



अंतरिक्ष विभाग / DEPARTMENT OF SPACE  
भारत सरकार / GOVERNMENT OF INDIA  
भारतीय अंतरिक्ष अनुसंधान संगठन / INDIAN SPACE RESEARCH ORGANISATION  
भारतीय सुदूर संवेदन संस्थान, देहरादून / INDIAN INSTITUTE OF REMOTE SENSING, DEHRADUN



नामांकन सं. / Enrolment No. : 20221061643739



## CERTIFICATE OF PARTICIPATION IN ONLINE COURSE

यह प्रमाणपत्र

Mr. Akash Patley

को “सुदूर संवेदन एवं जीआईएस प्रौद्योगिकी के अनुप्रयोग”  
मे ऑनलाइन पाठ्यक्रम में भाग लेने पर प्रदान किया जाता है।

इस ऑनलाइन पाठ्यक्रम का आयोजन 14 सितंबर, 2022 से 28 सितंबर, 2022 (कुल पाठ्यक्रम की अवधि = 24  
घंटे) के दौरान किया गया।

(संबन्धित आई.आई.आर.एस नोडल केंद्र- सी. एम. डी. पी.जी कालेज बिलासपुर (छ.ग.)/अटल बिहारी वाजपेयी विश्वविद्यालय  
बिलासपुर (छ.ग.))

Date: 13-10-2022

Place: Dehradun

समन्वयक, विश्वविद्यालय/संस्थान

Coordinator, University/ Institution

निदेशक/ Director

आई.आई.आर.एस, देहरादून/ IIRS, Dehradun

UID- 34757c4e6e015204321244dc4ce5045 : This Certificate can be validated using URL: <https://certificate.iirs.gov.in>



The **Department of Physics** in collaboration with **IMPULSE TECHNOLOGY** conducted hands on training for Post Graduate students on Nanomaterial And Nanodevice Using Nanodcal And Rescu S/W . The software tools **NanoDCAL And RESCU** :- ab initio first principles DFT with NEGF large scale DFPT solver package predicts nonequilibrium quantum transport properties for simulation of Nanoelectronics, Semiconductor device, electrical and electronic properties of advanced materials, calculate electronic structure, Phonon properties, RAMAN properties and Optical Properties.

Some of the students have completed their M.Sc Sem-IV projects on device simulation and characterization using the above mentioned software.

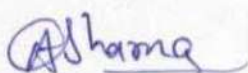


# CERTIFICATE OF PARTICIPATION

THIS CERTIFICATE IS PRESENTED TO

Khemprabha - C.M.D. Post Graduate College, Bilaspur, Chhattisgarh

HAS ATTENDED TWO DAYS HANDS ON ONLINE TRAINING WORKSHOP ON  
(4th-5th May-2023) ON NANOMATERIAL & NANODEVICE MODELING SIMULATION USING RESCU & NANODCAL  
SOFTWARE FROM NANOACADEMIC TECHNOLOGIES.



ANIL KUMAR SHARMA





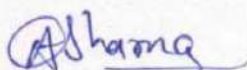
RAVIKANT SHARMA

# CERTIFICATE OF PARTICIPATION

THIS CERTIFICATE IS PRESENTED TO

Sadanani Gupta - C.M.DUBEY POST GRADUATE COLLEGE, BILASPUR (C.G.)

HAS ATTENDED TWO DAYS HANDS ON ONLINE TRAINING WORKSHOP ON  
(4th-5th May-2023) ON NANOMATERIAL & NANODEVICE MODELING SIMULATION USING RESCU & NANODCAL  
SOFTWARE FROM NANOACADEMIC TECHNOLOGIES.



ANIL KUMAR SHARMA





RAVIKANT SHARMA



# CERTIFICATE of PARTICIPATION

THIS CERTIFICATE IS PRESENTED TO

Yamini Kashyap

-

CMD college, Bilaspur(C.G.)

HAS ATTENDED TWO DAYS HANDS ON ONLINE TRAINING WORKSHOP ON  
(4th-5th May-2023) ON NANOMATERIAL & NANODEVICE MODELING SIMULATION USING RESCU & NANODCAL  
SOFTWARE FROM NANOACADEMIC TECHNOLOGIES.

*Sharma*

ANIL KUMAR SHARMA



*Ravi*

RAVIKANT SHARMA

# CERTIFICATE of PARTICIPATION

THIS CERTIFICATE IS PRESENTED TO

vikas gavel

-

cmd pg college bilaspur (c.g.)

HAS ATTENDED TWO DAYS HANDS ON ONLINE TRAINING WORKSHOP ON  
(4th-5th May-2023) ON NANOMATERIAL & NANODEVICE MODELING SIMULATION USING RESCU & NANODCAL  
SOFTWARE FROM NANOACADEMIC TECHNOLOGIES.

*Sharma*

ANIL KUMAR SHARMA



*Ravi*

RAVIKANT SHARMA

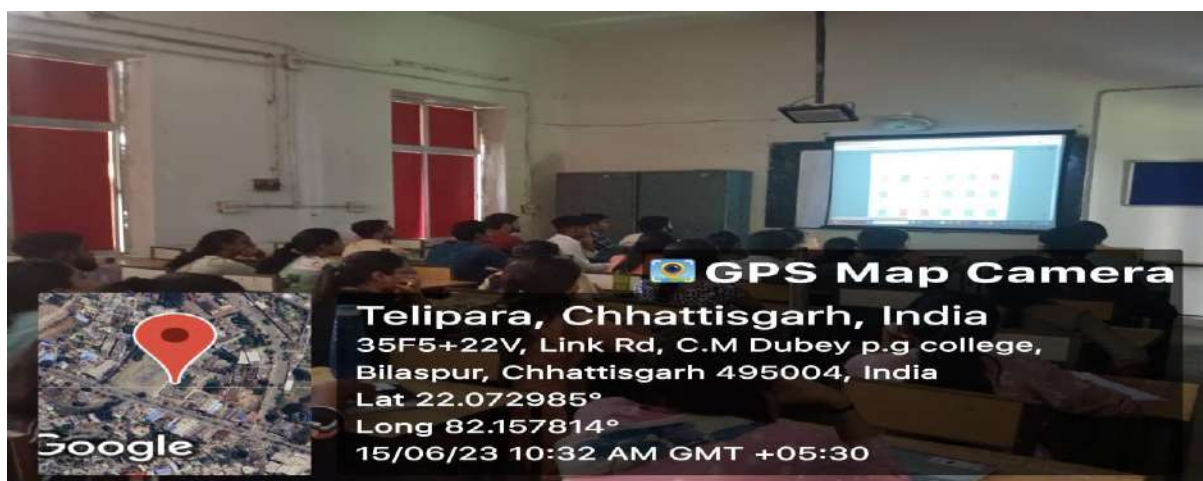


Moodle cloud based LMS was used for teaching students of M.Sc. Physics –II & IV Semester.

Students were made familiar on how to manage an online course through Moodle

Cloud LMS. Familiarization included :

- ☐ To create online courses on the online Moodle platform.
- ☐ Add assignments and keep an eye on participant's progress.
- ☐ To communicate with the participants and encourage communication between them in forums and discussions.
- ☐ To create and administer their courses and lessons.
- ☐ To manage the roster of students enrolled in a course, and how to create modules and different kinds of activities.



# ENGAGE OF STUDENT IN MOODLE

## ❖ Moodle account of Devashish Patel

The screenshot shows the Moodle course settings page for a course titled "BIDIRECTIONAL VISITORS COUNTER WITH AUTOMATIC LIGHTING SYSTEM". The page is divided into two main sections: "Updating: File" and "Your site".

**Updating: File**

- Name:** BIDIRECTIONAL VISITORS COUNTER WITH AUTOMATIC LIGHTING
- Description:** This project has two parts. One is "Individual couns" and other is "Automatic room light Controller". We use IR sensors to detect number of people entering the room. (131 words)
- Select Files:** A file named "macproject.d..." is selected.
- Appearance:** Send content change notification (checked).
- Common module settings:**
- Restrict access:**
- Tags:**
- Competencies:**

**Your site**

- Home:** Settings, Participants, Reports, Question bank, More
- FILE:** BIDIRECTIONAL VISITORS COUNTER WITH AUTOMATIC LIGHTING SYSTEM (Word 2007 document)
- Add an activity or resource** button
- Add a new course** button

## ❖ Moodle account of Maruf Ali

The screenshot shows the Moodle user dashboard for Maruf Ali. The page is titled "Welcome back, MARUF!" and features a "Available courses" section with an "Add a new course" button.

**Home:** Dashboard, My courses, Site administration

**Welcome back, MARUF!**

**Available courses**

**Add a new course**

The screenshot shows the Moodle course page for a course titled "ARDUINO FUNCTION GENERATOR". The page displays a text resource with the following content:

[1] Waveform generation is a fundamental aspect of electronics, used in a wide range of applications such as signal testing, circuit prototyping, audio synthesis, and scientific research. An Arduino waveform generator is a versatile and cost-effective solution that leverages the capabilities of the Arduino microcontroller platform to generate various types of waveforms accurately and efficiently. The most commonly used waveform in an inverter are sine waves and square waves, each with unique characteristics and advantages. Sometimes in electronic circuits we need to produce many different types of frequencies and shapes of signal waveforms such as Square Waves, Rectangular Waves, Triangular Waves, Sawtooth Waveforms and a variety of pulses and spikes. Electronic systems use an extremely wide variety of signal waveform types and shapes from sinusoidal to those created by waveform generators.

Click maruf ali report.pdf link to view the file.

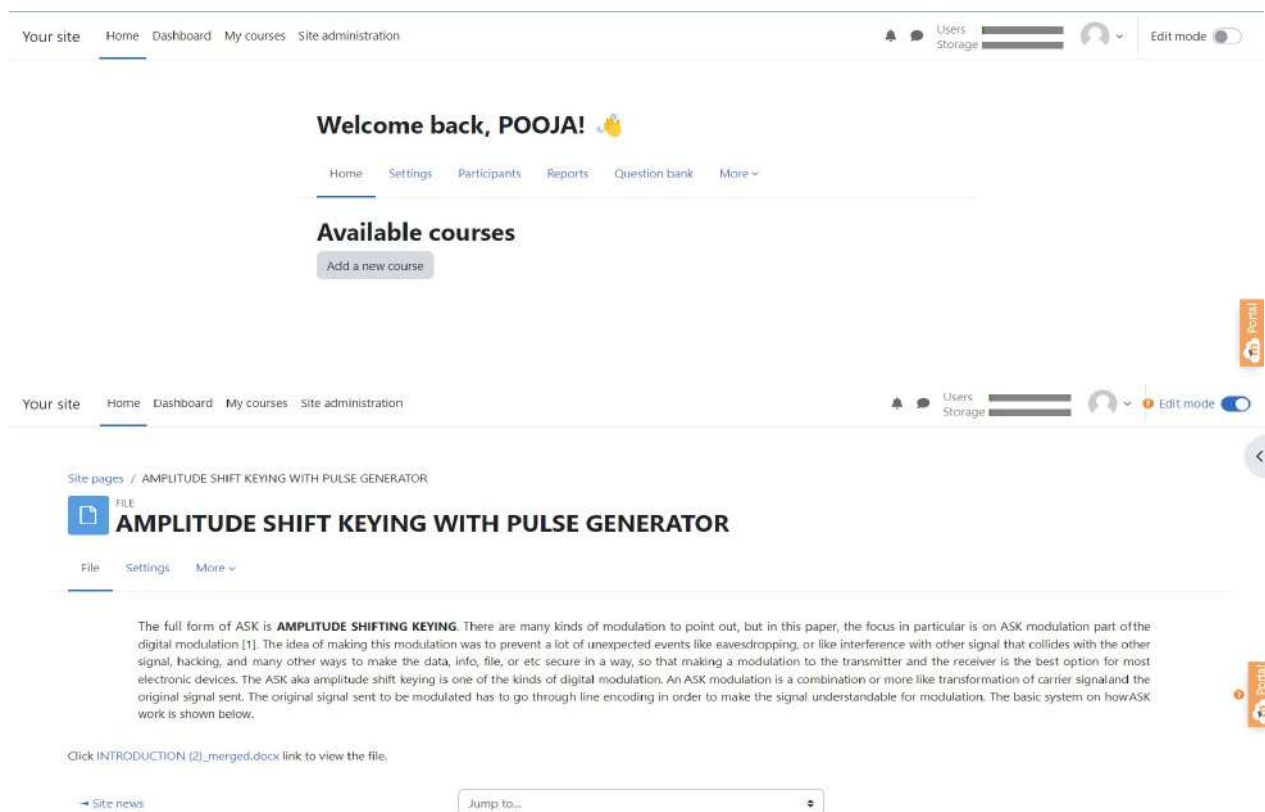
**Site pages:** ARDUINO FUNCTION GENERATOR

**File:** Settings, More

**Jump to...**



## ❖ Moodle account of Pooja Patel



The screenshot shows the Moodle user interface for Pooja Patel. The top navigation bar includes 'Your site', 'Home', 'Dashboard', 'My courses', and 'Site administration'. The user's name 'Pooja Patel' is visible in the top right corner. The main content area displays a welcome message 'Welcome back, POOJA!' followed by a navigation menu with 'Home', 'Settings', 'Participants', 'Reports', 'Question bank', and 'More'. Below this, the 'Available courses' section features an 'Add a new course' button. The page also shows a sidebar with 'Site pages' and a list of files, including 'AMPLITUDE SHIFT KEYING WITH PULSE GENERATOR'. A 'Jump to...' search bar is located at the bottom of the page.

❖ Moodle account of Pooja Patel

Site pages / AMPLITUDE SHIFT KEYING WITH PULSE GENERATOR

FILE

### AMPLITUDE SHIFT KEYING WITH PULSE GENERATOR

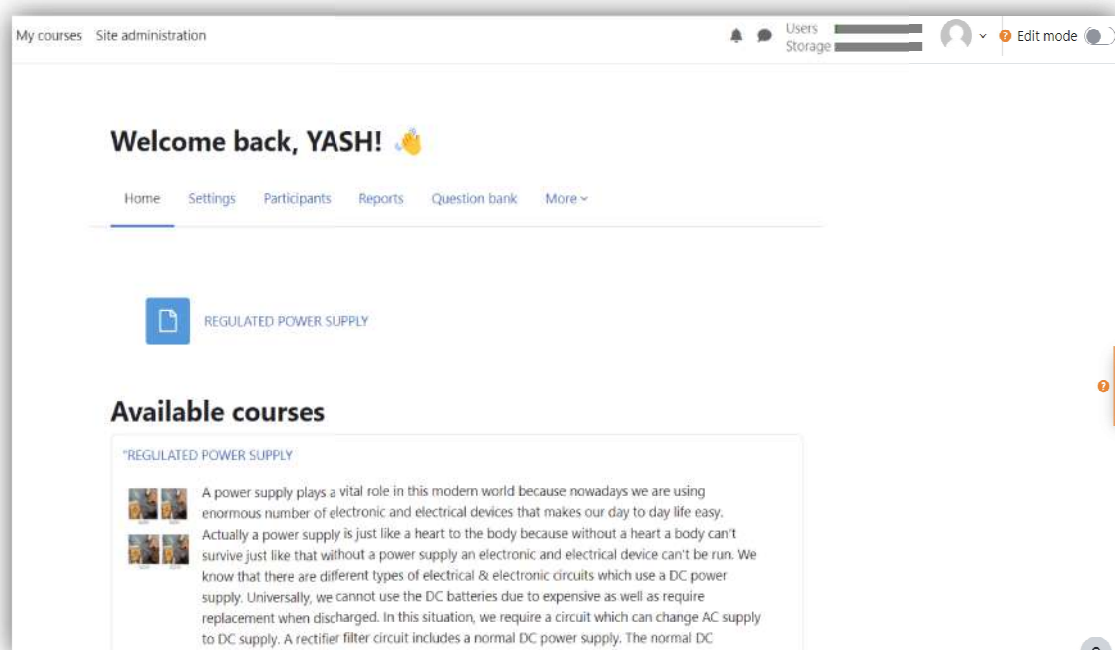
File Settings More v

The full form of ASK is **AMPLITUDE SHIFTING KEYING**. There are many kinds of modulation to point out, but in this paper, the focus in particular is on ASK modulation part of the digital modulation [1]. The idea of making this modulation was to prevent a lot of unexpected events like eavesdropping, or like interference with other signal that collides with the other signal, hacking, and many other ways to make the data, info, file, or etc secure in a way, so that making a modulation to the transmitter and the receiver is the best option for most electronic devices. The ASK aka amplitude shift keying is one of the kinds of digital modulation. An ASK modulation is a combination or more like transformation of carrier signal and the original signal sent. The original signal sent to be modulated has to go through line encoding in order to make the signal understandable for modulation. The basic system on how ASK work is shown below.

Click INTRODUCTION (2)\_merged.docx link to view the file.

Site news Jump to...

## ❖ Moodle account of Yash



The screenshot shows the Moodle user interface for Yash. The top navigation bar includes 'My courses' and 'Site administration'. The user's name 'Yash' is visible in the top right corner. The main content area displays a welcome message 'Welcome back, YASH!' followed by a navigation menu with 'Home', 'Settings', 'Participants', 'Reports', 'Question bank', and 'More'. Below this, the 'Available courses' section features a course titled 'REGULATED POWER SUPPLY'. The course description states: 'A power supply plays a vital role in this modern world because nowadays we are using enormous number of electronic and electrical devices that makes our day to day life easy. Actually a power supply is just like a heart to the body because without a heart a body can't survive just like that without a power supply an electronic and electrical device can't be run. We know that there are different types of electrical & electronic circuits which use a DC power supply. Universally, we cannot use the DC batteries due to expensive as well as require replacement when discharged. In this situation, we require a circuit which can change AC supply to DC supply. A rectifier filter circuit includes a normal DC power supply. The normal DC'.

❖ Moodle account of Yash

My courses Site administration

Welcome back, YASH!

Home Settings Participants Reports Question bank More v

REGULATED POWER SUPPLY

### Available courses

"REGULATED POWER SUPPLY"

A power supply plays a vital role in this modern world because nowadays we are using enormous number of electronic and electrical devices that makes our day to day life easy. Actually a power supply is just like a heart to the body because without a heart a body can't survive just like that without a power supply an electronic and electrical device can't be run. We know that there are different types of electrical & electronic circuits which use a DC power supply. Universally, we cannot use the DC batteries due to expensive as well as require replacement when discharged. In this situation, we require a circuit which can change AC supply to DC supply. A rectifier filter circuit includes a normal DC power supply. The normal DC

## ❖ Moodle account of Gagandeep Shing Arora

The screenshot shows the Moodle course page for 'REGULATED POWER SUPPLY'. The page is in 'Edit mode' and displays the 'General' tab. The 'Name' field contains 'REGULATED POWER SUPPLY'. The 'Description' field contains the text: 'normal DC power supply remains stable if the load is contrast. Although in several information, information is in...'. The 'Select files' section shows a list of files, including 'yashkumaryadav.pdf' (1.7 MB, PDF document). The page also shows the 'Appearance' tab and the 'Your site' navigation bar.

Yashkumar yadav

Home Dashboard My courses Site administration

Users Storage Edit mode

**General**

Name: REGULATED POWER SUPPLY

Description: normal DC power supply remains stable if the load is contrast. Although in several information, information is in... 154 words

Select files: Maximum size for new files: Unlimited, overall limit: 255.9 MB

Name	Last modified	Size	Type
yashkumaryadav.pdf	30/06/23, 16:38	1.7 MB	PDF document

**Appearance**

Your site Home Dashboard My courses Site administration Users Storage Edit mode

Site pages / Pulse width modulation

### FILE Pulse width modulation

File Settings More

Pulse-width modulation (PWM), or pulse-duration modulation (PDM), is a method of reducing the average power delivered by an electrical signal, by effectively chopping it up into discrete parts. The average value of voltage (and current) fed to the load is controlled by turning the switch between supply and load on and off at a fast rate. The longer the switch is on compared to the off periods, the higher the total power supplied to the load. Along with maximum power point tracking (MPPT), it is one of the primary methods of reducing the output of solar panels to that which can be utilized by a battery. PWM is particularly suited for running inertial loads such as motors, which are not as easily affected by this discrete switching, because their inertia causes them to react slowly. The PWM switching frequency has to be high enough not to affect the load, which is to say that the resultant waveform perceived by the load must be as smooth as possible.

Click [gagan final file.pdf](#) link to view the file.

Site news

Jump to...

The screenshot shows the Moodle course page for 'ARDUINO FUNCTION GENERATOR'. The page is in 'Edit mode' and displays the 'General' tab. The 'Name' field contains 'ARDUINO FUNCTION GENERATOR'. The 'Description' field contains the text: 'electronic systems use an extremely wide variety of signal waveform types and shapes from sinusoidal to those created by waveform generators. p...'. The 'Select files' section shows a list of files, including 'manuf all report.pdf'. The page also shows the 'Appearance' tab and the 'Your site' navigation bar.

manu

Home Dashboard My courses Site administration Users Storage Edit mode

**General**

Name: ARDUINO FUNCTION GENERATOR

Description: electronic systems use an extremely wide variety of signal waveform types and shapes from sinusoidal to those created by waveform generators. p... 131 words

Select files: Maximum size for new files: Unlimited, overall limit: 255.9 MB

Name	Last modified	Size	Type
manuf all report.pdf			

**Appearance**

Your site Home Dashboard My courses Site administration Users Storage Edit mode



❖ Moodle account of Maruf Ali

The image displays two screenshots of the MoodleCloud interface. The top screenshot shows the account setup page for Ayush Kumar Sarkar, with a large green checkmark and a congratulatory message. The bottom screenshot shows the 'Your site' management page, which includes tabs for Home, Settings, and Participants, and a list of activities and resources.

**moodleCloud™**

Reset page to default

**Ayush Kumar Sarkar** Message

User details [Edit profile](#)

**Email address**  
ayushmaza+official@gmail.com (Visible to everyone)

**Country**  
India

**Timezone**  
Asia/Kolkata

**Congratulations your site has been successfully created!**

Check out the [MoodleCloud Quickstart Guide!](#)  
It has videos and articles to help get you started. We've also sent this to your email.

[Take me to my Moodle site](#)

**Your site**

Home Settings Participants

[More](#)

[Add an activity or resource](#)

[Add a new course](#)

[Services and support](#) [Contact site support](#)

You are logged in as Ayush Kumar Sarkar (Log out)

**FILE**  
Comparative study of 2D and 3D Germanium Carbide Material GeC through NanoDCAL Simulation software.

**QUIZ**  
About simulation software

[Add an activity or resource](#)

## YOUTUBE LINKS:

### ➤ **Dirac Delta Function**

[https://youtube.com/playlist?list=PLKL4YgbBUss7XDO5M5yErReYWEf\\_DzDyU](https://youtube.com/playlist?list=PLKL4YgbBUss7XDO5M5yErReYWEf_DzDyU)

### ➤ **Beta and Gamma Function**

<https://youtube.com/playlist?list=PLKL4YgbBUss5Tuabu5oQb7C8q2hY4fJ-D>

### ➤ **Statistical Mechanics**

[https://youtube.com/playlist?list=PLKL4YgbBUss6twNRdRgz41wC4Cl4S\\_43K](https://youtube.com/playlist?list=PLKL4YgbBUss6twNRdRgz41wC4Cl4S_43K)

### ➤ **Electrodynamics**

<https://youtube.com/playlist?list=PLKL4YgbBUss5Pe1udud2k-liL3H2E3eQm>

[https://youtube.com/playlist?list=PLKL4YgbBUss5TRE\\_DlnDz1Dp0DTEz6HYq](https://youtube.com/playlist?list=PLKL4YgbBUss5TRE_DlnDz1Dp0DTEz6HYq)

### ➤ **Numerical Methods**

[https://youtube.com/playlist?list=PLKL4YgbBUss6qO9AxTpBs\\_tMFeXR2hkhI](https://youtube.com/playlist?list=PLKL4YgbBUss6qO9AxTpBs_tMFeXR2hkhI)

### ➤ **Quantum Mechanics**

<https://youtube.com/playlist?list=PLKL4YgbBUss7FLYDlszJGKezLSNCXVQzJ>



# Information and Library Network Centre

(An Autonomous Inter-University Centre of UGC)

## सूचना एवं पुस्तकालय नेटवर्क केन्द्र

(विश्वविद्यालय अनुदान आयोग का स्वायत्त अंतर विश्वविद्यालय केन्द्र)

### National Library and Information Services Infrastructure of Scholarly Content (N-LIST)

#### Invoice

Ref No.: INF/N-LIST/2023/1479

Date: 2023-04-05

Invoice No.: NLIST/23-24/105

College GST No.: Not Available

College GST State Code: CT [22]

#### Name and Address of Subscriber

To

The Principal

C.M.D.POST GRADUATE COLLEGE

C.M.D.POST GRADUATE COLLEGE LINK ROAD

BILASPUR

Chhattisgarh - 495001

SR. No.	Membership Fee	Period of Membership	Amount in Rs
1	N-LIST Annual Membership Fee	April 2023 to March 2024	5,000.00
		CGST@0.00%	0.00
		SGST@0.00%	0.00
		IGST@18.00%	900.00
		<b>Total</b>	<b>5,900.00</b>

Rupees Five Thousand Nine Hundred Only

GSTIN: 24AAATI1480J1ZS

Servicing Accounting Code: 998431

Sincerely Yours

Ashok Kumar Rai  
Scientist-E(CS)

----- Cut Here -----

#### N-LIST MEMBERSHIP FEE RECEIPT

Receipt Date: 2023-04-05

Receipt No: 5517

Received with thanks from C.M.D.POST GRADUATE COLLEGE, BILASPUR, Chhattisgarh

A sum of Rupees Five Thousand Nine Hundred Only by Cheque No/DD No/RTGS No. IDIBH23095423544

Dated 2023-04-05 drawn on VAN Transaction Payable at Gandhinagar Gujarat towards N-LIST Annual Membership Fee in the financial year 2023-24.

## Rs. 5900

Sincerely Yours

For Administrative Officer(Finance)

This receipt is valid on realization of Cheque and DD.

Subject to Gandhinagar(Gujarat) jurisdiction only

Online Printed Date : 2023-07-07 05:37:07

INFLIBNET Ref No : INF/N-LIST/2023/1479

GSTIN. 24AAATI1480J1ZS

Servicing Accounting Code: 998431

Infocity, P.B. No. 4, Gandhinagar - 382007, Gujarat, INDIA

इन्फोसिटी, पो.बो. नं. ४, गांधीनगर - ३८२००७, गुजरात (भारत)

Ph.: +91-79-23268000, Fax : +91-79-23268222, <http://www.inflibnet.ac.in>