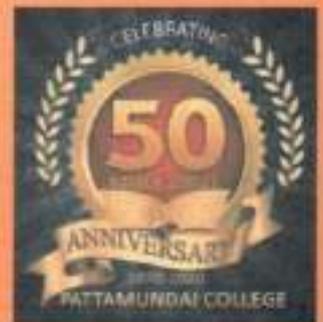




# REPORT



A NATIONAL LEVEL WEBINAR ON

***“IMPACT ON THE SECTORS OF INDIAN ECONOMY  
AND SURVIVAL STRATEGY FOR INDIAN BUSINESS IN  
THE PANDEMIC OF COVID-19”***

On 11<sup>th</sup> November 2020 at 3 p. m.

Platform : Zoom Meeting App and Youtube Live

## Resource Person



**Dr. Bhagaban Das**  
Retired Professor and Dean  
Department of Business  
Management  
Fakir Mohan University, Balasore  
Odisha.

**Dr. Debadax Rakshit**  
Professor  
Department of Commerce  
and Management  
The University of Burdwan  
West Bengal



Organised by:-

## DEPARTMENT OF COMMERCE

**PATTAMUNDAI COLLEGE**

Pattamundai, Kendrapara, Odisha

In Association With

Internal Quality Assurance Cell (IQAC)

## REPORT

The Department of Commerce, Pattamundai College, Pattamundai organized a National Level Webinar on the topic ***“IMPACT ON THE SECTORS OF INDIAN ECONOMY AND SURVIVAL STRATEGY FOR INDIAN BUSINESS IN THE PANDEMIC OF COVID-19”*** on 11<sup>th</sup> November 2020 at 3 p. M. Through online platform: zoom cloud meeting app and youtube live streaming.

### Inaugural Session

The session was started at 3 P.M under the chairmanship of prof. Adhikari Laxmi Narayan Dash, Principal cum Chairperson of this webinar Dr. Debadas Rakshit, Professor, Department of Commerce and Management, The University of Burdwan, West Bengal and Dr. Bhagaban Das, Retired Professor and Dean, Department of Business Management, Fakir Mohan University, Balasore, Odisha were the two resource person of this auspicious occasion.

The participants were joined in the webinar from 2.45 pm to 3 pm Sri Ranjan Kumar Behera, Lecturer in Commerce and the Convenor of the webinar introduced the guests. Sri Sanjib Kumar Dash Head of the Department delivered welcome address to the resource persons, staff of the nearby and our college and the students participated in the webinar and gave a brief introduction about the webinar topic. Prof Adhikari Laxmi Narayan Dash, Principal and Chairperson of the webinar delivered inaugural address to the resource persons, staff of the nearby other and our college and the students participated in the webinar Mrs Neerupama Swain, Lecturer in Education of our college Coordinated the webinar.

### Technical session 1

The first technical session was started at 3.30 p.m . in this session Dr. Bhagaban Das delivered his talk on Effect of pandemic COVID - 19 on Indian Higher Education. The different questions were asked by the participants and prof das answered the question in a very simplified way.

### Technical session 2

The second technical session was started 4.45 pm just after the question and answer session of technical session one and in this session the resource person was Dr. Debadas Rakshit and he delivered his talk on Impact on the sectors of Indian economy and survival strategy for Indian business in the pandemic of COVID-19. The different questions were asked by the participants and Prof Debadas answered the question in a very simplified way.

Finally, the webinar was ended with a vote of thanks by Mrs Neerupama Swain, lecturer in education of our college coordinated the webinar.

Date: 11<sup>th</sup> November 2020

*Ranjan Kumar Behera*  
Ranjan Kumar Behera 11/11/2020  
Convenor

*Ranjan Kumar Behera*  
Ranjan Kumar Behera  
11/11/2020

# DEPARTMENT OF COMMERCE

**Pattamundai College**  
Pattamundai, Kendrapara, Odisha.



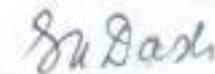
## *Certificate of Participation*

This is to certify that

<< name >>

<<designation>> of << college >> has actively participated in the National Webinar on "Impact on the sectors of Indian economy and survival strategy for Indian business in the pandemic of COVID-19" Organized by Department of Commerce , Pattamundai College, Pattamundai, Kendrapara, Odisha **on 11th November 2020 at 3 p.m.**

  
R K Behera  
Convenor

  
S K Dash  
HOD ,Commerce

  
Prof. A.L.N. Dash  
Principal





Registration Form for National Level Webinar on "Impact on the sectors of Indian economy and survival strategy for Indian business in the pandemic of COVID-19"

Organised by Department of Commerce

Pattamundai College, Pattamundai Time : 11th November 2020 at 3 p.m.

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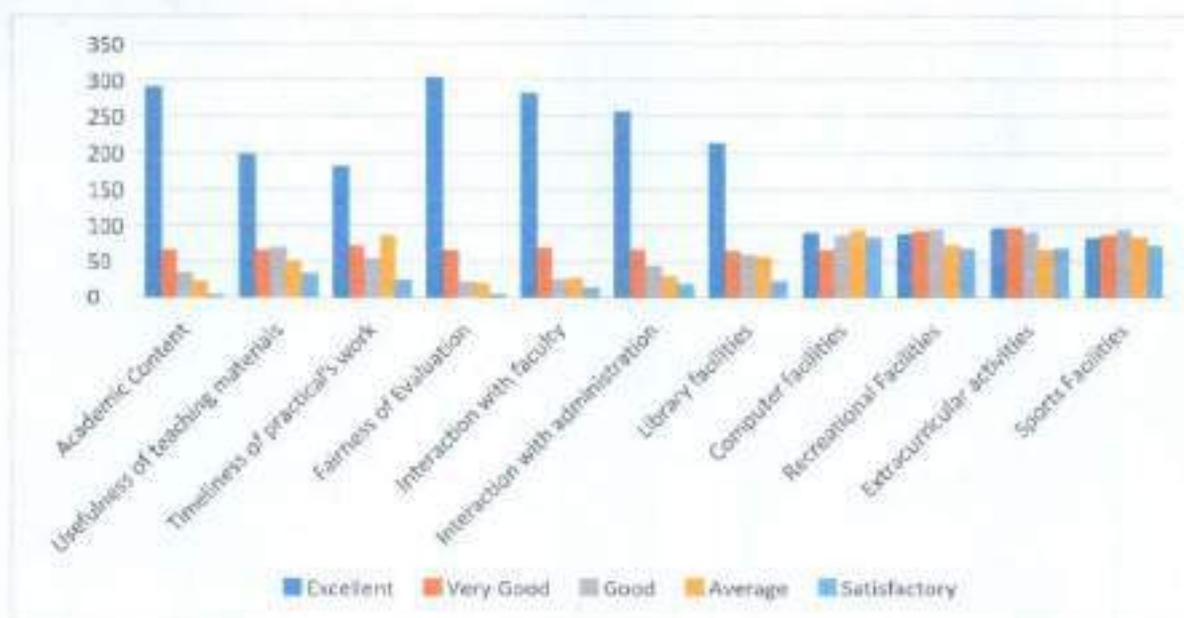
## Report of Analysis on Feedback Collected by different Stakeholders

Academic Year: 2020-2021

### Students Feedback:

425 no. of feedbacks of the students are collected for the academic session 2020-21. The feedbacks of different questions are based on five point scale whose details are analysed on the basis of no. as well as in percentage which is given below.

No of Ques t.	Questions	Excellent	Very Good	Good	Average	Satisfactory
1	Academic Content	298	67	36	23	1
2	Usefulness of teaching materials	200	68	73	52	32
3	Timeliness of practical's work	186	72	57	86	24
4	Fairness of Evaluation	306	68	24	22	5
5	Interaction with faculty	287	69	27	28	14
6	Interaction with administration	260	68	47	30	19
7	Library facilities	218	66	59	58	24
8	Computer facilities	96	67	89	93	83
9	Recreational Facilities	93	93	97	74	68
10	Extracurricular activities	98	94	92	70	71
11	Sports Facilities	88	87	96	82	72

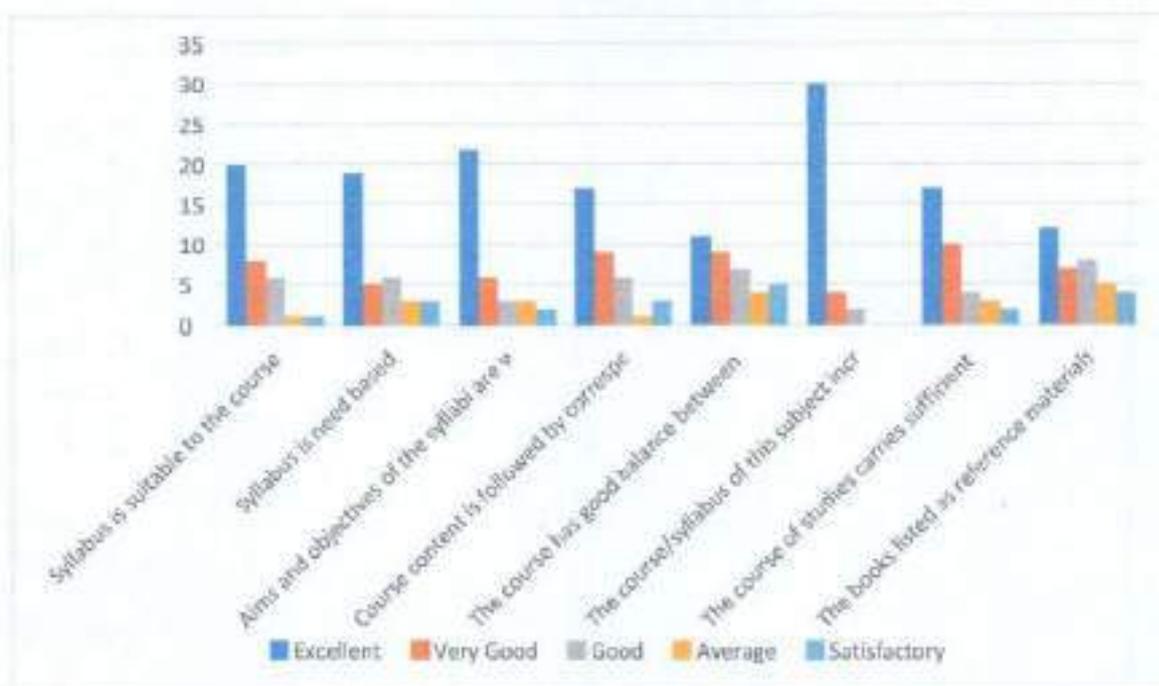


On analysis of the different contents, it is found that average 70% students are very satisfied with the academic content of the CBCS Syllabus, 47% of students were very satisfied on the usefulness of teaching materials and 44% of students had shown satisfaction on timeliness of practical work. A very good response has been obtained towards the interaction with faculties, administration as well as library facilities. But in the fields of Computer facilities, recreational facilities, extracurricular activities and sports facilities, there were mixed responses which needs a great changes.

### Teachers Feedback

The feedbacks of all the teachers were collected regarding the contents of syllabus in five points scale. The data collected was analysed in the following table.

No. of Quest.	Questions	Excellent	Very Good	Good	Average	Satisfactory
1	Syllabus is suitable to the course	21	9	5	1	1
2	Syllabus is need based	18	5	7	4	3
3	Aims and objectives of the syllabi are well defined and clear to teachers and students	23	7	2	3	2
4	Course content is followed by corresponding reference books/materials	17	9	7	1	3
5	The course has good balance between theory and lab	12	9	8	3	5
6	The course/syllabus of this subject increased my knowledge and perspective in the subject area.	30	4	3	0	0
7	The course of studies carries sufficient number of optional papers	18	10	3	4	2
8	The books listed as reference materials are relevant, updated and appropriate	13	8	7	5	4

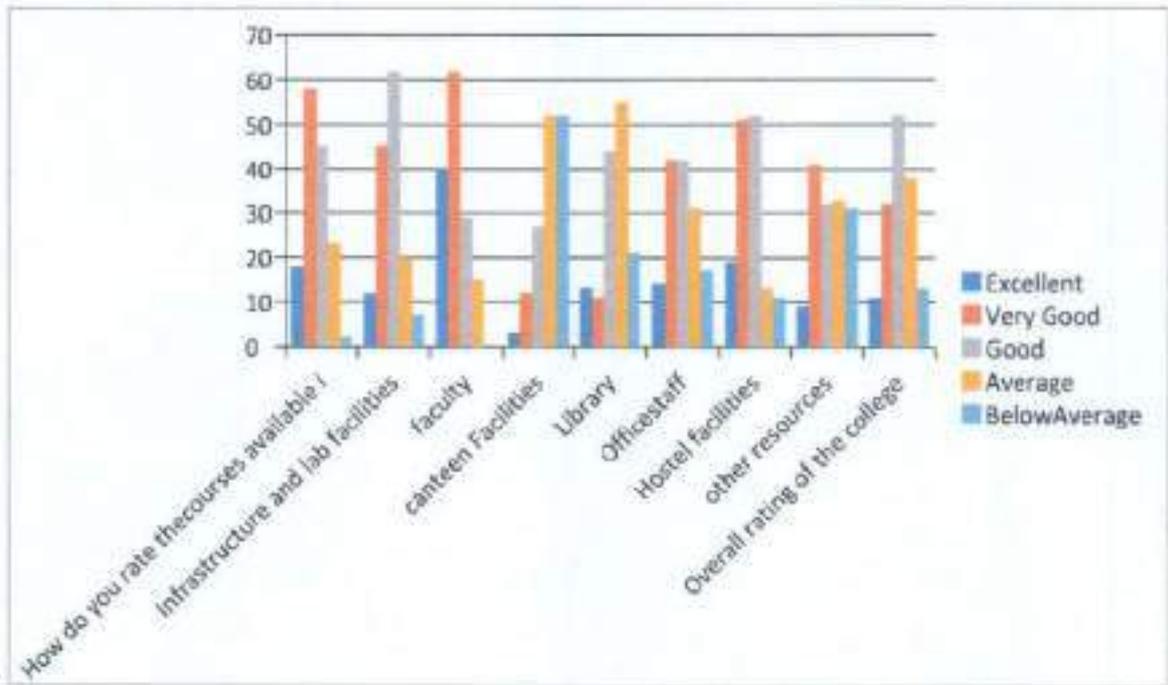


The response regarding the contents of the syllabus by the teachers were mostly suitable for the betterment of the students which will help them in future as it was the result of rigorous exercise of many intelligent brains.

#### Alumni Feedback-

A total of 148 feedbacks are collected from the alumni of this institution out of many which based on different questionnaire particularly the institution has. They expressed their views whose details are given below.

No. of Quest	Question	Excellent	Very Good	Good	Average	BelowAverage
1	How do you rate the courses available in the college?	19	58	46	23	2
2	Infrastructure and lab facilities	13	45	63	20	7
3	faculty	40	63	29	16	0
4	canteen Facilities	4	12	27	52	53
5	Library	13	12	44	55	22
6	Office staff	14	42	43	31	18
7	Hostel facilities	19	51	53	14	11
8	other resources	9	41	33	34	31
9	Overall rating of the	12	32	52	38	14



Most of the alumni rated the college a range of vary good to good indicating the college has adequate facilities in overall fields and still needs many changes to cater the need of the students.

Pratik Kumar Boddha  
(Do. Hk. Boddha) 10/11/2021

Megha Kishore Nayak  
(Do. Hk. Nayak) 02.01.2021

Subhanshu Mishra  
08.07.2021

Satyajit Nayak 08/07/21

Pritendra Mishra  
02.07.21



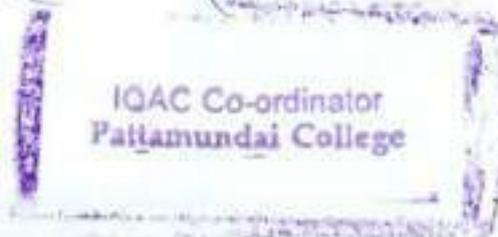
## Report

At the end of the Academic Year 2020-2021, the IQAC team through faculties of the college collected Feed from students. In total 425 responses were received from the students. IQAC team analyzed collected feedbacks and suggested corrective measure before IQAC meeting.

### Steps taken following students' feedback:

1. The college administration renovated the Canteen for students.
2. More numbers of ICT facilities were made available for the students, as most of seminar halls were provided with LCD projectors.
3. The institution increased its internet speed and availability for students as all seminar halls were provided with LAN connection.
4. The college administration renovated gymnasium for students and faculties.
5. Mentor-mentee systems are strengthened by the college, and it is operated more efficiently.
6. To increase students' perception or to provide practical knowledge beyond curriculum, the college arranged various exposure visits for students.
7. To cope with the changing scenario the institution decided to collect feedback through online mode.
8. To reduce the gap between Inter and Graduation IQAC introduced bridge course for first year UG students.
9. Various training programmes were conducted for teacher to adapt them with new technologies for a better teaching-learning process.
10. Help desk programme for slow learner and group discussion for advance learners were conducted

*S. K. Pradhan*  
(Dr. S. K. Pradhan)

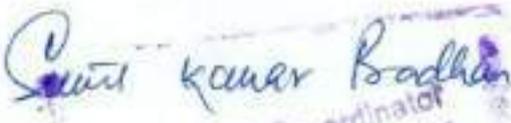


SI No	Suggestions received regarding	Suggestions received from feedback	Action taken on feedback
1	Academic Content	298 says Excellent 67 says very good	Teaching learning section has obtained majorly highest score among all the sections in the survey.
2	Usefulness of Teaching Materials	200 says Excellent 68 says very good	The faculties should be advised to provide more online resource
3	Timeliness of Practical's Work	186 says Excellent 72 says very good	As the procurement of instruments for practical class of CBCS is complete the departments are directed to engage all class.
4	Fairness of Evaluation	306 says Excellent 68 says very good	The satisfaction level is very high as there is no grievance. Students have acknowledged the teacher's attitude towards teaching and fairness in evaluation.
5	Interaction with Faculty	287 says Excellent 69 says very good	Faculties are advised to improve interaction through mentoring process. However, they have asked for more interactive session.
6	Interaction with Administration	260 says Excellent 68 says very good 260	The students and their representatives should get more

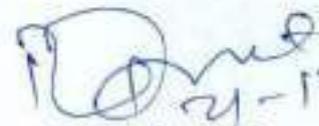
*Sunita Kumar Baidya*

IQAC Co-ordinator  
Patilamundai College

			opportunities to interact with administration.
7	Library Facility	218 says Excellent 66 says very good 218	Strengthening of departmental library is done. The librarian of the college should request to be a part of the meeting in order to discuss the feedback regarding the library and its resources.
8	Computer Facility	96 says Excellent 67 says very good	This year 11 no of laptops are provided to teaching faculties.
9	Recreational Facility	93 says Excellent 93 says very good	The canteen committee should provide variety food items in the canteen. Special facility for differently able students at canteen. Entertainment programs related to drama, Song competition etc. should be arranged where the students have a chance to participate.
10	Extracurricular Activity	98 says Excellent 94 says very good	Due to COVID 19 pandemic the activity hampers partially.
11	Sports Facility	88 says Excellent 87 says very good	Due to COVID 19 pandemic the

  
 IQAC Co-ordinator  
 Pattamundai College

			activity hampers partially Frequent coaching camps for sports and games.
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21-12-21  
Principal

Pattamundai College  
Principal  
Pattamundai College

**Members of IQAC**

Shree! Kumar Pradhan  
(Dr S.K. Pradhan) Co-ordinator IQAC

Manas Kumar Nayak  
(Dr H.K. Nayak) 21.12.21

Pritendra Malik 21.12.21

Subhansu Mishra  
21.12.21

Sanjay Kumar Nayak 21/12/21



*Help Desk Programme of Dept. of Economics*



*Student Seminar by Department of Odia*



*Students' Group discussion*



*Covid Awareness Programme by NSS*



*Self Defence Programme*



*Students' Power Ppoint Presentation*

*Sunita Kumar Baidya*  
IQAC Co-ordinator  
Parlamunda College



PATTAMUNDAI COLLEGE, PATTAMUNDAI, KENDRAPARA 754215(ODISHA)

STUDENT FEED BACK ON PROGRAMME OF STUDY

SESSION- 2020-21

(Faculty: Arts /Science /Commerce)

(Strike out which is not necessary)

Department of Botany

(Put a tick in the appropriate box against each item)

Sl. no	Item	Excellent	Very Good	Good	Average
1	Academic Content	✓			
2	Usefulness of Teaching Materials	✓			
3	Timeliness of Practical's Work	✓			
4	Examination System	✓			
5	Farness of Evaluation	✓			
6	Interaction with Faculty		✓		
7	Interaction with Administration	✓			
8	Library Facility			✓	
9	Computer Facility			✓	
10	Hostel Facility			✓	
11	Recreational Facility		✓		
12	Extraçurricular Activity		✓		
13	Sports Facility	✓			

(Rate the teacher on the following attributes using 4 point scale as shown)

4                      3                      2                      1  
 Excellent            Very Good            Good                  Average

Sl. No	Name of the teacher	Communication skill	Sincerity/commitment of the teacher	Knowledge base of the teacher	Accessibility of teacher in and out of the class	Ability to integrate other course
1	Dr. Miss Anjali Kumari Dash	4	3	4	4	3
2	Mrs Suchismita Biswal	4	3	4	4	3



PATTAMUNDAI COLLEGE, PATTAMUNDAI, KENDRAPARA 754215(ODISHA)

STUDENT FEED BACK ON PROGRAMME OF STUDY

SESSION- 2020-21

(Faculty: ~~Arts~~ /Science /~~Commerce~~)

(Strike out which is not necessary)

Department of Physics

(Put a tick in the appropriate box against each item)

Sl. no	Item	Excellent	Very Good	Good	Average
1	Academic Content	✓			
2	Usefulness of Teaching Materials	✓			
3	Timeliness of Practical's Work		✓		
4	Examination System	✓			
5	Farness of Evaluation			✓	
6	Interaction with Faculty		✓		
7	Interaction with Administration		✓		
8	Library Facility	✓			
9	Computer Facility			✓	
10	Hostel Facility		✓		
11	Recreational Facility			✓	
12	Extracurricular Activity	✓			
13	Sports Facility	✓			

(Please rate the teacher on the following attributes using 4 point scale as shown)

4                      3                      2                      1  
Excellent            Very Good            Good                  Average

Sl. No	Name of the teacher	Communication skill	Sincerity/commitment of the teacher	Knowledge base of the teacher	Accessibility of teacher in and out of the class	Ability to integrate other course
1	Dr. Ramesh Kumar Sahoo	4	4	4	4	4
2	Mr. Baikuntha Chandra Roul	4	3	4	3	4



**PATTAMUNDAI COLLEGE, PATTAMUNDAI, KENDRAPARA 754215(ODISHA)**  
**STUDENT FEED BACK ON PROGRAMME OF STUDY**

**SESSION- 2020-21**

**(Faculty: Arts /Science /Commerce)**

**(Strike out which is not necessary)**

**Department of Physics**

**(Put a tick in the appropriate box against each item)**

Sl. no	Item	Excellent	Very Good	Good	Average
1	Academic Content	✓			
2	Usefulness of Teaching Materials	✓			
3	Timeliness of Practical's Work	✓			
4	Examination System		✓		
5	Farness of Evaluation		✓		
6	Interaction with Faculty			✓	
7	Interaction with Administration	✓			
8	Library Facility	✓			
9	Computer Facility				✓
10	Hostel Facility	✓			
11	Recreational Facility		✓		
12	Extracurricular Activity	✓			
13	Sports Facility	✓			

**(Please rate the teacher on the following attributes using 4 point scale as shown)**

4                      3                      2                      1  
 Excellent            Very Good            Good                  Average

Sl. No	Name of the teacher	Communication skill	Sincerity/commitment of the teacher	Knowledge base of the teacher	Accessibility of teacher in and out of the class	Ability to integrate other course
1	Dr. Ramesh Kumar Sahoo	4	4	4	4	4
2	Mr. Baikuntha Chandra Roul	4	4	3	3	4



**PATTAMUNDAI COLLEGE, PATTAMUNDAI, KENDRAPARA 754215(ODISHA)**

**STUDENT FEED BACK ON PROGRAMME OF STUDY**

**SESSION- 2020-21**

**(Faculty: Arts /Science /Commerce)**

**(Strike out which is not necessary)**

**Department of History**

**(Put a tick in the appropriate box against each item)**

Sl. no	Item	Excellent	Very Good	Good	Average
1	Academic Content	✓			
2	Usefulness of Teaching Materials		✓		
3	Timeliness of Practical's Work	—	—	—	—
4	Examination System	✓			
5	Farness of Evaluation	✓			
6	Interaction with Faculty		✓		
7	Interaction with Administration		✓		
8	Library Facility	✓			
9	Computer Facility		✓		
10	Hostel Facility	✓			
11	Recreational Facility	✓			
12	Extracurricular Activity		✓		
13	Sports Facility	✓			

**(Rate the teacher on the following attributes using 4 point scale as shown)**

**4**                      **3**                      **2**                      **1**  
 Excellent              Very Good              Good              Average

Sl.no	Name of the teacher	Communication skill	Sincerity/commitment of the teacher	Knowledge base of the teacher	Accessibility of teacher in and out of the class	Ability to integrate other course
1	Dr. Pramod Kumar Samal	4	4	4	4	4
2	Mr. Rabindra Kumar Panda	4	3	4	3	4
3	Mr. Ranjan Kumar Behura	4	4	4	4	4



**PATTAMUNDAI COLLEGE, PATTAMUNDAI, KENDRAPARA 754215(ODISHA)**

**STUDENT FEED BACK ON PROGRAMME OF STUDY**

**SESSION- 2020-21**

**(Faculty: Arts /Science /Commerce)**

**(Strike out which is not necessary)**

**Department of Sociology**

**(Put a tick in the appropriate box against each item)**

Sl. no	Item	Excellent	Very Good	Good	Average
1	Academic Content	✓			
2	Usefulness of Teaching Materials			✓	
3	Timeliness of Practical's Work				
4	Examination System	✓			
5	Farness of Evaluation	✓			
6	Interaction with Faculty		✓		
7	Interaction with Administration	✓			
8	Library Facility	✓			
9	Computer Facility			✓	
10	Hostel Facility			✓	
11	Recreational Facility		✓		
12	Extracurricular Activity	✓			
13	Sports Facility		✓		

**(Rate the teacher on the following attributes using 4 point scale as shown)**

4                      3                      2                      1  
 Excellent            Very Good            Good                  Average

Sl.no	Name of the teacher	Communication skill	Sincerity/commitment of the teacher	Knowledge base of the teacher	Accessibility of teacher in and out of the class	Ability to integrate other course
1	Capt. Manoj Parida	4	4	4	3	3
2	Mr. Ranjit Keshari Senapati	4	4	4	3	3



**PATTAMUNDAI COLLEGE, PATTAMUNDAI, KENDRAPARA 754215(ODISHA)**  
**STUDENT FEED BACK ON PROGRAMME OF STUDY**

**SESSION- 2020-21**

**(Faculty: Arts /Science /Commerce)**

**(Strike out which is not necessary)**

**Department of Mathematics**

**(Put a tick in the appropriate box against each item)**

Sl. no	Item	Excellent	Very Good	Good	Average
1	Academic Content		✓		
2	Usefulness of Teaching Materials	✓			
3	Timeliness of Practical's Work	✓			
4	Examination System	✓			
5	Farness of Evaluation		✓		
6	Interaction with Faculty	✓			
7	Interaction with Administration		✓		
8	Library Facility		✓		
9	Computer Facility		✓		
10	Hostel Facility		✓		
11	Recreational Facility	✓			
12	Extracurricular Activity	✓			
13	Sports Facility		✓		

**(Rate the teacher on the following attributes using 4 point scale as shown)**

Sl. No	Name of the teacher	4	3	2	1	Ability to integrate other course
		Excellent	Very Good	Good	Average	
1	Mr.Arabinda Pandab	4	4	3	3	3
2	Dr. Nirmala Kumar Sahoo	4	4	3	2	3



PATTAMUNDAI COLLEGE, PATTAMUNDAI, KENDRAPARA 754215(ODISHA)

STUDENT FEED BACK ON PROGRAMME OF STUDY

SESSION- 2020-21

(Faculty: Arts /Science /Commerce)

(Strike out which is not necessary)

Department of Zoology

(Put a tick in the appropriate box against each item)

Sl. no	Item	Excellent	Very Good	Good	Average
1	Academic Content	✓			
2	Usefulness of Teaching Materials	✓			
3	Timeliness of Practical's Work	✓			
4	Examination System	✓			
5	Farness of Evaluation	✓			
6	Interaction with Faculty	✓			
7	Interaction with Administration	✓			
8	Library Facility	✓			
9	Computer Facility		✓		
10	Hostel Facility		✓		
11	Recreational Facility			✓	
12	Extracurricular Activity	✓			
13	Sports Facility	✓			

(Rate the teacher on the following attributes using 4 point scale as shown)

Sl.no	Name of the teacher	4	3	2	1	Ability to integrate other course
		Excellent	Very Good	Good	Average	
		Communication skill	Sincerity/commitment of the teacher	Knowledge base of the teacher	Accessibility of teacher in and out of the class	
1	Mr. Dillip Kumar Bhuyan	4	4	4	4	4
2	Mrs. Sarojini Mishra	4	4	3	4	4



**PATTAMUNDAI COLLEGE, PATTAMUNDAI, KENDRAPARA 754215(ODISHA)**  
**STUDENT FEED BACK ON PROGRAMME OF STUDY**

**SESSION- 2020-21**

**(Faculty: Arts /Science /Commerce)**

**(Strike out which is not necessary)**

**Department of Political Science**

**(Put a tick in the appropriate box against each item)**

Sl. no	Item	Excellent	Very Good	Good	Average
1	Academic Content		✓		
2	Usefulness of Teaching Materials		✓		
3	Timeliness of Practical's Work			✓	
4	Examination System	✓			
5	Farness of Evaluation			✓	
6	Interaction with Faculty		✓		
7	Interaction with Administration		✓		
8	Library Facility			✓	
9	Computer Facility			✓	
10	Hostel Facility		✓		
11	Recreational Facility	✓			
12	Extracurricular Activity	✓			
13	Sports Facility	✓			

**(Please rate the teacher on the following attributes using 4 point scale as shown)**

**4**                      **3**                      **2**                      **1**  
 Excellent              Very Good              Good              Average

Sl.no	Name of the teacher	Communication skill	Sincerity/commitment of the teacher	Knowledge base of the teacher	Accessibility of teacher in and out of the class	Ability to integrate other course
1	Mrs. Nibedita Pradhan	4	4	4	4	3
2	Miss Simangini Das	3	4	4	3	4



PATTAMUNDAI COLLEGE, PATTAMUNDAI, KENDRAPARA 754215(ODISHA)

STUDENT FEED BACK ON PROGRAMME OF STUDY

SESSION- 2020-21

(Faculty: Arts /Science /Commerce)

(Strike out which is not necessary)

Department of Economics

(Put a tick in the appropriate box against each item)

Sl. no	Item	Excellent	Very Good	Good	Average
1	Academic Content		✓		
2	Usefulness of Teaching Materials		✓		
3	Timeliness of Practical's Work			✓	
4	Examination System	✓			
5	Farness of Evaluation		✓		
6	Interaction with Faculty			✓	
7	Interaction with Administration	✓			
8	Library Facility			✓	
9	Computer Facility			✓	
10	Hostel Facility			✓	
11	Recreational Facility		✓		
12	Extracurricular Activity		✓		
13	Sports Facility		✓		

(Rate the teacher on the following attributes using 4 point scale as shown)

Sl.no	Name of the teacher	4	3	2	1	Ability to integrate other course
		Excellent	Very Good	Good	Average	
1	Mr. Pradyumna Pradhan	4	4	4	4	3
2	Mr. Subhasis Mishra	4	4	4	4	4



**PATTAMUNDAI COLLEGE, PATTAMUNDAI**

**STUDENT SATISFACTION  
SURVEY (SSS) REPORT**

**Session: 2020-2021**

**Prepared By**

**Internal Quality Assurance Cell (IQAC),**

**Pattamundai College, Pattamundai**

**Kendrapara, Odisha 754215**

# Pattamundai College, Pattamundai

## Student Satisfaction Survey (SSS)

### Session 2020-21

## Under Criterion II of Teaching – Learning and Evaluation

#### Guidelines for Students:-

Pattamundai College, Pattamundai is conducting a Student Satisfaction Survey regarding Teaching – Learning and Evaluation, which will help to upgrade the quality in higher education. A student will have to respond to all the questions given in the following format with her/his sincere effort and thought. Her/his identity will not be revealed.

A) Please confirm this is the first and only time you answer this survey.

a) Yes  b) No

B) Age:

C) College Name:

D) Gender: a) Female  b) Male  c) Transgender

E) What degree program are you pursuing now?

a) Bachelor's  b) Master's  c) MPhil   
d) Doctorate  e) Other ( )

F) What subject area are you currently pursuing?

a) Arts  b) Commerce  c) Science   
d) Professional  e) Other: ( )

#### Instructions to fill the questionnaire

- All questions should be compulsorily attempted.
- Each question has five responses, choose the most appropriate one.
- The response to the qualitative question no. 21 is student's opportunity to give suggestions or improvements; she/he can also mention weaknesses of the institute here. (Kindly restrict your response to teaching learning process only)

**Following are questions for online student satisfaction survey regarding teaching learning process.**

1. How much of the syllabus was covered in the class?
  - 4 – 85 to 100%
  - 3 – 70 to 84%
  - 2 – 55 to 69%
  - 1– 30 to 54%
  - 0 –Below 30%
  
2. How well did the teachers prepare for the classes?
  - 4 –Thoroughly
  - 3 – Satisfactorily
  - 2 – Poorly
  - 1 – Indifferently
  - 0 – Won't teach at all
  
3. How well were the teachers able to communicate?
  - 4 – Always effective
  - 3 – Sometimes effective
  - 2 – Just satisfactorily
  - 1– Generally ineffective
  - 0– Very poor communication
  
4. The teacher's approach to teaching can best be described as
  - 4– Excellent
  - 3 – Very good
  - 2 – Good
  - 1 – Fair
  - 0– Poor

5. Fairness of the internal evaluation process by the teachers.

- 4 – Always fair
- 3 – Usually fair
- 2 – Sometimes unfair
- 1 – Usually unfair
- 0– Unfair

6. Was your performance in assignments discussed with you?

- 4 – Every time
- 3 – Usually
- 2 – Occasionally/Sometimes
- 1 – Rarely
- 0– Never

7. The institute takes active interest in promoting internship, student exchange, and field visit opportunities for students.

- 4 – Regularly
- 3 – Often
- 2 – Sometimes
- 1 – Rarely
- 0– Never

8. The teaching and mentoring process in your institution facilitates you in cognitive, social and emotional growth.

- 4 – Significantly
- 3 – Very well
- 2 – Moderately
- 1 – Marginally
- 0– Not at all

9. The institution provides multiple opportunities to learn and grow.

- 4 – Strongly agree
- 3 – Agree
- 2 – Neutral
- 1 – Disagree
- 0– Strongly disagree

10. Teachers inform you about your expected competencies, course outcomes and programme outcomes.

- 4 – Every time
- 3 – Usually
- 2 – Occasionally/Sometimes
- 1 – Rarely
- 0 – Never

11. Your mentor does a necessary follow-up with an assigned task to you.

- 4 – Every time
- 3 – Usually
- 2 – Occasionally/Sometimes
- 1 – Rarely
- 0 – I don't have a mentor

12. The teachers illustrate the concepts through examples and applications.

- 4 – Every time
- 3 – Usually
- 2 – Occasionally/Sometimes
- 1 – Rarely
- 0 – Never

13. The teachers identify your strengths and encourage you with providing right level of challenges.

- 4 – Fully
- 3 – Reasonably
- 2 – Partially
- 1 – Slightly
- 0 – Unable to

14. Teachers are able to identify your weaknesses and help you to overcome them.

- 4 – Every time
- 3 – Usually
- 2 – Occasionally/Sometimes
- 1 – Rarely
- 0 – Never

15. The institution makes effort to engage students in the monitoring, review and continuous quality improvement of the teaching learning process.

- 4 – Strongly agree
- 3 – Agree
- 2 – Neutral
- 1 – Disagree
- 0 – Strongly disagree

16. The institute/ teachers use student centric methods, such as experiential learning, participative learning and problem solving methodologies for enhancing learning experiences.

- 4 – To a great extent
- 3 – Moderate
- 2 – Some what
- 1 – Very little
- 0 – Not at all

17. Teachers encourage you to participate in extracurricular activities.

- 4 – Strongly agree
- 3 – Agree
- 2 – Neutral
- 1 – Disagree
- 0 – Strongly disagree

18. Efforts are made by the institute/ teachers to inculcate soft skills, life skills and employability skills to make you ready for the world of work.

- 4 – To a great extent
- 3 – Moderate
- 2 – Some what
- 1 – Very little
- 0 – Not at all

19. What percentage of teachers use ICT tools such as LCD projector, Multimedia, etc. while teaching.

- 4 – Above 90%
- 3 – 70 – 89%
- 2 – 50 – 69%
- 1 – 30 – 49%
- 0 – Below 29%

20. The overall quality of teaching-learning process in your institute is very good.

- 4 –Strongly agree
- 3 – Agree
- 2 – Neutral
- 1 – Disagree
- 0 – Strongly disagree

21. Give three observation / suggestions to improve the overall teaching – learning experience in your institution

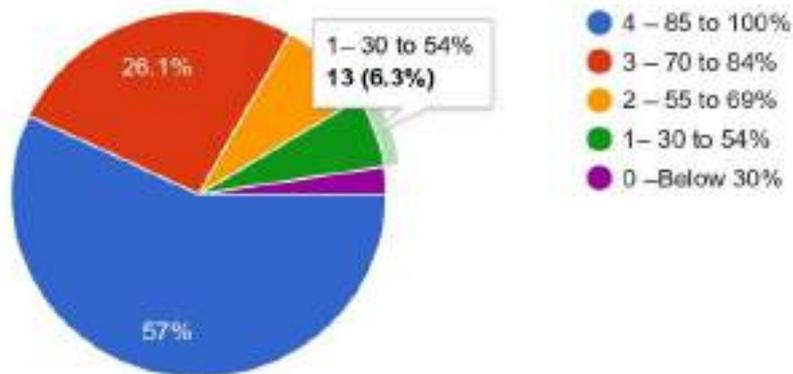
### **Data Analysis and Interpretation**

A structured google form of above questionnaire was developed and used for the collection of data. The questionnaire contains Teaching – Learning and Evaluation, which will help to upgrade the quality in higher education and the data was collected among more than 200 UG students on the campus through google form link <https://forms.gle/GN6tbSBGRqJ4wBpDA> . The collected data were tabulated and analyzed with the help of Microsoft Excel the statistical technique Mean used for the analysis of data. The graphical representation of analyzed data is given below.

### 1. How much of the syllabus was covered in the class?

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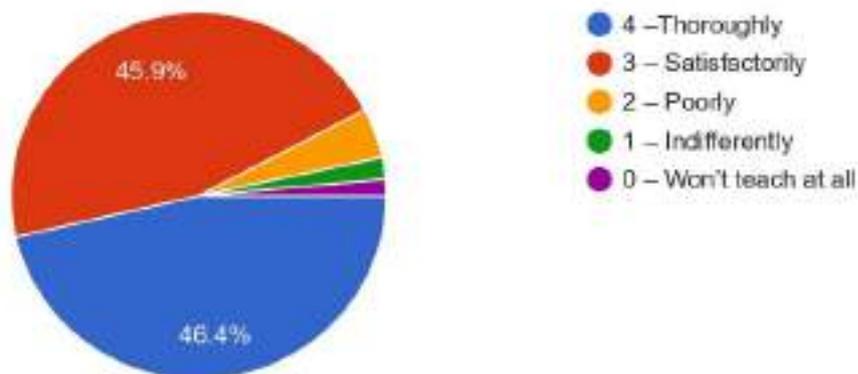
207 responses



### 2. How well did the teachers prepare for the classes?

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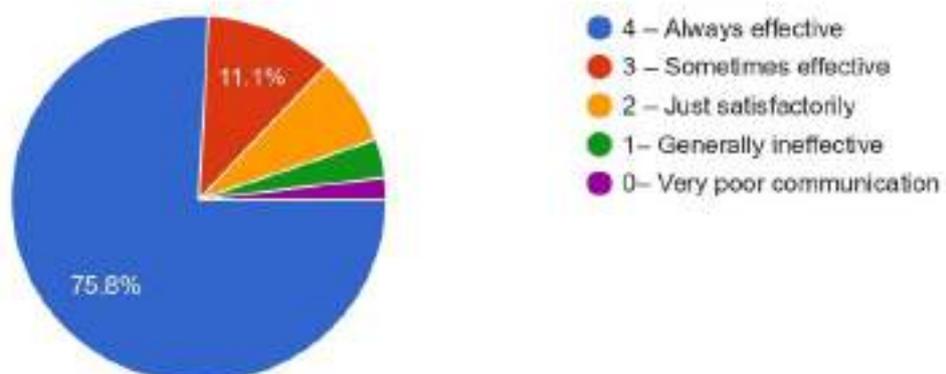
207 responses



### 3. How well were the teachers able to communicate?

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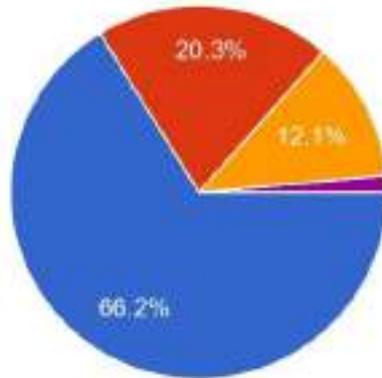
207 responses



4. The teacher's approach to teaching can best be described as



207 responses

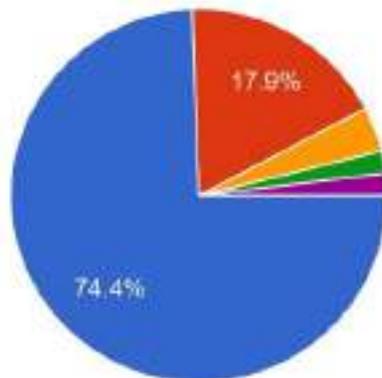


- 4- Excellent
- 3 - Very good
- 2 - Good
- 1 - Fair
- 0- Poor

5. Fairness of the internal evaluation process by the teachers.



207 responses

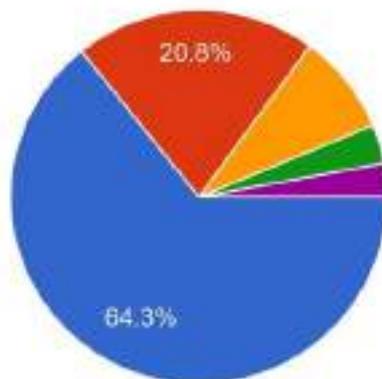


- 4 - Always fair
- 3 - Usually fair
- 2 - Sometimes unfair
- 1 - Usually unfair
- 0- Unfair

6. Was your performance in assignments discussed with you?



207 responses

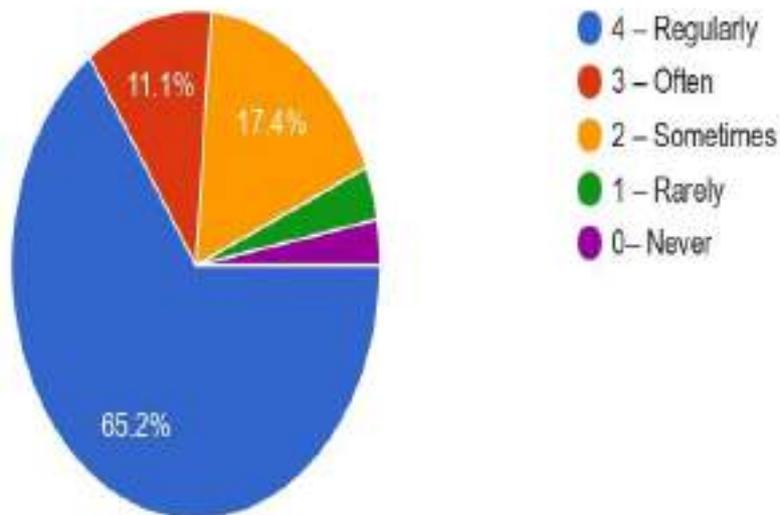


- 4 - Every time
- 3 - Usually
- 2 - Occasionally/Sometimes
- 1 - Rarely
- 0- Never

7. The institute takes active interest in promoting internship, student exchange, field visit opportunities for students.



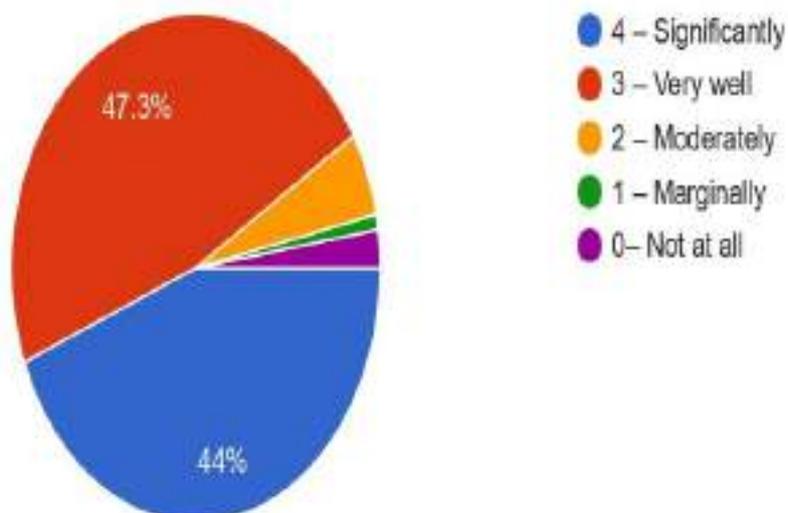
207 responses



8. The teaching and mentoring process in your institution facilitates you in cognitive, social and emotional growth.



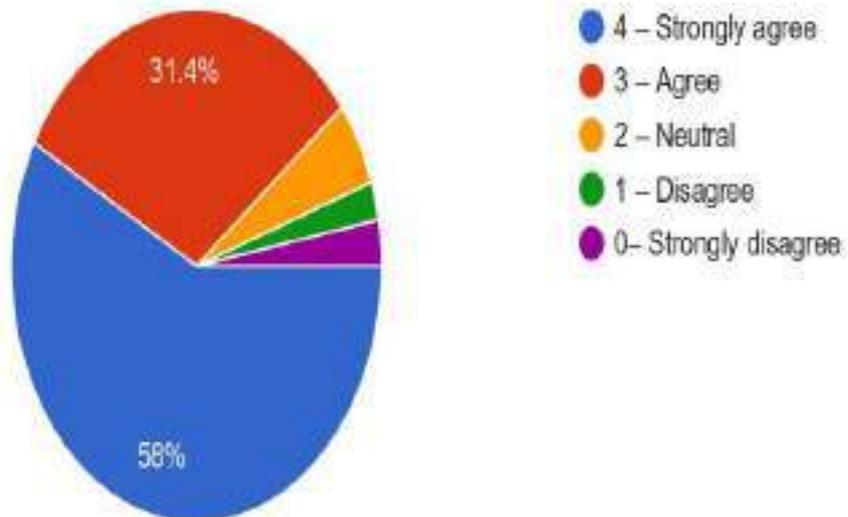
207 responses



9. The institution provides multiple opportunities to learn and grow.



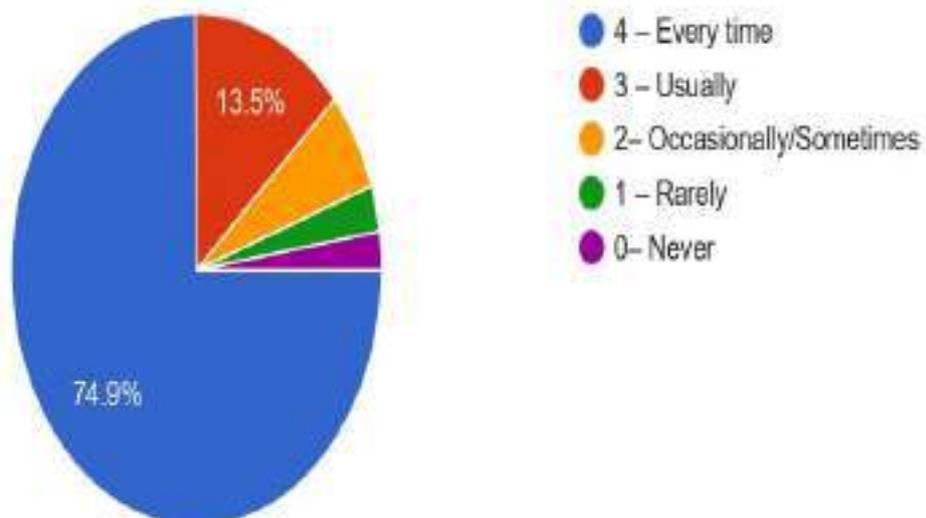
207 responses



10. Teachers inform you about your expected competencies, course outcomes and programme outcomes.



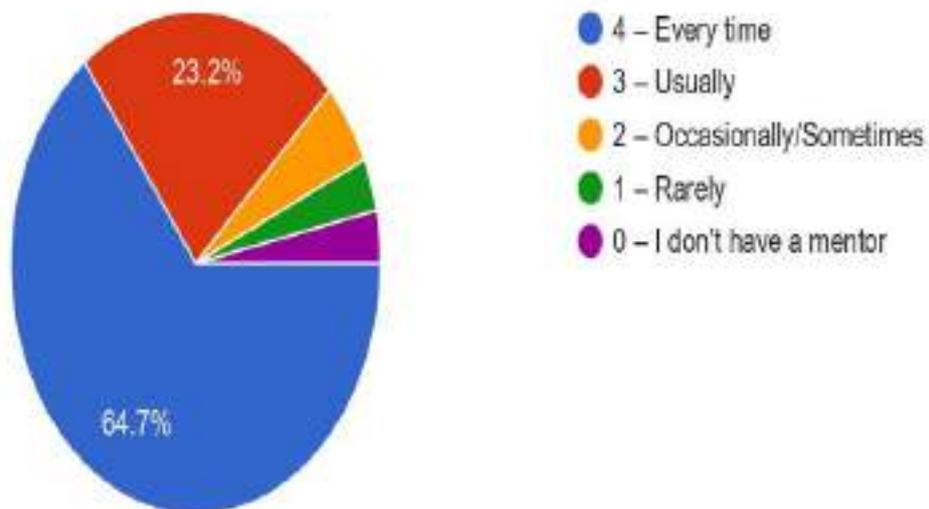
207 responses



11. Your mentor does a necessary follow-up with an assigned task to you.



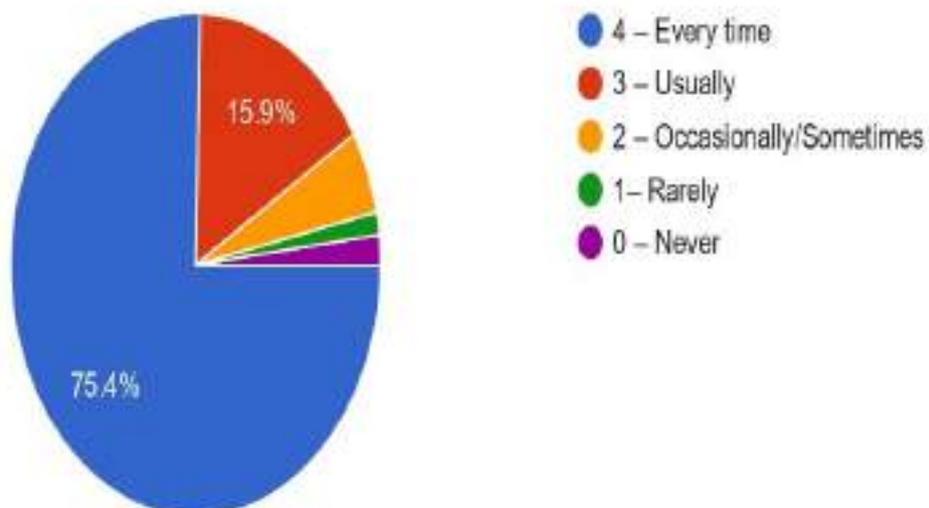
207 responses



12. The teachers illustrate the concepts through examples and applications



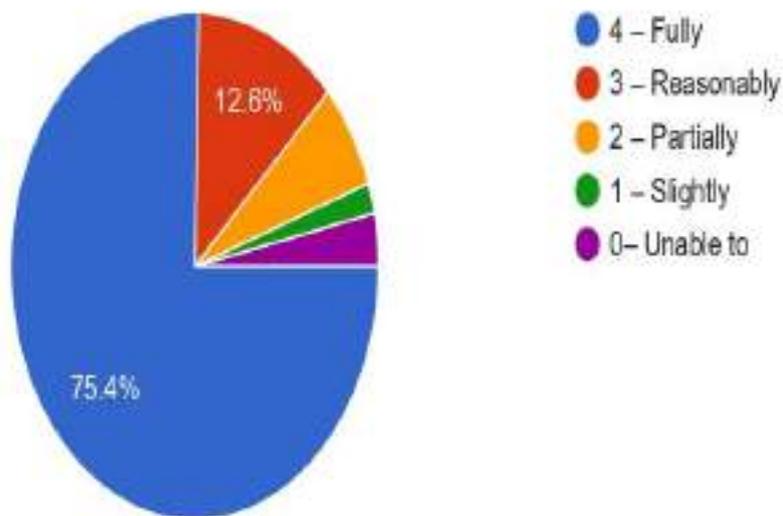
207 responses



13. The teachers identify your strengths and encourage you with providing right level of challenges.



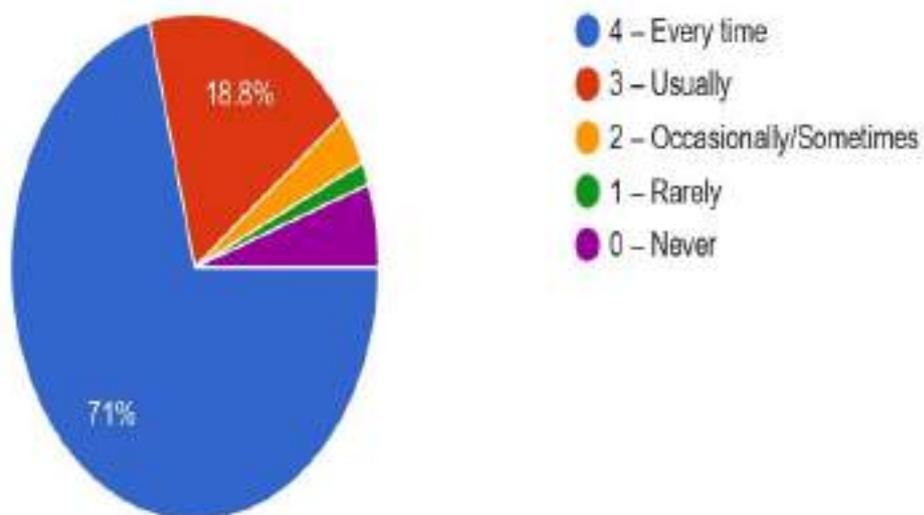
207 responses



14. Teachers are able to identify your weaknesses and help you to overcome them.



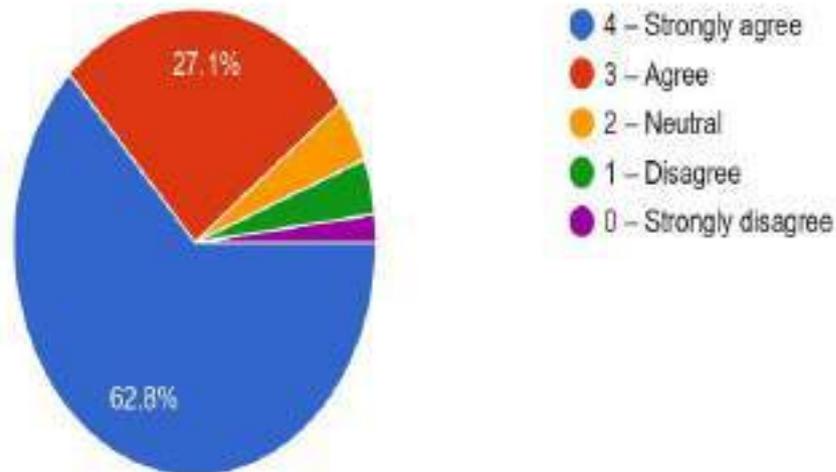
207 responses



15. The institution makes effort to engage students in the monitoring, review and continuous quality improvement of the teaching learning process.



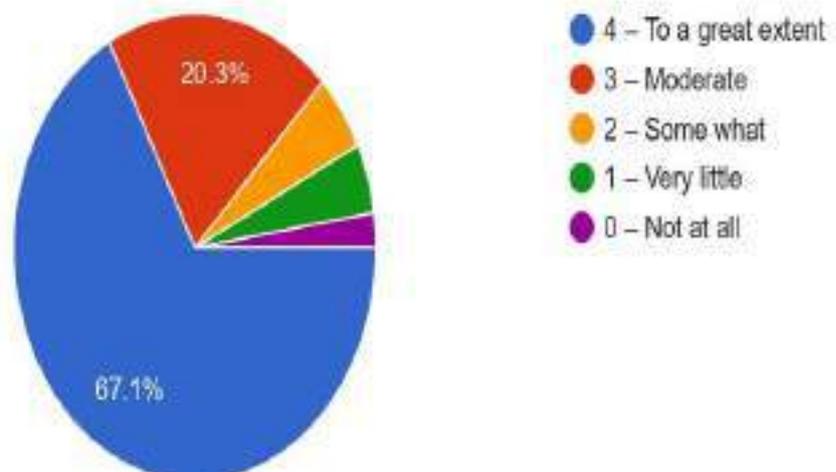
207 responses



16. The institute/ teachers use student centric methods, such as experiential learning, participative learning and problem solving methodologies for enhancing learning experiences.



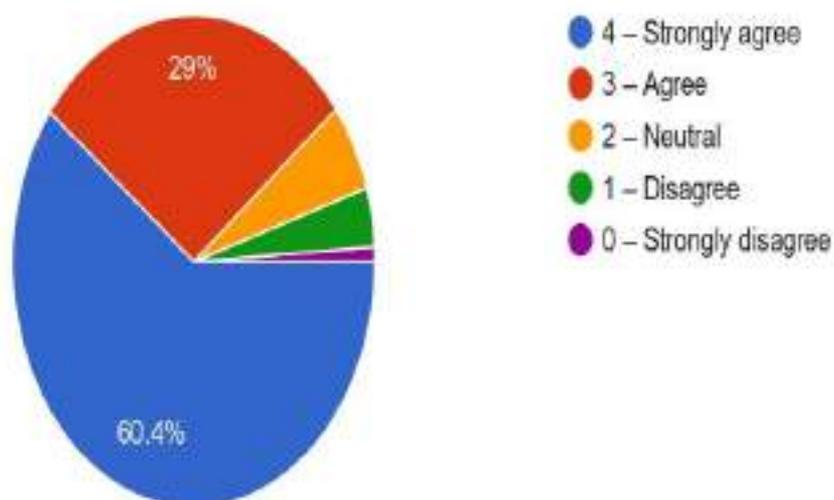
207 responses



17. Teachers encourage you to participate in extracurricular activities.



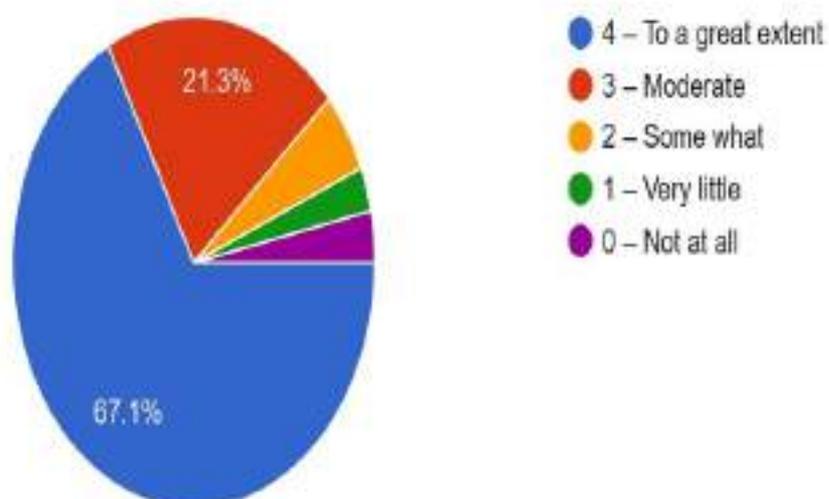
207 responses



18. Efforts are made by the institute/ teachers to inculcate soft skills, life skills and employability skills to make you ready for the world of work.



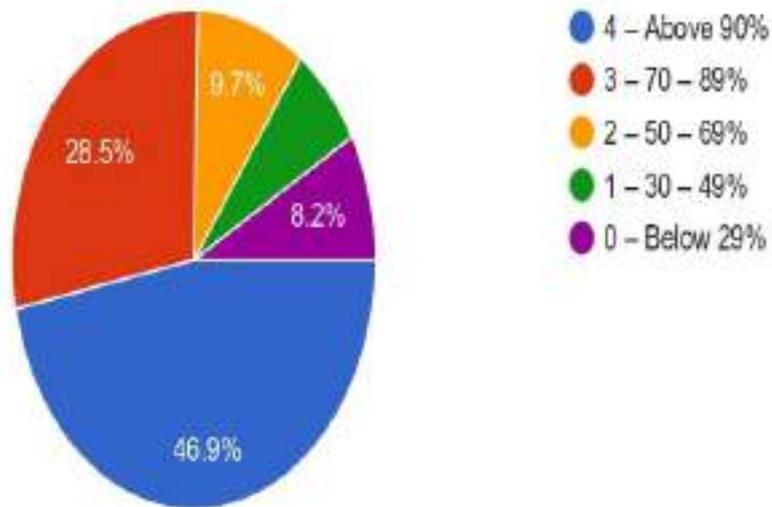
207 responses



19. What percentage of teachers use ICT tools such as LCD projector, Multimedia, etc. while teaching.



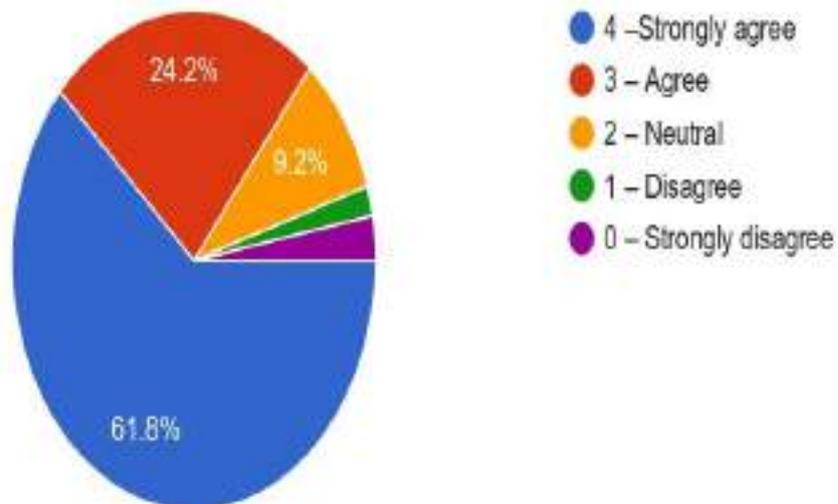
207 responses



20. The overall quality of teaching-learning process in your institute is very good.



207 responses







## REPORT OF STUDENT SATISFACTION SURVEY



**ACADEMIC YEAR 2020-21**  
**PATTAMUNDAI COLLEGE,**  
**PATTAMUNDAI.**

## Report

The Student Satisfaction Survey for the session 2020-21 was conducted through online mode. Students from all Programmes participated in the said survey. The overall report suggests that students are very much satisfied with the institution and on its teaching-learning process. The point wise analysis of the survey is given below and the corrective measure is taken wherever it necessitates.

Sl No	Questionnaire	Suggestions received from SSS	Action taken on SSS
1	How much of the syllabus was covered in the class?	Above 83 % of the respondent admitted the course is completed	Little discrepancy in view of COVID pandemic situation.
2	How well did the teachers prepare for the classes?	Above 91% of the respondent admitted that teachers are well prepared to take the class.	No suggestion.
3	How well were the teachers able to communicate?	76% of the respondent says teachers are well communicating.	Some teachers are advised to improve their communication skill. Teachers should help to improve student's communication and personality skills.
4	The teacher's approach to teaching can best be described as.	86% of the respondent says teacher's approaches towards teaching are excellent or very good.	

*Praveen Kumar Baidya*  
IOAC Co-ordinator  
Tatyasaheb Kore College  
IOAC Co-ordinator

5	Fairness of the internal evaluation process by the teachers.	93 % of the respondent says teachers are excellent or very good in evaluation.	Very good positive response
6	Was your performance in assignments discussed with you?	85% replied in affirmative.	The performance of the students were discussed with the students departmentally and through mentoring system.
7	The institute takes active interest in promoting internship, student exchange, and field visit opportunities for students.	76% confirmed the execution of these events	More field trips are to be arranged. Institute should organize more guest lecturers' demonstrations and competitions related to industry.
8	The teaching and mentoring process in your institution facilitates you in cognitive, social and emotional growth.	91% says mentoring process is highly satisfactory	The students are extremely satisfied with the mentorship programme
9	The institution provides multiple opportunities to learn and grow.	90 % agree	Students have expressed overall satisfaction regarding Orientation Programme, career counseling programme ,skill development programme.
10	Teachers inform you about your expected competencies, course outcomes and programme outcomes.	89 % do agree	Students have expressed overall satisfaction regarding Orientation Programme (89%),
11	Your mentor does a necessary follow-up with an assigned task to you.	88 % says in affirmative	Good response from the participants
12	The teachers illustrate the	92% agree with the	Students have expressed

*Praveen Kumar Reddy*

IOAC Co-ordinator  
Pattamundai Collet

	concepts through examples and applications.	comment	overall satisfaction regarding Orientation Programme (92%),
13	The teachers identify your strengths and encourage you with providing right level of challenges.	88% says in affirmative	Mentoring system should be strengthen.
14	Teachers are able to identify your weaknesses and help you to overcome them.	90 % says yes	Students have expressed overall satisfaction regarding Orientation Programme (90%),
15	The institution makes effort to engage students in the monitoring, review and continuous quality improvement of the teaching learning process.	90 % respondent agree that the institute continuously monitoring, review and there is continuous quality improvement of the teaching learning process.	Academic audit is done by the institution regularly.
16	The institute/ teachers use student centric methods, such as experiential learning, participative learning and problem solving methodologies for enhancing learning experiences.	88% respondent agrees teachers use student centric methods, such as experiential learning, participative learning and problem solving methodologies for enhancing learning experiences.	Teachers are advised to include more student centric methods like field visit ,exposure visit,group discussion ,help desk etc.
17	Teachers encourage you to participate in extracurricular activities.	90% says yes.	Extracurricular activity hampers partly due to COVID 19 pandemic this year.
18	Efforts are made by the institute/ teachers to inculcate soft skills, life	88% agree the institute/ teachers to inculcate soft	In view of the responses received, for the improvement of

*Secy: Kame Reddy*

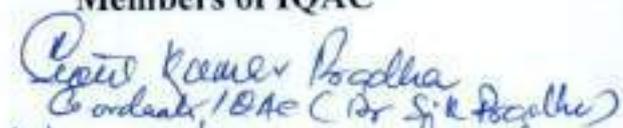
IQAC Co-ordinator  
Pattamundai Collet

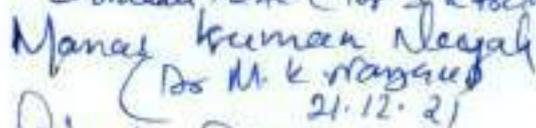
	skills and employability skills to make you ready for the world of work.	skills, life skills and employability skills to make you ready for the world of work.	curriculum and other facilities, the IQAC is tirelessly working to arrange virtual talks and webinars to hone the skills of the students.
19	What percentage of teachers use ICT tools such as LCD projector, Multimedia, etc. while teaching.	70% says yes	ICT facilities are constantly upgraded with purchase of laptops, LCD, Xerox etc. In view of the responses received, for the improvement of curriculum and other facilities, the IQAC is tirelessly working to arrange virtual talks and webinars to hone the skills of the students.
20	The overall quality of teaching-learning process in your institute is very good.	86% respondent says in affirmative	The college is continuously taking measures through IQAC and other statutory bodies to improve the teaching learning process in the institution.

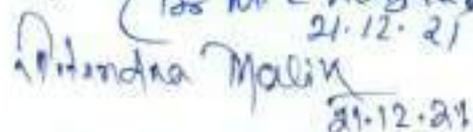
  
**Principal**  
**Pattamundai College**

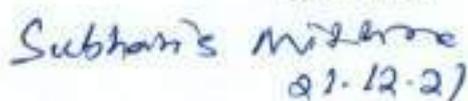
Principal  
Pattamundai College

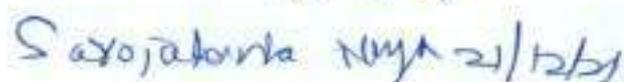
**Members of IQAC**

  
 Dipak Kumar Padua  
 Coordinator IQAC (Dr. J. K. Padua)

  
 Manas Kumar Nayak  
 Dr. M. K. Nayak  
 21.12.21

  
 Anindita Malik  
 21.12.21

  
 Subhanshu Mishra  
 21.12.21

  
 Sayojanta Nayak  
 21/12/21



## MEMORANDUM OF UNDERSTANDING

BETWEEN

**Kalinga Institute of Industrial Technology Deemed to be University, Bhubaneswar**

AND

**Pattamundai College, Pattamundai, Kendrapada**

The Memorandum of Understanding [ hereinafter referred to as MoU ] is being entered into on this 16th day of March, 2021 at Bhubaneswar,

By and Between

Kalinga Institute of Industrial Technology (KIIT) Deemed to be University having its registered office at Patia, Bhubaneswar-751024, Odisha (hereinafter referred to as KIIT ) of the First party;

AND

Pattamundai College, Pattamundai, Kendrapara  
located at Pattamundai, Kendrapara is hereby referred as Second Party

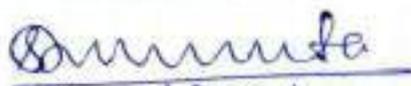
### 1. OBJECTIVES

The MoU relates to proposed links between the University and the Institutions. The parties propose to Co-operate in discussions and joint activities in relation to the following :

Establishment of a research partnership which provides opportunities for the University and College to carry out and publish joint research, joint projects and joint patent.

#### Responsibilities of 1<sup>st</sup> Party :

- Undertake joint research, including publications and other appropriate activities, between staff and/or students from each institutions;
- Facilitates the exchange of staff, students and researchers for the purpose of teaching, study and academic research;
- Provides the laboratory, academic and research facility
- Provides administrative support for growth of academic research in association with the College.
- Provides mentor advice and support to the collaborative institution for growth of its academic and research.

  
16/03/2021

Adhinari Laxminarayan Bala  
Principal 16.3.21  
Pattamundai College



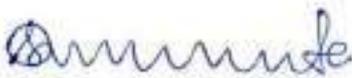
This MoU is subject to the conditions and recommendations of the academic approval process of the University being satisfied and to the granting of all applicable licenses as required by the University, the Institution or any relevant government or public authorities.

If this MoU is translated into any other language, the English language version of this MoU shall prevail.

Each party hereby confirms its agreement to the terms contained in this MoU.

Authorised to sign for and on behalf of  
KIIT Deemed to be University

Authorised to sign for and on behalf of  
Pattamundai College, Pattamundai,  
Kendrapara

Signature : 

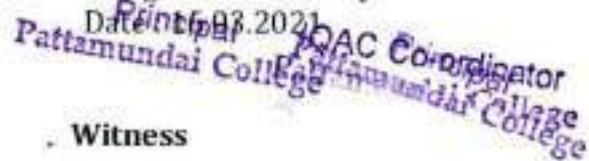
Name : Prof. Sasmita Samanta  
Designation: Pro Vice Chancellor  
Date : 16.03.2021

**Witness**

Signature :  
Name :  
Designation:  
Date :

  
Signature : 16.3.21

Name : Adhikari Laxmi Narayan Dash  
Designation: Principal  
Date: 16.03.2021

  
AQAC Co-ordinator  
Pattamundai College

**Witness**

Signature :  
Name :  
Designation:  
Date :

## MOU BETWEEN PATTAMUNDAI COLLEGE AND KIIT UNIVERSITY





**Memorandum of Understanding  
(MOU)  
Between**



**Siksha 'O' Anusandhan  
Bhubaneswar, Odisha, India**

**And**



**Pattamundai College,  
Pattamundai, Odisha**

**2021**



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48AA 903158

## Memorandum of Understanding (MOU)

### PREAMBLE

Siksha 'O' Anusandhan (SOA) (herein after will be known as SOADU), Bhubaneswar having office at Plot # J-15, Khandagiri Square, Bhubaneswar-751030, Odisha, India has grown into a premier center of academic and research having strength in following areas

- That, this is a Deemed University declared u/s. 3 of the UGC Act, 1956 in 2007. It is engaged in teaching and research which includes award of degrees in Under Graduate, Post Graduate, Doctoral and Post Doctoral programmes in the areas of Engineering and Technology, Medical Sciences, Dental Sciences, Pharmaceutical Sciences, Management Sciences, Nursing, Legal Studies and Agricultural Sciences.
- That, it has been accredited by National Assessment and Accreditation Council (NAAC), an autonomous institution of University Grants Commission (UGC), Government of India with 'A' Grade for the periods of 5 years. It has been ranked 20th

*[Handwritten signature]*

*[Handwritten signature]*

best Institution (University Category), 23<sup>rd</sup> Best Medical College, 34<sup>th</sup> Best Engineering College & 12<sup>th</sup> Best Dental College by National Institutional Ranking Framework (NIRF) in 2021, Ministry of Human Resource Development (MHRD), Government of India. SOA has been granted Category-II Graded Autonomy Status by University Grants Commission in 2018.

- Moreover, the Bachelor of Technology (B.Tech.) programmes of Mechanical Engineering, Electrical Engineering and Electronics & Communication Engineering of Institute of Technical Education and Research (ITER) have been inspected and recommended for accreditation by Accreditation Board of Engineering and Technology (ABET), USA and the B.Tech. programme of Civil Engineering is under consideration for ABET accreditation.
- That, SOADU imparts technical and professional education and conducts research in emerging areas through its constituent units namely Institute of Technical Education and Research (ITER), Institute of Business and Computer Studies (IBCS), Institute of Medical Sciences and SUM Hospital (IMS & SH), Institute of Dental Sciences (IDS), School of Pharmaceutical Sciences (SPS), SUM Nursing College (SNC), School of Hotel Management (SHM), SOA National Institute of Law (SNIL) and Institute of Agricultural Sciences (IAS), 13 research & field centres and 38 research laboratories. SOADU is spread over 446 acres of land, out of which 127 acres of land are used for academic purpose having 4,47,396 square meter built-up areas. Currently, 10098 students are pursuing their studies through different academic programmes under tutelage of 1275 faculty members with 3730 supporting staff members. More than 1000 research scholars are pursuing their research leading to Doctoral programme where the University provides fellowship to 240 full-time research scholars. SOADU offers 24 Under Graduate programmes and 67 Post graduate programmes, 15 Post Master's Programme besides 12 Ph.D. programme and 2 Post Doc. Programme. The Hospital with 1600 bed capacity extends free consultation and beds to underprivileged section of the society. Besides the hospital offers 19 super specialized health care facilities with 250 air-conditioned cabins. The daily outdoor inflow of patients is around 3000.
- Whereas **Pattamundai College**, affiliated to Utkal University, Odisha, is situated away from the din and bustle of the town with five meadows and rich corn fields around. It



came into being in 1970 as an Arts College with the provision for teaching pre-University Humanities course. The institute at present is a family of 1475 students with boys and girls of 869 and 606 respectively taking education at under graduate level in Arts, Commerce and Science disciplines with 80 numbers of teaching and non teaching faculties.

- With a long history of 50 years and a picturesque sprawling campus of 14.6 acres land of its own is indeed a testimony of truly materialized dream of education lovers of Pattamundai. Since fifty springs has been passed, this institution continuously ventilating knowledge and has been playing a pivotal role in the development of Pattamundai and its surrounding regions. With the modest strength of 128 students in the year of its inception-1970, besides all odds and constraints the college grew manifold in leaps and bounds. It is carefully nurtured by illustrious academicians, administrators, dedicated faculties and alumni, with institutionalised efforts over the years, and it has become a premiere institution in the academic map of Odisha.
- In its onward march, the institution cradled with one faculty in Arts in 1970, and introduced Honours in Political Science, History, Economics in 1978 and English, Odia, Sociology, Philosophy & Education in 1989. Then Commerce faculty was opened in 1979 and Science faculty in 1989 with introduction of Chemistry and Mathematics Honours in 1994-95 and Botany, Physics and Zoology Honours in 1998 added to its glory. The University was pleased to open a vocational subject of Tourism and Travel Management in 1998 which illuminated as land mark in development and expansion of the academic area of the college. The college has a permanent affiliation and has been listed under 2(f) and 12(B) of the UGC act which withstands the academic and administrative standards of the college. In response to the changing needs of the society and as per UGC norms innovative experiments are being carried out with help of computer net working for making the teaching learning process interactive and participative. With the need of the time, the institution expanded its area of innovation in different respects to meet the requirement of the students as well as different stake holders.
- With the infrastructural growth such as addition of new buildings, hostels, renovation of library laboratories and playground, it also emphasized to enhance its academic



quality to reach the institution to a new height. It contributed toppers in Sociology and Mathematics at University level in different years with many more best students along with achievements in sports and other fields. The institution also adopted the new curriculum as changed by Utkal University at different times and prepared the students accordingly with a new idea to compete with the other in national and international levels. The contribution of its NCC, NSS and YRC students has a remarkable effect in serving the society by awaring and donating blood, planting trees, campus cleaning, observing national days etc. The institution is one step ahead by planting about 4000 trees since 1990 to make the campus an eco-friendly environment with a permanent green and waste management policy of its own. The institution is diversified with a planed electricity management to save energy by switching off the unused buildings and converting whole institution with LED bulbs. This year, the institution has already installed solar power panels which generates 6 K. W. to add the era of renewable energy.

- The institution has a fully operational website providing day to day information and has also fully automated library with INFLIBNET connection and e-portals to provide easy access to its all the stake holders.

## ARTICLE-I: SCOPE OF THE MOU

### 1. Research Activities

- a. Faculty members of Pattamundai College shall avail research facilities of SOA.
- b. Students & staff shall avail learning resources facilities specifically library facility of SOA.
- c. Faculty of Pattamundai College shall avail the facilities of Ph.D. programme on full time & part time basis.
- d. Joint research activities shall be undertaken.

### 2. Academic Activities

- a. Faculty of SOA shall extend all co-operation in developing 'Add-on' courses for the students of Pattamundai College
- b. Students shall avail the facilities of the existing 'Add-on' courses of SOA.
- c. Students of Pattamundai College shall be trained in different areas including computer education.



- d. SOA shall facilitate different accreditation programme including NAAC.
- e. Pattamundai College will extend all facilities to SOA staff for conducting training programmes at their place.
- f. Different academic programmes on emerging areas and training programmes will be jointly organized to upgrade the student potentiality of Pattamundai College to facilitate their placement in different organisations.

**3. Co-curricular Activities**

- a. NSS and Yoga activities of Pattamundai College shall be augmented with the help of SOA.
- b. Organisation of NSS and other ISR activities of SOA in the rural set-up shall be facilitated by Pattamundai College.
- c. Joint Centre of Excellence shall be established on Yoga and health awareness.

**4. Out-reach Activities**

- a. SOA shall arrange / organize Health Camps at Pattamundai College for students and staff.
- b. Special focus shall be given on regular health check-up of senior citizen of locality.

**ARTICLE-II: EFFECTIVE DATE AND DURATION OF MOU**

- a) This MOU shall be effective from the date of signature by the competent authorities at both ends.
- b) The duration of the MOU shall be for a period of 5 years from the effective date.
- c) During its tenancy, the MOU may be extended or terminated by a prior notice of not less than one months by either party. However, termination of the MOU will not in any manner affect the interests of the students/faculty/scientists who have been admitted to pursue a program under the MOU.
- d) Any clause or article of the MOU may be modified or amended by mutual agreement of SOA, Bhubaneswar and Pattamundai College, Pattamundai.



### **ARTICLE-III: CONFIDENTIALITY**

During the tenure of the MOU both SOA, Bhubaneswar and Pattamundai College, Pattamundai will maintain strict confidentiality and prevent disclosure of all the information and data exchanged under the scope of this MOU for any purpose other than in accordance with this MOU.

Both SOA, Bhubaneswar and Pattamundai College, Pattamundai shall bind their respective personnel who come into possession or knowledge of any confidential information not to disclose the same to third parties without written approval of the disclosing party or use such confidential information for any use other than intended under this agreement or PROJECTS.

Further both SOA, Bhubaneswar and Pattamundai College, Pattamundai shall put in place adequate and reasonable measures to keep and store confidential information secure so as to prevent any unauthorized use.

### **ARTICLE-IV: AMENDMENTS**

Any amendment and/or addenda to the AGREEMENT shall be in writing and signed by the PARTIES hereto and shall only after such execution be deemed to form part of the AGREEMENT and have the effect of modifying the AGREEMENT to the extent required by such amendment or addenda.

### **ARTICLE-V: IPR AND PUBLICATION RIGHTS**

Rights regarding publications, patents, royalty, ownership of software/design/product developed etc. under the scope of this MOU, shall be decided by the two parties by mutual consent.

### **ARTICLE-VI: RESOLUTION OF DISPUTES**

The dispute or difference whatsoever arises between PARTIES in relation to or in connection with this AGREEMENT both the parties shall first try to resolve the dispute/difference



amicably between themselves, failing which the matter shall be resolved subject to jurisdiction of civil court Bhubaneswar.

IN WITNESS WHERE OF PARTIES HERE TO HAVE ENTERED INTO THIS AGREEMENT EFFECTIVE AS ON THE DATE AND YEAR MENTIONED BELOW.

  
18/03/2021

**Prof. Pradipta Kumar Nanda**  
**Pro Vice-Chancellor**  
Siksha 'O' Anusandhan  
Deemed to be University  
Bhubaneswar

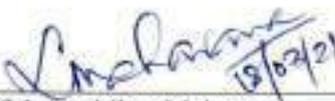


Witness

  
18/03/2021

**Prof. Adhikari Laxminarayan Dash**  
**Principal**  
Pattamundai College,  
Pattamundai, Odisha.

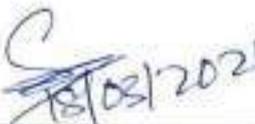


  
18/03/2021

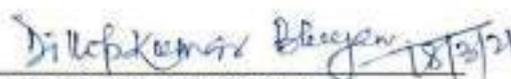
**Prof. Laxmidhar Maharana**  
**Professor**  
Siksha 'O' Anusandhan  
Deemed to be University  
Bhubaneswar

  
18/03/2021

**Dr. Dushasan Parida**  
**Reader in Chemistry &**  
**IQAC Co-ordinator**  
Pattamundai College,  
Pattamundai, Odisha

  
18/03/2021

**Dr. Chinmaya Kumar Mohapatra**  
**Assistant Professor**  
Siksha 'O' Anusandhan  
Deemed to be University  
Bhubaneswar

  
18/03/2021

**Prof. Dillip Kumar Bhuyan**  
**HOD & Reader in Zoology**  
Pattamundai College,  
Pattamundai  
Odisha.

Date: 18<sup>th</sup> March 2021

Date: 18<sup>th</sup> March 2021

**MOU BETWEEN PATTAMUNDAI COLLEGE AND SOA UNIVERSITY**









# ଗବେଷଣାକୁ ପ୍ରୋତ୍ସାହନ ଦେଲା ସୋଆ

ପଟ୍ଟାମୁଦ୍ରା କଲେଜ ସହ ବୁଝାମଣାପତ୍ର ସ୍ୱାକ୍ଷର



ଭୁବନେଶ୍ୱର, ୧୮ ମା(ବୁଧବେ): ଶିକ୍ଷା ଓ ଅନୁସନ୍ଧାନ (ସୋଆ) ଗବେଷଣାକୁ ବେଲକ୍ସି ପ୍ରୋତ୍ସାହନ। ଏହି ଦିନରେ ବେଲକ୍ସି ଦୁଆ ପଦକ୍ଷେପ। କେନ୍ଦ୍ରପତ୍ରା ଜିଲ୍ଲା ପଟ୍ଟାମୁଦ୍ରା କଲେଜ ସହ ଗୁରୁବର ଏକ ବୁଝାମଣାପତ୍ର ସ୍ୱାକ୍ଷର ହୋଇଛି। ଏହି ବୁଝାମଣା ପତ୍ରରେ କଲେଜର ଅଧ୍ୟାପକ/ଅଧ୍ୟାପିକାମାନେ ପୂର୍ଣ୍ଣକାଳୀନ ଏବଂ ସାମୟିକ ଭାବେ ସୋଆରେ ଗବେଷଣା ଏବଂ ପିଏଚ୍ଡି କରିପାରିବେ। ସେହିପରି କଲେଜର ଛାତ୍ରଛାତ୍ରୀ ଏବଂ କର୍ମଚାରୀମାନେ ସୋଆରେ ବିଭିନ୍ନ ଦୁର୍ବିଧା ଏବଂ ଲାଇଭ୍‌ରେଟା ବ୍ୟବହାର ପାଇଁ ଦୁପ୍ପେକ୍ସ ପାଇପାରିବେ। ସେହିପରି ସୋଆର ଅଧ୍ୟାପକମାନେ ପଟ୍ଟାମୁଦ୍ରା କଲେଜର ଛାତ୍ରଛାତ୍ରୀମାନଙ୍କୁ ବିଭିନ୍ନ 'ଅଡ ଅନ୍' କୋର୍ସର ଦୁର୍ବିଧା ଯୋଗାଇଦେବେ। କମ୍ପ୍ୟୁଟର ଶିକ୍ଷା କ୍ଷେତ୍ରରେ

ମଧ୍ୟ ଛାତ୍ରଛାତ୍ରୀମାନଙ୍କୁ ପ୍ରଶିକ୍ଷଣ ଦିଆଯିବ। ରକ୍ଷାୟ ପୂଜ୍ୟାୟନ ଏବଂ ଅନୁମୋଦନ ପରିଷଦ (ନାକ୍)ସମେତ ବିଭିନ୍ନ ସ୍ୱାକ୍ଷର ନିମନ୍ତେ ସୋଆ ପକ୍ଷରୁ କଲେଜକୁ ପ୍ରସ୍ତୁତ କରାଯିବ। ସୋଆ ପକ୍ଷରୁ କଲେଜର ଛାତ୍ରଛାତ୍ରୀମାନଙ୍କର ପ୍ରେସ୍‌ମେଣ୍ଟ ନିମନ୍ତେ ଚଳିମା କାର୍ଯ୍ୟକ୍ରମ କରାଯିବ। ସୋଆ ସହଯୋଗରେ ଏନ୍‌ଏସ୍‌ଏସ୍ ଏବଂ ଯୋଗ ସମ୍ପୂର୍ଣ୍ଣ କାର୍ଯ୍ୟ ପରିଚାଳନା କରାଯିବ। କଲେଜରେ ଯୋଗ ଏବଂ ସ୍ୱାସ୍ଥ୍ୟ ସଚେତନତା ସମ୍ବନ୍ଧୀୟ ଏକ ଉତ୍ସର୍ଗ କେନ୍ଦ୍ର ମଧ୍ୟ ଆରମ୍ଭ କରାଯିବ। ସେହିପରି ସୋଆ ପକ୍ଷରୁ କଲେଜର ଛାତ୍ରଛାତ୍ରୀ ଏବଂ କର୍ମଚାରୀମାନଙ୍କ ନିମନ୍ତେ ସ୍ୱାସ୍ଥ୍ୟ ଶିବିର ଆୟୋଜନ ସହିତ ପ୍ରାଣୀୟ ବିଭିନ୍ନ ନଗରିକମାନଙ୍କର ସ୍ୱାସ୍ଥ୍ୟ ପରୀକ୍ଷା ମଧ୍ୟ କରାଯିବ। ସୋଆ ପ୍ରତିଷ୍ଠା ସଭାପତି ପ୍ରଫେସର

ମନୋଜରଞ୍ଜନ ନାୟକଙ୍କ ଉପସ୍ଥିତିରେ ପ୍ରୋ-ଭାଇସଚାନ୍ସେଲର ପ୍ରଫେସର ପି.କେ. ନନ୍ଦ ଏବଂ ପଟ୍ଟାମୁଦ୍ରା କଲେଜର ଅଧ୍ୟକ୍ଷ ପ୍ରଫେସର ଅଧିକାରୀ ଲକ୍ଷ୍ମୀନାରାୟଣ ଦାସ ଏହି ବୁଝାମଣାପତ୍ର ସ୍ୱାକ୍ଷର କରିଥିଲେ। ଅନ୍ୟମାନଙ୍କ ମଧ୍ୟରେ ସୋଆ ରେଜିଷ୍ଟ୍ରାର ପ୍ରଫେସର ବିଭୁତି କୁଞ୍ଜରା ପ୍ରଧାନ, ଛାତ୍ରମଙ୍ଗଳ ଚିନ୍ତ ପ୍ରଫେସର ଜ୍ୟୋତିରଞ୍ଜନ ଦାସ, ମୁଖ୍ୟ ପ୍ରଶାସନିକ ଅଧିକାରୀ(ଟିଏ ଅକମିନିଷ୍ଟ୍ରିଆ ଅଫିସର) ପି.କେ. ପଣ୍ଡାଙ୍କ ସମେତ ପ୍ରଫେସର ଲକ୍ଷ୍ମୀଧର ମହାରଣା, ତଃ ଚିନ୍ତୁକ ମହାପାତ୍ର ପ୍ରମୁଖ ଉପସ୍ଥିତ ଥିଲେ। ସେହିପରି ପଟ୍ଟାମୁଦ୍ରା କଲେଜ ପକ୍ଷରୁ ତଃ ଦୁଃଶାସନ ପରିଜ୍ଞ, ପ୍ରଫେସର ଦିଲୀପ କୁମାର ବୃକ୍ଷ, ପ୍ରଫେସର ଅରବିନ୍ଦ ପାଞ୍ଜବ ଉପସ୍ଥିତ ଥିଲେ।

# ପଞ୍ଜାମୁଣ୍ଡାଲରେ ଗବେଷଣାକୁ ପ୍ରୋତ୍ସାହିତ କରିବ ସୋୟା

## କଲେଜ ସହ ବୁଝାମଣାପତ୍ର ସ୍ୱାକ୍ଷରିତ

ପଞ୍ଜାମୁଣ୍ଡା, ୧୯/୩(ଭବିଷ୍ୟ): ପଞ୍ଜାମୁଣ୍ଡା କଲେଜ ପାଇଁ ଏକ ନୂଆ ଇତିହାସ ସୃଷ୍ଟି ହୋଇଛି। ଗବେଷଣାକୁ ପ୍ରୋତ୍ସାହିତ ଦେବା ପାଇଁ କଲେଜ ଏକ ନୂଆ ପଦକ୍ଷେପ ନେଇଛି। ଏ କେବଳ ପଞ୍ଜାମୁଣ୍ଡା କଲେଜ ଏବଂ ଶିକ୍ଷା ଓ ଅନୁସନ୍ଧାନ(ସୋଆ) ମଧ୍ୟରେ ଏକ ବୁଝାମଣାପତ୍ର ଦ୍ୱାରା ହୋଇଛି। ଏହି ବୁଝାମଣା ପତ୍ରରେ କଲେଜର ଅଧ୍ୟାପକ ଓ ଅଧ୍ୟାପିକାମାନେ ପୂର୍ଣ୍ଣକାଳୀନ ଓ ଅନୁସନ୍ଧାନ କର୍ମରେ ଯୋଗଦାନ କରିବାକୁ ଏବଂ ପି-ଏଚ୍ଡି କରିବା ପାଇଁ ଉତ୍ସାହ ଦେବାକୁ କଲେଜର ଶାସ୍ତ୍ରପତି ଓ କର୍ମଚାରୀମାନେ ଯୋଗଦାନ କରିବେ ବୁଝାମଣା ପତ୍ରରେ ଉଲ୍ଲେଖ କରାଯାଇଛି। ସୋଆର ଅଧ୍ୟାପକମାନେ ପଞ୍ଜାମୁଣ୍ଡା କଲେଜର ଶାସ୍ତ୍ରପତିମାନଙ୍କୁ ବିଭିନ୍ନ ଅବିଭାଜିତ କର୍ମରେ ସୁବିଧା ଯୋଗାଇ ଦେବେ। କଲେଜର ଶିକ୍ଷାକ୍ଷେତ୍ରରେ ମଧ୍ୟ ଶାସ୍ତ୍ରପତିମାନଙ୍କୁ ପୁଣିଥରେ ବିଭାଜିତ ଭାବରେ ମୁକ୍ତ କରିବା ଏବଂ ଅନୁସନ୍ଧାନ ପରିଷଦ(ନାହି) ସମେତ ବିଭିନ୍ନ ସ୍ୱୀକୃତି ନିମନ୍ତେ ସୋଆ ପକ୍ଷରୁ କଲେଜକୁ ପ୍ରୋତ୍ସାହିତ କରାଯିବ। ସୋଆ ପକ୍ଷରୁ କଲେଜର ଶାସ୍ତ୍ରପତିମାନଙ୍କ ପ୍ରୋତ୍ସାହିତ ନିମନ୍ତେ ତାଲିମ କାର୍ଯ୍ୟକ୍ରମ କରାଯିବ। ସୋଆ ସମୟକ୍ରମରେ ଏହି ପଦକ୍ଷେପ

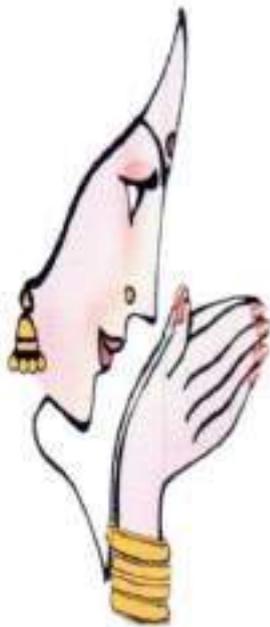


ଏବଂ ଯୋଗ ସମ୍ପର୍କୀୟ କାର୍ଯ୍ୟକ୍ରମ ପରିଚାଳନା କରାଯିବ। ସୋଆ ପକ୍ଷରୁ ଶାସ୍ତ୍ରପତି ଓ କର୍ମଚାରୀମାନଙ୍କ ନିମନ୍ତେ ପ୍ରୋତ୍ସାହିତ ଆୟୋଜନ କରାଯିବ। ସମସ୍ତ ଶାସ୍ତ୍ରପତି କର୍ମଚାରୀମାନଙ୍କର ସ୍ୱାଧୀନତା କରାଯିବ। ସୋଆର ପ୍ରତିଷ୍ଠା ସମ୍ପର୍କରେ ପ୍ରୋତ୍ସାହିତ ମନୋଜ ଚାନ୍ଦନ ମହାପାତ୍ର ଉପସ୍ଥିତିରେ ପ୍ରୋତ୍ସାହିତ କଲେଜର ପ୍ରୋତ୍ସାହିତ ପତ୍ରରେ ଏବଂ ପଞ୍ଜାମୁଣ୍ଡା କଲେଜ ଅଧ୍ୟକ୍ଷ ପ୍ରଫେସର ଅଧିକାରୀ ଲକ୍ଷ୍ମୀନାରାୟଣ ଦାଶ ଏହି ବୁଝାମଣାପତ୍ରରେ

ସ୍ୱାକ୍ଷର କରିଥିଲେ। ଅନ୍ୟମାନଙ୍କ ମଧ୍ୟରେ ସୋଆର ନେତୃତ୍ୱ ପ୍ରଫେସର ବିଭୁତି କୁମାର ପ୍ରଧାନ, ଶାସ୍ତ୍ରପତିମାନଙ୍କୁ ବିଭିନ୍ନ ପ୍ରୋତ୍ସାହିତ କାର୍ଯ୍ୟକ୍ରମରେ ସମାବେଶ, ଶୁଭର ବିଭୁଷଣ ମହାପାତ୍ର ପ୍ରମୁଖ ଉପସ୍ଥିତ ଥିଲେ। ସେହିପରି ପଞ୍ଜାମୁଣ୍ଡା କଲେଜ ପକ୍ଷରୁ ଶୁଭର କୁମାର ପ୍ରଫେସର ପରିଡ଼ା, ପ୍ରଫେସର ବିକ୍ରାମ କୁମାର ଭୂୟାଁ, ପ୍ରଫେସର ଅନିଲ ପାଣିଗ୍ରାହୀ ଉପସ୍ଥିତ ଥିଲେ।



## **PATTAMUNDAI COLLEGE, PATTAMUNDAI**



### **GREEN AUDIT REPORT**

**2020-2021**

Prepared By

**Internal Quality Assurance Cell (IQAC),**

**&**

**Green Audit Committee**

**PATTAMUNDAI COLLEGE, PATTAMUNDAI  
KENDRAPARA, ODISHA 754215**



## EXECUTIVE SUMMARY

Educational institutions are the nursing grounds for the futures of a nation's growth. A conducive learning atmosphere in an educational institution requires a clean and healthy environment. While the concept of 'Eco Club' is being adopted in institutions of primary education level to imbibe the essence of environment among the young, more environmental responsibility is required in case of institutions of higher education to achieve environmental sustainability through wise resource utilization and waste discharge to the environment. Waste minimization plan and sustainable environmental management are now mandatory for educational institutions. Environmental Auditing or Green Auditing is a process to test the environmental performance of an organization against its environmental policies and objectives.

The audit process in Pattamundai College, Pattamundai involved initial interactions with the management to clarify policies, activities, records and cooperation of staff and students in the implementation of mitigation measures. This was followed by collection of data through questionnaire, review of records, observation of practices and observable outcomes. In order to assess the quality of water and soil, data on water and soil quality was obtained by testing of samples collected from different locations of the college campus by testing laboratories. In addition, the approach ensured that the management, staff and students are active participants in the green auditing process in the college.

This is the first Green Audit of Pattamundai College and the baseline data prepared for the college will be a useful tool for campus greening, resource management, planning of future projects, and a document for implementation of sustainable development of the college. It is expected that the management will be committed to implement the green audit recommendations.

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## **BRIEF BACKGROUND OF THE COLLEGE**

Pattamundai College, affiliated to Utkal University, Odisha, is situated away from the din and bustle of the town with five meadows and rich corn fields around. It came into being in 1970 as an Arts College with the provision for teaching pre-University Humanities course. The institute at present is a family of 1475 students with boys and girls of 869 and 606 respectively taking education at under graduate level in Arts, Commerce and Science disciplines with 80 numbers of teaching and non-teaching faculties.

With a long history of 50 years and a picturesque sprawling campus of 14.6 acres land of its own is indeed a testimony of truly materialized dream of education lovers of Pattamundai. Since fifty springs has been passed, this institution continuously ventilating knowledge and has been playing a pivotal role in the development of Pattamundai and its surrounding regions. With the modest strength of 128 students in the year of its inception-1970, besides all odds and constraints the college grew manifold in leaps and bounds. It is carefully nurtured by illustrious academicians, administrators, dedicated faculties and alumni, with institutionalised efforts over the years, and it has become a premiere institution in the academic map of Odisha.

In its onward march, the institution cradled with one faculty in Arts in 1970, and introduced Honours in Political Science, History, Economics in 1978 and English, Odia, Sociology, Philosophy & Education in 1989. Then Commerce faculty was opened in 1979 and Science faculty in 1989 with introduction of Chemistry and Mathematics Honours in 1994-94 and Botany, Physics and Zoology Honours in 1998 added to its glory. The University was pleased to open a vocational subject of Tourism and Travel Management in 1998 which illuminated as land mark in development and expansion of the academic area of the college. The college has a permanent affiliation and has been listed under 2(f) and 12(B) of the UGC act which withstands the academic and administrative standards of the college. In response to the changing needs of the society and as per UGC norms innovative experiments are being carried out with help

of computer networking for making the teaching learning process interactive and participative.

With the need of the time, the institution expanded its area of innovation in different respects to meet the requirement of the students as well as different stake holders.

With the infrastructural growth such as addition of new buildings, hostels, renovation of library laboratories and playground, it also emphasized to enhance its academic quality to reach the institution to a new height. It contributed toppers in Sociology and Mathematics at University level in different years with many more best students along with achievements in sports and other fields. The institution also adopted the new curriculum as changed by Utkal University at different times and prepared the students accordingly with a new idea to compete with the other in national and international levels. The contribution of its NCC, NSS and YRC students has a remarkable effect in serving the society by awarding and donating blood, planting trees, campuscleaning, observing national days etc. The institution is one step ahead by planting about 4000 trees since 1990 to make the campus an eco-friendly environment with a permanent green and waste management policy of its own. The institution is diversified with a planned electricity management to save energy by switching off the unused buildings and converting whole institution with LED bulbs. This year, the institution has also planned to install solar power to provide the main building where main electric consumption is there.

The institution has a fully operational website providing day to day information and has also fully automated library with INFLIBNET connection and e-portals to provide easy access to its all the stake holders.



Location of Pattamundai College

### **Vision of the College**

- ❖ To make higher education qualitative and value based for the socio-economic transformation of the nation.
- ❖ To install a sense of discipline and morality among the student's community for the making the students socially responsible citizens.

### **Mission of the College**

- ❖ To grow into an institution of excellence and exemplary at the university level
- ❖ To provide literary, scientific, professional and technical education to the aspiring rural youth at a minimum cost.
- ❖ To be recognized as an institution with proven capacity to provide quality education in Science, Commerce & Humanities.
- ❖ To create symbiotic relationship with the society to meet the changing needs
- ❖ To introduce self-financing courses in multidisciplinary area.
- ❖ To adopt continues measures to improve the quality of the programme.
- ❖ To provide need-based career-oriented courses to the needs of the society
- ❖ To involve the Alumni for all round development of the college

**NAAC Accreditation: Year: 2006      2021**

**B+      B**

**Courses Offered:**

The institution offers following programmes which include the different courses as given in the table below.

<b>PROGRAMME OFFERED</b>	<b>COURSE OFFERED</b>
<b>Arts</b>	<b>Economics</b>
	<b>Education</b>
	<b>English</b>
	<b>Philosophy</b>
	<b>Sociology</b>
	<b>Odia</b>
	<b>History</b>
	<b>Political Science</b>
<b>Science</b>	<b>Chemistry</b>
	<b>Botany</b>
	<b>Physics</b>
	<b>Mathematics</b>
	<b>Zoology</b>
<b>Commerce</b>	<b>Commerce</b>

**Strength of Staff (Teaching/ Non-teaching):**

Presently this institution runs with 80 Nos of both teaching and non-teaching staff members whose continuous effort makes this institution a glorious one. Among the total staff, detailed analysis of men and women of both the categories are given.

Gender-wise Details of Teaching staff in the College.

Sl. No	Academic Year	Total	Male	Female	Male Percentage	Female Percentage
1	2020-21	43	33	10	76.74	23.26

**Gender-wise Details of Teaching staff  
in the College**



■ Male ■ Female

**Gender-wise Details of Non-Teaching staff in the College:-**

Sl. No	Academic Year	Total	Male	Female	Male Percentage	Female Percentage
1	2020-21	37	33	04	89.19	10.81

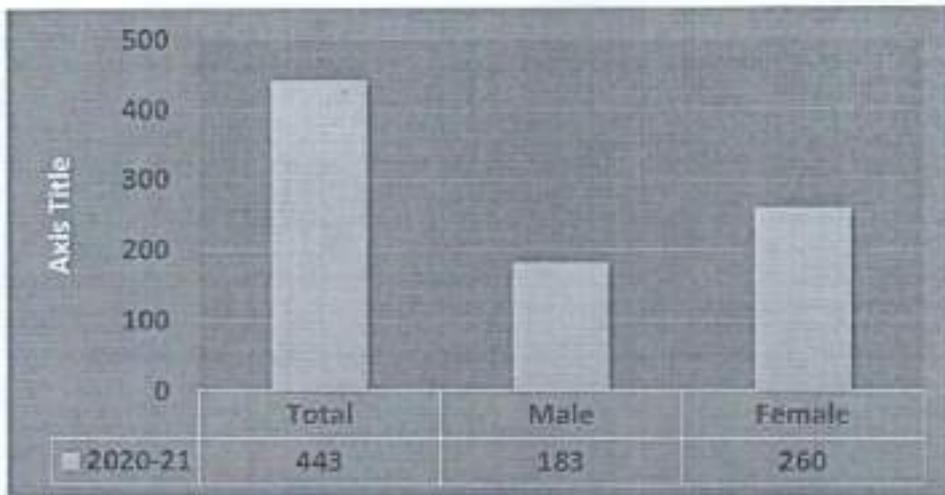
**Gender-wise Details of Non-Teaching  
staff in the College**



■ Male ■ Female ■ ■

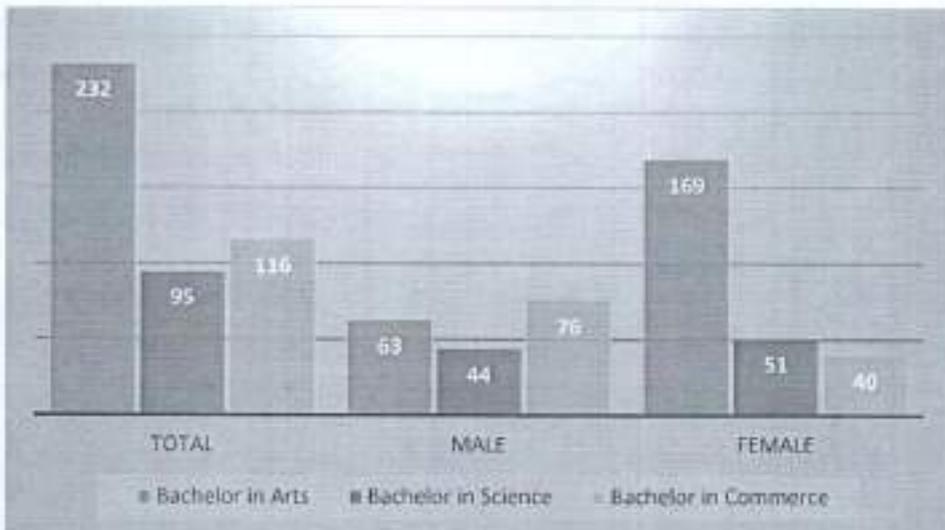
**Gender wise Details of Total Students in the College**

Sl. No	Academic Year	Total	Male	Female	Male Percentage	Female Percentage
1	2020-21	443	183	260	41.31 %	58.69 %



**Gender wise Details of Total Students in programme wise.**

Sl. No	Name of the Programme	Total	Male	Female	Male Percentage	Female Percentage
1	Bachelor in Arts	232	63	169	27.16	72.84
2	Bachelor in Science	95	44	51	46.32	53.68
3	Bachelor in Commerce	116	76	40	65.52	34.48



**Physical structure (Area/ Built up area/ No. of class rooms/ libraries/ administrative rooms/ laboratories/ auditoriums/ conference rooms/ staff common rooms/ students common rooms/ hostels/ canteens/ others)**

The institution has a land area of 14.6 acres of its own which is surrounded with pacca boundary fully to check the free access of the trespassers to overcome any kind of huddles in its academic atmosphere. Out of this, the built up area covers 10299.23m<sup>2</sup> which includes the physical structures given in the list below to cater the need of the students as well as all other stakeholders. The rest part of the total area covers a huge playground with full of green lands of different plants. Different gardens inside the campus add to its beautification in many folds.

Details of Physical Structures	
Physical Structure	Area/No
Total Area	14.6 Acre
Built Up Area	10299.23 m <sup>2</sup>
Class Rooms	32
Libraries	01
Administrative rooms	05
Laboratories	04
Auditoriums	01
Conference rooms	01
Staff common rooms	01
Students common rooms	02
Hostels	03
Canteens	01
Guest House	01
Post Office	01
Staff Quarter	02

Stadium	01
Security Rooms	03
Principal Quarter	01
Cycle Stand	01
Examination Hall	01
Lavatories	14

Construction Area in Sqft.		
Specific area	Size in ft	Total area in ft <sup>2</sup> .
Staff Common Room to Boys Lavatories	2(200 X 28 )	11200
Administrative Block	2(125 X 28 )	7000
Zoology Department	89 X 37	3293
Examination Hall	2(115 X 25)	5750
Room No-01 to 06	145 X 26	37770
Room No-26 & 27	64 X 27	1727
Library Hall	2(137 X 38)	10412
Chemistry, Botany & Math Laboratory	100 X 68	6800
Boys Hostel	92 X 67	6164
Principal Quarter	51 X 34	1734
Guest House	62 X 56	3472
Canteen	34 X 23	782
Old Chemistry Block	87 X 42	3650
Post Office	36 X 46	1656
New OBC Hostel	3(94 X 52)	14664
Ladies Hostel	2 (112 X 90)	20160

Staff Quarter	79 X 35	2765
Cycle Stand	35 X 18	630
Stadium	72 X 31	2232
Security 3 Nos. Room	10 X 12.5	125
	25 X 10	250
	10 X 12.5	125
Total		110860 ft <sup>2</sup> =10,299.23 m <sup>2</sup>

### **Establishment of Environment Management System**

- **Declaration of Environment Policy**

The institution has its own environment policy to set up the targets which technically possible for the environmental protection and economically possible to create eco-friendly green environment. The different policies are

- To create the sense for environmental protection for the society.
- To aware and educate different stake holders regarding relevant laws and regulations of environmental protection.
- To aware about planting of more number of trees and reduce fossil fuel consumption.
- To reduce energy consumption and avoid plastic based materials.
- To aware the local people by making continuous rally with placards, posters and road show by the students.
- To avoid the burning of coal, wood, leaves, dung cake for different purposes and give more emphasis on use of natural gas.
- To dispose the particular wastes in proper manner as per then rule.
- **Planning of programme or activity**

The institution has an annual plan and programme for the different activities relating to plantation, gardening (ornamental and medicinal), beautification, auction of uprooted

trees, and waste disposal of its own. The different stake holders such as NCC, NSS, YRC, Alumni etc. are advised accordingly to perform such activities in due course of time to adhere the environmental policy of this institution.

- **Implementation and operation**

As per the programme, the institution is planted with different trees by our different stake holders and they are well aware to take care of these plants. Regular awareness programme, meetings and placards rally are going on to aware and activate the students, staff and people of this locality. Cleanliness programme are regularly done to make the campus clean. The watering of plants and garden are regularly done through supplied, waste and harvested rain water. The wastemanagement of the institution is properly done as explained in the waste management.

### **OBJECTIVES OF GREEN AUDIT**

The objectives of Environmental Audit in Pattamundai College are:

- To recognize the initiative taken by the College towards environment.
- To recognize, diagnose and resolve the environmental problems.
- To recognize the effects of the College on the environment and vice versa.
- To identify and control the impact of activities of the College on environment.
- To suggest the best protocols for sustainable environment.
- To assess environmental performance and the effectiveness of the measures to achieve the defined objectives and targets.
- To identify the different pressures on the College to improve their environmental performance.
- To ensure that the natural resources are utilized properly as per national policy of environment.
- To set the procedure for disposal of all types of harmful wastes.
- To reduce energy consumption.

- To give preference to the most energy efficient and environmentally sound appliances.
- To minimize the consumption of water and monitor its quality.
- To identify the risks of hazards and implement the policies for safety of stakeholders.
  - To make sure that rules and regulations are taken care to avoid the interruptions in environment.
- To provide baseline information to enable the College to evaluate and manage environmental change, threat and risk.
- To identify the gap areas and suggest recommendations to improve the Green Campus status of the College.

## **TARGET AREAS OF GREEN AUDITING**

Green audit forms part of a resource management process. Although they are individual events, the real value of green audit is the fact that they are carried out, at defined intervals, and their results can illustrate improvement or change over time. The concept mainly focuses on the efficient use of energy and water; minimize waste generation or pollution and also economic efficiency.

All these indicators are assessed in the process of Green Auditing of this Institute. It focuses on the reduction of contribution to emissions, procure a cost effective and secure supply of energy, encourage and enhance energy use conservation, promotes personal action, reduce the institute's energy and water consumption, reduce wastes to landfill, and integrate environmental considerations into all services considered to have significant environmental impacts. Target areas included in this green auditing are water, energy, waste, green campus and carbon footprint.

### **Auditing for Water Management**

Water is a natural resource; all living organisms depend on water. Groundwater depletion and water contamination are taking place at an alarming rate. Hence it is essential to examine the quality and usage of water in the college. Water auditing is

conducted for the evaluation of facilities of raw water intake and determining the facilities for water treatment and reuse. The concerned auditor investigates the relevant method that can be adopted and implemented to balance the demand and supply of water.

#### **Auditing for Energy Management**

Energy conservation is an important aspect of campus sustainability which is also linked with carbon foot print of the campus. Energy auditing deals with the conservation and methods to reduce its consumption related to environmental degradation. It is therefore essential that any environmentally responsible institution examine its energy use practices.

#### **Auditing for Waste Management**

Human activities create waste, and it is the way these wastes are handled, stored, collected and disposed of, which can pose risks to the environment and to public health. Pollution from waste is aesthetically unpleasing and results in large amounts of litter in our communities which can cause health problems. Solid waste can be divided into three categories: bio-degradable, non- biodegradable and hazardous waste. Bio-degradable wastes include food wastes, canteen waste, wastes from toilets etc. Non-biodegradable wastes include what is usually thrown away in homes and schools such as plastic, tins and glass bottles etc. Hazardous waste is waste that is likely to be a threat to health or the environment like cleaning chemicals, acids and petrol. Unscientific management of these wastes such as dumping in pits or burning them may cause harmful discharge of contaminants into soil and water supplies, and produce greenhouse gases contributing to global climate change respectively. Special attention should be given to the handling and management of hazardous waste generated in the college. Bio-degradable waste can be effectively utilized for energy generation purposes through anaerobic digestion or can be converted to fertilizer by composting technology. Non-biodegradable waste can be utilized through recycling and reuse. Thus, the minimization of solid waste is

essential to a sustainable college. The prevailing waste disposal policies are assessed and suggestions made on the best way to combat the problems.

### **Auditing for Green Campus Management**

Trees play an important ecological role within the urban environment, as well as support improved public health and provide aesthetic benefits to cities. In one year, a single mature tree will absorb up to 48 pounds of carbon dioxide from the atmosphere, and release it as oxygen. The amount of oxygen released by the trees of the campus is good for the people in the campus. So while you are busy studying and working on earning those good grades, all the trees in campus are also working hard to make the air cleaner for you.

### **Auditing for Carbon Footprint**

Burning of fossil fuels (such as petrol) has an impact on the environment through the emission of greenhouse gases into the atmosphere. The most common greenhouse gases are carbon dioxide, water vapour, methane, nitrous oxide and ozone. Of all the greenhouse gases, carbon dioxide is the most prominent greenhouse gas, comprising 402 ppm of the Earth's atmosphere. The release of carbon dioxide gas into the Earth's atmosphere through human activities is commonly known as carbon emissions. Vehicular emission is the main source of carbon emission in the campus, hence to assess the method of transportation that is practiced in the college is important.

### **METHODOLOGY ADOPTED**

The methodology adopted to conduct the Green Audit of the college had the following components

#### **Onsite Visit**

Three day field visit was conducted by the Green Audit Team . The key focus of the visit was on assessing the status of the green cover of the college, their waste management

practices and energy conservation strategies etc.

### **Group Discussion**

The Group discussions were held with the staff members, students and the management focusing various aspects of Green Audit. The discussion was focused on identifying the attitudes and awareness towards environmental issues at the institutional and local level. Energy, waste management and Carbon foot print analysis Survey

With the help of teachers and students, the audit team assessed the energy consumption pattern and waste generation, disposal and treatment facilities of the college. The monitoring was conducted with a detailed questionnaire survey method.



Pre Audit Meeting

### **AUDIT STAGE**

Green auditing began with the assessment of the status of the green cover of the Institution followed by waste management practices and energy conservation strategies etc. Different facilities at the college were monitored, different types of appliances and utilities (lights, taps, toilets, fridges, etc.) were determined as well as measuring the

usage per item (Watts indicated on the appliance or measuring water from a tap) and identifying the relevant consumption patterns (such as how often an appliance is used) and their impacts. The staff were interacted to get details of usage, frequency or general characteristics of certain appliances.

Data collection was done in the sectors such as Energy, Waste, Greening, Carbon footprint and Water use. College records and documents were verified several times to clarify the data received through survey and discussions. The environment samples including water, soil from various location of the campus were collected and analyzed at government recognized testing laboratories.



Post Audit Discussion

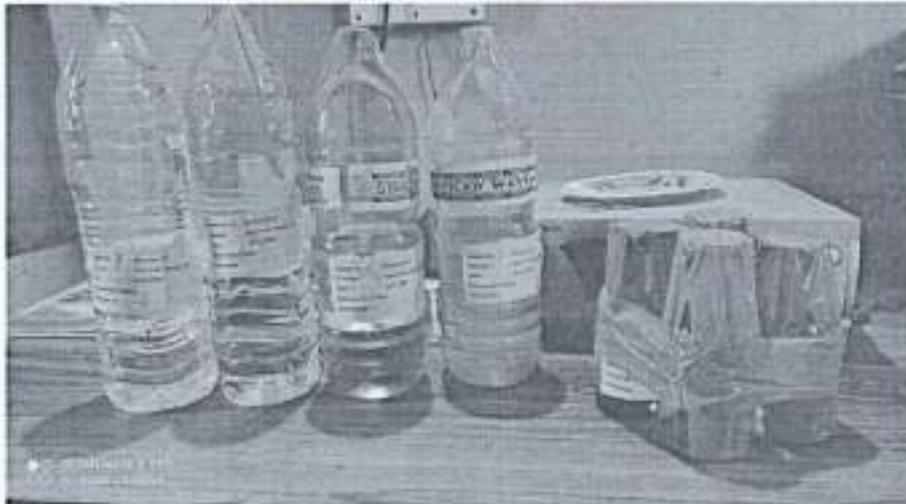
## GREEN AUDIT REPORT

### Water Quality assessment Water quality:

Water samples were collected from 4 different sites such as tube well water (boys hostel), pond water (near main building) and two bore wells of the campus and analyzed for the basic parameters by sending State Food Testing Laboratory, Bhubaneswar, Odisha whose results are given in the tabular form.

Parameters	Tube Well Water (Boys hostel)	Pond Water (Near Main Building)	Bore Well Water 1	Bore Well Water 2	Standard value (BIS)	BSI
Colour	Nil	Nil	Nil	Nil	Agreable	
Odour	Nil	Nil	Nil	Nil	Agreable	
Alkalinity (mg/l)	150	136	152	110	200	
Chloride (mg/l)	32	28	36	34	250 mg/l Max	
Residual Free Chlorine (mg/l)	Nil	Nil	Nil	Nil	0.2 mg/l Max	
Total Hardness (Total)	62	54	64	58	200 mg/l Max	
Iron (as Fe) (mg/l)	3.5	Nil	Nil	Nil	1.0 mg/l Max	
pH	6.0	6.5	7.0	7.5	6.0 to 8.5	
Turbidity	20 NTU	15 NTU	Nil	Nil	1 NTU Max	
Sulphate as SO <sub>4</sub> -2 (mg/l)	Nil	Nil	Nil	Nil	200 mg/l Max	
Total Alkalinity (as HCO <sub>3</sub> -) (mg/l)	150	136	152	110	200 mg/l Max	
Nitrate (as NO <sub>3</sub> -)	Nil	Nil	Nil	Nil	45 mg/l Max	
Nitrate (as NO <sub>2</sub> -)	Nil	Nil	Nil	Nil	0.02 mg/l Max	
Test for E.Coli coliform	Negative	Negative	Negative	Negative	Absent	
MPN of Coli	Negative	+5	Absent	Absent	Negative	

form group of organisms per 100 ml					
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Water samples for testing

### **Water Management**

The institution has its own water management system. There are two deep Bore wells with two submersible pumps of capacity 2 hp and 1 hp each which meet all the need of the water. The distribution of water is properly done to different places as per the requirements. Different overhead tanks are available in different parts of the college to meet these requirements. There are 13 water purifiers and 1 cooler at different parts of the college to overcome the drinking water of the different stakeholders. The waste water obtained from different parts are well managed by watering the plants, ponds as well as sumps. Also college has access to the municipality supply water and also used at its need. Rain water harvesting system is also managed properly to watering the plants and rest to the ponds. There is also a well available in the college whose water is not used due to the supply of water from the Bore wells. The ponds are cleaned time to time for the pisciculture which add some funds to the college and consume biodegradable wastes left to the ponds through rain as well as waste water.

Sl. No	Parameters	Response	Remarks
1	Source of water	Bore Well with submersible pump, Municipality water supply, Ponds.	Bore Well-02 Ponds -02
2	No of wells	01	Available but not in use (Location- Physics Department backside)
3	No of motors used	02	
4	Horse power (motor)	2 hp and 1 hp each	Total Quantity -02
5	Depth of well	20 feet	
6	Water level	10 feet	
7	No of water tanks	20	
8	Capacity of tank	18,000 L	2000 L × 4 = 8000 L 750 L × 4 = 3000 L 1000 L × 6 = 6000 L 500 L × 2 = 1000 L
9	Qty of water pumped everyday	10,000 L	Regular use before COVID-19
10	No of ponds	02	Near College Canteen-01 Boys Hostel -01
11	Any water wastage/ why?	No	
12	Water usage for gardening	Yes	

13	Waste water sources	Lavatory College Office & Building Laboratory(Physics, Chemistry, Zoology & Botany) Water Cooler & Water Purifiers. Outlet Boys & Girls Hostel, Toilets, Kitchen & wash basin outlet	
14	Use of waste water	Gardening, Plantation & Drained to ponds for storage.	
15	Fate of wastewater from labs	Soak pits are made at their outlet to absorb within	
16	Whether waste water from labs mixed with ground water	No	Absorbed fully within the soak pits.
17	Whether any green chemistry method practiced in labs	No	
18	Any treatment of lab water	No	Only absorbed through soak pits.
19	No of watercoolers	01+13 =14	01-Water Cooler 11-Kent RO water Purifier 02-UV water purifiers
20	Rain water	Yes	

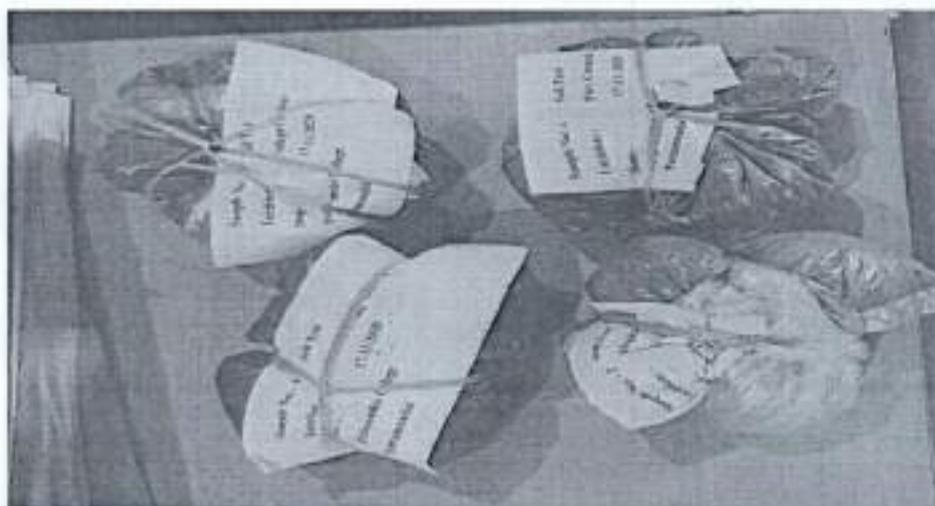
	harvest available?		
21	No of units and amount of water harvested	02 units	
22	Any leakytaps	No	
23	Amount of water lost per day	Nil	
24	Any water management plant used	No	
25	Any water saving techniques followed	Yes	Urinals are equipped with push pull angle cocks to prevent wastage of water. Overhead water tanks connected with ball cock to prevent water spillages automatically
26	Are there any signs reminding people to turn off the water		Overhead tanks are also connected with drain Pipes in case water fall on ground because of faulty ball cock.

#### Soil Quality Assessment

Soil samples were collected from four locations such as ornamental garden, playground, herbal garden and back side of the main building plantation area of the campus and analysed the basic Parameters Krushi Vigyan Kendra, Kendrapara, Odisha. The results are tabulated and presented in the table.

Parameter	Location 1	Location 2	Location 3	Location 4
pH	5.8	5.4	5.9	6.2
Total Available Nitrogen (kg/ha)	195.2	175.6	205.3	220.4

Total organic carbon (%)	0.39	0.35	0.41	0.44
Available Phosphorous (kg/ha)	10.2	9.3	10.4	11.3



Soil samples for testing

### Energy Audit

A detailed data of consumption of electricity of the institution for the sessions 2017-18, 2018-19 and 2019-20 are given elaborately in table separately. The consumption of electricity is varied with the addition / modification of different items/ instruments. The institution is equipped with modern / updated electric appliances such as 5star rated instruments LED tube and bulbs to reduce the energy consumption. It also tried to add solar energy system to further save and use of green energy.

**Data Sheet for Energy Audit of the Session: 2020-21**

Room No./ Name	Electrical device/ Items (Bulbs: CFL/ Incandescent/ CFL;AC, Fan/ Computer, Instruments, Other appliances)	Number	Power	Usage Time (Hr/Day)
NAAC	Fan	2	140	5
	LED	3	36	5
	Desktop	2	440	5
	Laptop	1	150	5
	AC	1	1500	2
	Printer	2	440	5
Principal's Office	Fan	3	210	7
	LED	3	36	7
	Laptop	1	150	7
Principal's Res tRoom	Fan	1	70	5
	LED	3	36	5
	Desktop	1	220	5
	CCTV DVR	1	220	24
	AC	1	1500	2
	Printer	1	220	5
	Refrigerator	1	125	24
Account Section	Fan	2	140	7
	LED	4	48	7
	Desktop	1	220	7
	Printer	2	220	5
Administrative Office	Fan	2	140	7
	LED	8	96	7
	Desktop	1	220	7
	Printer	1	220	5
Office Veranda	Tube Light	4	48	5
Staff Commo nRoom	Fan	8	560	7
	LED	16	240	7
	AC	3	4500	3
	Water Purifier	1	30	24
	Fan	8	560	5

Examination Section	Tube Light	9	360	5
	Desktop	1	220	5
SAMS	Fan	1	70	5
	Tube Light	2	80	5
	Desktop	3	220	5
	Xerox	1	350	5
Education Seminar	Fan	3	210	5
	Tube Light	3	120	5
	Laptop	1	150	5
Economics Seminar	Fan	3	210	5
	Tube Light	3	120	5
	Laptop	1	150	5
	Printer	1	220	5
Sociology Seminar	Fan	2	140	5
	Tube Light	2	80	5
	Laptop	1	150	5
English Seminar	Fan	1	70	5
	Tube Light	1	40	5
	Laptop	1	150	5
	Printer	1	220	5
Philosophy Seminar	Fan	2	140	5
	Tube Light	1	40	5
	Laptop	1	150	5
Vocational Office	Fan	1	70	5
	Tube Light	2	80	5
Odia Seminar	Fan	3	210	5
	Tube Light	2	80	5
History Seminar	Fan	3	210	5
	Tube Light	3	120	5
	Desktop	1	220	5
Political Science Seminar	Fan	3	210	5
	Tube Light	3	120	5
	Laptop	1	150	5
Commerce Seminar	Fan	3	210	5
	Tube Light	4	160	5
	Laptop	1	150	5
Ladies	Fan	2	14	5
	Tube Light	6	240	5

nRoom	Commo	Fan	9	630	5
Zoology Department		Tube Light	10	400	5
		Laptop	1	150	5
		LED	6	72	5
Motor Room		Motor	1	1492	4
		Bulb	1	40	4
Class Room No 08		Fan	8	560	5
		LED	4	60	5
Class Room No 10		Fan	4	280	5
		LED	3	45	5
Class Room No 09		Fan	1	70	5
		LED	1	15	5
Class Room No 07		Fan	2	140	5
		LED	2	30	5
Class Room No 14		Fan	1	70	5
		LED	1	15	5
Class Room No 15		Fan	1	70	5
		LED	1	15	5
Class Room No 16		Fan	6	210	5
		LED	3	45	5
Class Room No 17		Fan	1	70	5
		LED	1	15	5
Class Room No 18		Fan	1	70	5
		LED	1	15	5
Class Room No 19		Fan	1	70	5
		LED	1	15	5
Class Room No 20		Fan	6	420	5
		LED	3	45	5
Class Room No 21		Fan	8	560	5
		LED	4	60	5
Class Room No 23		Fan	6	420	5
		LED	3	45	5
Class Room No 24		Fan	2	140	5
		LED	2	30	5
Class Room No 25		Fan	10	700	5
		LED	5	75	5
		Fan	9	630	5
		LED	13	295	5

Physics Department	Desktop	1	220	5
	Water Purifier	1	30	24
	Refrigerator	1	125	24
	Printer	1	220	5
Botany Department	Fan	11	770	5
	LED	7	140	5
	Desktop	1	220	5
	Water Purifier	1	30	24
	Refrigerator	1	125	24
Mathematics Department	Fan	4	280	5
	LED	6	9	5
	Desktop	6	1320	5
	Printer	1	220	5
Chemistry Department	Fan	12	840	5
	LED	3	45	5
	Tube light	7	280	5
Library	Fan	25	1750	5
	Tube Light	13	520	5
	LED	20	300	5
	Desktop	3	660	5
	Printer	1	220	5
Boys Hostel	Fan	12	840	5
	Tube Light	16	192	5
	LED	11	132	5
Ladies Hostel	Fan	24	1680	5
	Tube Light	25	1000	5

**Annual Electricity Bill:** 2020-21 Rs .82,255/-

The total energy utilization of the college for different purposes is approximately **17856.97 units/month**. Increased production of solar energy a type of nonconventional category of energy will be a good energy management system for the college. Electricity charges per month are **Rs.100000/month**. Energy saving through the replacement of incandescent bulbs, CFL lamps and tube lights to LED light could be a good option. Energy efficient electrical equipment especially fans

and pump sets can be replaced against old ones. Awareness programs for the stakeholders to save energy may also increase sustainability in the utilization of various energy sources.

**Availability of solar power with details:**

The college has already installed luminous PCU 7.5 KVA solar power system since 2020-21 academic session which is sufficient enough to meet the power supply from renewable energy sources in the Central Office and the IQAC Room .

**Waste Management**

Waste management is important for an eco-friendly campus. In a college different types of wastes are generated, its collection and management are very challenging. The following data provide the details of the waste generated and the disposal method adopted by the college. Annexure -2

**Waste Management for the session 2020-21**

Approximate quantity of waste generated per day (in kg)

Approx.	Biodegradable	Non-biodegradable	Hazardous	Others
<b>Office</b>				
<1 Kg	√	√	Nil	Nil
2-10 Kg				
>10 Kg				
<b>Laboratories</b>				
<1 Kg	√	√	Nil	Nil
2-10 Kg				
>10 Kg				
<b>Canteen/ Kitchen</b>				
<1 Kg		√	Nil	Nil
2-10 Kg				
>10 Kg	√			

### How the waste generated in the college are managed

	Yes/ No	Remark
Composting/ Vermicomposting	Yes	
Recycling	Yes	Waste water used for gardening
Reusing		
Other ways		

### Waste generated in the College

	Yes/ No	Remark
E-waste	Yes	All the E-Wastes (315 Kg) of the College up to 30-09-2020 have already been disposed to State Pollution Control Board, Odisha in College letter No 946 dated 30- 09-2020 with generation of Rs 4094/- towards college fund.
Hazardous waste	Yes	Hazardous wastes generated from different laboratories are well managed by dumping in sealed sump.
Solid waste	Yes	The Biodegradable solid wastes are consumed for Vermi composting purpose and Non- biodegradable wastes are handed over to municipality through its regular collection vehicle.
Dry leaves	Yes	Used for Vermi composting purpose.
Canteen	Yes	The waste generated from the canteen is disposed as mentioned in the above process.
Liquid waste	Yes	All types of liquid wastes are used for gardening, plantation and pond watering.
Glass	Yes	As this is treated as solid waste, it is handed over to

		municipality for its proper disposal.
Unused equipment	Yes	Disposed as E-Waste
Napkins	Yes	Biodegradable and disposed as me
Others (specify)	-	

### Green Campus

The institution is sincerely concerned about the environmental pollution too early for which many timber yielding plants as well as medicinal plants were planted in the campus since 1990. This is a continuous practice of this institution for which it has reached around 4000 trees of different kinds. It not only reduces the green house gases but also supplies huge amount of oxygen to create an eco-friendly environment. The Google earth picture and detailed list of plants are given below for the information. As this is a cyclone prone area, almost every year the institution suffers loss of some trees which is used for the generation of funds by selling the broken trees. The details of fund generation in different years are given in annexure- V.

### Tree Enumeration by staff and students

List of Plants in the campus 2020-21			
1	Ficus benghalensis	Bara	1
2	Cedrus deodara	Debadaru	120
3	Terminalia arjuna	Arjuna	358
4	Syzygium cumini	Jamu	10
5	Emblica officinalis	Amla	6
6	Callistemon citrinus:	Bottle brush	3
7	Alstonia scholaris	Chhatiana	15
8	Azardichta indica	Nimba	218
9	Millettia pinnata	Karanja	280
10	Bombax ceiba	Simili	7
11	Simarouba glauca	Simrua	124
12	Saraca asoca	Asoka	25
13	Phoenix dactylifera	Khajuri	33

14	<i>Neolamarckia cadamba</i>	Kadamba	5
15	<i>Melia azedarach</i>	Mahanimba	17
16	<i>Cocus nucifera</i>	Nadia	41
17	<i>Syzygium austral</i>	Australian Cherry	6
18	<i>Terminalia bellirica</i>	Bahada	1
19	<i>Swietenia macrophylla</i>	Mahogany	121
20	<i>Artocarpus heterophyllus</i>	Panasa	9
21	<i>Hevea brasiliensis</i>	Rubber	1
22	<i>Mangifera indica</i>	Amba	15
23	<i>Dalbergia sisso</i>	Sisu	41
24	<i>Tectona grandis</i>	Saguan	275
25	<i>Roystonea regia</i>	Areca palm	2
26	<i>Ficus carica</i>	Dimiri	5
27	<i>Acacia auriculiformis</i>	Akasia	8
28	<i>Psidium guava</i>	Pijuli	12
29	<i>Albizia lebbek</i>	Sirisa	21
30	<i>Casuarina equisetifolia</i>	Jhaun	41
31	<i>Magnolia Champaka</i>	Swarna champa	7
32	<i>Dellenia indica</i>	Ou	7
33	<i>Terminallia cattappa</i>	Katha badam	27
34	<i>Streblus asper</i>	Sahada	18
35	<i>Delonix regia</i>	Krushnachuda	17
36	<i>Caesalpinia pulcherrima</i>	Radhachuda	15
37	<i>Mimusops elengi</i>	Baula	14
38	<i>Gmelina arborea</i>	Gambhari	19
39	<i>Aegle marmelos</i>	Bela	6
41	<i>Diospyros melanoxylon</i>	Kendu	5
42	<i>Schleichera oleosa</i>	Kusum	1
43	<i>Annona reticulata</i>	Ata	1

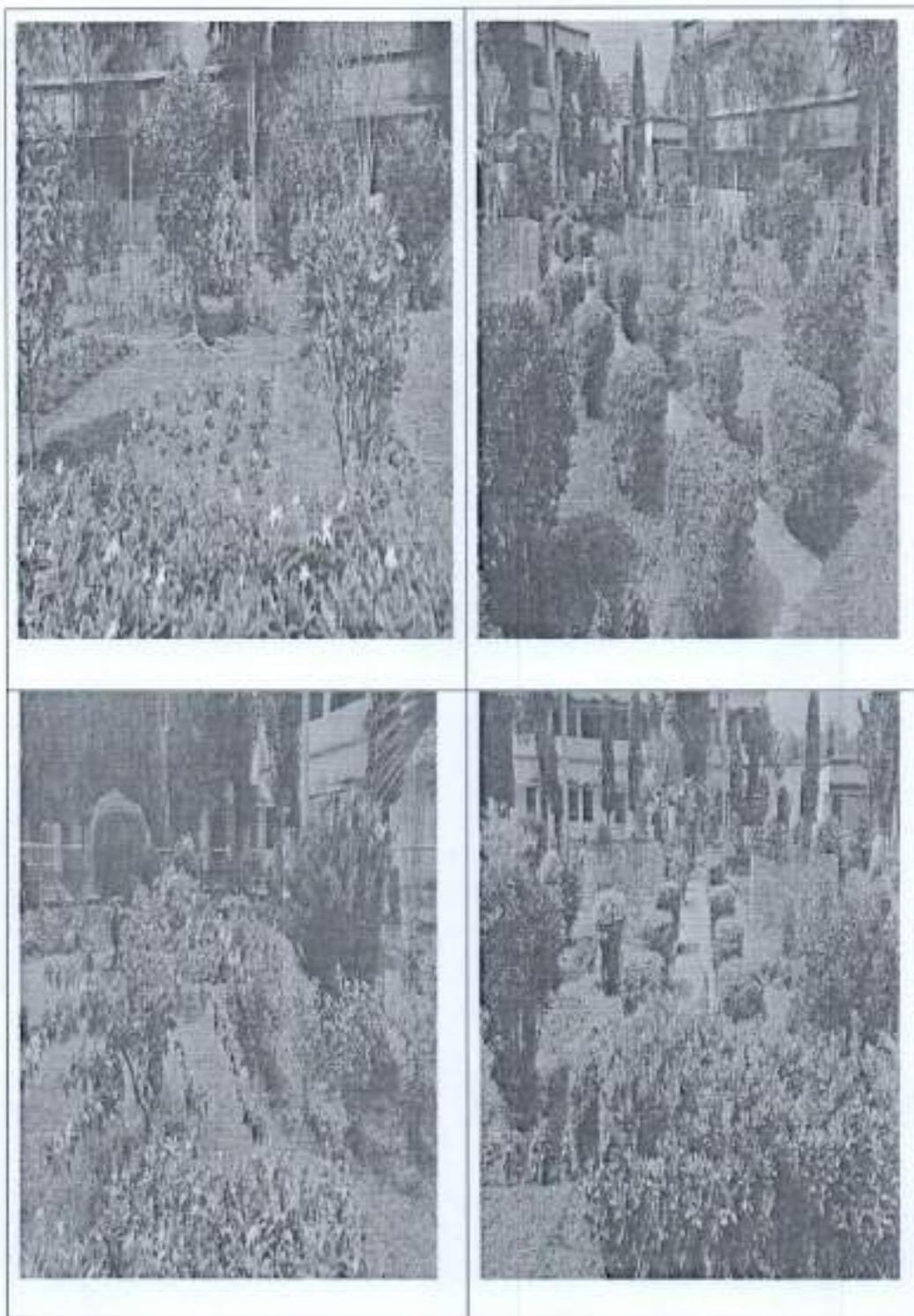
		Total	4264
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**No of trees planted:**

Session	No. of trees planted	No. of trees broken	Total no. of trees
2017-18	550	Nil	3940
2018-19	127	35(Due to cyclone)	4022
2019-20	194	23(Due to cyclone)	4193
2020-21	71	Nil	4264

**No of gardens:**

Garden Types	Number
Ornamental Garden	02
Medicinal Garden	01
Orchards	01
Others	01



College Garden

**List of Medicinal plants in herbal garden of Pattamundai College**

Sl.No	Common Name	Botanical Name
1	Amla	<i>Phyllanthus emblica</i>
2	Bela	<i>Aegle marmelos</i>
3	Gangasiuli	<i>Nictanthes arbor-tristis</i>
4	Amarpoi	<i>Kalanchoe pinnata</i>
5	Manjuati	<i>Lawsonia inermis</i>
6	Bahada	<i>Terminalia bellirica</i>
7	Mandara	<i>Hibiscus rosa-sinensis</i>
8	Dhanwantari	<i>Cymbopogon flexuosus</i>
9	Pipali	<i>Piper longum</i>
10	Tulasi	<i>Ocimum sanctum</i>
11	Ghritkumari	<i>Aloe vera</i>
12	Badiamla	<i>Phyllanthus fraternus</i>
13	Satabari	<i>Asparagus racemosus</i>
14	Brahmi	<i>Bacopa monnieri</i>
15	Dayana	<i>Artemisia vulgaris</i>
16	Rukuna	<i>Coleus barbatus</i>
17	Banadhania	<i>Eryngium foetidum</i>
18	Karpura tulasi	<i>Ocimum kilimandscharicum</i>
19	Chireita	<i>Andrographis paniculata</i>
20	Pasaruni	<i>Paederia foetida</i>
21	Salaparni	<i>Desmodium gangeticum</i>
22	Ramatulasi	<i>Ocimum gratissimum</i>
23	Satabari	<i>Asparagus racemosus</i>
24	Gugula	<i>Commiphora caudata</i>
25	Agaru bacha	<i>Alpina galanga</i>
26	Ankaranti	<i>Cauroupita guianensis</i>
27	Dalchini	<i>Cinnamomum verum</i>
28	Tejapatra	<i>Cinnamomum tamala</i>
29	Kanchana	<i>Bauhinia variegata</i>
30	Insulin	<i>Costus igneus</i>
31	Thalkudi	<i>Centella asiatica</i>
32	Pana	<i>Piper betle</i>
33	Kanaka champa	<i>Pterospermum acerifolium</i>
34	Kaladudura	<i>Datura metel</i>
35	Anatamula	<i>Hemidesmus indicus</i>
36	Annapurna	<i>Pandanus amaryllifolius</i>
37	Arsha	<i>Crinum asiaticum</i>
38	Aswagandha	<i>Withania somnifera</i>
39	Bacha	<i>Acorus calamus</i>
40	Bajramuli	<i>Sida cordifolia</i>
41	Bhrungaraj	<i>Wedelia chinensis</i>
42	Brudhadaraka	<i>Argyrea nervosa</i>
43	Dhala arakha	<i>Calotropis procera</i>

44	Durlava	<i>Ocimum basillicum</i>
45	Golamaricha	<i>Piper nigrum</i>
46	Guluchi	<i>Tinospora cordifolia</i>
47	Hadajoda	<i>Cissus quadrangularis</i>
48	Hemasagar	<i>Kalanchoe lanceolata</i>
49	Keukeua	<i>Costus speciosus</i>
50	Sarpagandha	<i>Rauwolfia serpentina</i>
51	Pipermint	<i>Mentha arvensis</i>
52	Raktakhai	<i>Ventilago madrasapatana</i>
53	Sadabihari(Dhala)	<i>Catharanthus pusillus</i>
54	Patalagaruda	<i>Rauwolfia tetraphylla</i>
55	Stevia	<i>Stevia rebaudiana</i>
56	Akarakara	<i>Spilanthes calva</i>
57	Amba ada	<i>Curcuma amda</i>
58	Bisalyakarani	<i>Tridax procumbens</i>
59	Ayapan	<i>Eupatorium ayapana</i>
60	Koilikhia	<i>Hygrophylla auriculata</i>
61	Lajakuli	<i>Mimosa pudica</i>
62	Madaranga	<i>Alternanthera sessilis</i>
63	Pitasaga	<i>Glinus oppositifolius</i>
64	Antamula	<i>Hemidesmus indicus</i>
65	Antamuli	<i>Tylophora indica</i>
66	Aparajita(Dhala)	<i>Clitoria ternatea</i>
67	Aparajita(Kala)	<i>Clitoria pusilis</i>
68	Dahadahia	<i>Ipomoea reniformis</i>
69	Gudumari	<i>Gymnema sylvestre</i>
70	Multivitamin green	<i>Sauropus androgynus</i>
71	Loni	<i>Morinda citrifolia</i>
72	Kalama	<i>Ipomoea aquatica</i>
73	Sadabihari(violet)	<i>Catharanthus roseus</i>
74	Apamaranga	<i>Achyranthes aspera</i>
75	Kala arakha	<i>Calotropis gigantea</i>
76	Brahmajasti	<i>Clerodendrum serratum</i>
77	Gayasa	<i>Leucas aspera</i>
78	Raktachita	<i>Plumbago indica</i>
79	Swetachita	<i>Plumbago zeylanica</i>
80	Pauinsia	<i>Aerva lanata</i>
81	Talamuli	<i>Curculigo orchoides</i>
82	Bena	<i>Vetiveria zizanioides</i>
83	Gada	<i>Diospyros sylvatica</i>
84	Krushna pami	<i>Uraria picta</i>
85	Gandhasunthi	<i>Kaempferia galanga</i>
86	Sunusunia	<i>Marsilea quadrifolia</i>
87	Swetachandana	<i>Santalum album</i>
88	Raktachandana	<i>Pterocarpus santalinus</i>
89	Nagachampa	<i>Couropita guianensis</i>
90	Bhadraksya	<i>Gauzuma ulmifolia</i>
91	Banapiaja	<i>Urginea dubius</i>

92	Biribiri	<i>Spilanthes paniculata</i>
93	Kalahaladi	<i>Curcuma caesia</i>
94	Methi	<i>Trigonella foenum-graecum</i>
95	Bathua	<i>Chinopodium album</i>
96	Bhuinamla	<i>Phyllanthus niruri</i>
97	Ambiliti	<i>Oxalis pes-caprae</i>
98	Mashaparni	<i>Teramnus labialis</i>
99	Sankhapushpi	<i>Evolvulus alsinoides</i>
100	Olatakamala	<i>Abroma augustum</i>
101	Kaincha	<i>Mucuna radians</i>
102	Podina	<i>Mentha arvensis</i>
103	Kala tulasi	<i>Ocimum tenuiflorum</i>
104	Queen Pineapple	<i>Ananas comosus</i>
105	Brajamalli	<i>Clerodendron chinense</i>
106	Gobinda garuda	<i>Trewia nudiflora</i>
107	Akadia	-
108	Akalmundi	-
109	-	<i>Aclema radicans</i>



#### Herbal Garden Routine Green Practices: Celebration of important days

The institution celebrated the following important days during each year to

aware, observe and perform the activities by the different stakeholders.

SL No.	Important days	Activities
1	National Youth Day	Awareness
2	Republic Day	Campus Cleaning and Awareness
3	World Sustainable Energy Day	Energy Saving Awareness
4	World Wildlife Day	Plantations and Awareness
5	Gopabandhu Jayanti	Campus Cleaning and Awareness
6	World Water Day	Water Conservation Awareness
7	World Earth Day	Campus Cleaning
8	World Red Cross Day	Blood Donation
9	Netaji Jayanti	Observation & Awareness
10	NSS Day	Campus Cleaning and Social work
11	World Environment Day	Plantations and Awareness
12	International Yoga Day	Yoga Camp & Seminar
13	NCC Day	Parade, Campus Cleaning and Awareness
14	Gandhi Jayanti	Campus Cleaning and Awareness
15	World Aids Day	Observation and Awareness
16	Human Right Day	Observation and Awareness
17	Kargil Vijay Diwas	Observation and Awareness
18	Environmental pollution vs industrial development	Webinar on 31 <sup>st</sup> august 2020
19	Role of chemistry in sustainable development of society	Webinar on 28 <sup>th</sup> September 2020
20	Industrialization urbanization and development	Webinar on 10 <sup>th</sup> September 2020
21	Biology of SARS-Cov-2	Webinar on 19 <sup>th</sup> September 2020
22	Climate change and agriculture	Webinar on 26 <sup>th</sup> September 2020
23	Biodiversity conservation : its challenge and opportunities	Webinar on 19 <sup>th</sup> November 2020
24	Mapping of genes causing congenital ocular decease and use of bio pesticides:- an ecofriendly approach to enhance agricultural productivity	Webinar on 26 <sup>th</sup> November 2020

### Carbon footprint analysis

Burning of fossil fuels such as petrol has an impact on the environment through the emission of greenhouse gases into the atmosphere; of these carbon dioxide is the most prominent greenhouse gas, comprising 402 PPM of the Earth's atmosphere. The release of carbon dioxide gas into the Earth's atmosphere through human activities is

commonly known as carbon emissions in which the vehicular emission and burning of natural gas are the main sources in the campus. As this is a rural based institution, maximum stakeholders use public transport as well as own cycle through which realisation of green house gases is minimised. A very few numbers of two wheelers and cars are used by students, staff members and other stakeholders coming to the college. The natural gas used by different laboratories, hostels and canteen are very less which contribute very less green house gas for environment pollution. As there are around 4000 of trees are present in the campus this not only balances the green house gases but also supplies a huge amount of oxygen to the atmosphere to make an eco-friendly environment.

Sl No	Particulars	Numbers
1	No of cycles used in college by stakeholders	345
2	No of two wheelers used Average Distance Travelled Quantity of Fuel Amount used per day	50 5 K.M 5 L Rs 400/-
3	No of cars used Average Distance Travelled Quantity of Fuel Amount used per day	06 15 K.M 6 L Rs 480/-
4	No of persons using public transportation	920
5	No of persons using college conveyance	-
6	No of generators used per day	Rarely used as institution has inverter systems in different parts.
7	Amount of fuel used for generators per day	-
8	No of LPG cylinders used in canteen/ labs	07 Canteen - 01 Hostel - 02 Lab- 04
9	Use of any other fossil fuels in the college	-
10	Any suggestions/ planning to reduce the use of fuel	

## **MAJOR AUDIT OBSERVATIONS**

- The college has developed its own environmental policy
- The college has developed very good greenery in the campus. Almost all the available spaces have been planted with trees.
- Gardens are well maintained. It is good to have a herbal garden which would boost the knowledge of staff, students and visitors on medicinal plants.
- Purchase policy should be developed to procure environment friendly items.
- Programmes on green initiatives have to be increased.

### **Water Management**

- The water sources are safe in terms of contamination.
- The college at present does not have waste water treatment for waste water generated from laboratories and other sources.
- Per day consumption of water is high.
- Measurement of quantity of water obtained from rain water harvesting should be done.

### **Energy Management**

- Monthly use of electricity in the college is very high. As expansion is going on, the consumption would further increase.
- The communication process for awareness in relation to energy conservation is inadequate.

### **Waste Management**

- The college has proper communication with the local body for regular collection of solid waste from the college.
- E-waste disposal has been done properly as per procedure.
- Hazardous waste management need to be re-visited and local municipal body be consulted for its proper disposal.

### **Carbon Foot Print Audit**

- Motorized vehicles are not more in number in comparison to the strength of staff and students.
- Use of inverters has reduced consumption of fossil fuel for functioning of college.
- Use of gas cylinder is moderate.

### **Green Campus**

- Tree cover in the campus is adequate.
- Regular planting of trees is found adequate.
- Display boards for medicinal plants in the herbal garden have been placed with required information.

## **SUGGESTIONS AND RECOMMENDATIONS**

### **Water**

- Students can be advised to take back the food waste which would help in reducing the consumption of water for washing.
- The wells can be recharged with rainwater from rooftops of buildings.
- Construction of rainwater harvesting structures for each building can be thought of.
- Awareness programmes for water conservation can be arranged with local NGOs/ Municipal Body. Water quality monitoring should be done periodically.
- Water consumption monitoring system for the entire college should be developed.
- Display boards against the misuse of water need to be developed.

### **Energy**

- It is recommended to avoid using of more energy consuming older electrical appliances and to replace with more environment friendly and energy efficient appliances eg. Five star rating appliances in the college.
- Potential for renewable energy sources have to be explored. The advantage of large roof areas of the college can be taken for installing solar grid.
- It is recommended to use solar powered water heater and cooker in the

canteens of college/ hostels and solar powered street lights.

- The plan to establish 7.5 KVA solar grid should be materialized soon to reduce electricity consumption.
- Regular monitoring of equipment and immediate rectification of any problem should be done.

### **Green Campus**

- In order to increase the carbon credit and greenery of the campus more indigenous and evergreen trees should be planted in the spaces available and spaces created/ likely to be created due to damage and uprooting of old trees.
- Registry of flora and fauna of the college should be developed.
- Display boards for tree with scientific names in the campus need to be developed for identification and learning.
- Possibility of drip watering system for the gardens can be thought of.

### **WASTES**

- The entire campus is plastic free . The use of plastics should be avoided with use of biodegradable materials especially jute bags or paper carry bags..
- Leaf Litter from the campus can be effectively used for Organic Compost /Vermi Compost. The composting matter should be used as environmental friendly Organic Manure.
- Paper waste should be recycled instead of incineration or burning.
- The College Cafeteria wastes /Hostels Wastes should be subjected to aerobic composting by setting up more composting wastes in the campus. The process will provide a chance for the students to operate the composting yards.
- Establishment of bio-gas plant should be encouraged in order to adjust energy consumption from natural sources.
- Instead of using toxic chemicals which is responsible for environmental degradation green practices should be adopted in Laboratories and also in the campus.

#### CARBON FOOTPRINTS-

- In order to maintain the carbon acclount the College take initiaves like the use of bicycles ,no vehicle day in a month, use of CNG-Based vehicles for all stake holders is the needf of the hour.
- Moe emphasis should be given for the use of LPG- in the Hostels for cooking purposes rather than traditional methods of cooking.

PHOTO GALLERY OF PRE AND POST GREEN AUDIT , ACADEMIC SESSION-2020-21



Pattamundai, Odisha, India  
 H+FF+W7J, Baktapur Rd, Pattamundai, Odisha 754215, India  
 Lat 20.574712°  
 Long 86.572916°  
 31/05/22 10:34 AM



Pattamundai, Odisha, India  
 H+FF+W7J, Baktapur Rd, Pattamundai, Odisha 754215, India  
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 Long 86.57285°  
 31/05/22 10:29 AM



Pattamundai, Odisha, India  
 11, Pattamundai, Odisha 754215, India  
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 Long E 86° 34' 23.0664°  
 02/07/22 11:48 AM



Pattamundai, Odisha, India  
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 31/05/22 10:33 AM



Pattamundai, Odisha, India  
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 31/05/22 10:46 AM







Pattamundai, Odisha, India  
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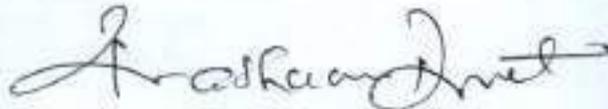
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College  


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 Long E 86° 34' 22.3716"  
 02/07/22 11:37 AM

SIGNATURE OF THE GREEN AUDIT COMMITTEE MEMBERS



1. (Prof. Prabhakar Rout)

Principal

Principal  
Pattamundai College



2. (Dr. Jagyandatt Pati)

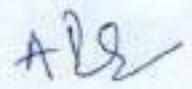
DFO- Mangrove Forest Division( WL)

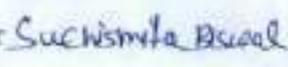
Rajnagar

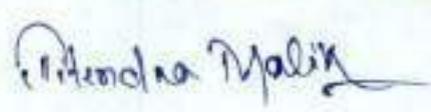
Divisional Forest Officer  
Mangrove Forest Division (WL)  
Rajnagar

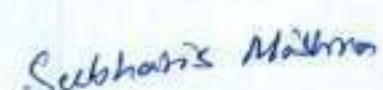
3. Dr. Fakir Chandra Pradhan, Reader in Chemistry & Coordinator Green Audit Committee. 

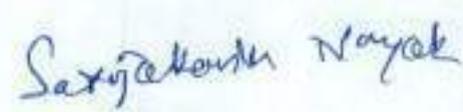
4. Dr. Sunil Kumar Pradhan, Reader in Chemistry & IQAC-Co-ordinator. 

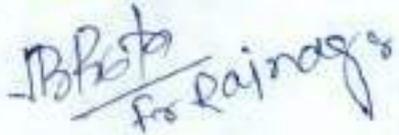
5. Sri Arabinda Pandab, HOD- Mathenmaties & Green Audit Committee Member 

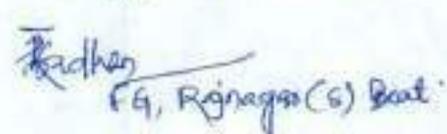
6. Mrs. Suchismita Biswal, Lect. In Botany & Green Audit Committee Member 

7. Sri Jitendra Malik, Lect. In Commerce & IQAC -Member 

8. Sri Subhashis Mishra , Lect. In Economics & IQAC -Member 

9. Sri Sarojkanta Nayak, Lect. In English & IQAC -Member 

10. Sri Bijaya Kumar Patra, Forester ,Rajnagar 

11. Sri Trideep Kumar Pradhan, Forest Guard , Rajnagar 

# **PATTAMUNDAI DEGREE COLLEGE, PATTAMUNDAI**

## **ACADEMIC CALENDAR FOR THE SESSION 2020-21**

Sl. No.	Activities	Time schedule
1	Re-opening of college after summer vacation	18.06.2020
2	Compilation of information's for publication of college calendar	01.09.2020-31.10.2020
3	UG 2nd & 4th semester examinations.	Cancelled due to COVID-19 Pandemic
4	College foundation day	05.07.2020
5	Re-admission & issue of academic time table to UG 3rd & 5th semester students	20.09.2020-15.10.2020
6	Commencement of classes UG 3rd & 5th semesters through <b>Online Mode</b>	13.07.2020
7	Publication and distribution of college calendar	01.11.2020-15.12.2020
8	Admission of +3 1 <sup>st</sup> Year students as per UGC Notification	01.10.2020-31.10.2020
9	Commencement of classes of +3 1st year students as per UGC Notification through online/offline	01.11.2020
10	Commencement of Indian culture class/Gita Gyana Yanga/ Yoga/value-based education (every Saturday) in online mode	16.08.2020
11	National level webinars by all 14 departments	01.10.2020-15.11.2020
12	Despatch of questions by respective HOD's for mid-semester assessment (3rd, & 5th semester) for courses covered up to 21.10.2020	15.10.2020-21.10.2020
13	Mid-semester exam for 3rd, & 5th semesters	As notification by the university
14	Inter College Tournament	15.11.2020-31.12.2020
15	Blood Donation Camp	04.01.2021-25.02.2021
16	Invitation articles from students and staff for publication in the college magazine	16.09.2020-15.10.2020
17	Filling up form for UG 1st, 3rd, & 5th semester exams.	As notification by the university
18	Semester examination 3rd, & 5th semester (tentative as per university notification)	03.01.2021-31.01.2021
19	Semester examination 1st semester (tentative as per university notification)	08.03.2021-26.03.2021
20	Study tour cum workshop	05.02.2021-25.03.2021
21	Commencement of classes for 4th and 6th semester (as per university notification)	04.02.2021-15.02.2021

22	Commencement of classes for 2nd semester (as per university notification)	05.04.2021-15.04.2021
23	Annual Sports/Essay/Debate and Other Competitions /Cultural Week/Annual Function	15.01.2021-26.02.2021
24	Departmental webinars	15.09.2020-15.10.2020
25	Teacher - Parents meet through online	01.11.2020-30.11.2020
26	Alumni meet	15.12.2020-31.01.2021
	IQAC Meeting (1st quarter)	01.10.2020-15.10.2020
27	IQAC Meeting (2nd quarter)	01.12.2020-15.12.2020
	IQAC Meeting (3rd quarter)	15.02.2021-28.02.2021
	IQAC Meeting (4th quarter)	15.04.2021-30.04.2021
	IQAC Seminar (1st)	
28	IQAC Seminar (2nd)	15.09.2020-31.11.2020
	IQAC Seminar (3rd)	
29	Mid-semester exam for 4th and 6th semesters	15.02.2021-15.03.2021
30	Mid-semester exam for 2nd semesters	20.06.2021-30.06.2021
31	Assignment of students' projects (DSE-IV) for 6th semester	15.03.2021-30.03.2021
32	Feedback of teachers from 6th semester students	05.11.2020-15.12.2020
33	Teachers to submit self-appraisal form	01.11.2020-15.11.2020
34	Filling of forms for 6th semester (tentative)	02.02.2021-28.02.2021
35	Filling of forms for 2nd & 4th semester (tentative)	01.04.2021-15.04.2021
36	Semester examination for 6th semester	01.05.2021-15.05.2021
37	Semester examination for 4th semester (as per university notification)	20.06.2021-30.06.2021
38	Semester examination for 2nd semester (as per UGC notification)	09.08.2021-21.08.2021

This is to be modified subject to Govt/ University notification from time to time.

*A. Lakshmi*  
7.7.20

Principal

Pattamundai College  
Principal  
Pattamundai College



**PATTAMUNDAI COLLEGE**  
**PATTAMUNDAI, KENDRAPARA**

**SESSION 2020 -2021**

CLASS +3 SCIENCE (CHEMISTRY)

**+3 STREAM**

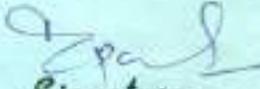
**LESSON PLAN AND PROGRESS REGISTER**

(To be maintained by all members of teaching staff)

FULL NAME OF THE TEACHER DR. DULHASAN PARIDA

DESIGNATION READER IN CHEMISTRY

DEPARTMENT CHEMISTRY

  
Signature

# PATTAMUNDAI COLLEGE

Pattamundai, Kendrapara

Affix  
Photograph

## BIODATA

1. Name : DR DUSHASAN PARIDA (Capital Letters)
2. Designation : READER IN CHEMISTRY
3. Date of Birth : 12.07.1965
4. Date of joining : 16.08.1991
5. Academic Qualification : M.Sc, M.Phil, Ph.D.
6. Academic achievement :
  - a) No. of Research Project completed :
  - b) No. of On-going Projects :
  - c) No. of Research Scholars :
    - (i) Completed Ph.D. :
    - (ii) Continuing Ph. D. :
    - (iii) Completed M.Phil.:
    - (iv) Continuing M.Phil.:
7. Any distinctions / prizes / awards received : 3RD POSITION IN M.Sc (CHEM)
8. No. of Books published : \_\_\_\_\_
9. No. of Research paper published & Communicated 05
10. Present Address : AT: DOKHARIA PARA NEAR COLLEGE  
SQUARE SBI ATM, PO: PATTAMUNDA,  
DIST: KENDRAPARA, ODISHA - 752215  
Contact No. : Phone :/Mob. 9853165455  
e-mail ID : dpawida1965@gmail.com

# CONTENTS

Sl. No.	Class/ Semester	Paper/Unit	Topics assigned	Page No.
1	2	3	4	5
1	+ 3rd yr Sc (5th sem)	C-XI Unit I - IV	i) Nucleic Acid ii) ENZYMES iii) Amino acids, proteins iv) Lipids v) Concept of Energy in Biosystems vi) Pharmaceutical compounds.	1-6
2	+ 3rd yr Sc (1st sem)	DSE-1 Unit - I & II	i) Introduction & history of Polymeric materials ii) functionality & its supstances. iii) Determination of MW of Polymers iv) Glass Transition Temp & its determination.	7-12
3	+ 3rd yr Sc (3rd sem)	C - VI Unit - I to IV	i) Halogenated hydrocarbons ii) Alcohols, phenols, ethers & Epoxides iii) Carbonyl compounds iv) Carboxylic acids & their derivs. v) Sulphur containing compounds.	13-18
4	+ 3rd yr Sc (1st sem)	C - II Unit - II	i) Liquid state ii) Ionic equilibria - I	19-24

# LESSON PLAN

5TH SEMESTER

Online classes

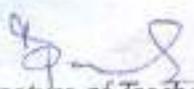
Class +3

Class +3 3rd yr Chemistry Subject Chemistry C-XI No. of Periods/Week 2 (1.5 hrs)  
(90 minutes)

Sl. No	Month	Paper & Unit	Topics to be covered	No. of classes required
1.	July-2020	C-XI Unit-1	1) Nucleic acids: components, structure, synthesis & reactions.	5
2	Aug-2020	Unit-2	1) Enzymes: Introduction, classification, characteristics, salient features, mechanism factors, specificity, Inhibitors in detail. 2) Amino acids, peptides & proteins: Synthesis, properties, reaction, determination of structure, methods of peptide synthesis: N- & C-protecting groups, Solid phase synthesis.	5 10
3	Sept-2020	Unit-3	1) Lipids: Introduction, hydrogenation of oils & fats, saponification value, acid value, iodine no., Rancidity. 2) Concept of Energy in Biochemistry: Cell, Introduction to metabolism, Overview of catabolic pathways of fats & proteins, caloric value.	5 5
4	Oct-2020	Unit-4	Pharmaceutical Compounds: Structure & importance: Classification, structure, therapeutic uses of antipyretics, analgesic, Antimalarials and medicine value of Curcumin, azadiroctin, Vitamin-C & anti-cancer. Antibiotics.	6

Sl. No	Date
1	14.07.20
2	20.07.20
3	23.07.20
4	30.07.20
5	06.08.20
6	13.08.20
7	19.08.20
8	27.08.20
9	03.09.20
10	10.09.20

  
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Signature of Teacher

# PROGRESS

2

Class +3 2nd yr Sr

Subject Chemistry C-XI

Sl. No	Date	Time	Topics covered (If class not taken, mention the reasons)	Signature of Teacher	Signature of H.O.D / Principal
1	14.07.2020	9 am to 10:30 am	Nucleic acid: Definition, Constitution of Nucleotides, Nucleosides & bases & sugar	[Signature]	
2	20.07.2020	"	Synthesis of Purine bases: Adenine & Guanine.	[Signature]	
3	23.07.2020	"	Synthesis of Pyrimidine bases: Uracil, Thymine, Guanine. Structures of nucleotides and Nucleic acids.	[Signature]	
4	30.07.2020	"	Enzyme: Introduction, classifications and characteristics	[Signature]	
5	06.08.2020	10:30 am to 12:45 pm	Salient features, mechanism of enzyme catalysis: Fischer's lock and key model, Koshland's Induced fit model. Inhibition	[Signature]	
6	13.08.2020	9 am to 6:30 pm	Types of inhibition, mechanism specificity of catalysis.	[Signature]	
7	19.08.2020	-do-	Amino acids: Introduction, classification, examples, naming	[Signature]	
8	27.08.2020	-do-	Prep <sup>n</sup> of amino acids with methods: Prep <sup>n</sup> by Gabriel Phthalimide, Strecker synthesis, Orton's method, Nitrile synthesis, Curtius rearrangement, Darzensky synthesis	[Signature]	
9	03.09.2020	-do-	Physical properties: Acidity & basicity, I.P and electrophoresis	[Signature]	
10	10.09.2020	-do-	Chemical properties of amino acids: Basic character, alkylation, acylation, with HNO <sub>2</sub> , with CH <sub>2</sub> O, NOCl, Sandmeyer's reagent decarboxylation, reaction of heat with metal ions, with nitrohydrazine	[Signature]	

# PROGRESS

3

Class +3 3rd yr Sc.

Subject Chemistry-XI

Class 7

Sl. No	Date	Time	Topics covered (If class not taken, mention the reasons)	Signature of Teacher	Signature of H.O.D / Principal	Sl. No	Date
11	24.09.2020	7:00-10:30 AM	Methods of peptide synthesis; N- & C- protecting groups (II) solid phase synthesis.			23	07.11
12	30.09.2020	-do	Determination of structure of polypeptides & proteins			24	9.11
13	01.10.2020	10:30-12:30 AM	Lipids: Introduction, types of lipids and explanation of occurrence and composition of oils and fats.			25	10.11
14	08.10.2020	9:00-10:30 AM	Hydrogenation of oils and fats & acidity.			26	11.11
15	14.10.2020	-do-	Concept of Biology in biochemistry Cell, Introduction, catabolism.			27	12.
16	15.10.2020	-do	Anabolism. Metabolic Pathway of catabolism.			28	17.11
17	21.10.2020	10:30 AM to 12:30	Metabolic pathway of proteins			29	18.
18	2.11.2020	-do-	Metabolic pathway of fats			30	22
19	03.11.2020	10:30 AM - 01:30 PM	Metabolic pathway of carbohydrates			31	23
20	04.11.2020	9:00 AM - 10:30 AM	Calorific values and problems relating to and Iodine				
21	05.11.2020	-do-	Pharmaceutical compounds, Introduction, Developments classification.				
22	06.11.2020	-do-	Natural drugs, effects and impacts. Synthetic drugs, effects & impacts.				

# PROGRESS

Online classes

4

Class 73 3rd yr sc

Subject Chemistry XI

Sl No	Date	Time	Topics covered (If class not taken, mention the reasons)	Signature of Teacher	Signature of H.O.D / Principal
23	07.11.2020	10:30 AM to 12 PM	Classification: Antipyretic drugs: Uses and applications Paracetamol, Prop <sup>n</sup> & Properties		
24	9.11.2020	do	Structure, Synthesis and Uses of ibuprofen. Advantage of this with other Antipyretics.		 11.11.20
25	10.11.2020	do	Analgesics: Types, uses & effect of addicted drugs. Synthetic class, structure & synthesis of aspirin.		
26	11.11.2020	do	Antimalarial: Discovery, Synthesis & Structure for natural sources.		
27	12.11.2020	do	Structure of pamaquine & its synthesis and advantages.		
28	17.11.2020	do	Antibiotics: Def <sup>n</sup> , discovery application, penicillin.		
29	18.11.2020	do	Structure, Synthesis and Uses of chloroquine.		
30	22.11.2020	do	Medicinal values Curcumin, Azadirachtin (neem) & their Uses.		
31	23.11.2020	do	Vitamin - C, Sources, application, anti-cancer, anti-oxidant, anti-diabetic structure & uses.		
			The courses allotted to all completed		
				23/11/2020	



# PROGRESS

8

Class +3 3rd yr Sc

Subject Polym. Chemistry D.A.E.E

12  
53  
No. of  
asses  
quired

Sl. No	Date	Time	Topics covered (If class not taken, mention the reasons)	Signature of Teacher	Signature of H.O.D./Principal
1	15.07.2020	9 AM to 10:30 AM	Introduction & history of Polymers	[Signature]	
2	16.07.2020	10:20 AM to 12 noon	Classification: a) nature & sources, addition & condensation polymerization d) Temp resistance e) linkages.	[Signature]	
3	22.07.2020	9 AM to 10:30 AM	Classification: f) tacticity, plastics elastomers, fibres & resins. Nomenclature	[Signature]	
4	29.07.2020	-do-	Molecular focus in molecular weight of polymer & texture of polymers	[Signature]	
5	05.08.2020	-do-	Functionality & its importance. Criteria for synthesis, Classification of polymerization process - Difference between addition & condensation polymerization	[Signature]	
6	18.08.2020	12 PM to 1:30 PM	Relationships between functionality with types, Classification of polymerization process. Polymerization with advantages	[Signature]	
7	27.8.2020	9 AM to 10:30 AM	Suspension polymerization, Emulsion polymerization, Melt Condensation with advantages & disadvantages	[Signature]	
8	31.08.2020	-do-	Solid & gas phase polymerization, Interfacial polymerization, with examples and advantages & disadvantages	[Signature]	
9	02.9.2020	-do-	Determination of molecular weight of polymers: $\bar{M}_n$ , $\bar{M}_w$ & $\bar{M}_z$ and their relations.	[Signature]	
10	09.09.2020	-do-	Determination of MW by end group analysis, Osmotic pressure method.	[Signature]	
11	22.09.2020	10:30 AM to 12:00	Determination of MW by viscosity method	[Signature]	

# PROGRESS

Online classes 9

Class +3 BSc 4th Sem

Subject Polymer Chemistry DSE-1

Class +3

Sl. No	Date	Time	Topics covered (if class not taken, mention the reasons)	Signature of Teacher	Signature of H.O.D/Principal
12	23.09.2020	9-10-10:30 AM	Light scattering methods	[Signature]	
13	30.09.2020	do	Polydispersity index and its determination	[Signature]	
14	01.10.2020	do	Glass Transition Temp. ( $T_g$ ) Def <sup>n</sup> and factors affecting	[Signature]	
15	07.10.2020	do	$T_g$ Factors affecting $T_g$ Theories of GFT: Kinetic Theory	[Signature]	
16	09.10.2020	10:30 AM to 12:00 PM	WLF equation, derivations	[Signature]	
17	4.11.2020	do	Problems relating $\bar{M}_n, \bar{M}_w, \bar{M}_z$	[Signature]	
18	5.11.2020	do	General discussion of questions of previous exams.	[Signature]	
			No courses allotted to me are completed	[Signature]	
19	06.11.2020	do	Question discussion regarding mid semester	[Signature]	
20	11.01.2021	do	Question discussion (question bank)	[Signature]	
21	12.01.2021	do	Question discussion (question bank)	[Signature]	

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# LESSON PLAN

## ONLINE CLASSES

Class +3 2nd yr Science Subject Chemistry C-VI No. of Periods/Week 02 (1.5 hr)

Class +3.2

Sl. No	Month	Paper & Unit	Topics to be covered	No. of classes required
1	July 2020	C-VI Unit-I	Chemistry of halogenated hydrocarbons: a) Alkyl halides: Prep <sup>n</sup> , Nucleophilic substitution (S <sub>N</sub> 1, S <sub>N</sub> 2 & S <sub>N</sub> 1 reacting) with mech <sup>m</sup> , Substitution vs Elimination b) Aryl halides Prep <sup>n</sup> , Nucleophilic substitution SNAr, Benzene mechanism, Relative reactivity of alkyl halides with other halide	10
2				10
3				10
4				10
5		Unit-II	i) Organometallic Compds of Mg & Li: (Use in Synthesis) of other organic compounds ii) Alcohols; phenols, ethers & epoxide Alcohols: Prep <sup>n</sup> , properties & relative reactivity of 1°, 2° & 3° alcohols. Prep & properties of Glycols, Pinacol-Pinacolone iii) Phenols: Prep <sup>n</sup> & properties. Acidity e) Ethers & epoxides: Prep <sup>n</sup> & properties. Carbonyl compounds: a) Structure & reactivity, Prep <sup>n</sup> & properties of carbonyl compounds with name reaction b) Active methylene compounds - Keto-enol tautomerism, Prep <sup>n</sup> & synthetic application Carboxylic acids & their salts: a) Prep <sup>n</sup> , properties of monocarboxylic acid, dicarboxylic acid, hydroxy acid & substituted acid b) Prep <sup>n</sup> & properties of acid chloride, anhydride, ester and amide c) Sulphur containing compounds: Prep <sup>n</sup> & properties of thiols, thioethers & sulphonic acids	8
6		Unit-III		8
7		Unit-IV		8
8				8
9				8
10				8

Sl. No	Date
1	14.07.20
2	21.07.20
3	27.07.20
4	03.08.20
5	04.08.20
6	10.08.20
7	17.08.20
8	18.08.20
9	24.08.20
10	25.08.20

  
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Signature of Teacher

## PROGRESS

Class +3 2nd yr. Sc.

Subject Chemistry e-VI

 wk 02  
 1-5 hrs  
 No. of  
 classes  
 required

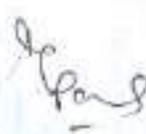
Sl. No	Date	Time	Topics covered (If class not taken, mention the reasons)	Signature of Teacher	Signature of H.O.D./Principal
1	14.07.2020	9 AM - 10.30 AM	Alkyl halides: Nomenclature, Preparation of alkyl halides.	[Signature]	
2	21.07.2020	9 AM - 10.30 AM	Nucleophilic substitution: $S_N1$ , $S_N2$ , $S_Ni$ reaction	[Signature]	
3	27.07.2020	9 AM - 10.30 AM	Chemical properties of alkyl halides.	[Signature]	
4	28.07.2020	9 AM - 10.30 AM	Halo arenes: Nomenclature, Methods of preparation.	[Signature]	
5	04.08.2020	-do-	Nucleophilic substitution: $S_N1$ Reactivity of alkyl halides towards nucleophilic substitution. Reactivity (Relative) alkyl halides with alkyl halides, vinyl halides.	[Signature]	
6	10.08.2020	-do-	$S_NAr$ mechanism, Benzyne mechanism.	[Signature]	
7	17.08.2020	-do-	Electrophilic substitution of halo benzene & their mechanism (halogenation, nitration, sulphonation, F.C. reaction).	[Signature]	
8	18.08.2020	-do-	Organometallics: Organometallic compounds, Examples, naming, Grignard reagent, Prep <sup>n</sup> , mechanism, Synthetic appls. Carbons: Alkanes, alkenes, alkynes.	[Signature]	
9	24.08.2020	-do-	Alcohols. Synthesis of aldehydes, ketones, carboxylic acids, amines, organometallics, aromatics.	[Signature]	
10	25.08.2020	-do-	Organolithium: Prep <sup>n</sup> & Synthetic applications	[Signature]	

# PROGRESS ONLINE CLASSES 15

Class +3 2nd yr sc

Subject Chemistry (Hons) @-VI

Class +

Sl. No	Date	Time	Topics covered (If class not taken, mention the reasons)	Signature of Teacher	Signature of H.O.D/ Principal
11	31.08.2020	9:00 AM	Alcohols: Introduction, Classification, Prep <sup>n</sup> from alkyl halides, Carbonyl compounds with mechs		
12	01.09.2020	7:00 AM	Prep <sup>n</sup> for Carboxylic acids, esters, alkenes, Grignard's reagents with mechanisms		
13	07.09.2020	do	Oxidation of alcohols, Dehydration, Haloform reac <sup>n</sup> , Glycol: Prep <sup>n</sup> of Glycol, a) form, dibromo ethane, alkene (Oxd, addition with HCl)		
14	08.09.2020	do	Physical and chemical Properties a) with met Na, HX, PCl <sub>5</sub> , P <sub>2</sub> O <sub>5</sub> , SOCl <sub>2</sub> , Oxidation and dehydration		
15	13.09.2020	do	Prep <sup>n</sup> and properties of ethylene glycol		
16	14.09.2020	do	Phenols: Classification, Acidity of phenols, Comparing acidity of phenol with nitro phenols, Prep <sup>n</sup> of phenols		
17	21.09.2020	do	Electrophilic substitution of phenols: Halogenation, nitration, Sulphonation, F & C reaction with mechs		
18	22.09.2020	do	Kolbe's reaction, Reimer-Tiemann reac <sup>n</sup> , Fries $\rightarrow$ , Claisen $\rightarrow$		
19	28.09.2020	do	Ethers: Preparation & Properties, Epoxides Properties.		

Sl. No	Date
20	29.09
21	30.09
22	03.10
23	05.10
24	06.10
25	10.10
26	12.10
27	17.10
28	19.10
29	02.11

# PROGRESS

C-VI

Class +3 2nd yr Sc

Subject Chemistry (Hons) C-VI

Signature of H.O.D / Principal

Sl. No	Date	Time	Topics covered (If class not taken, mention the reasons)	Signature of Teacher	Signature of H.O.D / Principal
20	29.09.2020	9:00-10:30	Carbonyl compounds: classification, nomenclature, prep of aldehydes and ketones	[Signature]	
21	30.09.2020	9:00-10:30	Propeties: Nucleophilic addition, reac <sup>n</sup> , General mechanism, addition of $H_2O$ , $NaHSO_3$ and alcohols	[Signature]	
22	03.10.2020	do	Reaction with $RMgX$ , $NH_3$ , $NH_2$ , $NH$ , $NH_2$ with mechanism (Amines)	[Signature]	
23	05.10.2020	do	Name reaction: Aldol Condensation, Cannizzaro's reaction	[Signature]	
24	06.10.2020	do	Haloforn reac <sup>n</sup> , Reformatsky reaction, Perkin reaction	[Signature]	
25	10.10.2020	do	Clemensen's reac <sup>n</sup> , Wolff-Kishner reac <sup>n</sup> , Wittig reaction	[Signature]	
26	12.10.2020	do	Beckmann's rearrangement, Michael addition, Benzil-benzilic acid rearrangement, Benzoin condensation	[Signature]	
27	17.10.2020	do	Active methylene compounds: Introduction, Tautomerism, proof of tautomerism	[Signature]	
28	19.10.2020	do	Methods of Prep: Claisen condensation, Mech <sup>n</sup> , Keto-enol tautomerism & ABE, stability	[Signature]	
29	02.11.2020	do	Synthetic applications of synthesis of acids, substituted acids, dicarboxylic acids	[Signature]	

# PROGRESS

Class +3 2nd yrs Sc

Subject Chemistry (Hons) 17

Class .....

Sl. No	Date	Time	Topics covered (If class not taken, mention the reasons)	Signature of Teacher	Signature of H.O.D / Principal
30	03.11.2020	9:30 AM - 11:30 AM	Malonic ester : Prep <sup>n</sup> , Synthetic applications		
31	07.11.2020	do-	Carboxylic acids and acid chlorides Monocarboxylic acids : Prep <sup>n</sup> Physical properties : Acidity comparison.	 <i>Amrinder</i> 11.11.20	
32	7.11.2020	do-	Acid derivatives : Acid chlorides, acid anhydrides, acid amides & esters.		
33	10.11.2020	do-	Dibasic acid, hydroxy acids, unsaturated acids.		
34	17.11.2020	do-	Sulphur containing compounds Prep <sup>n</sup> of thioles.		
35	18.11.2020	do-	Prep <sup>n</sup> & properties of thioethers and Sulphonic acids		
			Courses Completed 		
36	5-12-2020	do-	Question discussion regarding internal beam penetration <u>18.11.2020</u>		
37	07-12-2020	do-	Question discussion (Question bank)		
38	09.01.2021	do-	Question discussion		

Sl. No      Date

# LESSON PLAN

Online classes

19

Class +3 1st yr. Sc Subject Chemistry (H) No. of Periods/Week 2

Sl. No	Month	Paper & Unit	Topics to be covered	No. of classes required
1	DEC 2020	C-II Unit - II	<p>Liquid state : Introduction, Inter-molecular forces, H-bonding, characteristics, physical properties. Vapour pressure its determination, surface tension its measurement, viscosity its measurement, cleaning action of detergents, qualitative discussion of structure of water.</p> <p><u>Ionic equilibria - 1</u> Strong moderate &amp; weak electrolytes, degree of ionization factors affecting degree of ionization, Ionization constant or ionic product of water, ionization of weak acid &amp; weak bases, pH scale, common ion effect, dissociation constants of mono and di protic acids.</p>	6

Sl. No	
1	12
2	12.1
3	14.1
4	15.1
5	18.1
6	05
7	8.0
8	11.0
9	12

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Signature of Teacher

Class +3 Ist Yr. Sc

Subject CHEMISTRY (1)

Sl No	Date	Time	Topics covered (If class not taken, mention the reasons)	Signature of Teacher	Signature of H.O.D / Principal
1	12.12.2020	9 AM	Introduction of liquid: comparison of liquid with solid & gases	[Signature]	
2	12.12.2020	do	Intermolecular forces; Vander Waals forces & Raoult's law	[Signature]	
3	14.12.2020	do	London forces, Dipole forces, H-bonding relating to liquid	[Signature]	
4	15.12.2020	do	Vapour pressure: factors & its determination.	[Signature]	
5	15.12.2020	do	Viscosity & Co-efficient of viscosity: <del>its</del> determination	[Signature]	
6	05.01.2021	do	Surface tension: examples & factors of surface tension	[Signature]	
7	08.01.2021	do	Determination of surface tension by no. drop method & detergent	[Signature]	
8	11.01.2021	do	Cleaning action of detergent	[Signature]	
9	12.01.2021	do	Components of detergent & qualitative structure of water	[Signature]	

No. of classes required

08

6