



Adichunchanagiri Institute of Technology
Chikkamagaluru-577102
Department Of Civil Engineering
National Service Scheme



SL.NO.	USN	NAME OF THE STUDENT	SIGNATURE
1	4AI22CV001	ABHISHEK B	Abhishek
2	4AI22CV002	ANKITH C T	Ankith
3	4AI22CV003	C S DILIP KUMAR	Dilip
4	4AI22CV004	CHAITHRA M	chaithra M
5	4AI22CV005	CHANDAN H B	chandan.HB
6	4AI22CV006	CHEZHAN K C	chezhan
7	4AI22CV007	H S BHARATKUMAR	H S Bharatkumar
8	4AI22CV008	HARSHITHA B S	Harshitha B.S.
9	4AI22CV009	KUMKUM SHARMA D	Kumkum
10	4AI22CV010	NANDAN G U	Nandan
11	4AI22CV011	PAVAN MABLA GOUDA	Pava
12	4AI22CV013	SANDEEP NARASIMHA GOUDA	Sandeep
13	4AI22CV014	TUSHAR S	Tushar
14	4AI22CV015	VAISHNAVI P	Vaishnavi
15	4AI22CV016	VENKATESH M	Venkatesh M
16	4AI23CV400	ANVITH U	Anvitha
17	4AI23CV401	DEEPAK T S	Deepak
18	4AI23CV402	GIRISHA S D	Girisha S.D.
19	4AI23CV403	KOMALESHA B K	Komalesha B.K
20	4AI23CV404	KUMARSWAMY J	Kumar
21	4AI23CV405	NANDISH ACHARYA	Nandish Acharya
22	4AI23CV406	PRIYANKA S R	Priyanka
23	4AI23CV407	PUNEETH U D	Puneeth
24	4AI23CV408	RAKSHITHA S	Rakshitha S
25	4AI23CV409	SHEETHAL M	Sheethal
26	4AI23CV410	SPOORTHI G M	Spoorthi
27	4AI23CV411	TASHIF AHMAD	Tashif Ahmad
28	4AI23CV412	VINAY R	Vinay R
29	4AI23CV413	VINAYKUMAR J M	Vinay Kumar J.M.

Seema B.B.

Signature of Co-ordinator

Signature of HOD

Dr. KIRAN B. M.

B.E., M.Tech., Ph.D

Professor & Head
Department of Civil Engineering
Adichunchanagiri Institute of Technology
CHIKKAMAGALURU-577102

Signature of HOD

Dr. KIRAN B. M.

B.E., M.Tech., Ph.D
Professor & Head
Department of Civil Engineering
Adichunchanagiri Institute of Technology
CHIKKAMAGALURU-577102



ವಿಶ್ವವಿದ್ಯಾರಣ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ
VISVESVARAYA TECHNOLOGICAL UNIVERSITY - BELAGAVI

ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

REPORT ON

“NATIONAL SERVICE SCHEME” [BNSK459]

Submitted in partial fulfillment of the requirements for the degree of

by

NAME

VINAY KUMAR J M

USN No

4AI23CV413

In partial fulfillment

Of the requirements for the degree of

BACHELOR OF ENGINEERING

IN

CIVIL ENGINEERING

Signature of HOD

Dr. KIRAN B. M.
B.E., M.Tech., Ph.D
Professor & Head
Department of Civil Engineering
Adichunchanagiri Institute of Technology
CHIKKAMAGALURU-577102



ADICHUNCHANAGIRIINSTITUTE OF TECHNOLOGY

Affiliated to

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE

This is to certify that Mr. VINAY KUMAR J M with USN 4AI23CV413, student of Civil engineering branch has successfully completed a NSS activity. During this period of his NSS activity program with college, He had been exposed to different processes and was found diligent, hardworking and inquisitive.

Co-ordinators Signature

Seema P.R.

Dhanalakshmi C.K

HOD Signature

Dr. KIRAN B. M.
B.E., M.Tech., Ph.D.
Professor & Head
Department of Civil Engineering
Adichunchanagiri Institute of Technology
CHIKKAMAGALURU-577102

Signature of HOD

Dr. KIRAN B. M.
B.E., M.Tech., Ph.D.
Professor & Head
Department of Civil Engineering
Adichunchanagiri Institute of Technology
CHIKKAMAGALURU-577102

ABOUT NSS:-

- The concept of engaging students in national service in India can be traced back to Mahatma Gandhi, the nation's founding father. Gandhi consistently emphasized to students the importance of social responsibility. He believed that their primary role was not to indulge in academic pursuits for personal satisfaction but to prepare themselves to serve the nation, contributing to the essential goods and services that support society. Gandhi encouraged students to actively engage with their local communities, advocating for practical actions to uplift the material and moral standards of village life, rather than merely conducting theoretical research.
- Following India's independence, there was a significant push to incorporate social service into student education as a means of reform and to enhance the quality of educated manpower. The University Grants Commission, led by Dr. Radhakrishnan, suggested that national service be introduced on a voluntary basis in educational institutions. This initiative aimed to foster meaningful interactions between students and teachers and to build a constructive connection between campuses and their surrounding communities.
- In January 1950, the Central Advisory Board of Education (CABE) revisited the idea. After reviewing global practices, the Board proposed that students engage in manual labor and social service on a voluntary basis, with teachers also participating. The 1952 First Five- Year Plan further emphasized the necessity of such service, leading to the implementation of various schemes like labor and social service camps, campus projects, and village apprenticeship programs.
- In 1958, Prime Minister Jawaharlal Nehru suggested that social service be made a graduation requirement and directed the Ministry of Education to develop a suitable scheme. The following year, a draft proposal was reviewed by the Education Minister's Conference, which agreed on the urgent need for a practical national service program. It was recognized that the educational system required enhancement through social service programs that would foster interest in national development. The conference recommended forming a committee to develop a pilot project, resulting in the appointment of the National Service Committee chaired by Dr. C.D. Deshmukh.
- The committee proposed making national service compulsory for students completing high school and planning to enter college, including military training, social service, manual labor, and general education. However, the recommendations faced challenge
- In 1960, Prof. K.G. Saiyidain studied international models of student national service and suggested several improvements for India, including opening social service camps to both students and non-students. The Education Commission led by Dr. D.S. Kothari (1964-66) further recommended integrating social service into all levels of education. The National

Cadet Corps (NCC) or a new National Service Scheme (NSS), with exemptions for promising athletes to join the National Sports Organization (NSO).

- The Vice Chancellors' Conference in September 1969 supported this recommendation and proposed a special committee to refine the idea. The Government of India's national education policy emphasized incorporating work experience and national service into education. A student conference in May 1969 endorsed national service as a tool for national integration and rural exposure. Consequently, the Planning Commission allocated Rs. 5 crores for the NSS during the Fourth Five-Year Plan, initiating a pilot project in 37 universities in September 1969.
- The NSS program, launched during Gandhi's centenary year, aimed to engage students in national development through self-organized social service activities. The program provided practical work experience, potentially aiding in self-employment or employment after university. Initially funded with Rs. 120 per student per year, shared between the Central and State Governments, the scheme now covers all states and many universities, extending to the +2 level in several states.
- The NSS has successfully undertaken various community service projects, including village development, medical surveys, immunization drives, and relief work during natural disasters. It has also addressed social issues and promoted national values. Notable initiatives include campaigns against famine, disease, and AIDS, and projects focused on sustainable development and rural reconstruction. These efforts have made significant contributions to both community welfare and student development, demonstrating the NSS's effectiveness in integrating education with national service.



NSS LOGO

NSS Activity 1

Organic Farming, Indian Agriculture (Past, Present and Future) Connectivity for Marketing.

Introduction to organic farming

Organic farming is an agricultural approach that prioritizes the use of natural inputs and techniques to cultivate crops and raise livestock while minimizing the use of synthetic substances such as pesticides, fertilizers, and genetically modified organisms (GMOs). It encompasses a holistic philosophy that emphasizes soil health, biodiversity, and ecological balance.

Types and Techniques

- 1. Soil Health:** Organic farming places significant emphasis on maintaining and enhancing soil fertility and structure through practices such as crop rotation, composting, and the use of organic amendments like manure and cover crops. Healthy soil is seen as the foundation of a productive and sustainable farm ecosystem.
- 2. Crop Diversity and Rotation:** Organic farmers often employ diverse cropping systems and rotation schemes to promote soil health, manage pests and diseases, and reduce reliance on external inputs. Rotating crops helps break pest and disease cycles, improves soil structure, and enhances nutrient availability.
- 3. Natural Pest and Disease Management:** Instead of relying on synthetic pesticides, organic farmers utilize various techniques to manage pests and diseases, including biological control (introducing natural predators or parasites), crop rotation, intercropping (planting different crops together), and the use of physical barriers or traps.
- 4. Weed Management:** Organic farmers control weeds through methods such as mulching, hand weeding, cultivation, and cover cropping. These practices help suppress weed growth while maintaining soil health and biodiversity.
- 5. Animal Welfare:** In organic livestock production, animals are raised in conditions that prioritize their health and well-being. This includes access to outdoor areas, pasture grazing, and adherence to strict standards regarding housing, diet, and healthcare.
- 6. Prohibition of Synthetic Inputs:** Organic farming prohibits the use of synthetic fertilizers, pesticides, hormones, antibiotics, and genetically modified organisms (GMOs). Instead, organic farmers rely on natural and organic inputs such as compost, manure, biopesticides, and plant-based fertilizers.
- 7. Certification and Standards:** Organic farming is regulated by standards set forth by government agencies or certifying bodies. Farms seeking organic certification must comply

content, and reduce soil degradation, thereby ensuring the long-term productivity of agricultural land.

2. **Water Conservation:** India is experiencing increasing water scarcity due to factors such as over-extraction of groundwater and erratic rainfall patterns. Organic farming methods, such as mulching, cover cropping, and efficient water management practices, help to conserve water resources by minimizing evaporation, improving soil water retention, and reducing runoff and soil erosion.
3. **Reduction of Chemical Pollution:** Traditional agricultural practices in India often involve the intensive use of synthetic pesticides and fertilizers, which can have detrimental effects on human health, biodiversity, and the environment. Organic farming avoids or minimizes the use of synthetic chemicals, thereby reducing chemical residues in food, mitigating water and soil contamination, and promoting safer working conditions for farmers.
4. **Enhancement of Biodiversity:** India is known for its rich agro-biodiversity, but intensive farming practices can lead to the loss of native crop varieties and disruption of ecological balance. Organic farming supports biodiversity conservation by promoting diverse cropping systems, preserving traditional crop varieties, and creating habitats for beneficial insects, birds, and soil microorganisms.
5. **Improved Farm Income and Livelihoods:** Organic farming offers opportunities for small and marginal farmers to diversify their income streams, reduce input costs, and access premium markets for organic produce. By adopting organic practices, farmers can improve their resilience to market fluctuations, reduce dependency on expensive external inputs, and enhance their bargaining power in value chains.
6. **Climate Resilience:** Climate change poses significant challenges to Indian agriculture, including shifts in rainfall patterns, increased frequency of extreme weather events, and rising temperatures. Organic farming practices, such as agroforestry, conservation agriculture, and carbon sequestration in soils, help to build resilience to climate change by enhancing soil fertility, conserving water, and reducing greenhouse gas emissions.
7. **Promotion of Food Safety and Nutritional Security:** With increasing concerns about food safety and nutrition-related health issues in India, organic farming offers consumers access to safe, nutritious, and chemical-free food products. Organic crops are typically richer in essential nutrients and antioxidants compared to conventionally grown crops, contributing to improved public health outcomes and nutritional security.
8. **Sustainable Rural Development:** Organic farming has the potential to revitalize rural economies by creating employment opportunities, empowering women and marginalized communities, and promoting sustainable livelihoods based on ecological principles. By fostering local food systems, organic farming contributes to food sovereignty, community resilience, and equitable development across rural India.

Activity Conducted in the unit (photo of the activity)



Outcome:

Visiting an organic farm near Hassan, a region known for its agricultural significance in Karnataka, India, can offer a firsthand experience of sustainable farming practices and their impact on the local environment and community. Here's a potential outcome of such a visit:

The farm owner or manager welcome us and provides an overview of the farm's history, mission, and organic farming practices.

During the tour, we have the opportunity to observe various aspects of organic farming in action, including:

- 1. Crop Diversity:** The farm showcases a diverse range of crops grown using organic methods, such as rice, pulses, millets, vegetables, fruits, and spices. We learn about the importance of crop diversity for soil health, pest management, and resilience to climate change.
- 2. Soil Health Management:** The farm emphasizes soil health through practices like composting, crop rotation, green manuring, and minimal tillage. We witness compost piles, cover crops, and healthy soil teeming with beneficial microorganisms, earthworms, and organic matter.
- 3. Natural Pest and Disease Control:** Instead of synthetic pesticides, the farm employs integrated pest management (IPM) techniques such as biological control, crop rotation, trap crops, and use of natural predators to manage pests and diseases effectively. We observe companion planting arrangements, insect traps, and birdhouses strategically placed throughout the farm.
- 4. Water Conservation:** Given the importance of water conservation in a semi-arid region like Hassan, the farm demonstrates efficient water management practices such as drip irrigation, rainwater harvesting, and mulching. We learn how these techniques minimize water wastage, improve soil moisture retention, and enhance crop yields.
- 5. Livestock Integration:** Some organic farms in the region may incorporate livestock such as cows, goats, or poultry as part of their integrated farming systems. We have the opportunity to see animals grazing on pasture, learn about organic animal husbandry practices, and explore the symbiotic relationship between crops and livestock.
- 6. Community Engagement and Education:** The farm serves as a hub for community engagement, education, and capacity-building initiatives related to organic farming, sustainable agriculture, and environmental conservation. We may participate in workshops, training sessions, or farm-to-table activities that promote awareness and appreciation for organic principles.
- 7. Market Linkages and Value Addition:** The farm may have on-site facilities for processing, packaging, and marketing organic produce, creating value-added products such as jams, pickles, or herbal extracts. Visitors learn about the importance of market linkages, fair trade practices, and the economic viability of organic farming for small-scale producers.

NSS Activity 2

Waste Management– Public, Private and Govt Organization, 5 R's.

Introduction to waste management:

Waste management involves the collection, transportation, treatment, and disposal of waste materials to minimize environmental pollution and promote public health. It encompasses efforts from various sectors, including public, private, and government organizations, as well as individuals.

Types and techniques:

1.Public Sector:

- **Municipalities:** Municipal governments play a central role in waste management, organizing waste collection services, establishing recycling programs, and managing waste treatment facilities such as landfills or incinerators. They also implement regulations and policies related to waste disposal and environmental protection.
- **Public Health Departments:** Public health agencies oversee aspects of waste management that relate to public health and sanitation, ensuring that waste handling practices meet health and safety standards and mitigating risks associated with hazardous waste.

2.Private Sector:

- **Waste Collection and Transport Companies:** Private companies provide waste collection and transportation services to residential, commercial, and industrial clients. They operate garbage trucks, recycling vehicles, and other equipment to collect and transport waste to appropriate disposal or treatment facilities.
- **Recycling and Waste Management Companies:** Private enterprises specialize in recycling and waste management services, including sorting, processing, and recycling of various types of waste materials such as paper, plastics, metals, and organic waste. They may also engage in composting, energy recovery, or waste-to-energy initiatives.

3. Government Organizations:

- **Environmental Agencies:** Government agencies at the national, state, and local levels oversee environmental regulations and policies related to waste management, pollution control, and resource conservation. They conduct inspections, issue permits, and enforce compliance with environmental laws.
- **Research Institutions:** Government-funded research institutions and laboratories conduct studies and develop technologies to improve waste management practices, reduce waste

generation, and minimize environmental impacts. They may also provide technical assistance and expertise to support waste management initiatives.

5 R's and its usage:

1. **Reduce:** Encouraging individuals and businesses to minimize waste generation through practices such as purchasing products with minimal packaging, opting for reusable items instead of disposable ones, and adopting sustainable consumption habits.
2. **Reuse:** Promoting the reuse of products and materials to extend their lifespan and reduce the need for new resources. This includes repairing, refurbishing, or repurposing items instead of discarding them and supporting initiatives such as thrift stores, swap meets, and donation centres.
3. **Recycle:** Establishing recycling programs to collect and process recyclable materials such as paper, glass, plastics, and metals. Recycling conserves resources, reduces energy consumption, and decreases the amount of waste sent to landfills or incinerators.
4. **Recover:** Implementing waste-to-energy technologies such as incineration, anaerobic digestion, or gasification to recover energy from waste materials that cannot be recycled. These processes help divert waste from landfills, reduce greenhouse gas emissions, and contribute to renewable energy production.
5. **Residual Management:** Managing non-recyclable and hazardous waste materials through safe disposal methods such as landfilling, incineration with proper air pollution controls, or treatment to minimize environmental contamination and protect public health.

Uses and Benefits of waste management:

1. Environmental Protection:

- **Reduction of Pollution:** Proper waste management helps prevent pollution of air, water, and soil by reducing the release of harmful substances and contaminants into the environment.
- **Conservation of Natural Resources:** Recycling and reusing materials through waste management processes reduce the need for virgin resources, thereby conserving energy and raw materials.
- **Preservation of Ecosystems:** Proper disposal of waste minimizes habitat destruction and degradation, helping to preserve biodiversity and the health of ecosystems.

2. Public Health and Safety:

- **Prevention of Disease:** Effective waste management reduces the risk of diseases caused by exposure to hazardous waste materials, contaminated water, or unsanitary conditions.
- **Improvement of Air Quality:** Proper disposal and treatment of waste reduce emissions of greenhouse gases, particulate matter, and other pollutants, improving air quality and mitigating respiratory health problems.
- **Prevention of Accidents and Hazards:** Proper handling and storage of hazardous waste materials prevent accidents, spills, and environmental emergencies that pose risks to human health and safety.

3. Resource Efficiency and Sustainability:

- **Promotion of Recycling and Reuse:** Waste management systems facilitate the recovery and recycling of valuable materials such as metals, plastics, paper, and glass, promoting resource efficiency and reducing waste generation.
- **Energy Recovery:** Waste-to-energy technologies convert non-recyclable waste into heat, electricity, or biofuels, providing an alternative energy source and reducing reliance on fossil fuels.
- **Circular Economy:** Waste management systems contribute to the transition towards a circular economy by promoting the reuse, remanufacturing, and recycling of products and materials, thereby minimizing waste and maximizing resource utilization.

4. Economic Benefits:

- **Job Creation:** Waste management activities, including collection, sorting, recycling, and waste treatment, create employment opportunities in various sectors such as waste management services, recycling industries, and green technology.
- **Cost Savings:** Proper waste management reduces costs associated with waste disposal, cleanup of environmental contamination, and healthcare expenses related to waste-related illnesses, ultimately saving money for governments, businesses, and households.
- **Revenue Generation:** Recycling and recovery of valuable materials generate revenue through the sale of recycled products, recovered resources, and renewable energy, contributing to economic growth and financial sustainability.

5. Community Well-being:

- **Enhanced Quality of Life:** Clean and healthy environments resulting from effective waste management systems contribute to improved quality of life, well-being, and satisfaction among residents.
- **Community Engagement:** Waste management initiatives foster community involvement, awareness, and participation in sustainable practices such as recycling, composting, and waste reduction, building social cohesion and environmental stewardship.

Activity Conducted in the unit (photo of the activity)



Outcome:

Upon arriving at the wastewater treatment plant near Chikkamagaluru, visitors are greeted by staff members who provide an overview of the plant's operations, objectives, and significance for the local community and environment.

During the tour, visitors have the opportunity to observe and learn about the various stages of wastewater treatment, including:

1. **Wastewater Intake and Preliminary Treatment:** Visitors witness the intake of raw sewage or wastewater from municipal sewage systems, industrial sources, and other sources. They learn about the preliminary treatment processes, which may include screening to remove large debris and grit removal to separate sand and gravel.

2. **Primary Treatment:** Visitors observe the primary treatment processes, which involve physical and chemical methods to remove suspended solids, oils, and greases from the wastewater. This may include sedimentation tanks or clarifiers where solids settle out and are removed as sludge.
3. **Secondary Treatment:** Visitors learn about biological treatment methods used in the secondary treatment stage, such as activated sludge processes, trickling filters, or constructed wetlands. They observe microbial activity that breaks down organic matter and nutrients in the wastewater, producing treated effluent with reduced levels of contaminants.
4. **Tertiary Treatment:** Visitors explore tertiary treatment processes, which further improve the quality of treated wastewater to meet specific standards for discharge or reuse. This may involve advanced filtration, disinfection (e.g., chlorination or ultraviolet irradiation), or nutrient removal (e.g., nitrogen and phosphorus removal).
5. **Sludge Treatment and Disposal:** Visitors are briefed on the handling and disposal of sludge generated from the treatment process. They learn about sludge dewatering methods, such as centrifugation or drying beds, and options for sludge management, including incineration, composting, or land application.
6. **Reuse and Recycle Opportunities:** Visitors explore potential opportunities for reusing treated wastewater for irrigation, industrial processes, or non-potable uses. They learn about the benefits of water reuse in conserving freshwater resources, reducing demand on potable water supplies, and supporting sustainable development.
7. **Environmental and Regulatory Considerations:** Throughout the tour, visitors gain an understanding of the environmental impacts of wastewater discharges and the importance of regulatory compliance in protecting water quality, aquatic ecosystems, and public health. They learn about monitoring and reporting requirements to ensure the plant's operations meet regulatory standards.
8. **Community Engagement and Education:** The wastewater treatment plant may offer educational programs, outreach activities, or interactive exhibits to engage visitors and raise awareness about wastewater management, water conservation, and environmental stewardship. Visitors are encouraged to ask questions and participate in discussions about the role of wastewater treatment in sustainable development.

Overall, a visit to a wastewater treatment plant near Chikkamagaluru provides visitors with a deeper appreciation for the importance of wastewater management in protecting water resources, public health, and the environment. It highlights the technological innovations, regulatory frameworks, and community partnerships involved in ensuring the safe and sustainable treatment of wastewater for the benefit of present and future generations.

NSS Activity 3

WATER CONSERVATION TECHNIQUES.

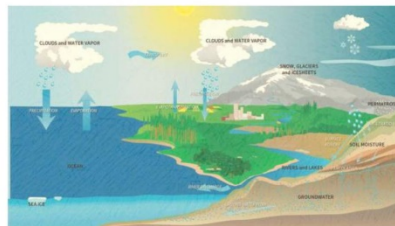
INTRODUCTION:

There is no way to envision life without water. Natural resource availability is declining daily, and they are not distributed fairly. Therefore, this situation compels us to consider developing new water management techniques. Water is a precious gift of nature to mankind and to various living species such as animals and human being living on earth. Water a natural resource is becoming one of the most scare resources in most part of the world. It comprises of every pattern of water such as groundwater, surface water, marine and costal water, which always plays a huge role in the traditional and cultural aspects of every human's life.

The importance of water can be seen in various aspects of human life for the overall economic and social development, progress, prosperity of the nations. So, thus it has a worldwide impact over all the human life and history of human. The foundation of sustainable development is water. Water resources and the variety of services they offer support environmental sustainability, poverty alleviation and economic prosperity. Water has been found to contribute to advances in social well-being, benefiting the livelihoods of billions, from food and energy security to human and environmental health. The majority of sustainable development goals must be advanced in order for global water management to significantly improve.

WATER CYCLE:

The water cycle describes how water vapor rises from the Earth's surface, travels through the atmosphere, cools, condenses to form clouds, and ultimately descends as precipitation. Around 75% of the energy (or heat) in the atmosphere is transferred through the evaporation of water from the Earth's surface. Water evaporates from the earth on land, primarily from lakes, streams, soils, and plants (i.e., transpiration). In reality, about 15% of the water entering the atmosphere is evaporation from the Earth's land surfaces and plant evapotranspiration. Such evaporation provides water for the creation of clouds in the sky as well as cooling the Earth's surface and lower atmosphere.



WATER CYCLE

WATER CONSERVATION TECHNIQUE:

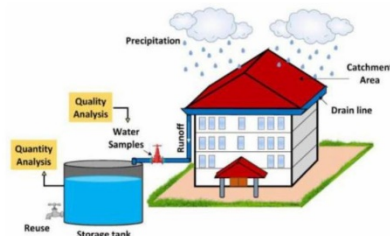
1. Rainwater Harvesting
2. Efficient Irrigation Technology
3. Greywater Recycling Systems
4. Water Meters
5. Pressure Reducing Valves
6. Insulated Pipes
7. Efficient Taps
8. Water-Saving Showers
9. Efficient Toilets
10. Waterless Urinals

RAINWATER HARVESTING:

Water management is the activity of planning, developing, distributing, and managing the optimum use of water resources. Water is a necessity. The activity of planning, developing, distributing, and optimum use of water resources under water policies and regulations. Need for water management:

- Development of water bodies for future
- Protection of available water bodies from pollution, etc
- Withdrawal rates or allocation of water for different purposes.

Rainwater Harvesting is a technique that is the process of saving and collecting rainwater using various means of various resources (such as agriculture etc.) for future use. Rainwater can be collected in natural reservoirs or artificial tanks. Storage of roof water is also a way of collecting rainwater. Whenever it rains, rainwater can be stored in man-made ponds or tank.



RAINWATER HARVESTING SYSTEMS

Rainwater harvesting systems can vary from the basic small ones, like the attachment of a water butt to a rainwater down-pipe, to the complexly designed large ones like those which collect rainwater from large areas and serve momentous numbers of properties.

When it comes to domestic purposes, these systems are relevant to both commercial and domestic properties. When collected, rainwater can be used for garden irrigation, toilet flushing, and even in washing machines.

NECESSITY OF RAINWATER HARVESTING SYSTEM:

Collection of rainwater is very important for people of all areas. It is very good to finish the fear of water shortage in the future. Understanding the following points will help why rainwater harvesting is needed:

- Water demand for water for various purposes cannot be fulfilled.
- All dependents on land water for all needs.
- Due to deforestation, rapidly increasing urbanization, below-ground rainwater, etc., continuously decreasing ground water level.
- Maintains rainwater storage in natural water resources.
- This reduces the risk of flood and soil degradation on the roads and also improves water quality.
- It plays great role in protecting the ground water decline and improving the ground water table.
- It is to bring the old tradition of water conservation among people.
- It is to conserve more water and prevent surface water runoff during the monsoon.
- It helps in reducing the soil erosion.

The main technique for collecting rainwater is as follows:

- Gathering surface water for future use
- Recharge of ground water

Collecting rainwater from the surface is very effective and traditional technique. These small ponds, underground tanks, storage tanks etc. can be used. However, recharge of ground water is a new method of storage. By well charging, excavator, crater, ditch, hand pump, can be opened by digging well.

The total rainwater that is available from the roof and non-roof areas 100% of this storm water is recharged into the local aquifer by the means of multiple rainwater recharge wells constructed on the site.





RAIN WATER HARVESTING PIT, ROOF AND NON-ROOF WATERWAY.

Conveyance of rainwater from roof to recharge well: Storm water collection traps are installed on the building roof at multiple locations, these rainwater traps collect water from various areas on the roof and conveyed directly to recharge wells by the means of PVC pipes.

Conveyance of rainwater from non-roof to recharge well: Storm water from the non-roof areas is diverted naturally into multiple recharge wells within the campus by the means of natural slopes of the site. Recharge wells are installed at different areas in the campus site to collect and recharge water from the whole site.

Water Treatment: 100% rainwater from site and roof is directed to recharge pits for aquifer recharge and no rainwater collection is implemented on site. As there is no rainwater collection on site, 100% potable water requirement is met by bore water / municipal water supply.

NSS Activity 4

Volunteering for Blood donation camp conducted at the college campus.

A blood donation camp is an organized event where individuals voluntarily donate blood for use in medical emergencies, surgeries, transfusions, and treatments for various medical conditions.

This camp was conducted by Lions club Chikkamagaluru in association with district hospital, blood bank with the aim of collecting blood donations from eligible donors. The importance of blood donation camps lies in several key aspects:

1. **Saving Lives:** Blood donation is a critical aspect of healthcare, as donated blood is used to save the lives of patients who require transfusions due to accidents, surgeries, childbirth complications, medical conditions like anaemia or cancer, and other emergencies. By donating blood, individuals directly contribute to the treatment and survival of patients in need.
2. **Meeting Demand:** There is a constant and often increasing demand for blood and blood products in healthcare facilities. Blood donation camps help address this demand by providing a convenient and accessible platform for individuals to donate blood regularly. These donations help ensure an adequate and reliable supply of blood for patients in hospitals and medical centres.
3. **Emergency Preparedness:** Blood donation camps play a crucial role in enhancing the preparedness and resilience of healthcare systems to respond effectively to emergencies and disasters. In times of crises such as natural disasters, accidents, or mass casualties, the availability of donated blood is essential for providing timely and life-saving medical care to affected individuals.
4. **Supporting Medical Treatments:** Blood donations are used not only in emergency situations but also in planned medical treatments such as surgeries, organ transplants, cancer therapies, and treatments for blood disorders. Regular blood donations help meet the ongoing needs of patients undergoing various medical procedures, improving their outcomes and quality of life.
5. **Raising Awareness:** Blood donation camps serve as platforms for raising awareness about the importance of blood donation, voluntary blood donation, and the need for regular donors. These camps provide opportunities for education, outreach, and engagement with the community, helping dispel myths, address misconceptions, and promote a culture of altruism and public service.
6. **Ensuring Safety and Quality:** Blood donation camps adhere to strict protocols and standards to ensure the safety, quality, and integrity of donated blood. Donors undergo

NSS Activity 4

Volunteering for Blood donation camp conducted at the college campus.

A blood donation camp is an organized event where individuals voluntarily donate blood for use in medical emergencies, surgeries, transfusions, and treatments for various medical conditions.

This camp was conducted by Lions club Chikkamagaluru in association with district hospital, blood bank with the aim of collecting blood donations from eligible donors. The importance of blood donation camps lies in several key aspects:

1. **Saving Lives:** Blood donation is a critical aspect of healthcare, as donated blood is used to save the lives of patients who require transfusions due to accidents, surgeries, childbirth complications, medical conditions like anaemia or cancer, and other emergencies. By donating blood, individuals directly contribute to the treatment and survival of patients in need.
2. **Meeting Demand:** There is a constant and often increasing demand for blood and blood products in healthcare facilities. Blood donation camps help address this demand by providing a convenient and accessible platform for individuals to donate blood regularly. These donations help ensure an adequate and reliable supply of blood for patients in hospitals and medical centres.
3. **Emergency Preparedness:** Blood donation camps play a crucial role in enhancing the preparedness and resilience of healthcare systems to respond effectively to emergencies and disasters. In times of crises such as natural disasters, accidents, or mass casualties, the availability of donated blood is essential for providing timely and life-saving medical care to affected individuals.
4. **Supporting Medical Treatments:** Blood donations are used not only in emergency situations but also in planned medical treatments such as surgeries, organ transplants, cancer therapies, and treatments for blood disorders. Regular blood donations help meet the ongoing needs of patients undergoing various medical procedures, improving their outcomes and quality of life.
5. **Raising Awareness:** Blood donation camps serve as platforms for raising awareness about the importance of blood donation, voluntary blood donation, and the need for regular donors. These camps provide opportunities for education, outreach, and engagement with the community, helping dispel myths, address misconceptions, and promote a culture of altruism and public service.
6. **Ensuring Safety and Quality:** Blood donation camps adhere to strict protocols and standards to ensure the safety, quality, and integrity of donated blood. Donors undergo

screening procedures to assess their eligibility, medical history, and suitability for donation, and donated blood is tested for infectious diseases and other health indicators to minimize risks to recipients.

- 7. **Community Engagement:** Blood donation camps foster community engagement, solidarity, and social responsibility by bringing together individuals from diverse backgrounds to support a common cause. These camps provide opportunities for collaboration, volunteerism, and civic engagement, strengthening bonds within the community and promoting a sense of collective well-being.

Activity Conducted in the unit (photo of the activity)




Signature of HOD
Dr. KIRAN B. M.
B.E., M.Tech., Ph.D
Professor & Head
Department of Civil Engineering
Adichunchanagiri Institute of Technology
CHIKKAMAGALURU-577102

NSS Activity 5

Setting of the Information Imparting Club for Women Leading to Contribution in Social and Economic Issues

Introduction to the scheme:

Establishing a club specifically for women aimed at contributing to social and economic issues can be a powerful platform for fostering empowerment, advocacy, and positive change within communities. Here's how such a club could function and the potential benefits it could bring:

- 1. Name and Mission:** Begin by naming the club and defining its mission. For example, the club could be called "Women Empowerment and Social Advocacy Club" or something similar. The mission could be to empower women to actively engage in addressing social and economic issues through education, advocacy, and community action.
- 2. Membership and Leadership:** Invite women from diverse backgrounds, including students, professionals, homemakers, and community members, to join the club. Encourage leadership roles within the club, allowing members to take on responsibilities such as president, vice president, treasurer, and secretary, fostering leadership skills and accountability.
- 3. Regular Meetings and Workshops:** Organize regular meetings and workshops to discuss various social and economic issues affecting women and communities. Invite guest speakers, experts, and activists to lead discussions on topics such as gender equality, women's rights, economic empowerment, education, healthcare, and poverty alleviation.
- 4. Awareness Campaigns:** Launch awareness campaigns to educate the public about important social and economic issues and promote gender equality and women's empowerment. This could include organizing seminars, webinars, film screenings, panel discussions, and awareness-raising events in collaboration with other organizations and community groups.
- 5. Skill-Building and Training:** Offer skill-building workshops and training sessions to enhance the capabilities and confidence of women in areas such as leadership, entrepreneurship, financial literacy, vocational skills, and advocacy. Empowering women with practical skills and knowledge can enable them to become agents of change in their communities.
- 6. Community Service Projects:** Plan and implement community service projects aimed at addressing specific social and economic needs within the local community. This could involve initiatives such as providing support to women-owned businesses, organizing health and hygiene workshops, mentoring programs for young women, or volunteering at shelters and NGOs serving vulnerable populations.

7. **Partnerships and Collaborations:** Forge partnerships and collaborations with other organizations, NGOs, government agencies, and businesses working on similar social and economic issues. By leveraging collective resources, expertise, and networks, the club can amplify its impact and reach a broader audience.
8. **Advocacy and Policy Engagement:** Advocate for policy changes and legislative reforms that promote gender equality, women's rights, and inclusive economic development. This could involve lobbying policymakers, writing petitions, organizing campaigns, and participating in advocacy initiatives at the local, national, and international levels.
9. **Networking and Mentorship:** Create opportunities for networking and mentorship among club members and with external stakeholders. Encourage peer-to-peer mentoring, mentorship programs pairing experienced professionals with aspiring women leaders, and networking events to facilitate connections and knowledge-sharing.
10. **Celebration and Recognition:** Celebrate the achievements and contributions of women leaders and activists in the community. Recognize outstanding members of the club for their efforts and accomplishments in advancing social and economic justice, fostering a culture of appreciation and support.

Benefits of Scheme:

1. **Empowerment:** Establishing a club focused on women's leadership in addressing social and economic issues provides a platform for women to develop confidence, skills, and networks necessary to become effective agents of change. Through participation in the club, women can gain empowerment to take on leadership roles, advocate for their rights, and contribute meaningfully to their communities.
2. **Community Impact:** The club enables women to collaborate on initiatives that address pressing social and economic challenges, such as gender inequality, poverty, education access, and healthcare disparities. By pooling resources, expertise, and passion, club members can amplify their impact and make a tangible difference in the lives of individuals and communities affected by these issues.
3. **Networking and Collaboration:** The club fosters opportunities for networking, collaboration, and knowledge-sharing among women leaders, professionals, activists, and community members. Through interactions within the club and partnerships with external organizations, members can leverage diverse perspectives, resources, and experiences to develop innovative solutions and initiatives.
4. **Advocacy and Policy Influence:** By advocating for policy changes, legislative reforms, and institutional reforms that advance gender equality, women's rights, and inclusive economic development, the club can contribute to broader social change. Through collective advocacy efforts, club members can raise awareness, influence decision-makers, and shape policies that promote equity, justice, and empowerment for women and marginalized communities.

Activity Conducted in the unit (photo of the activity):



Outcome:

1. Discussed regarding the conduction of International Women's Day at the campus.
2. Selecting a team to conduct cultural events at the department which will help to develop soft skills.

NSS Activity 6

Conducted national constitution day at the college campus:

National Constitution Day, also known as Samvidhan Divas, is observed in India on 26th November each year to commemorate the adoption of the Constitution of India. Here are some key points about National Constitution Day:

1. **Historical Significance:** On 26th November 1949, the Constituent Assembly of India adopted the Constitution of India, which came into effect on 26th January 1950, marking the birth of the Republic of India. The drafting and adoption of the Constitution represented a significant milestone in India's journey towards independence and democracy.
2. **Celebration and Observance:** National Constitution Day is observed with various events, programs, and ceremonies across the country to honor the principles, values, and ideals enshrined in the Constitution. Schools, colleges, universities, government institutions, and civil society organizations organize activities such as seminars, lectures, debates, quizzes, and cultural performances to raise awareness about the Constitution and its significance.
3. **Promotion of Constitutional Values:** National Constitution Day serves as an opportunity to promote awareness and understanding of the Constitution, its provisions, and its role in shaping India's democratic institutions, governance structures, and fundamental rights. It encourages citizens to uphold constitutional values such as justice, liberty, equality, and fraternity, and to actively participate in the democratic process.
4. **Reflection on Constitutional Principles:** On Constitution Day, citizens and policymakers reflect on the fundamental principles and ideals outlined in the Constitution, including democracy, secularism, socialism, and federalism. It provides an occasion to evaluate the progress made in upholding constitutional rights, addressing social inequalities, and strengthening democratic institutions.
5. **Educational Initiatives:** National Constitution Day is an opportunity to promote constitutional literacy and civic education among citizens, particularly students and young people. Educational institutions organize special programs and activities to familiarize students with the Constitution, its history, key features, and significance in shaping India's democracy.
6. **Constitution Pledge:** On Constitution Day, citizens, officials, and students often take a pledge to uphold the values and principles of the Constitution and to fulfill their duties as responsible citizens. The pledge reaffirms the commitment to democracy, justice, equality, and the rule of law enshrined in the Constitution.
7. **Constitution Day Lecture:** The President of India delivers a special address on Constitution Day, highlighting the importance of the Constitution, its enduring relevance in contemporary times, and the need to safeguard constitutional values and democratic principles.

Events conducted:

1. The President of the function our Principal sir addressed the gathering and spoke about the importance of constitution and briefed some historical events that happened while Constitution was formed and also spoke regarding the constitution drafting committee members and so on.
2. Chief guest of the function Mrs. Divya ma'am gave the brief insights of the constitution.
3. We all recited the Preamble of the constitution together.

Activity Conducted in the unit (photo of the activity):



NSS Activity 7

Conducted World Environmental Day in the Campus:

World Environment Day, observed on **June 5** each year, is the United Nations' principal day for encouraging worldwide awareness and action for the protection of the environment. Established in 1972 by the UN General Assembly, it has since become a global platform for environmental outreach, celebrated by millions in over 100 countries. Here are the key points of its importance:

1. **Global Awareness and Action:** World Environment Day serves as an annual reminder for individuals, communities, businesses, and governments around the world to reflect on environmental challenges. It brings attention to critical issues such as climate change, biodiversity loss, deforestation, pollution, and unsustainable consumption patterns, fostering collective awareness and encouraging individuals to take action.
2. **Advocacy and Policy Influence:** The day provides a platform for governments, NGOs, and international bodies to advocate for environmental protection and push for policy changes. Themes chosen each year are linked to global priorities, urging decision-makers to implement policies that promote sustainable development, conservation, and responsible resource use.
3. **Community Engagement and Education:** Events and activities organized on World Environment Day educate the public about environmental issues and promote sustainable practices. These activities include clean-up drives, tree planting, eco-friendly initiatives, workshops, and awareness campaigns, engaging communities and inspiring them to adopt environmentally responsible behaviours.
4. **Strengthening Environmental Stewardship:** World Environment Day installs a sense of environmental stewardship and responsibility, encouraging individuals to contribute to preserving the planet for future generations. It fosters a collective sense of duty towards the Earth, empowering people to make lifestyle changes and participate in sustainable actions, which ultimately helps create a healthier, more resilient planet.

By inspiring people worldwide to take action, World Environment Day plays a crucial role in creating a sustainable, eco-friendly future and addressing global environmental issues.

Events conducted:

1. The President of the function our Principal sir addressed the gathering and spoke about the importance of conducting World Environmental day and briefed the importance of green campus and clean pollution free environment and along with other faculties and students planted few fruit bearing plants in the campus.
2. Chief guest of the function was Dr. Prakash Rao.K.S. S Principal AIBM, Chikkamagaluru. He also gave few brief insights on pollution and environmental issues. Dr Pradeep G Desai, Assistant Professor AIBM and Mr. Rakesh Hosmani NSS coordinator AIBM is also present during the event.
3. Dr. Kiran.B.M the NSS officer and HOD Civil Engineering Department addressed the students and gave the insights regarding Global Environmental changes and the steps to achieve Environmental Sustainability.
4. Few fruit trees and other plants with medicinal values have been planted in the campus by faculties and student volunteers.

Activity Conducted in the unit (photo of the activity):



NSS Activity 8

BUSINESS PROPOSAL FOR ENHANCING THE VILLAGE INCOME. **INTRODUCTION:**

Rural areas are home to most of the poor. According to ILO calculations, 88 percent of the extremely poor live in rural areas, where poverty rates are four times higher than in urban areas and decent work deficits are typically severe. The rural/urban divide becomes even more apparent when considering poverty rates for people in employment. Nearly 20 percent of people employed in rural areas live in extreme poverty, compared with just over 4 percent in urban rural areas are characterized by governance gaps and informality. Genders in equalities in rural areas are pervasive. If women in rural areas had the same access to agriculture assets, education and markets as men, agricultural production could be increased and the number of hungry people reduced by 100-150 million. This activity aims to provide strategies to the village people in income.

Rural labor markets are often dysfunctional. Labor market institutions are weak, as are their organization and representation. Underemployment is widespread and incomes are generally low. Access to social protection is extremely limited. Rural workers are often vulnerable, and in numerous circumstances, are not fully covered by national labor law, while more broadly, their rights are often not realized or enforced. Indigenous and tribal peoples are particularly vulnerable to discrimination. Because of this vulnerability and lack of organization, the voice of rural workers is often not heard in relation to both rural development and broader economic and social development

Common challenges to unleashing the potential of rural areas include low productivity; underinvestment in agriculture and non-farm rural employment; lack of adequate infrastructure; poor occupational safety and health and working conditions; and limited or no access to services, including financial services. Additional pressures in rural economies result from conflict, natural resource depletion and climate change.

The rural economy holds considerable potential for economic growth, employment creation and promotion of decent work if the right policies are in place. The ILO's Decent Work Agenda, as an integrated rights-based development strategy, supports tripartite constituents in their efforts to promote sustainable rural livelihoods.

However, rural areas are also characterized by great diversity and should not be considered as being exclusively agricultural. There is a mixture of on-and off-farm activities ranging from smallholder agriculture or Pastoralism to highly sophisticated commercial agribusiness supplying global markets through intense regional and national linkages with industrial and services sectors

Rural development has been on ILO's agenda since it was established in 1919. Since then,

the ILO has adopted over 30 international labor standards that directly target agriculture and rural development, covering rights at work, employment opportunities, social protection and social dialogue. In 2008, the ILC discussion on rural employment, which culminated in the adoption of a Resolution and Conclusions on promoting rural employment for poverty education, set a mandate for renewed ILO involvement in rural development issues. In March 2011, the Governing Body adopted a strategy on promoting decent work for rural development, which called for particular attention to areas such as rural entrepreneurship, enterprises and cooperatives;

Employment-intensive employment strategies; appropriate skills development; extended social security coverage; occupational safety and health; and the systematic inclusion of rural dimensions and actors when developing and implementing employment and social protection policies. Informed by these developments, decent work in the Rural Economy became one of eight “areas of critical importance (ACI)” for the biennium 2014–15, and since then constitutes one of the Office’s ten policy outcomes. Approach to rural poverty aims at increasing the overall resilience of rural communities and their capacity to address such challenges through the Decent Work Agenda. This approach is based on three main goals: increasing the voice of rural people through organization of communities and promotion of rights, standards and social dialogue; promoting an employment based rural development model through diversified livelihoods, sustainable enterprises and better integration in value chains; and providing social protection floors which guarantee minimum income and access to basic services in rural economies which are often very vulnerable to external shocks.

OBJECTIVES FOR ENHANCING THE VILLAGE INCOME:

- 1. Increase productivity:** Increase crop productivity, livestock production, and crop intensity.
- 2. Improve efficiency:** Improve input use efficiency to save on costs.
- 3. Diversify:** Diversify into high-value crops.
- 4. Improve prices:** Help farmers get better prices for their produce.
- 5. Provide infrastructure:** Provide infrastructure to villages, such as roads, clean drinking water, and basic services like education and healthcare.
- 6. Create marketing facilities:** Create marketing facilities to reduce post-harvest losses and distress sales.
- 7. Provide non-farm jobs:** Provide more non-farm jobs to reduce pressure on the land.
- 8. Provide crop insurance:** Provide affordable crop insurance with a quick settlement process.
- 9. Encourage savings:** Encourage savings to reduce dependency on outsiders and increase self-reliance.
- 10. Promote income-generating activities:** Promote income-generating activities like milling, hulling, food preservation, and processing equipment.

THE CHALLENGES INVOLVED IN GROWING MORE AND EARNING MORE:

- Water and water security.
- There are possible solutions but technical skills and leadership to manage demand are needed at the village level.
- Buyers' monopolies as farmers are unable to bargain in the market.
- Limited infrastructure for storage reduces farmers' bargaining power further.
- Inability to shift to remunerative crops due to lack of knowledge.
- Precarious finances prohibit risk-taking as failure can be a life and death situation for a farmer.

WHAT VILLAGER AND FARMERS CAN DO?

Farmers can follow collectivization for succeeding. While it has its challenges, if farmers come together, then this single most critical step would help them to:

- Optimally tap common resources like water
- Cooperate and acquire knowledge for growing better price yielding crops
- Share infrastructure like storage
- Negotiate for better crop prices with buyers
- Negotiate for better input prices with sellers

COLLECTIVIZATION MODELS INCLUDE:

- 1) Cooperatives.
- 2) Political parties
- 3) Contract farming to private players
- 4) Producer companies (formed by the farmers themselves) v.
- 5) Leasing of land.

OUTCOME:

- Local populations can also bring about endogenous initiatives for development.
- Focus on the advancement of techniques that are relevant to the increasing knowledge of rural is necessary.
- The challenge pertains not only to a huge quantitative expansion in skill training for the adults, but also to the much more important task of raising the youth.
- Activity had helped the rural about the know-how of economy sector and well as increasing the quality and quantity of produce.
- Role of government is necessary for funding, promotion of new technology.



CONCLUSION

Conducting National Service Scheme (NSS) activities at college offers several benefits for students, the institution, and the community at large. Here are four key benefits:

1. **Community Engagement and Service Learning:** NSS activities provide students with opportunities to engage directly with communities, understand their needs, and contribute to addressing local issues. Through service-learning experiences, students develop empathy, leadership skills, and a sense of social responsibility as they actively participate in community service projects such as environmental conservation, health awareness campaigns, literacy programs, and rural development initiatives.
2. **Personal and Professional Development:** Participation in NSS activities fosters personal growth and professional development among students. By volunteering their time and talents, students enhance their communication skills, teamwork abilities, problem-solving capabilities, and cultural sensitivity. They also gain practical experience in project planning, implementation, and evaluation, which are valuable skills for their academic and future career pursuits.
3. **Social Impact and Civic Engagement:** NSS activities contribute to positive social impact and civic engagement within communities. By collaborating with local organizations, government agencies, and non-profit groups, students contribute to initiatives that address pressing social challenges, promote sustainable development, and improve quality of life for marginalized populations. Through their involvement in NSS projects, students become active agents of change, fostering a culture of civic responsibility and community participation.
4. **Promotion of Values and Citizenship:** NSS activities promote the values of volunteerism, inclusivity, and citizenship among students. By working together towards common goals and serving the needs of others, students develop a deeper understanding of social justice, diversity, and human rights. They cultivate a sense of belonging to their communities and a commitment to contributing positively to society, laying the foundation for responsible citizenship and ethical leadership in the future.

Overall, conducting NSS activities at college not only benefits students by enhancing their personal and professional development but also creates meaningful opportunities for them to make a positive impact on society and foster a culture of service and civic engagement within their communities