacher as individual or with other Researchers in Journals of good Impact Factors every year.

3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	02	02	00	00
Outlay in Rs. Lakhs	33.04	33.04	00	00

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	0	0	0	0
Outlay in Rs. Lakhs	0	0	0	0

3.4 Details on research publications

	International	National	Others
Peer Review Journals	18	06	00
Non-Peer Review Journals	00	00	00
e-Journals	00	00	00
Conference proceedings	03	00	00

3.5 Details on Impact factor of publications:

Range Average h-index Nos. in SCOPUS

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	Yearly	Ministry of New and Renewable Energy, New Delhi	33.04 Rs.Lakhs	33.04 Rs. Lakhs
Minor Projects				
Interdisciplinary Projects				
Industry sponsored				
Projects sponsored by the University/ College				
Students research projects <i>(other than compulsory by the University)</i>				
Any other(Specify)				
Total	2015-16	MNRE,Delhi	33.04 Rs. Lakhs	33.04 Rs. Lakhs

3.7 No. of books published i) With ISBN No. Chapters in Edited Books

ii) Without ISBN No.

3.8 No. of University Departments receiving funds from

UGC-SAP CAS DST-FIST
DPE DBT Scheme/funds

3.9 For colleges
Autonomy CPE DBT Star Scheme
INSPIRE CE Any Other (specify)

3.10 Revenue generated through consultancy

3.11 No. of conferences

organized by the Institution

Level	International	National	State	University	College
Number	Nil	Nil	Nil	Nil	Nil
Sponsoring agencies	N.A	N.A	N.A	N.A	N.A

3.12 No. of faculty served as experts, chairpersons or resource persons

3.13 No. of collaborations International National Any other

3.14 No. of linkages created during this year

3.15 Total budget for research for current year in lakhs :

From Funding agency From Management of University/College

Total in Rs Lakhs

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	0
	Granted	0
International	Applied	0
	Granted	0
Commercialised	Applied	0
	Granted	0

3.17 No. of research awards/ recognitions received by faculty and research fellows
Of the institute in the year

Total	International	National	State	University	Dist	College
01	0	0	01	0	0	0

- Young Scientist Award of MPCST by research Scholar (Mr Shashav Sharma)

3.18 No. of faculty from the Institution
who are Ph. D. Guides
and students registered under them

03

17

3.19 No. of Ph.D. awarded by faculty from the Institution

02

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF

01

SRF

02

Project Fellows

0

Any other

01

3.21 No. of students Participated in NSS events:

University level

0

State level

0

National level

0

International level

0

3.22 No. of students participated in NCC events:

University level

0

State level

0

National level

0

International level

0

3.23 No. of Awards won in NSS:

University level

0

State level

0

National level

0

International level

0

3.24 No. of Awards won in NCC:

University level

0

State level

0

National level

0

International level

0

3.25 No. of Extension activities organized

University forum	<input type="text"/>	College forum	<input type="text" value="0"/>		
NCC	<input type="text"/>	NSS	<input type="text"/>	Any other	<input type="text" value="02"/>

*Plantation in Campus

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

- Energy Audit of different Hostels and Departments by students under the guidance of faculty
- Plantation

Criterion – IV**4. Infrastructure and Learning Resources**

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area (Build up area)	1259 Sq m	Under Planning	UGC+ departmental fund	1259 Sq m
Class rooms	02	Under Planning	UGC+ departmental fund	02
Laboratories	07	Under Planning	UGC+ departmental fund	
Seminar Halls	01			
No. of important equipments purchased (\geq 1-0 lakh) during the current year.	00			
Value of the equipment purchased during the year (Rs. in Lakhs)	0.82 lakhs		RTC &UGC	
Others				

4.2 Computerization of administration and library

Yes, Library and administration are fully computerized

4.3 Library services:

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	4462		00	00	4462	
Reference Books	100					
e-Books	40	Free Copies	05	Free Copies	45	Free Copies
Journals	05					
e-Journals	91					
Digital Database						
CD & Video	85					
Others (specify)	22					
	Magzines					

** central Library e-journals

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others
Existing	45	20	All	02	01*	04	19	0
Added	0	0	0	0	00	0	0	0
Total	45	20	All	02	01*	04	19	0

* Central Facility of University

4.5 Computer, Internet access, training to teachers and students and any other programme for technology upgradation (Networking, e-Governance etc.)

Yes, Internet Access is available to all teachers and staff in addition to all students.

4.6 Amount spent on maintenance in lakhs :

i) ICT	1.28986
ii) Campus Infrastructure and facilities	2.67
iii) Equipments	2.32839
iv) Others	
Total :	6.28825

Criterion – V**5. Student Support and Progression**

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- Vision and mission helps to students for achieving the goals with the continuous involvement of all faculty and staff members in all activities
- Enhancing Teaching and learning
- Departments to benchmark with international departments of repute
- Introduction of Skill Development certificate courses with unique specialization in the Energy and Environmental Management.
- Modular teaching with Integrated Curricular from inter discipline department of the University
- Enhancing Research and development
- Formation of a Research Ethics Committee
- Each Professor/ Reader guided the students in minor and major projects
- Faculty members involve students in their R & D projects.

5.2 Efforts made by the institution for tracking the progression

All teachers are holding the responsibility to run the M. Tech (energy Management), M/Phil (Energy and Environment), MBA (Energy Management) and Ph.D programs in Energy & Energy and Environment. All teachers discuss the problems of the students and take unanimous decision for the growth of student and to provide a stress free environment to the students.

Monitoring and records are kept for tracking the progression of students as given below,

- Academic programs monitoring and quality
- Record of the students after passing M. Tech and M. Phil prefer joining jobs in Consultancy organizations/Industries. However, few M. Phil students recently joined Ph.D programmes.

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others
00	50	17	

(b) No. of students outside the state

(c) No. of international students

Men	No	%	Women	No	%
	53	79		14	21

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
48	7	1	11	0	67	21	04	0	07	0	

Demand ratio 1:4 Dropout % 5.5

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

University minority Cell arrange the coaching classes for competitive Examinations.

No. of students beneficiaries

5.5 No. of students qualified in these examinations

NET	<input type="text" value="01"/>	SET/SLET	<input type="text" value="00"/>	GATE	<input type="text" value="08"/>	CAT	<input type="text" value="00"/>
IAS/IPS etc	<input type="text" value="00"/>	State PSC	<input type="text" value="01"/>	UPSC	<input type="text" value="00"/>	Others	<input type="text" value="00"/>

5.6 Details of student counselling and career guidance

Guidance and counselling cell is provided to the students for academic improvement, project placements, and for job placements.

- ✓ Departmental/University Career Counseling Cell organizes the lectures time to time and help in getting the placement directly from the school to different Industries/multi national organisations / self employment etc.
- ✓ A language laboratory is setup for all students from UGC grant
- ✓ Department give the training of skill development through real field project such as Energy auditing and energy conservation , designing of solar thermal and power generation projects, Environmental Impact Assessment etc and these activities help in their jobs

No. of students benefitted

100%

5.7 Details of campus placement

<i>On campus</i>			<i>Off Campus</i>
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
0	10	03	07

07 Students are employed during their project in last semester. Three students were placed through Centralized placement cell.

5.8 Details of gender sensitization programmes

Regular counselling, feedback system, motivation and interaction is done by teachers on regular basis

5.9 Students Activities

5.9.1 No. of students participated in Sports, Games and other events

State/ University level

 Yes

National level

 No

International level

 No

No. of students participated in cultural events

State/ University level

 Yes

National level

 No

International level

 No

5.9.2 No. of medals /awards won by students in Sports, Games and other events

Sports : State/ University level

 No

National level

 No

International level

 No

Cultural: State/ University level

 No

National level

 No

International level

 No

5.10 Scholarships and Financial Support

	Number of students	Amount
Financial support from institution	00.	00
Financial support from government	18	2.5 lakhs/annum
Financial support from other sources	Nil	Nil
Number of students who received International/ National recognitions	Nil	Nil

5.11 Student organised / initiatives

Fairs : State/ University level National level International level

Exhibition: State/ University level National level International level

5.12 No. of social initiatives undertaken by the students

5.13 Major grievances of students (if any) redressed: _____ Nil _____

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision

To be a frontline school specializing in need based research and in developing professionals for energy and environmental solutions

Mission

- To develop and provide world class professionals with excellent analytical, communication skills and ability to work in the field of Energy and Environment.
- To ensure excellent research work to be competitive internationally and to cater to the needs of local / regional and national significance in the area of energy and environment.
- Inculcate professional, social and environmental ethics among youths to serve mankind and society.

6.2 Does the Institution has a management Information System

No

6.3 Quality improvement strategies adopted by the institution for each of the following:

6.3.1 Curriculum Development

Department uses the feedback as indicator of the overall quality of the teaching and learning and using this indicator the required changes implemented.

6.3.2 Teaching and Learning

Three Stage Teaching by using multimedia teaching methods, chalk-and- talk **method** and Field Visits in Industries/organizations/Renewable systems sites for practical knowledge on different real systems/processes in the field of Energy and Environment was adopted. Theories, Seminars, Field visits, DVDs, Projects were used to assess the learning progress of the student. Overall Knowledge was also assesses by external expert and teachers incomprehensive viva voce examination.

- Final outcome assessed on the basis of regular minor, seminars, group discussion, assignments etc
- Feedback form with ten important aspects of teaching and teacher is circulated to students at the end of each semester. Feedback data is analyzed in percentage by assigning the numbers to each activity.
- Departmental committee discuss all the issues related to teaching curriculum, question papers, examination procedure, evaluation methods and feedback percentage of individual teacher performance calculated from students feedback. The strength and weakness are communicated in the meeting to the concern teachers. A teacher is also guided by senior Faculty for improving teaching-learning process for next semester. The steps are taken also to improve the quality of the teaching-learning process

6.3.3 Examination and Evaluation

- Hard Copies of Teaching plan and schedule are distributed to students in advance.
- Examinations held as per Ordinance 31

Information is hosted at website www.dauniv.ac.in

6.3.4 Research and Development

- ✓ Research laboratories are well equipped with required facilities and having modern instruments and equipments.
- ✓ Each Teacher has One/Two research laboratory separately for their research work. Some Research Laboratories are
 - ✓ Biomass conversion Laboratory
 - ✓ Solar and PV Laboratory
 - ✓ Heat and Mass Transfer Laboratory
 - ✓ Waste management Laboratory
 - ✓ Environmental Laboratory
 - ✓ Computer Laboratory
 - ✓ Internet facility with large number of e-Journals availability

6.3.5 Library, ICT and physical infrastructure / instrumentation

Library is fully computerized for the records and availability check of books, journal and magazines.

- TLSS software is used for Database and searching the books.
- INFLIBNET/IUC facilities are used frequently for research work.
- University has ICT infrastructure. Wi-Fi campus ,best auditorium and sports fields.

Class rooms and seminar hall are equipped with multimedia setup to make ICT-enabled classrooms

Department availing of the National Knowledge Network connectivity Through Internet network by IT center in the class rooms.

6.3.6 Human Resource Management

All teachers are engaged actively in research and development therefore remains in contact with front line research and changing scenario in the field of energy and environment. The changing requirements of curriculum are discussed in Departmental Meetings. The planning of next year is done by fixing responsibilities of different activities are to be carried out. A departmental calendar is prepared.

6.3.7 Faculty and Staff recruitment

As per university rules

6.3.8 Industry Interaction / Collaboration

- ✓ Industries help by giving permissions and to explain the processes and technologies used in industrial experts during their field visits. Also Industrial experts come for lectures in the department and discuss the issues related to energy and environment on specific processes and system performances.
- ✓ Training and jobs are provided to students with the cooperation of Stakeholders.
- ✓ Industrial experts and Stakeholders cooperate also in modifications in curriculum every year by providing their suggestions and expert opinion.

6.3.9 Admission of Students

Admission notice for all the programmes is published in Employment News and Selected national and local newspapers in the month of April/May and also displayed on University Website: www.dauniv.ac.in . Applications are downloaded or apply online from the website: mponline.gov.in

6.4 Welfare schemes for

Teaching	Yes
Non teaching	Yes
Students	Yes

6.5 Total corpus fund generated

N.A

6.6 Whether annual financial audit has been done

Yes

No

6.7 Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	No	No	yes	Yes
Administrative	No	No	Yes	Yes

6.8 Does the University/ Autonomous College declares results within 30 days?

For UG Programmes Yes No

For PG Programmes Yes No

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

The Examination pattern we follow is as per the Ordinance 31 of the university which was renewed collectively.

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

Ordinance 31 provides academic and evaluation function autonomous to the school. University conveys appreciation of the work of Dr. S P Singh. Performance based assessment (prescribed by UGC) is filled at the end of every year by each faculty. Self-appraisal and PBA form are assessed by University. Remarks are conveyed to the faculty. So far no adverse remarks have been communicated for the faculty of the School

6.11 Activities and support from the Alumni Association

SEES Alumni association having an interaction through Internet

Rs 300 per student fee is taken for the alumni association

6.12 Activities and support from the Parent – Teacher Association

Yes

6.13 Development programmes for support staff

Yes

6.14 Initiatives taken by the institution to make the campus eco-friendly

- * Energy conservation
 - Energy Audit of all departments are done by the School faculty and students. Reports are to be submitted
- * Use of renewable energy
 - ✓ 5 kW_p Photovoltaic power plant to meet the maximum demand of the department
- * Water harvesting
 - ✓ Roof harvesting system based on rock fracturing technique was installed
- * Efforts for Carbon neutrality
 - ✓ Yes, Energy and water conservation in building in addition to gardens and plantation.
- * Plantation
 - ✓ More than 25 Trees, shrubs and flower plants are grown in and around the School building in this year.
- * e-waste management
 - e-waste collected and sold to Government approved vender.

Criterion – VII

7. Innovations and Best Practices

- 7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

Involvement of students in frontline research and consultancy projects making better professionals in the field of Energy and Environment. It is observed that they are well trained with enhanced practical knowledge and fully developed skills in energy auditing and conservation, design of renewable energy systems and environment assessment projects. They learn about the practical design aspects, data collection and measurements, analysis of data, results interpretation and appropriate recommendations for future and preparation of Detailed Project Report (DPR). It is also acknowledged by us and stakeholders.

- 7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

The Department is strictly following the Academic Calendar. Special Classes for advanced learners and remedial classes for the weaker students have been conducted.

- 7.3 Give two Best Practices of the institution (*please see the format in the NAAC Self-study Manuals*)

- **Suggestions from senior alumni on job requirements during project time .**
 - **Keeping the records of alumni.**
 - Regular revision of the syllabus
 - Regularly update the full functional web site of University.
 - Transparency in the admission and examination process. The admission list is prepared by different board members. The final marks are compiled of four members of a board and then merit list displayed on the notice board & internet same day.
The examination copies are shown to the students before the comprehensive viva voce.
 - Use of ICT in all the class rooms.
 - Field visits are organized for the students on alternative Saturday.
 - Seminar is organized every week for students presentation on specific topics.

**Provide the details in annexure (annexure need to be numbered as i, ii,iii)*

7.4 Contribution to environmental awareness / protection

School organized different activities for environment protection. i.e. plantation , shram dan in a day an hour every week.

Environment Consciousness

Department Area Green Audit details

Energy Efficient Building Design

Features

- ✓ East –west long orientation: Minimum cooling load in summer and maximum heat gain in winter
- ✓ Hollow walls: Reduction in cooling and heating load in summer and winter
- ✓ South wall windows for maximum solar heat gain in winters
- ✓ North wall window designs for proper lighting.
- ✓ Exact overhang sizes to cut direct radiation gain into the building
- ✓ Light colours on outside walls for minimum heat gain
- ✓ Light shaft for lighting
- ✓ Reflection from overhangs top white tiles to roof inside the building
- ✓ Passive cooling tower to cool /reduce Air conditioning load whole building in Summer

Energy efficient lighting, Air conditioners and other gadgets

The following Energy efficient lighting and Air conditioners are installed for use and demonstration.

- ✓ CFL's,
- ✓ LED lights for inside and outdoor lighting,
- ✓ Metal Halide fixtures,
- ✓ Induction lighting systems
- ✓ Energy efficient Five Star and three star Air conditioners are installed in the building
- Flat LCD screens installed with computers in replace of old CPU.

Water Conservation

- ✓ Roof harvesting system based on rock fracturing technique was installed.
- ✓ Sprinklers are installed for gardens irrigation.
- ✓ Water wastages is minimized by checked regularly the leakages by maintenance.

Waste Recycling Minimization

- ✓ Use of Paper is minimized by using more electronic communication.
- ✓ Organic Solid waste is converted to compost by **vermi composting method**.

Renewable Energy Systems

- ✓ 5 kW_p Photovoltaic power plant to meet the maximum demand of the department
- ✓ 2 cu meter biogas plant for departmental kitchen and for demonstration
- ✓ Water heating system is also coupled to kitchen for hot water requirements as tea making etc.

Reuse of Resources

- ✓ Composted slurry and composted manure from vermin composting systems are used in gardening and plantation in the department as well as in the university.

7.5 Whether environmental audit was conducted? Yes No

7.6 Any other relevant information the institution wishes to add. (for example SWOT Analysis)

1. Strength

- (a) High spirit of Team work to complete any task assigned or taken by the School and focus on both knowledge acquisition and employment capabilities of student
- (b) Promotion of Inter-disciplinary research to bring science and technology closer to humanities.
- (c) Regular Field visits & seminars to provide a suitable platform for practical knowledge, skills as well as English speaking/developing Communication skills among students to prepare them a better professional.
- (d) Excellent work environment for learning and research.
- (e) Excellent Interaction with rural and urban society, Industries/organisations and national and International Institutes and their faculty and scientists.

2. Weakness

- (a) Deficiency of teachers
- (b) Want of adequate Infra-structure for expansion
- (c) Deficiency of latest equipments and softwares
- (d) Less recreation facilities for students in the School
- (e) All faculty members are not having Research projects.

3. Opportunities

- (a) Participation in Exchange programmes with foreign Universities
- (b) Invite alumni for guest lectures and as external experts for examination
- (c) Syllabus modifications according to Industries/organisations need
- (d) Academic autonomy to the School

4. Challenges

- (a) To develop Research and educational Laboratories of International standards
- (b) Collaboration with International Institutes / Universities/ R&D organizations.
- (c) Increasing Student-teacher ratio
- (d) To provide Value Education to students

8. Plans of institution for next year

- Skill Development certificate Courses would be introduced for our regular students and for external fresh students .
- M. Tech in Energy and Environment would be proposed for approval in coordination committee.

Name Dr Rubina Chaudhary
Signature of the Coordinator, IQAC

Name **Prof S. P. Singh**
Signature of the Chairperson, IQAC
