

Department of Chemistry

ANNUAL REPORT

Year: 2020-2021

1) Student Strength:

Following is the number of students admitted to undergraduate (UG) and postgraduate (PG) department of chemistry in the academic session of 2020-2021.

A] Undergraduate (UG) Student Strength

<i>Class</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
BSc-I	30	75	105
BSc-II	26	74	100
BSc-III	24	70	94

B] Postgraduate (PG) Student Strength

<i>Class</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
MSc-I	13	09	22
MSc-II	09	11	20

2) “International Yoga Day” Celebration:

“World Yoga Day” was celebrated on 21st June 2021 organized by the institution in online mode. Respected experts demonstrated the various “Yoga skills” and aspects of the yoga in order to increase the health consciousness of the staff and students.

3) Tree Plantation:

On 6th July 2021, departmental teaching and non-teaching staff were actively involved in the “Plantation Programme” carried out in the institution. Numbers of varieties of plant sapling were planted. Departmental staff were engaged with the institutional staff members and students.



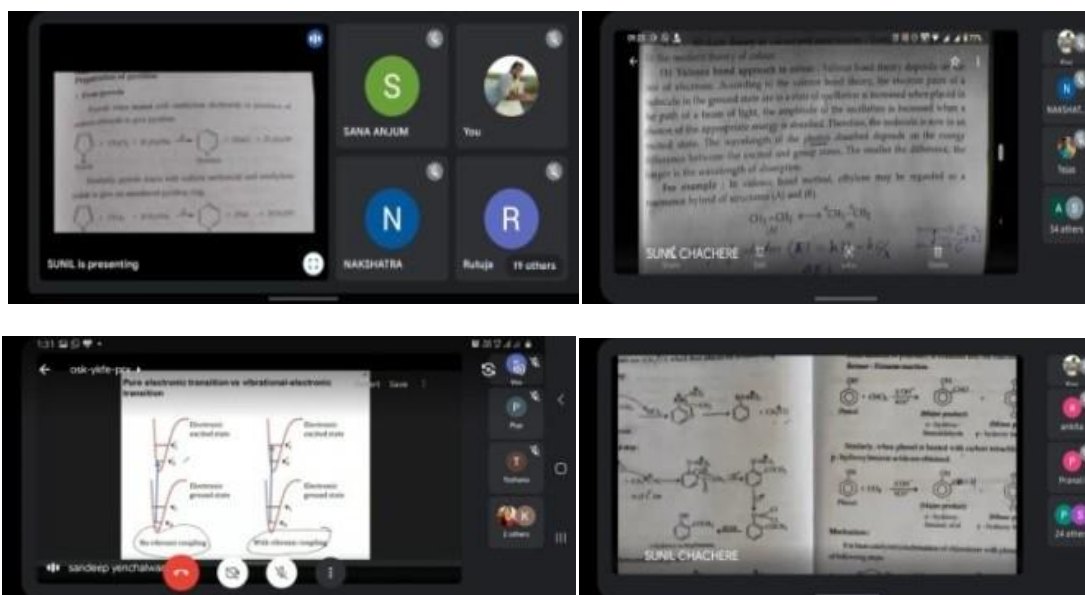
4) 74th Independence Day Celebration:

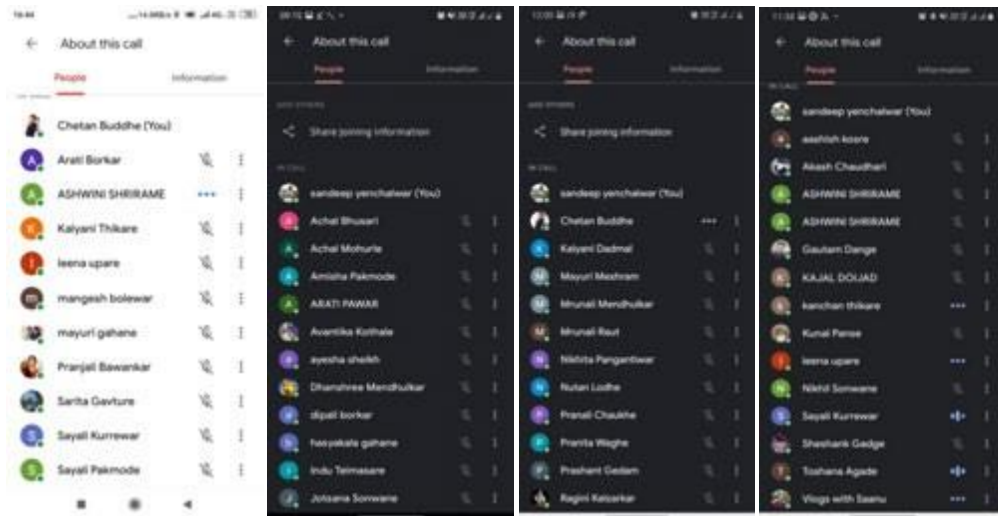
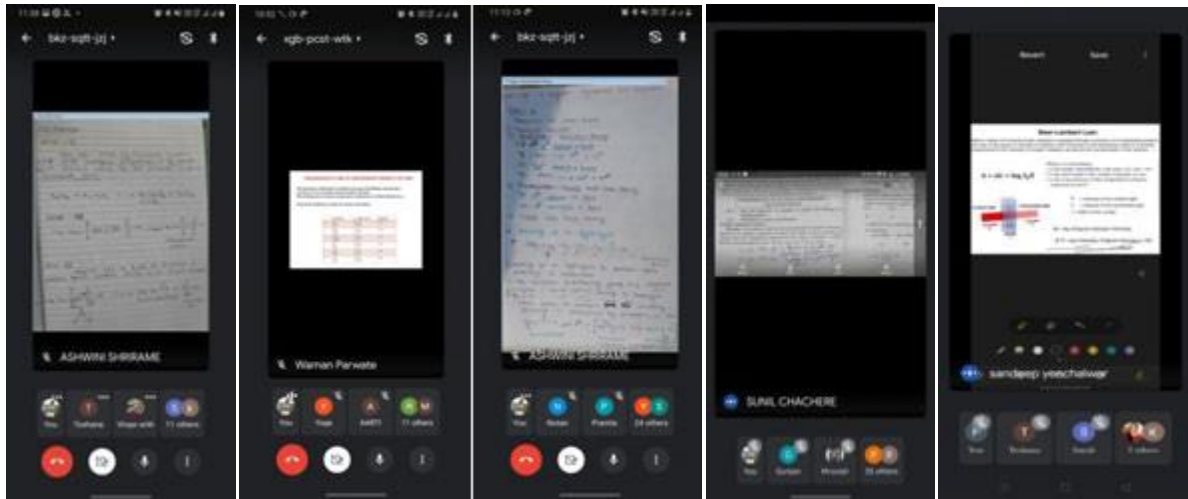
Departmental staffs were present and involved on the day of Independent India which was celebrated in on 15th of August 2020. Secretary of Bhartiya Shikshan Sanstha, Nawargaon, Shri Sadanand Borkar hoisted the flag followed by the national anthem. Students were presented with Academic Excellence Award for their academic achievements.

5) Online Teaching:

In the present COVID-19 situation, department of chemistry has conducted online teaching mode for the benefit of the students. All teaching staff members of the department have carried out online lectures through google meet. Academic supporting material (written notes, ppts) has been provided to the students by means of whatsapp in the various whatsapp groups of the department of chemistry.

Students were already known the online teaching method and hence they were actively present and participated in the lectures. Following are some of the snapshots of the lectures taken by the various faculties of the department.





List of the google meet lectures link is given in the following table.

Class	Google Meet Links
BSc-I	Dr. W N Parwate: http://meet.google.com/bkz-sqtt-jzj Dr. S D Chachere: http://meet.google.com/eca-hnpa-ofe https://meet.google.com/mxn-euxc-dzx Mrs. Ashvini Srirame: https://meet.google.com/cwp-txmc-juk Mr. Chetan Budhhe: https://meet.google.com/ngn-xvym-rvg
BSc-II	Dr. W N Parwate: http://meet.google.com/bkz-sqtt-jzj Dr. S D Chachere: http://meet.google.com/eca-hnpa-ofe https://meet.google.com/mxn-euxc-dzx Mrs. Ashvini Srirame: https://meet.google.com/cwp-txmc-juk Mr. Chetan Budhhe: https://meet.google.com/ngn-xvym-rvg
BSc-III	Dr. W N Parwate: http://meet.google.com/bkz-sqtt-jzj Dr. S D Chachere: https://meet.google.com/mxn-euxc-dzx Mrs. Ashvini Srirame: https://meet.google.com/cwp-txmc-juk Mr. Chetan Budhhe: https://meet.google.com/ngn-xvym-rvg
MSc-I	Dr. Sandeep Yenchalwar: http://meet.google.com/osk-ykfe-prx Mrs. Ashvini Srirame: https://meet.google.com/cwp-txmc-juk Mr. Chetan Budhhe: https://meet.google.com/ngn-xvym-rvg
MSc-II	Dr. Sandeep Yenchalwar: http://meet.google.com/osk-ykfe-prx Mrs. Ashvini Srirame: https://meet.google.com/cwp-txmc-juk Mr. Chetan Budhhe: https://meet.google.com/ngn-xvym-rvg

6) Student online seminars and presentations

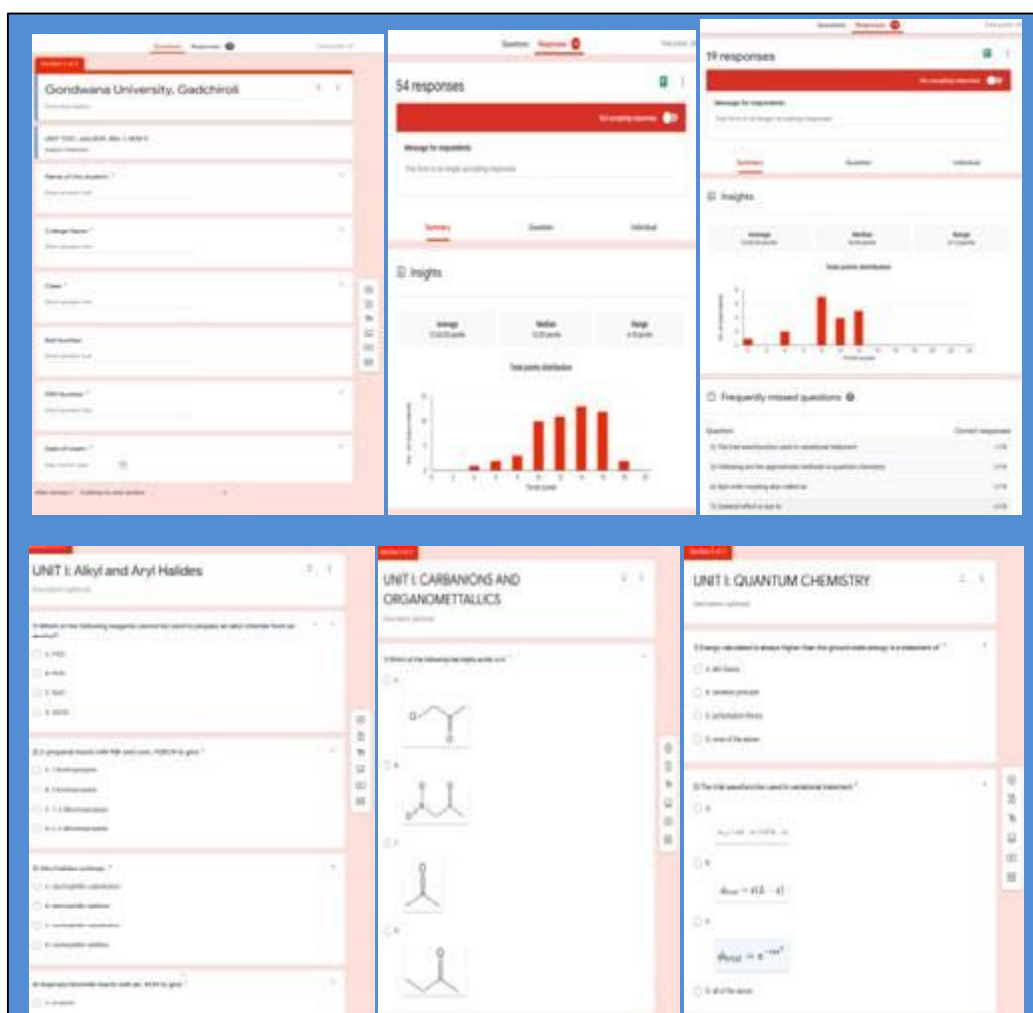
To avoid any academic loss of the students as a result of COVID-19, students were advised to present their seminars as per the syllabus of the Gondwana University, Gadchiroli on VIRTUAL PLATFORM i.e. Google Meet. Undergraduate students were enthusiastically presented all the topics which were given to them.



Similarly, seminars and project presentations of the postgraduate students were conducted on the online as well as in offline modes which were successfully done by the students.

7) Unit Test Exams:

Department of Chemistry has carried out the Unit Test Exams for the students in online mode with the help of Google Form. These links were uploaded through whatsapp and also through gmail as some the tests were involved multiple sets of the MCQ questions. Snapshots are shown as in the following along with the link distributed.



8) Guest Lectures:

In the pandemic Department of Chemistry has conducted online guest lectures for the benefit of the students.

1) Dr. Indrapal Karbhal (NET JRF, GATE and PhD-CSIR NCL, Pune), Assistant Professor at the Department of Chemistry from Pt. Ravishankar Shukla University, Raipur has delivered a talk on “Pericyclic Reactions”.

2) Dr. Atul Nagpure (NET JRF, SET, GATE and PhD-CSIR NCL, Pune), Assistant Professor at the Department of Chemistry from Rashtrapita Mahatma Gandhi College of Arts and Science, Nagbhir has presented a lecture on “ Mass Spectroscopy”.

Both dignities were enthusiastic while presenting the lectures and they have also discussed the various opportunities available after post graduation like NET, SET, GATE competitive exams and in the research. Each lecture was followed by Q/A session where students actively asked the questions on the topics.



Pericyclic Reaction

Pericyclic Reaction

- These reactions are basically the game of pushouts.
- Bond formation and breaking takes place at the periphery of the system.

Characteristics:

- Concerted mechanism takes place (Reactant → Product).
- 4-jet transition state will be formed.
- No intermediate will be formed during the reaction (S_N², E₂, Diels-Alder etc).
- No requirement of any reagent that means photochemical, nucleophile, radical, carbanion etc.
- These are initiated by simply on heating or photochemical condition.
- These reactions are independent of change of solvent and catalyst.

Classification of Pericyclic Reaction

- Electrocyclic
- Cycloaddition
- Sigmatropic
- Group transfer
- Cheletropic

Sigmatropic Reaction

- It involves the migration of sigma bond within the pi framework under thermal or photochemical conditions.

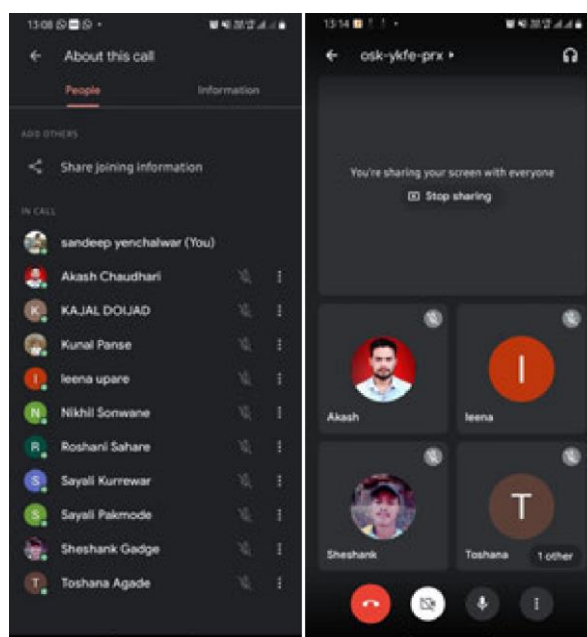
Rules:

- Sigmatropic reaction must have sp² hybrid carbon and sp³ hybrid carbon.
- After sigmatropic shift, sp² carbon must be sp² and sp³ carbon must be sp³.

Group Transfer Reaction

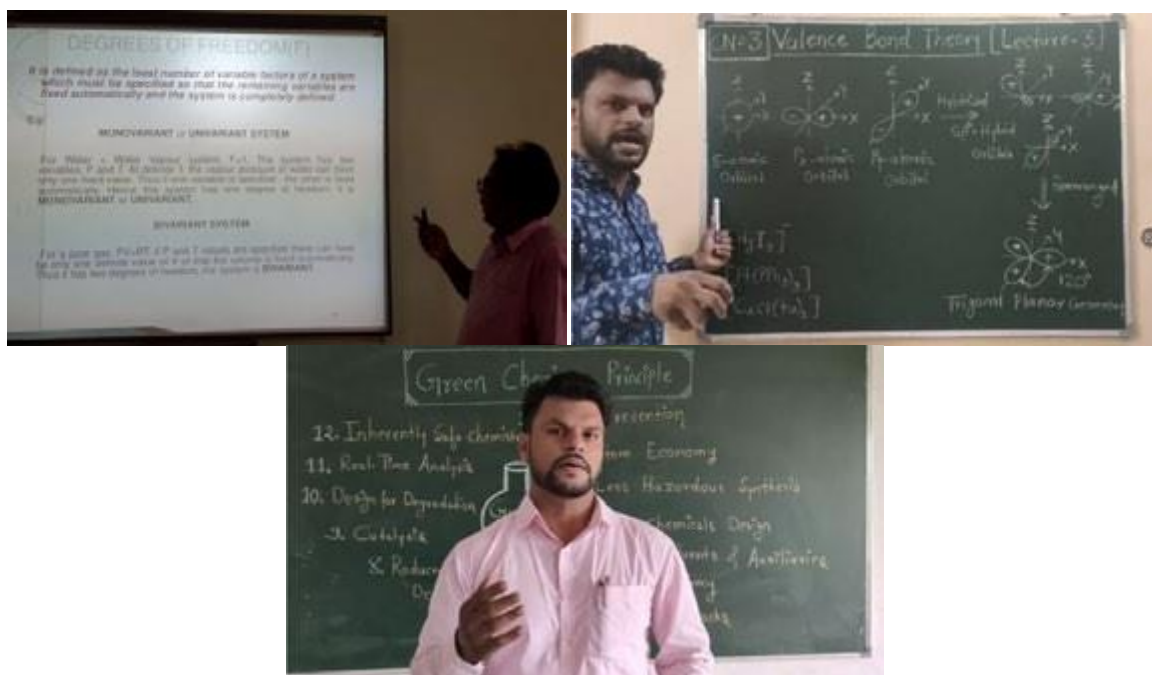
Cheletropic Reaction

- Homocyclic reaction.
- Reversibility of the reaction should be maintained in the product, i.e. one gives the product and then gives back product.
- Reaction is thermally allowed.
- Two-center system of C₂, O₂, N₂, S, Se, etc.





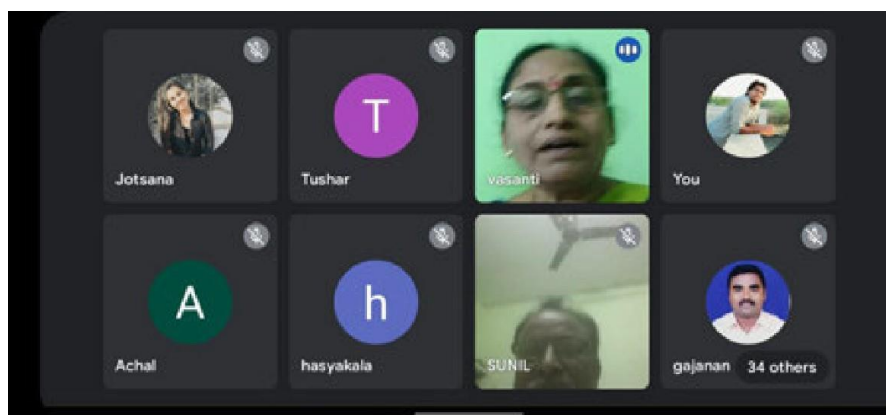
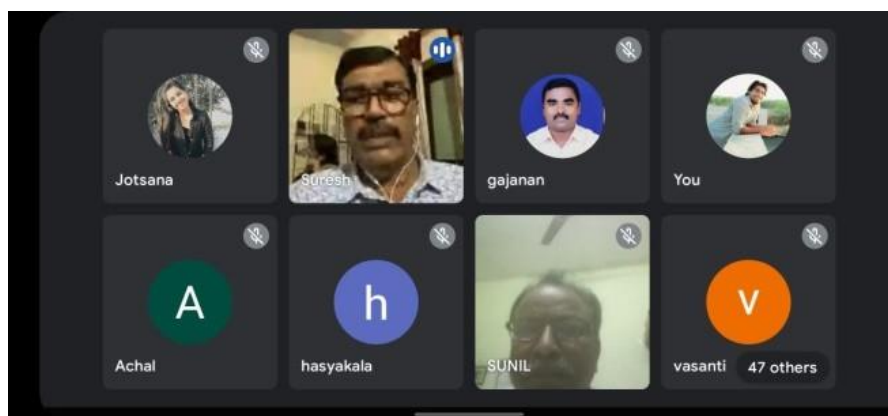
Special Lectures

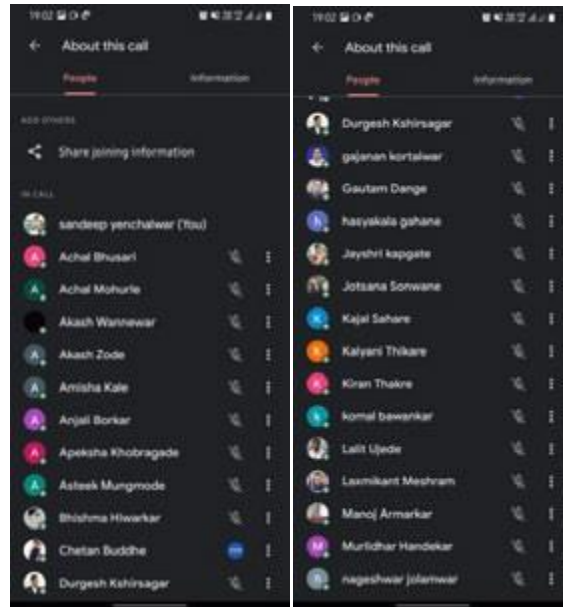


9) Parent Alumni Meet:

The Parents-Teachers meet was organized by the Parents-Teachers committee on online mode (Google Meet) on 30th July 2021. Dr. Sunil D. Chachere has initiated the meet by welcoming the parents. Dr. (Mrs) Revatkar has discussed the importance of the parent meet for the institution and the students. Dr. S. S. Bakare, Principal has chaired the meet and delivered the parents, various aspects of the institution and the importance of the parent's feedback in regard of the institutional improvisation for the benefit of the students. He also mentioned how parents are important to enhance the institutional agenda and the institutional academic welfare of the students. Institutional faculties were also present in the online parent meet.

Link: <http://meet.google.com/ady-gnri-qdk>





10) Exam Result, Gondwana University, Gadchiroli,

Department of Chemistry, Summer Result (2020-21)

I) Graduation Result:

Class	Student's Appeared	Student's Qualified	Percentage
BSc-I	92	91	98.91
BSc-II	101	100	99.00
BSc-III	92	92	100

II) Post-Graduation Result:

Class	Student's Appeared	Student's Qualified	Percentage
MSc-I	22	22	100
MSc-II	20	20	100

*** Department of Chemistry, Winter Result (2020-21)***

I) Graduation Result:

Class	Student's Appeared	Student's Qualified	Percentage
BSc-I	96	92	95.83
BSc-II	102	101	99.01
BSc-III	94	92	97.87

II) Post-Graduation Result:

Class	Student's Appeared	Student's Qualified	Percentage
MSc-I	22	22	100
MSc-II	20	20	100

11) M.Sc.-II Student Farewell Programme:

Farewell programme for the MSc- II year students was carried out on the 09th September 2021 from the MSc-I students as well as from the all the staff members of the Department of Chemistry. Mr. Durgesh Kshirasagar, Assistant Professor, Department of English; Mrs. Nihite, Assistant Professor, Department of Sociology and Mr. B. Balbudhhe, Assistant Professor, Department of Physics was present as guest faculties during the farewell. They delivered the talk and discussed on the various aspects of the next step in the career after post graduation.



12) Dr. S R Ranganathan Jayanti

On 12th September 2021, Dr. S R Ranganathan Jayanti has been conducted in the Department of Library. Dr. S D Chachere of the Department of Chemistry was the Chairperson and Prof. V Wakode was the Chief guest on this special occasion. Prof. V D Wakode highlighted that the books are the lighthouse in the ocean of life. He said in the war of thoughts, books are the weapon. Gems glitters from the outside but books light up the mind and heart.



As a chairperson Dr S D Chachere has elaborated thoughts of the Dr S R Ranganathan. He specially mentioned that library is not only a collection of books but the librarian, reader and the books are the triad pillars of the library.

13) Publications

Author	Title	Journal	Page	Impact Factor	Month/Year	ISSN/ISBN
Dr. S. D. Chachere	Climate changes: Environmental and Health, Regarding significant key concerns,	Journal of Research and Development	108-110	7.625	August 2021	2230-9578

14) Conference/Workshops

A] Dr. S. D. Chachere:

- 1) 2020- International Webinar on “Sustainable Development: Past, Present and Future” organized by Chintamani College of Arts and Science Gondpipri Dist. Chandrapur.
- 2) 2021- International e-conference on “Interdisciplinary Innovations in Socio-Economic Environment, Biodiversity Conservation Through Sustainable Development (ICIISEEBCSD-2021)” organized by Dr. Ambedkar College of Arts, Science and Commerce, Chandrapur.

15) Curricular Activities

- i) Unit tests
- ii) Student Seminars/Presentations
- iii) Remedial Classes
- iv) Mock Tests
- v) Terminal Examinations
- vi) Practical Examinations