

<u>A</u>

<u>Report</u>

<u>On</u> <u>Two Days State Level Conference on</u> <u>RESEARCH & SCIENTIFIC WRITING</u> 25<sup>th</sup> & 26<sup>th</sup> February 2022



Approval: Given by the Principal Dr. M. G. Bhatt

Date: 25th & 26th February 2022, Time: 09:00 am to 04:45 pm

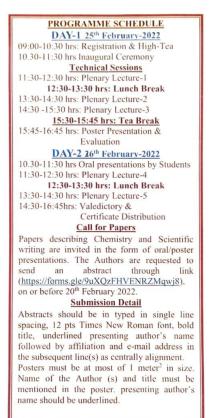
Organized by: Department of Chemistry, Government Science College, Gandhinagar

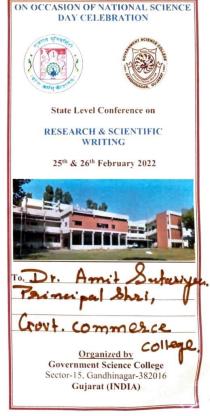
No. of Attendees: 200

Fees: As mentioned in brochure

### **Brochure of the Conference**

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RESEARCH & SCIENTIFIC WRITING 25 <sup>th</sup> & 26 <sup>th</sup> February 2022					
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#### ABOUT CONFERENCE

Scientific writing is not just writing about science; it is the technical writing that scientists do to communicate their research to others. Scientific writing is predicated on the rigors of scientific inquiry, so it must reflect the same precision as that demanded in the research process. Scientific communication demands precision (the precise use of words and phrases), clarity, and economy. This distinction is an important one because the writer is communicating highly technical information to others who might, or might not, be as knowledgeable: they may be from a different discipline, they may, or may not, be a native speaker of the language used. Many journals have international audiences. so precise communication helps prevent misunderstandings and mistranslations in other contexts. Communicating facts, figures, and methods used in research as well as the description of the results has to be precise and exact. The research question, hypotheses, methods, analysis, and conclusions must be stated clearly and simply

#### OBJECTIVE

- A platform to academicians, researchers and students to make a common pathway. 2 The different streams of sciences like bioscience, chemical science, physical science, material science, medical medical sciences, engineering science, etc can join their hands to for the betterment of literature writings. 2
- Further, this will facilitate the spreading of knowledge about points to be kept at priority while scientific writing.
- The exchange of ideas and recent findings related to latest advances among different streams of sciences and it applications. Also the researchers can find next step to
- foot over for best drafting of their research in different field of sciences

#### ABOUT COLLEGE

It is one of the premier institute located in lush green garden city of Gandhinagar spread over an area of 49.19 acres, was established in 1970 by the state Government. The only Government institute located in the capital of Government institute located in the capital of Gujarat offering undergraduate degree courses in various discipline of science and Post Graduate in field of Organic Chemistry since 2016. To its credit, this college was awarded as excellence in Saptadhara, Academic & administrative audit by Commissioner of Higher education, Government of Gujarat and Knowledge Consortium of Gujarat during 2014. Campus wifi which helps the students to keep updated with knowledge and current trends. with knowledge and current trends

Along with studies, the college provides an active platform for wide array of co-curricular activities to develop various abilities in students.

#### STATE LEVEL ADVISORY COMMITTEE

- Dr. Mahendra G. Bhatt (President) Principal, Government Science College. Gandhinagar
- Dr. Dashrath P. Patel (Member Secretary) Head, Department of Chemistry, Government Science College, Gandhinagar

Dr. Narottam Sa Advisor (GUJCOST) Gandhinagar, Gujarat (INDLA).

- Dr. Hitesh D. Patel Professor, Department of Chemistry, School of Science, Gujarat University, Ahmedabad
- Dr. Prakash Jha Professor & Dean. Department of Apphed Chemistry. Central University of Gujarat, Gandhinagar
- Dr. Sangita Sharma Professor, Department of Chemistry, Hemchandracharya North Gujarat University. Patan

#### ORGANIZING COMMITTEE

Dr. S. P. Prajapati (Organizing Coordinator)

- Dr. K. B. Patel
- Dr. K. S. Nimavat Dr. U. P. Tarpada
- Dr. D. S. Gandhi
- Prof. V. N. Dave Dr. J. S. Rajora

### Schedule of the Conference

#### **GOVERNMENT SCIENCE COLLEGE, GANDHINAGAR** CHEMISTRY DEPARTMENT **ON OCCASION OF NATIONAL SCIENCE DAY CELEBRATION**

#### STATE LEVEL CONFERENCE ON

#### **RESEARCH AND SCIENTIFIC WRITING**

TIME	25/02/2022	26/02/2022	
09:00 AM TO 10:30 AM	<b>REGISTRATION &amp; TEA</b>		
10:30 AM TO 11:30 AM	INAUGURATION FUNCTION Hon. NARAYAN MADHU. (Add. Comm. CHE, Gandhinagar)	ORAL PRESENTATION BY STUDENT	
11:30 AM TO 12:30 PM	SPEAKER TALK Dr. H. D. PATEL (PROFESSOR) SOS, CHEMISTRY, GUJ. UNI.	SPEAKER TALK Dr. SANGITA SHARMA (PROFESSOR) CHEMISTRY, HNGU, PATAN	
12:30 PM TO 01:30 PM	LUNCH BREAK		
01:30 PM TO 02:30 PM	SPEAKER TALK Dr. DILIP VASAVA (ASSISTANT PROFESSOR) SOS, CHEMISTRY, GUJ. UNI.	SPEAKER TALK Dr. NAROTTAM SAHOO ADVISOR (GUJCOST)	
02:30 PM TO 03:30 PM	SPEAKER TALK Dr. PRAKASH JHA (PROFESSOR & DEAN) CENTRAL UNIVERSITY OF GUJARAT		
3:30 AM TO 3:45 AM	TEA BREAK	VALEDICTORY FUNCTION	
03:45 PM TO 04:45 PM	POSTER PRESENTATION FOR STUDENTS Dr. M. C. SHAH (JURY MEMBER) (ASSO. PROFESSOR, CHEM. DEPT., GUJARAT VIDHYAPITH, SADRA)		

Men

Principal Government Science College Sector-15, Gandhinagar.

### Introduction

Department of chemistry organized two days' state level conference on 'RESEARCH & SCIENTIFIC WRITING' to facilitate the spreading of knowledge about important points to be kept at priority while writing the scientific document. The conference also invited applications from the research scholar and faculties for best drafting of their research work in a variety of science field.

### ✤ Objective

- ✓ A common platform to facilitate the academicians, researchers and research scholars to publish their research work.
- $\checkmark$  Various science streams such as bioscience, chemical science, physical science, material science, medical science, engineering science, etc. can joined the conference.
- ✓ The exchange of ideas and recent findings related to latest advances among different streams of sciences and its applications.

### The Conference

### 25<sup>th</sup> February 2022

Dr. D. P. Patel, Member Secretary, welcomed invited speakers, students and faculty members from various colleges and anchored entire conference. Hon. Narayan Madhu (Add. Commissioner of Higher Education, Gandhinagar) inaugurated a conference. Dr. Mahendra **G.** Bhatt, Principal conveyed best wishes for the success of conference and also motivated the participants. The conference began with the invited talk by Dr. H. D. Patel (Professor, Department of Chemistry, Gujarat University). After the lunch break, the conference continued by the invited talks by Dr. Dilip Vasava (Asst. Professor, Department of Chemistry, Gujarat University) and Dr. Prakash Jha (Professor & Head, Central University of Gujarat). After a short tea break, last session of the day was Poster Presentation for students, in which Dr. M. C. Shah (Associate Professor, Gujarat Vidhyapeeth, Saadara) worked as Jury member. Total 45 candidates participated in poster presentation and 6 candidates participated in oral presentation.

Principal

### 26<sup>th</sup> February 2022

On the second day, the first session was started by Oral Presentation by Students. A conference continues again by invited talks by Dr. **Sangeeta Sharma** (Professor, Department of Chemistry, HNGU, Patan) and **Dr. Narottam Sahoo** (Advisor, GUJCOST). The last session of the conference was Valedictory function from 02:30 pm onwards which includes the feedback from all the participants as well as certificate distribution to all the appeared students for first, second and third session in the poster and oral presentation.

The invited talks were delivered by various experts as follows:

- 1. Dr. Hitesh D. Patel delivered an effective talk about how to write review article. He also mentioned why review articles are very popular among research scholars. He also described about the function of review article.
- Dr. Dilip Vasava taught how to write a manuscript for different journals having a different set of guidelines. He also mentioned about Revise, Edit and Rework for the manuscript. He gave idea about Graphical abstract, Table of contents, strong cover letter etc.
- **3.** Dr. Prakash Jha gave effective speech about the difference between Scientific writing and other kind of writing with examples. He mentioned the strategies one can use to write clearly and concisely.
- 4. Dr. Sangeeta Sharma gave basic ideas of research in the field of science. She explained about the characteristics, the purposes (Exploratory, Descriptive, Explanatory) and the types of research (Fundamental research, Applied research, Qualitative research, Quantitative research, Mixed research, Exploratory research) very effectively.
- 5. Dr. Narottam Sahoo introduced all about the activities of GUJCOST AND THE National Science Congress. The interactive sessions were also organized parallel to engage the students and teachers on various subjects like STEM, Innovation and sustainable development.

Principal Government Science College Sector-15, Gandhinagar.









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Principal Government Science College Sector-15, Gandhinagar.



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# Report

"BASIC ROBOTICS TRAINING WORKSHOP AND CERTIFICATE PROGRAM"

UNDER "TEERTH" SCHEME

Submitted to

# Knowledge Consortium of Gujarat

(KCG)

By

# **Government Science College**

Gandhinagar







## **BASIC ROBOTICS TRAINING WORKSHOP AND**

## **CERTIFICATE PROGRAM UNDER "TEERTH" SCHEME**

ORGANIZED BY

# **KNOWLEDGE CONSORTIUM OF GUJARAT**

# **DEPARTMENT OF EDUCATION**

## **GOVERNMENT OF GUJARAT**

# AND

# **GOVERNMENT SCIENCE COLLEGE GANDHINAGAR**

IN COLLABORATION WITH ISTEM COLLECTIVE FOUNDATION

DURING 21-25 MARCH 2022

# AT GOVERNMENT SCIENCE COLLEGE GANDHINAGAR



### Government Science College Gandhinagar

### **Report**

### "Basic Robotics Training Workshop and Certificate Program"

Topic of Workshop: Basic Robotics Training Workshop and Certificate Program

**Dates:** 21<sup>st</sup>- 25<sup>th</sup> March 2022

Time/Duration for Workshop: 30 Hours of Training (Total 5 Days - 6hrs/Day)

**Organizers:** Knowledge Consortium of Gujarat (KCG), Department of Education, Government of Gujarat in Collaboration Government Science College, Gandhinagar.

**Funded by**: Funded by Knowledge Consortium of Gujarat (KCG), Department of Education, Government of Gujarat Under "TEERTH" Scheme.

Amount of Funds: Rs. 42000.

Trainer: ISTEM Collective Foundation

Number of Participants: 53 (BSc Physics Students of Final Semester)

Total Number	Total Number Of Participants: 53 Male:38						
Female:15							
Category Wise Bifurcation Of Beneficiaries							
Open	SC	ST	SEBC	EWS			
12	05	02	30	4			

Principal Government Science College Sector-15, Gandhinagar.

### Introduction:

Robotics is a branch that deals with design, construction, operation and application of Robots. Robots are automated machines that can assist humans in a variety of settings, from manufacturing Processes, to working in critical conditions unsuitable for human life. Robotics is one of the technologies which are changing the world's scenario.

Along with the basic curriculum at graduation courses, it has become the need of the present time to incorporate robotics skill development training/ workshops/ courses in academic curriculum which will prepare students for their professional life. Along with the basic degree certificate students will get an added skill to innovate their ideas.

With the vision of inculcating innovative approach and developing skills among the graduation level students of entire Gujarat, Knowledge Consortium of Gujarat (KCG), Department of Education, Government of Gujarat has taken initiative to train students and teachers of various HEIs of Gujarat in the field of Robotics.

Government Science College, Gandhinagar grabbed the opportunity and proposed 5 days "Basic Robotics Training Workshop and Certificate Course" to KCG and to the credit to institute, financial assistance of Rs. 42000 were sanctioned by KCG to organize this workshop in premises of Government Science College Gandhinagar.

### **Details of Workshop:**

To consider limited number of participants in the workshop, students of final semester of BSc with specialization in physics were registered for the workshop. Total 53 students were benefitted by the workshop, with 38 males and 15 female candidates.

### <u>Day-1</u>

### Inaugural Session:

First day of the workshop begin with Inaugration in the esteemed presence of Dr. Yogesh Yadav, Officer on Special Duty (OSD)-TEERTH Scheme, Honourable Principal of the Institute Dr. M.G. Bhatt, Dr. Ekta Patel, CEO-ISTEM collective foundation and Dr. G.R. Patel HOD, Physics Department on the Dias.

The inaugural session started with prayers and Lamp Lighting, followed by welcome address by Dr. G.R. Patel followed by special address by Honourable principal Dr. M.G. Bhatt. Special Remarks about the training and TEERTH Scheme were given by Dr. Yogesh Yadav. Coordination of entire event was done by Convener of the workshop Dr. Pooja Sharma and Vote of thanks for the session was proposed by Dr. C.K. Chauhan, IQAC coordinator of the institute.

Principal

Principal Government Science College Sector-15, Gandhinagar.



Inaugural session of Basic Robotics Training workshop and certificate program dated 21st March 2022 at Government Science College,Gandhinagar.

Principal Government Science College Sector-15, Gandhinagar.

Workshop sessions were bifurcated in three main parts:

- Designing the structure
- Electronic circuitry
- Programming for interfacing hardware with Software

### **Designing:**

The session initiated with explanation of designing concepts which covered the use of tools like 3D-printing which is latest technology for designing structures and Use of Tinker-CAD App for 3D design, electronics and Coding. Participants were given hands on session of 3D pen to make different structures using which they prepared various models.

### <u>Day-2</u>

At second day of the training, participants were introduced with mechanical kits with hands - on with designing of STEM kits, which enhanced the creativity and skills of participants while designing different structures.



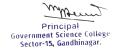
Structure designing using 3D painting and assembling STEM kits

Principal Government Science College Sector-15, Gandhinagar.

Further the session was followed by explaining mechanism of drone designing and programming.



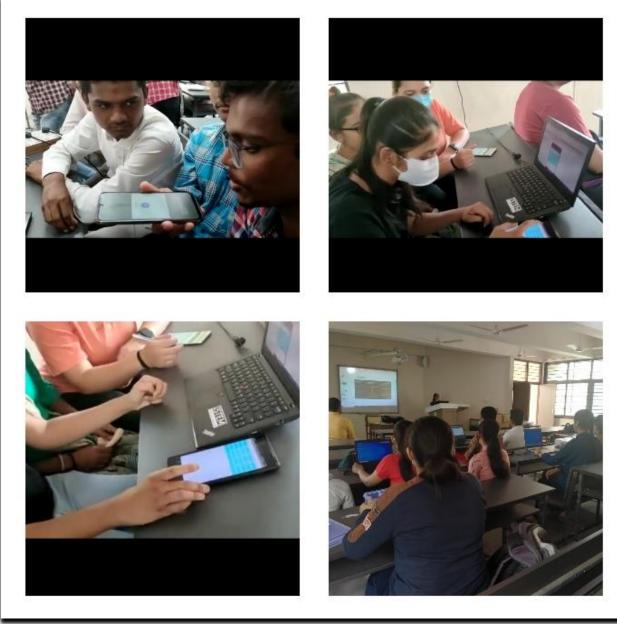
**Drone Flying Session** 



### <u>Day-3</u>

### **Electronics and Programming (Interfacing of hardware and software):**

Third day of workshop was the session with Introduction to computer programming to create application software(apps) for operating systems like android and iOS using MIT app Inventor web Application. Using this, participants created Apps like Voice assistant, calculator and attendance system.

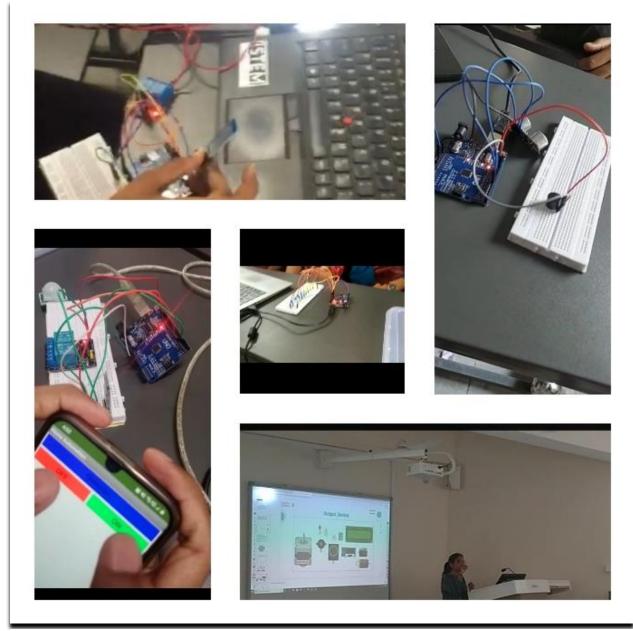


**Creating Apps using MIT App Inventor** 



### Day-4

On fourth Day of workshop Participants were given hands-on with various Electronics components like Sensors, microcontrollers to make automation based projects. Various projects using Temperature sensor, Humidity sensors, Gas sensor, IR sensor and Ultrasonic sensors were made by participants using Arduino interfacing

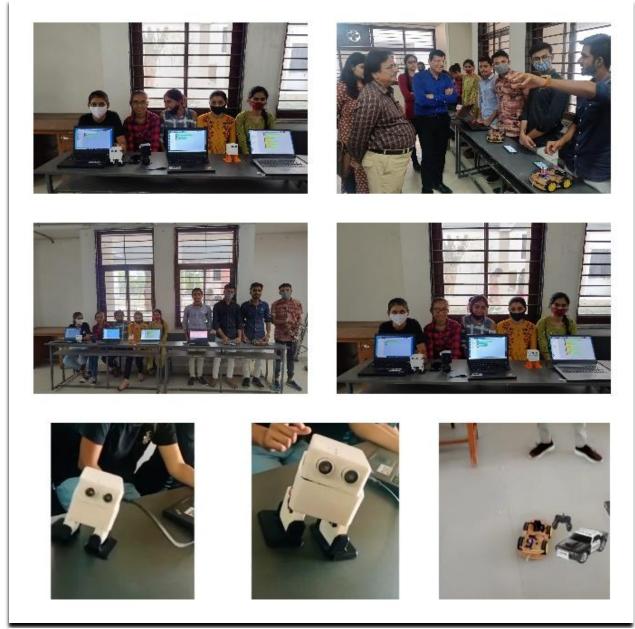


Sensors based projects like Distance sensor, Gas Sensors, Humidity Sensors and Wi-Fi operated electrical appliances, using Arduino

Principal Government Science College Sector-15, Gandhinagar.

### <u>Day-5</u>

On Fifth day of the workshop participants made Otto bot using 3D printed Otto bot body, sensors like ultrasonic sensor for distance sensing as the eye of Otto bot, servo motors for controlled motion of Otto bot and programmed it for various tasks by coding apps. Similarly, Bluetooth operated car was also made the participants which can be controlled by mobile interfaced with car.



Bluetooth controlled car and OTTO Bot

m Principal Government Science College Sector-15, Gandhinagar.

### Valedictory Session:

The session was concluded with distribution of certificates to the successful participants in esteemed presence of Honourable Principal of the Institute Dr. M.G. Bhatt and Respected Chief guests of the Event Dr. Yogesh Yadav and Dr. Ekta Patel.Coordination of the Event was Done by Dr. Kashmira Tank and Vote of thanks was proposed by Dr. Pooja sharma.



Valedictory session and certificate distribution of Basic Robotics Training workshop and certificate program dated 25th March 2022 at Government Science College, Gandhinagar.

Principal Government Science College Sector-15, Gandhinagar.

### Outcome of the workshop:

After successful completion of the workshop participants have shown below given outcomes;

- Develop mechanical structure/prototyping using 3D printing and slicing software. (Basics of structure, Gears and Automobiles).
- Understanding of Electronic Circuits, Sensors and microcontrollers.
- Computational Thinking.
- Programming and hence Interfacing Motors with microcontrollers.
- Drone designing, Mobile Bluetooth operated Cars, Wi-Fi enabled controlled Devices, Developing mobile based apps.

### Future scope:

- Widespread of Robotics training workshop to all HEIs will render the participants well equipped with knowledge and skill in the field of robotics which will help them to execute their ideas to reality rendering innovation in their respective fields.
- such trainings will be helpful in inculcating the concept of Innovation and startup in the participants.

### Acknowledgement:

Government Science College, Gandhinagar is thankful to Knowledge consortium of Gujarat (KCG), Department of Education, Government of Gujarat for providing financial assistance to organize the "Basic Robotics Training Workshop and certificate program" at premises of Government Science college, Gandhinagar.

myseun Principal Government Science College Sector-15, Gandhinagar.

### **Government Science college Gandhinagar**

### **One Day Workshop on Fire and Safety**

21/04/2022 Convener: Jignasha Vaghela Principal: Dr. M. G. Bhatt

*Title: Report on One Day Workshop on Fire and Safety at Government Science College, Gandhinagar* 

Date: 21st April 2022

Venue: Government Science College, Gandhinagar

Convener: Jignasha Vaghela

Principal: Dr. M. G. Bhatt

Number of students participated:20

Introduction: Government Science College, Gandhinagar, organized a One Day Workshop on Fire and Safety on 21st April 2022. The workshop aimed to raise awareness about fire safety measures and protocols among the faculty, staff, and students of the college.

Workshop Objectives:

- 1. To educate participants about fire hazards and preventive measures.
- 2. To train participants in using firefighting equipment effectively.
- 3. To create awareness about emergency evacuation procedures.
- 4. To foster a culture of safety and preparedness within the college community.

Workshop Proceedings: The workshop commenced with an opening address by Principal Dr. M. G. Bhatt, who emphasized the importance of fire safety in educational institutions. Following the introduction, Convener Jignasha Vaghela provided an overview of the workshop agenda and its objectives.

The sessions were conducted by experienced fire safety experts from renowned organizations. Topics covered included:

- 1. Identification of fire hazards in educational institutions.
- 2. Principles of fire safety and prevention.
- 3. Types and uses of firefighting equipment.

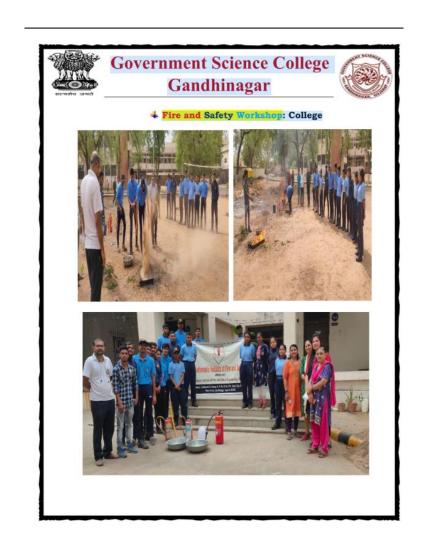


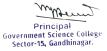
- 4. Emergency evacuation procedures and mock drills.
- 5. Role of individuals in maintaining fire safety.

Interactive sessions, demonstrations, and hands-on training were integrated to enhance participants' understanding and practical skills in fire safety management.

Key Highlights:

- 1. Hands-on Training: Participants had the opportunity to handle firefighting equipment under the guidance of experts, including fire extinguishers, fire blankets, and emergency evacuation kits.
- 2. Mock Drills: Simulated fire emergency scenarios were conducted to assess participants' response capabilities and familiarize them with evacuation procedures.
- 3. Q&A Session: A dedicated question and answer session enabled participants to clarify doubts and seek expert advice on fire safety practices.





Conclusion: The One Day Workshop on Fire and Safety at Government Science College, Gandhinagar, proved to be a valuable learning experience for all participants. By imparting knowledge, practical skills, and fostering a culture of safety, the workshop contributed towards enhancing the college's preparedness to effectively mitigate fire-related risks and ensure the safety of its stakeholders.

Acknowledgments: The organizers extend sincere gratitude to Principal Dr. M. G. Bhatt for his support and encouragement in conducting the workshop. Special thanks to Convener Jignasha Vaghela for her efforts in coordinating the event and ensuring its success. Appreciation is also extended to the faculty, staff, and participants for their active participation and commitment to fire safety awareness.

### GOVERNMENT SCIENCE COLLEGE, GANDHINAGAR

### ONE DAY YOG TRAINING CAMP/SEMINAR BY SPORTS DEPT

### 21/02/2021

### Title: Report on One Day Yoga Training Camp/Seminar at Government Science College Gandhinagar

Date: 12-01-2022

Venue: Government Science College Gandhinagar

Supervision: Ms. Jignasha Vaghela, Sports Instructor

Principal: Dr. M. G. Bhatt

Number of Participants: 100



Introduction: On january 12, 2022, Government Science College Gandhinagar organized a one-day yoga training camp/seminar aimed at promoting physical and mental well-being among students and staff. The event was held under the supervision of Ms. Jignasha Vaghela, the Sports Instructor, and was motivated by the college principal, Dr. M. G. Bhatt.

Objective: The primary objective of the yoga training camp/seminar was to introduce participants to the benefits of yoga and provide them with practical knowledge and techniques to incorporate yoga into their daily lives. Additionally, the event aimed to raise awareness about the importance of holistic wellness and stress management.

<u>Activities</u>: The one-day yoga training camp/seminar featured a variety of activities designed to engage participants and enhance their understanding of yoga. These activities included:

<u>Yoga Asanas</u>: Participants were guided through a series of yoga asanas (poses) aimed at improving flexibility, strength, and balance. Emphasis was placed on proper posture and breathing techniques.

<u>Pranayama</u>: The importance of breath control was demonstrated through pranayama exercises, helping participants learn to regulate their breathing and reduce stress.

<u>Meditation</u>: Mindfulness meditation sessions were conducted to promote relaxation and mental clarity. Participants were guided through various meditation techniques to cultivate inner peace and focus.

<u>Yoga Philosophy</u>: Brief lectures were delivered on the philosophical aspects of yoga, including its roots in ancient Indian tradition and its relevance in modern life. Participants gained insights into the holistic nature of yoga beyond physical exercise.

<u>Outcome</u>: The one-day yoga training camp/seminar received enthusiastic participation from students, faculty, and staff members of Government Science College Gandhinagar. Participants expressed appreciation for the opportunity to learn and practice yoga under the guidance of experienced instructors. Many reported feeling refreshed, relaxed, and energized after engaging in the yoga sessions.

<u>Conclusion</u>: The one-day yoga training camp/seminar organized by Government Science College Gandhinagar proved to be a resounding success in promoting holistic wellness and stress management among participants. The event underscored the college's commitment to fostering a healthy and balanced lifestyle among its academic community. Such initiatives contribute significantly to the overall well-being and productivity of individuals in the college environment.

We express our gratitude to Ms. Jignasha Vaghela for her diligent supervision and to Principal Dr. M. G. Bhatt for his motivation and support in organizing this enriching event.







