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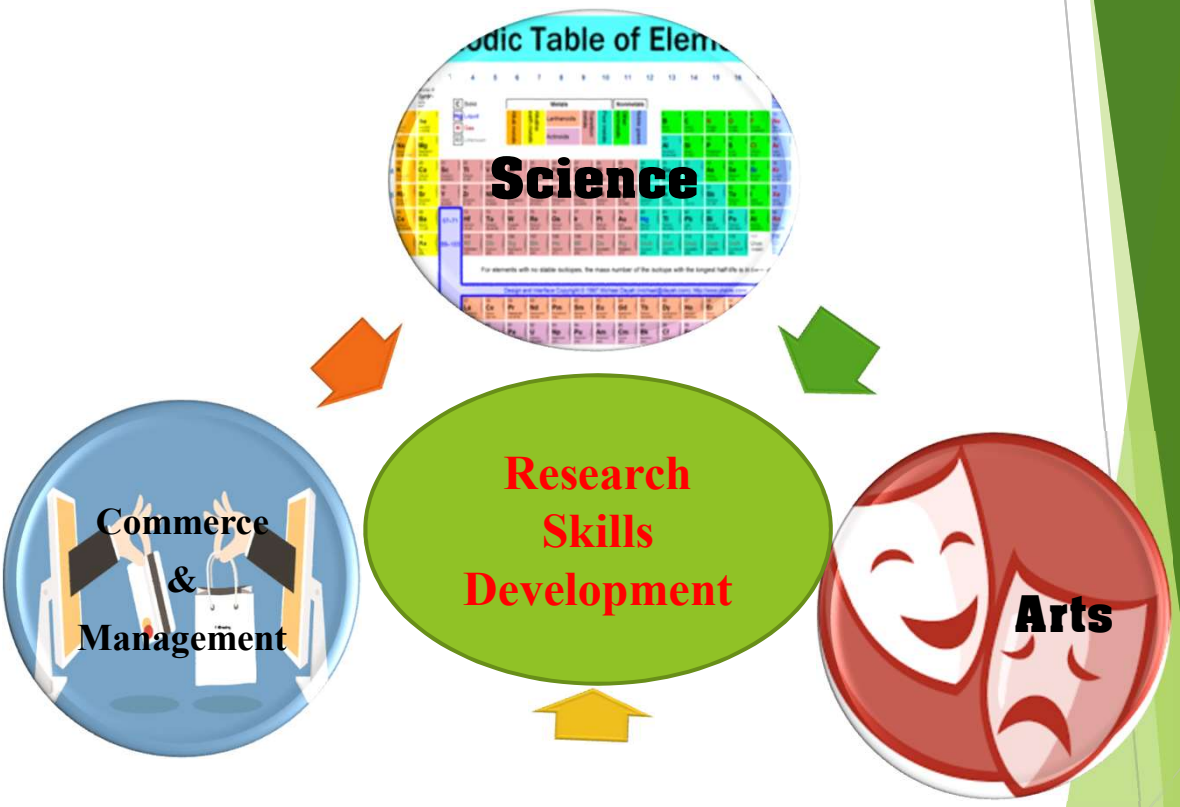

February, 2020

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EDITORIAL BOARD

Avishkar Committee and IQAC Committee

Printed, Published and Owned by Dahiwadi College Dahiwadi, At/Post: Dahiwadi, Tal. Man, Dist. Satara 415508, Maharashtra, India. Editor: Dr. B.T. Jadhav

DCD Journal of Interdisciplinary Research 2020
VOLUME III, ISSUE I

Contents

Microcontroller Based Bidirectional Visitor Counter System

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Abstract

Visitor counter is a consistent circuit which is mainly designed to the public place as well as the count the number of persons or people entering in the area very accurately .It also avoids crowds in different areas of the any public place or also function halls .When a person enters into the area or a public place a counter is maintained for presenting the number of people and is upgraded by one .The overall count of people inside the area will be present .This obstruction is sensed by the Arduino microcontroller . It also can manage the fans based on relay provide .If the place or function halls reaches the maximum capacity then by using counter . Thereby congestion is avoided.

In events or parties goes out of control due to gate crashing by uninvited guests . It will count the number of persons in the public place . In this project at the entry of it count the number of invitees and raising alarm when the number exceeds the guest list .

Keywords : Microcontroller, Arduino Uno , IR sensors, Visitor Counter .

Introduction

In events or parties goes out of control due to gate crashing by uninvited guests. It could have sounded like a magic door some years back , but it is a really today .We can call it a smart door and the thing that is making it smart is a get-crashing alarm system that we are going to build in this project . In this project at the entry it counts the no. of invitees and raising an alarm when the number exceeds the guest list. This technology can also be used to prevent entry of criminal inside public place.

The door alarm system prototype that can detect entry up to 3-4 persons, but it can be upgraded as per requirement .It will count the number of times of the door opens and will automatically raise alarm when it detects the extra persons .This is enable by using a gesture sensors that senses the doors movement from left to right or right to left .This technology can also be used to prevent entry of criminals in the public place or any functional halls.

Objective

- . To use in office , public place like meeting where limited persons are allowed.
- . To account accurate no. of personal in prohibited area.
- . Raises an alarm when the no. Of persons exceeds.
- . This technology can also be used to prevent entry of criminals inside our house.
- . Detect entry of up to three to four person.
- . It will count the number of times the door opens.
- . Automatically raise alarm when it detects the extra persons.

Literature Survey

In this Atomic room light and fan controller with bidirectional visitor counter system, controller can count the number of persons entering into the room and then light intensity of the room and turn on the fan automatically, when the persons seating inside the room[1]. It is made to prevent unwanted electric power in school, colleges, houses and other working places. This is used in automatic sensors. When the person exists from the room the count is updated by the another infrared sensors on to the display. The micro controller does the above job .

It receives the signals from the IR sensors , and this signal is operated under the control of software which is stored in ROM [2] . Micro controller continuously monitors the Infrared Receivers . When any object pass through the IR Receivers then the IR Rays. The gesture engine accommodates a wide range of mobile device gesturing requirements UP- DOWN - RIGHT - LEFT gestures or more complex gestures can be accurately sensed . Power Consumption and noise are minimized with adjustable IRLED timing.

Micro controller based visitor counter is designed and presented in order to count the visitors of auditorium [3]. The system count both the entering and existing visitor of the auditorium where it is placed . Depending up[on the interrupt from the sensors the system identifies the entry and exist of the visitor.

Materials

1. Arduino Mega :

   The Arduino Mega is an open source micro controller board based on the microchip AT mega 328P micro controller and developed by Arduino cc . The board is equipped with sets of digital and analog input/ output pins that may be interfaced to various expansion board and other circuits . Layout and production files for some versions of the hardware are also available.

2. IR Sensor:

An Infra red sensors is an electronic instrument that is used to sense certain characteristic of its surroundings. It does this by either emitting or detecting an Infrared radiations are also capable of measuring the heat being emitted by an object and detecting motion .

Methodology

It will count the number the number of times the door opens and will automatically raise alarm when it detects the extra persons, but it can be upgraded as per requirements . This is enabled by using a IR sensor that sense the doors movement from left - right or right –left . The door alarm system prototype that we are going build today can detect entry of up to three to four persons, but it can be upgraded as per requirement.

The IR engine accommodates a wide range of mobile device graduation gesturing requirements simple UP-DOWN-RIGHT-LEFT gestures or more complex sensors can be accurately sensed . Power consumption and noise are minimized with adjustable IRLED timing.

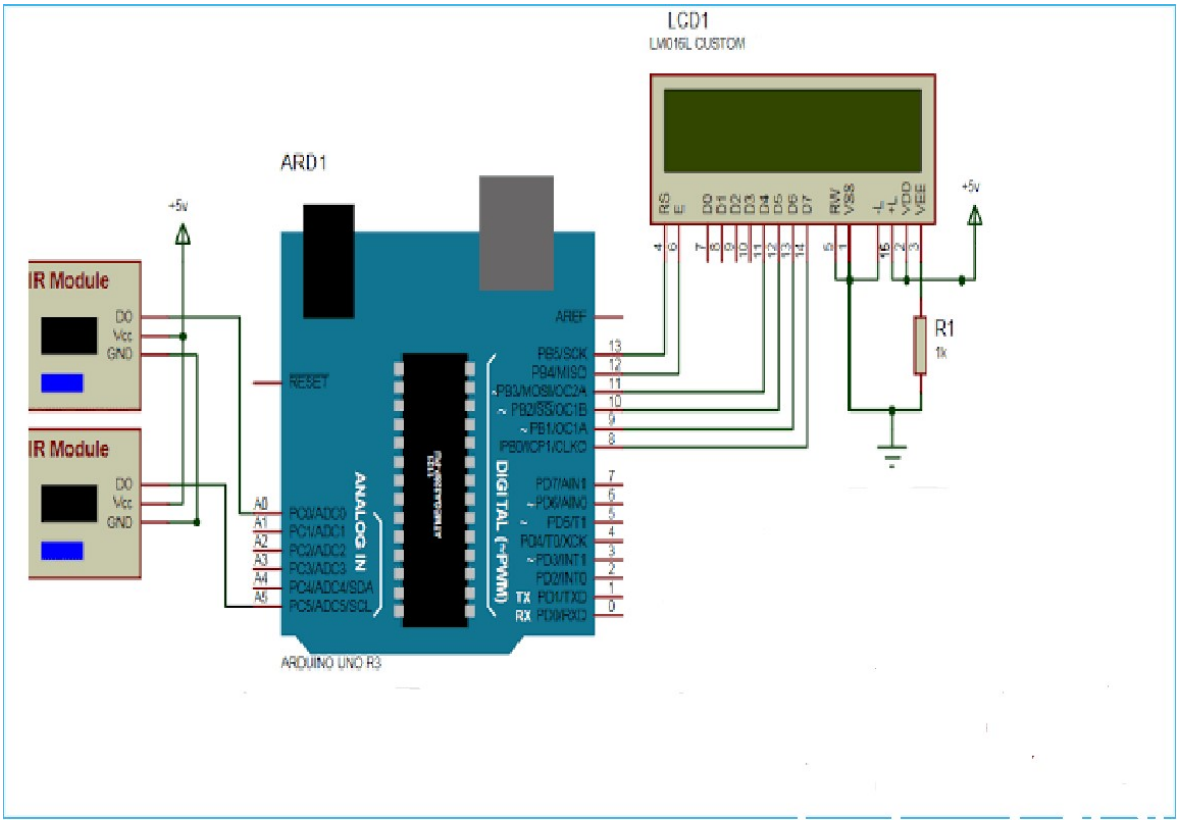

Figure - Circuit Diagram Of Visitor Counter

Result

It will count the number of times of door opens and will automatically raise alarm when it detects the extra person . This system easily count the person with the help of the IR sensors . It is easy to detect the time which are the person entering . It will also count the accurate number of persons in the prohibited area .

Conclusion

Bidirectional visitor counter using IR sensors and Arduino Uno is to measured and displayed the number of persons entering in any room like seminar hall , conference hall , auditoriums etc. .This system counted both the entering and existing visitor of the auditorium or hall or other public places .

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Battery Level Indicator for Electrical Vehicle

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Abstract:

Now a days use of electric batteries increases in automobiles, inverters. To improve the performance of battery we use battery level indicator. Battery level indicator is a circuit that is used to check the battery life. We can easily recognize the battery level with the help of LED's. It uses aLM3914 driver IC use to drive 7 led's by passing through it sufficient amount of current. Brightness of LED's are controlled by reference adjustable pin and reference out pin. We have colored LED's to indicate state of the batteries which made easy to understand.

Keywords: LM 3914, Battery, level indicator, Display driver.

Introduction:

The goal of this project is to design and build a system that would indicate level of battery. Knowing the amount of energy left in a battery compared with the energy it had when it was full gives the user an indication of how much longer a battery will continue to perform before it needs recharging. In this project we design a simple battery level indicator indicates the status of the battery just by glowing the LEDs. This circuit can be used to check car battery or inverter so by using this circuit we can increase the lifetime of battery. In this project there is no need of resistors in the series LEDs because current is regulated by the IC. The circuit derives the power supply for its operation from the battery of the device itself. In this project we use LM 3914 IC. It support dot mode.

Objectives:

- Gives the indication about the battery charging or discharging status.
- To avoiding the overcharging problems of batteries having high tolerance limit.
- To reduce the exploding problems of batteries.
- To reduce the exploding increases reliability by automatically recording & trending critical parameter.

Literature Survey:

In paper-[1] In this have reviewed experimental and adaptive technology for battery health diagnosis and prognostics; the data driven methods for remaining useful life prognostics. Battery performance inevitably [2] degrades with cycling, information about the state of health (SOH) of lithium-ion batteries is critical for safe and reliable operation. Generally, the remaining useful life (RUL) is predicted to give users an estimate of battery cycle life, so that decisions on battery replacement can be made. In [3] Batteries in plug-in hybrid vehicles (PHEVs) require sufficient energy and power and power fades when resistance increases as the battery age. Both the capacity and internal resistance should be integrated to estimate battery.

Material:

LM 3914:

The LM3914 is a monolithic integrated circuit by National Semiconductor that senses analog voltage levels and drives 10 LEDS, providing a linear analog display. A single pin changes the display from a moving dot to a bar graph. Current drives to a LEDS are regulated and programmable, eliminating the need for resistors. One LM3914 can driver 7 LED's, LCD's or vacuum fluorescent displays on its output.

Methodology:

The heart of circuit is LM3914. LEDS 'S displays the capacity of the battery in either dot mode or display mode. This mode is selected by the external switch sw1 which is connected to 9th pin of IC. 6th & 7th pins of IC are connected to the ground though a resistor.

This resistor controls the brightness of LED's. Here resistor R3 & POT RV1 forms potential divider circuit. Here RV1 is used for calibration. There is no need of any external power supply to this circuit. The circuit is designed to monitor 10v to 15v DC. This circuit will work even if the battery voltage is 3V. The operating voltage of this IC is 3V to 25dc. The IC can also acts as sequencer. Connect D1 to D3 red LED's which indicates shut down stage of your battery.

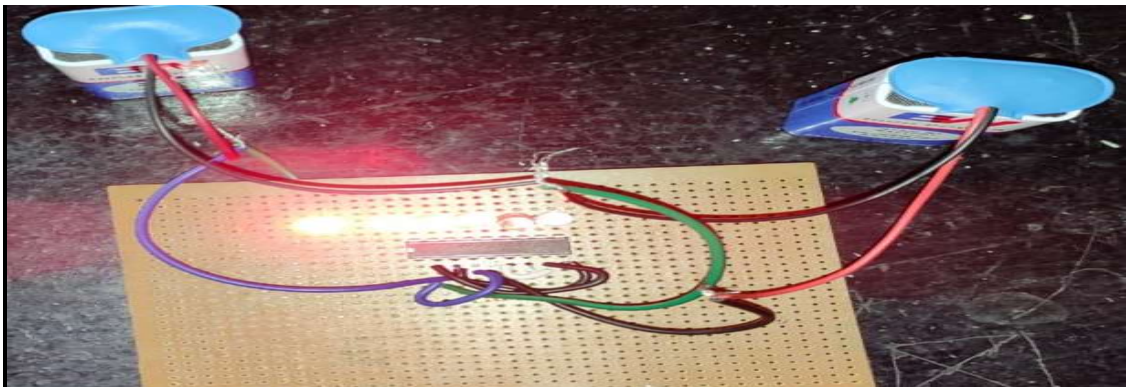

Figure1: when the battery level is 100%

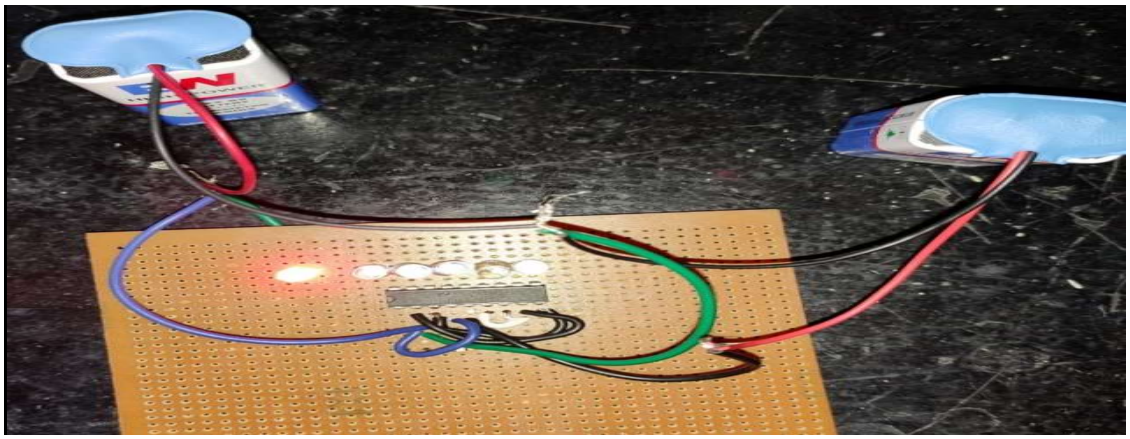

Figure2: when the battery level is 10%

Observation:

Battery voltage	Pin no. 1	Pin no. 18	Pin no. 17	Pin no. 16	Pin no. 15	Pin no. 14	Pin no. 13	Pin no. 12	Pin no. 11	Pin no. 10
0%	0	0	0	0	0	0	0	0	0	0
20%	1	1	0	0	0	0	0	0	0	0
40%	1	1	1	1	0	0	0	0	0	0
60%	1	1	1	1	1	1	0	0	0	0
80%	1	1	1	1	1	1	1	1	0	0
100%	1	1	1	1	1	1	1	1	1	1

Table 1: result of different battery level indication

Result:

Battery level indicator system using IC LM3914 is less cost effective method. The proposed for inverter, car battery for showing position of battery in vehicles. Thus the battery level indicator system has been designed and tested successfully. Our battery level

indicator indicates the status of the battery up to 12V batteries. Taking a look at these goals at the end it can be said that the total cost of our project was approximately Rs.300. This project is a stepping stone to a cheaper and efficient battery monitoring system along with 12V battery and LM3914 Display driver.

Conclusion:

In this project we detect the level of the battery and also life of the battery. We have succeeded in making the battery level indicator circuit and after tested it was seen that our battery level indicator is successfully work. Further we conclude that in our battery level indicator, it indicates the battery level on the LED, For example when 6 LED's are glow then 60% battery is remaining.

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Automatic Street Light on off Controller

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ABSTRACT:-

Now days, humans has become too busy, and is unable to find time even to switch the lights whenever necessary. The present system is like, the street lights will be switched on in the evening before the sunsets and they are switched off the next day morning, after there is sufficient light on the roads. This projects gives the best solution for electrical power wastage. In this model, LDR sensor is used to indicate day/ night time. Finally the system has been successfully designed and implemented as prototype system.

Keywords: Street light, LDR, transistor, relay.

INTRODUCTION:-

Automatic street light control system is a simple and powerful concept, which uses transistor as switch on and off the street light automatically. By using this system manual works are removed. It automatically switches on lights when the sunlight goes below the visible region of our eyes. It automatically Switches off lights under illumination by sunlight. This is done by sensor called a Light Dependent Resistor (LDR) which senses the light actually like our eyes.

OBJECTIVE:

- To know design procedure of Automatic street light control using LDR.
- To avoid the wastage of electricity at day time.
- To study different electrical parts and elements.
- To study light intensity.
- To control the lighting system on off.

LITERATURE SURVEY

In paper [1]: As we all know we are very busy and are unable to find time even to switch the lights whenever not necessary. The street light will be switched on in the evening before the sunsets and they are switched off the next day morning after the sufficient light on the roads. The paper focus on the application of modern technology in energy saving.

In paper [2]: In this paper we discuss the design and implementation of an "automatic street light control system". A Transistor switching a 12 v relay is deplored to provide the switching mechanism to activate the street light connected in parallel. The need for manual operation of the security lights is completely eliminated and much energy is saved that would have been otherwise wasted. If the user were forget to power "off" the light at any point in time.

MATERIALS:

- **LDR:**- An LDR is a component that has a variable resistance that changes with light intensity that falls upon it. This allows them to be used in light sensing circuit.
- **Transistor:**- BC 547 is a bipolar junction Transistor, abbreviated as BJT. It is an NPN transistor. It has 3 terminals named as Emitter Collector Base
- **Relay:-**A relay is an electrically operated switch. Many relays use an electromagnet to mechanically operate a switch, but other operating principles are also used, such as solid state relays.
- Transformer, bulb, etc.

METHODOLOGY:

Whenever light falls over LDR its resistance get decreased and transistor turns ON and collector Of this transistor goes low , and this makes the second transistor turns OFF due to getting a LOW signal at is base , so relay also remain turned off due to second transistor. Now, whenever LDR senses darkness, means no light then resistor turned on due to increase in the resistance of LDR which is responsible for voltage drop at the base of transistor.

Due to low signal at the transistor base, transistor gets a HIGH signal from the collector of transistor and turns on the relay. Relay Turn on the ac load that is connected to

relay. A 10k pot is also used for seating up the sensitivity of the circuit. So, this is how Automatic Street light turns on the night and turns off in the day.

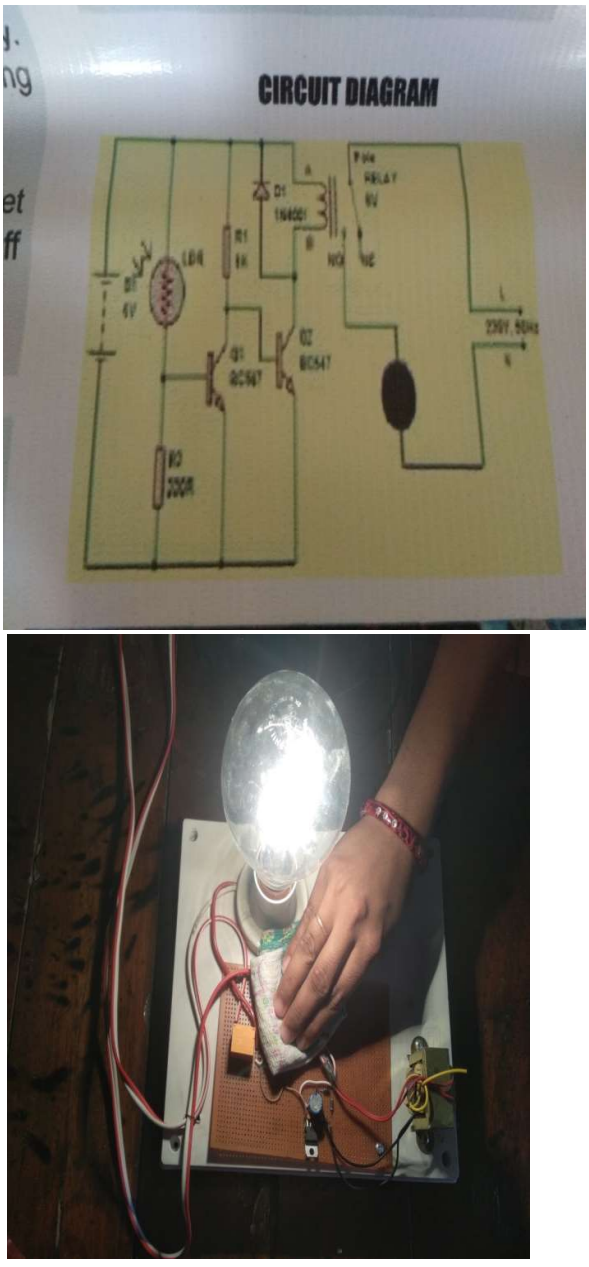

Figure :- Automatic street light Controller

ADVANTAGES:-

- No man power required.
- Simple construction.
- Efficient method.

- Less consumption of electrical energy.
- Less maintenance.
- Cheap and economical.

CONCLUSION:-

This project elaborated the design and construction of automatic street light control system circuit. Circuit works properly to turn street lamp ON/OFF. After designing the circuit which controls the light of the street as illustrated in the diagram. Finally this control circuit can be used in long roadways .

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Smart Goggles for Night Vision System to Avoid Road Accident

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ABSTRACT :

At night many accident has taken place due to low light and bad weather condition or high intensity light fall on bike riders or small vehicles, and this is reasons behind increasing percentage of accident at night. To overcome this problem many automobiles company use this night vision technique .Therefore to make human being unable to see in dark by technological means, night vision technology has been developed.

An automotive night vision system is system to increase the vehicle driver perception and seeing distance in darkness or poor weather beyond the reach of vehicles headlights. It senses the image in the form of electronic signal and then send it via cable to the LCD screen which helps the driver for his convenience. When the light from the headlight of the approaching heavy vehicle fall on the goggles LDR1, it senses light to energies the relay. This enables the transparent LCD's and there color turns black, when the light goes away the LCD's reset within the few seconds.

KEYWORDS : Night vision system, Light Dependent Resistor, LM311 operational Amplifier.

INTRODUCTION :

At night on highways the high intensity light from the headlight of heavy vehicles blinds oncoming light vehicles drivers e.g. bike riders and car-drivers for a moment. This is the main reason for a large number of accident on highways at night.

This Night Vision System increases vehicles drivers perception and seeing distance in darkness or poor weather beyond the reach of vehicles headlights. This technology or system reduce much amount accident at night. Night Vision technique is used under low light environment which works based on three method. Image intensifier, active illumination and thermal imagine. Therefore, to make human being unable to see in dark by technological means, Night Vision Technology has been developed, which is more useful for vehicle drivers for safely driving. Due to this technology we try to be reduce much more accident at night

OBJECTIVE :

- To increase the ability to see in low light condition.
- To improve a vehicles driver perception night.
- To show up roads and buildings better to vehicles drivers.
- To alert a driver to presence of animal or people on the roads at nights.
- Advanced to in vehicle and vehicles driver safety.
- Better overview of the driving situation.
- Improved vision conditions of dusk and darkness.

LITERATURE SURVEY :

In these paper [1], the various methods and applications of Night Vision Technology has been explained. The working of the methods, both advantage and disadvantages of three method has been explained. The importance and working of night vision technique in automobiles has been mentioned. Image fusion and the edge detection algorithm has been used in night vision technique to display the clear image.

Night vision system of the BMW [2] which gave us the knowledge about the whole system. We can know the benefits to having this technology in the vehicle which can be used to avoid accident. By the study of the paper we got familiarize with the technology used in BMW Night Vision System. automatic pedestrian warning in the form of the highlighting the pedestrian on the night vision display is generally helpful in increasing detection distance and accuracy. In these paper [3], study is using a data set of night surveillance activities system will automatically differentiate and identify the subject and indicate the existing subject and indicate the existing subject is harmful or harmless subject and safe life.

MATERIALS :

- LM311-

  LM311 is an excellent operational amplifier capable of driving DTL, RTL,TTL or MOS logic. The output can switch voltage to 50 volt at current to 50mA. IC LM311 operate between 5 to 30 volt of single supply. It can be used to drive relay, lamps, solenoids etc., but when compared to other operational amplifier the pin connection of LM311 is different. This is design note will help you to design circuit based on LM311.

- LDR –

LDR (Light Dependent Resistance) are cheap light sensors. A less known light detector is the electric microphone, whose electret membrane function as perfect absorber, but only detect pulse light. LDR is device whose resistivity is a function of incident electromagnetic radiation. Hence they are light sensitive device. They are also called as photo conductor, photo conductive cell, or simply photo cells. LDR is a component that has as resistance that changes with light intensity that falls upon it. This allows them to be used in light sensing circuit.

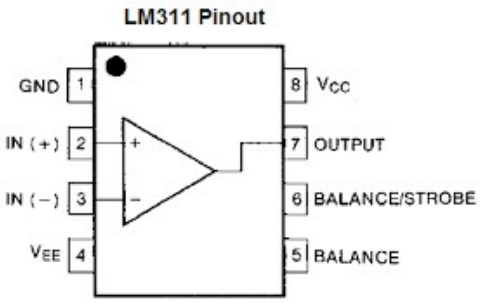
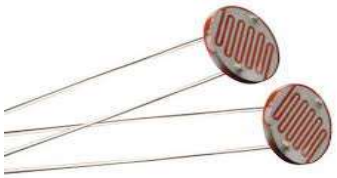


Figure 2: Light Dependent Resistor

METHODOLOGY :



The heart of circuit is IC LM311. IC LM311 is wired as comparator. It's non-inverting Pin-3 gets reference voltage through divider network formed by resister R1 and R2. Inverting Pin-2 gets the control voltage through the network preset VR1, and light dependent resistor LDR1 . At the night, the resistance of LDR1 is very high and therefore the voltage at the inverting input of IC1 remain higher then at the non-inverting input and relay remain e-energized to disable transparent LCD's.

When lights falls on LDR1, it's resistance reduces as result, the voltage at the inverting input of IC1 goes below the voltage at the non-inverting input and the relay energies to enable the transparent LCD's.

When the light from the headlight of the approaching heavy vehicle fall on the goggles LDR1, it senses light to energies the relay. This enables the transparent LCD's and there color turns black, when the light goes away the LCD's reset within the few seconds.

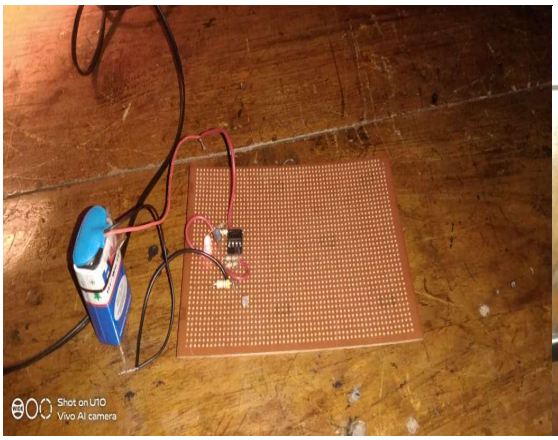


Figure 3: At normal condition LED off

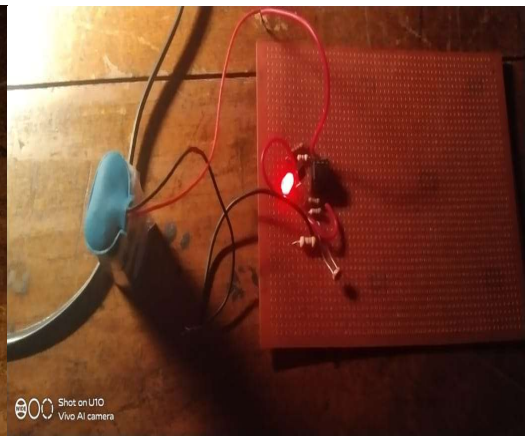


Figure 4: When light fall on it LED on

When this circuit is fitted on transparent LCD the goggle look like this:

Figure 5 : Circuit fitted on transparent LCD's

RESULT :

The night vision system using IC LM311 is less cost effective method. The system is proposed for small vehicles (Bike riders or car drivers) at night. When the light from headlight of the approaching heavy vehicles fall on the goggles, LDR (Light Dependent Resistance) , it senses light to energies the relay. The system reduce intensity of light from heavy vehicles, when the light goes away the LCD's reset within a few seconds. Thus night vision system has been designed and tested successfully.

CONCLUSION :

In the project we built night vision system. By through this night vision device we can see the object in dark environment. The system innovation and implementation of night vision system has a great impact on automotive session such as saving many lives from death reducing accidents at night. Observer can work efficiently during night and also shown how surveillance can be kept in low light condition. Finally we come to know the benefit to having this technology in the vehicle which can be used to avoid the accident.

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Speed Checker System for Highway

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ABSTRACT

In today fast moving world the accidents are increasing at very fast rate. One of the major-cause of these accidents is over a speeding of Vehicles. A major step has been taken rather to increase the road safety so as to minimize accidents .one of the major developments was the introduction of the speed camera. The principle of these speed cameras is Doppler Effect used in RADAR. Now days we here news about accidents on highways very frequently and in most of the cases main reason of accidents is over speed. The project mentioned here is Speed Checker and over speed detector for highways. This project is designed by taking into the consideration the problem mentioned above we have used two sensors in these project these sensors detect vehicles speed. Condition is that the two sensors should be installed at a distance of 100 Meter apart from one another. This project has buzzer also over speed condition is indicated by turning on the buzzer. Although all high ways do have sign boards indicating maximum speed limit for the sake of drivers safety but still people does not obey high way speed limit. In order to overcome this problem we have designed equipment called as speed checker for highways. The speed limit is set by the police who use the systems depending upon traffic at every location. The time taken by the vehicle to travel from one set point to another is calculated by control circuit IC-555 timer.

Keywords: speed checker, IR Sensor, IC 555 timer, LED

INTRODUCTION

The speed checker will come for the highway traffic police as it will only provide digital display in accordance with a vehicle speed but also sound and alarm if the vehicle exceeds the permissible speed for the highway . To detect rash driving on highway and to alert traffic authorities wirelessly the speed details and any speed violation. Accidents due to rash driving are on rise and people loss their lives due others mistakes. This is an insufficient process as after detecting one has to inform the same and lot of time is wasted. Although there good road safety performance the number people killed and injured on our roads remain unacceptably high. So the road safety strategy was published and introduced to support the new casualty reduction targets the road safety strategy includes all forms of invention based on engineering and education and enforcement and recognize that there are

many different factors that lead to traffic collisions and casualties. The main reason is speed of vehicles. We use traffic lights and other traffic manager to the speed .One among them is speed cameras.

OBJECTIVE

- The main objective of this system to develop a highway speed checker device
- To detect rash driving on highways and to alert traffic authorities if the speed checker finds any vehicles violating the set limit on highways
- To provide a digital display in accordance with vehicles speed
- Accidents occur due to speed violation since the drivers tends to ignore their speedometer
- The main purpose of this system is to reduce the accidents

LITERATURE SURVEY

It is generally agreed [1] that speed is one major factor contributing to the occurrence of traffic accidents, and to the seriousness of the consequences should an accident occur. In paper [2] As many drivers exceed - limits a major concern for road authorities is to increase adherence to speed limits. There are different strategies available. For example information campaigns, police surveillance and different types of physical measures such as road humps, flower pots, small circulation points, and elevated pedestrian crossings. An alternative and/or complement to these measures are different applications of intelligent speed adaptation (ISA). [3] To increase knowledge about Drivers usage and acceptance of different ISA applications and the possibilities for using road informatics in large scale the Swedish National Road Authority launched large-scale field tests in four different cities in Sweden for the period 1999–2002. The most extensive study, in terms of number of participants, was carried out in Umea, 1 Sweden.[4] The analysis indicated that age, perceived risk, moral and perceived difficulty to keep the speed limits significantly influenced their evaluation of the ESC and that the perception of the ESC influenced the decision to participate.

MATERIAL

1)IC 555 Timer-

IC 555 is an integrated circuit (chip) implementing a variety of timer and multivibrator application. The ic555 timer is type of chip used in different applications like an oscillator , pulse generation ,timer. The designing of ic555 timers can be done by using

various electrical and electronic components like transistors ,resisters ,diodes and a flip-flop.

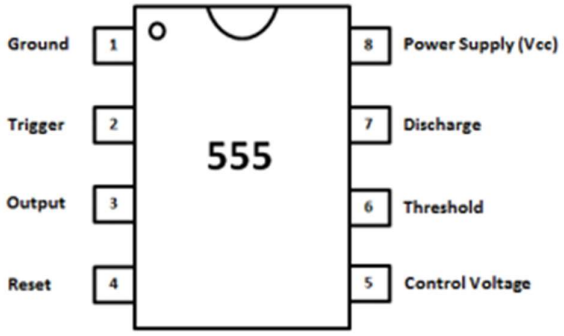

Figure 1: pin Diagram of IC 555

2) Decade Counter-

A decade counter is one that counts in decimal digits, rather than binary. A decade counter may have each (that is, it may count in binary-coded decimal, as the 7490 integrated circuit did) or other binary encodings. "A decade counter is a binary counter that is designed to count to 1010 (decimal 10).

3) NAND Gate- The 7400 chip, containing four NANDs.

4) LED, Photodiode, IR LED, Buzzer, 7-Segment Display, Transformer, Regulator.

METHODOLOGY

There are total four section. They are counter circuit, timer, control circuit, trigging- circuit, 7-segment display .Each block has its own functionality. It is used for displaying the output. Counter circuit is one of the Count the number of times. Timer and control circuit consist of timer IC and another IC which receives input signal from travelling circuit. The proposed system checks rash driving by calculating the speed of a vehicle by using the time taken to travel between the two set points placed on the road at a certain distance.

A set point consists of a couple of sensors comprising an IR transmitter and an IR receiver, which are placed on either side of the road. The speed limit is set by the police who use the system depending on the traffic at each location. The time taken by the vehicle to travel from one set point to the other is calculated by the control circuit. Based on the time that has elapsed between the two sensors, the control circuit calculates

the speed and displays the result on a seven segment display. If a vehicle exceeds the speed limit between transmitter and receiver, then this system emanates a buzzing sound as an alarm and alerts the police.

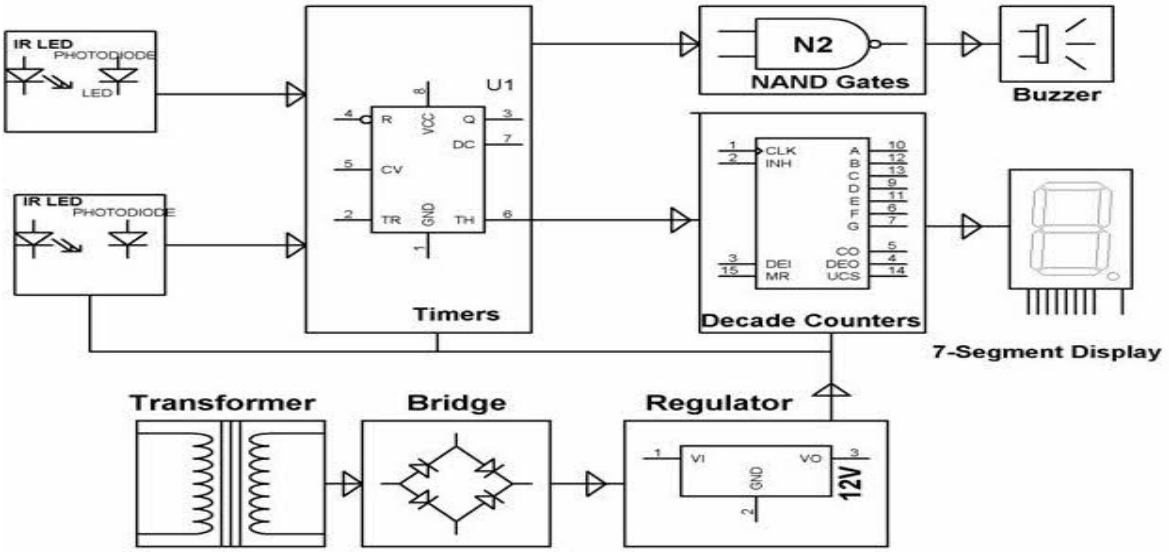

Figure 2: speed checker for highway using IC 555 time

RESULT: While driving on highways, drivers should not exceed the maximum speed limit permitted for their vehicles. However, accidents keep on occurring due to speed violations as drivers follow their speedometers and control their speed according to them, and reduce the speed if they find it to be exceeding and beyond their control. A highway speed checker comes handy for the traffic- police , especially against the speed limit violators because it provides the digital display as well as buzzing sound or alarm to detect any vehicle speed if the vehicle exceeds the permitted speed limit .This kit is inexpensive and it is used for considering the average and high speed of vehicles that move on the highways or roads.

CONCLUSION

Since number of accidents on highways increases day by day so it is necessary to check speed of the vehicles on highways so as to remove accident cases and to provide a safe journey by controlling high speed of the vehicle. It also minimizes the difficulties of traffic police department and make ease to control the rash driving on highways. The police can perform their duties while sitting in control room and can provide their service with more ease and accuracy. This concept can be extended in future by integrating a camera with the system

which could capture the image of the number plate of the vehicle to sends that to the traffic authorities.

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Smart Warning System for Over Height Vehicle

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Abstract

A bridge or tunnel strike is an incident in which a vehicle that is taller than the clearance underneath the structure (over-height), typically a lorry or double-decker bus, collides with the structure causing damage. This can lead to injuries, fatalities and train derailments. Bridge and tunnel strikes are costly and expensive. In this paper, we present a comprehensive synthesis of the nature and scope of the problem of bridge and tunnel strikes, followed by the current state of research. Bridge and tunnel strikes still occur with high frequency and prevention systems available on the market are often too expensive. Bridge-owners are seeking an affordable yet reliable system that is cheap enough for widespread installation without compromising the accuracy and performance of such a system.

Keywords: Over height detection system ,using Arduino Mega ,IR sensor, LED.

Introduction

An over height vehicle strike (OHVS) is an incident in which a vehicle typically lorry(truck) or double Decker bus tries to pass under a bridge or tunnel that is lower than its height subsequently colliding with the structure .Accidents are the results of human errors such as; high speed, careless drive, overweight vehicles, over height vehicles, and errors of the infrastructure road design. Over height vehicles cause less control drive or collisions with bridges and tunnels which cause structures and vehicles damage. Therefore over height vehicle is one of the most important reasons which cause accidents. This system can be used to detect big over height vehicle moving towards bridges tunnel entrances and over head structure and warn the driver it can be developed for monitoring such a vehicle approaching say a bridge at night. The vehicle system uses an (IR) infrared sensor to monitor the vehicle and audible alarm or sign is activated when an over height vehicle is detected by the system

With the aim of reducing injury and accident severity, pre-crash sensing is becoming an area of active research among automotive manufacturers, suppliers and universities. Vehicle accident statistics disclose that the main threats a driver is facing are

from other vehicles. Consequently, developing on-board automotive driver assistance systems aiming to alert a driver about driving environments, and possible collision with other vehicles has attracted a lot of attention.

Objectives:-

- In order to avoid these accident and to reduce involve costs. It is beneficial to have a warning system that detect over height truck and notify its driver ahead of low clearance overpass/Tunnel.
- An audio alarm is activated when the over height vehicle detected by the system.
- Reduce damage to trucks /trailers and occupant injuries

Brief Literature Survey:-

This project will investigate ate and test truck mounted LIDER and optical sensor to determine there feasibility for detecting hazardous bridge /tunnel heights for warning the driver of an over height truck this documents , which describes the problem and reviews potentials solutions is the first deliverable of the project . This paper [1] presented a new technique of over-height vehicle detection. This technique was advanced driver assistance system to reduce collisions between motorists and overhead structures. The proposed technique was design by three different methods; mechanical, optical, and image processing method. The technique achieved at a real-time operation. This technique consisted of three stages; over high detection, driver alert, and traffic administration unit. License plate recognition (LPR) was used at traffic administration unit. The system was robust, and had accurate performance.

Material

1. IR Proximity Module

This module incorporates IR transmitted and IR receiver /detector in one package it transmitted and IR beam continuously .whenever on object or over height vehicle is detected the IR beam reflected from the object /vehicle is detected by the in build IR receiver when the refracted IR beam is detected, the vehicle detection system generates an audio alert information the driver to stop the vehicle as it may not be set to continue LED 1 used visual alert whenever an over height is detected.

2. Arduino Uno

Arduino Uno that has an at Mega 328 microcontroller (MCU) is used in the project it consist of 14-digital input/output pins ,six analogue inputs ,16MHz crystal oscillator ,USB connection , Power Jack ICSp header ,and reset button output of sensor

module is analogue it gets converted to digital through the inbuilt A/D converted of Arduino Uno.

3. LCD

A 16 pin JHD16A LCD module is used in this system as warning display it is two lines and 16 characters LCD module which can replace with large LCD display

Methodology:-

We developed and designed a system for over height vehicles detection. Made a connection as per the circuit diagram. if an object or vehicle is not detected by sensors 'path is clear 'message is displayed on LCD. If vehicle is detected the massage reads as a "please stop!!".

At same time LED glows and buzzer sounds and alarm the circuit can be wired on the bread board with jumper wire for testing.

Those vehicle detection system implemented using a lesser sensor speaker and bigger display instead of a proximity sensor buzzer and 16×2 respectively the sensor and display should be installed along the path of vehicle before it approaches the bridge so that the driver gets notified of the warning message well in time .

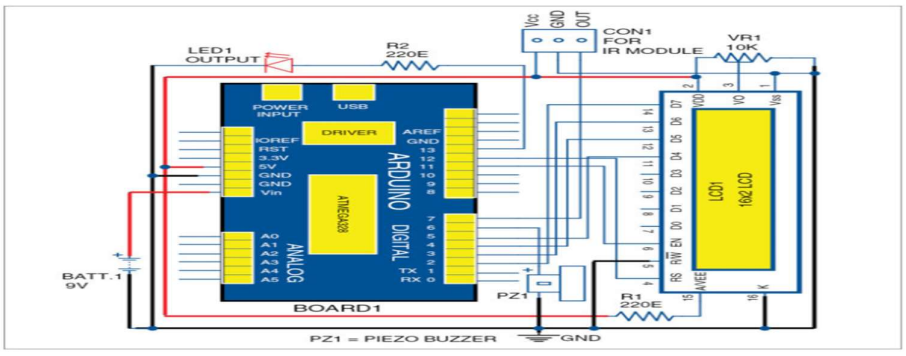

Fig. 1: Circuit diagram of vehicle detection system

Fig. 3: Warning message on LCD

Advantages:-

1. There are many accidents due to high speed , so by using this technology on highway, we

can stopped these types of accidents.

2. The people also safe on road during cross it.
3. It could detect overweight vehicles
4. It reduces exposure to costs associated with incidents or accidents, and warns traffic administration to overweight vehicles.

Result:-

This Smart Warning System proved the efficiency of the system and its applicability to the field of advanced driver assistance. The technique had many advantages.

Conclusion

This module incorporates IR transmitted and IR receiver /detector in one package it transmitted and IR beam continuously .whenever on object or over height vehicle is detected the IR beam reflected from the object /vehicle is detected by the in build IR receiver when the refracted IR beam is detected, the vehicle detection system generates an audio alert information the driver to stop the vehicle as it may not be set to continue LED 1 used visual alert whenever an over height is detected.

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Comparative Study of Efficacy in *Aloe Vera* and Lifebuoy Hand Sanitizer

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Introduction :

This days people are really prone to diseases just by simply touching a dirty thing, and commonly our hands are particularly one of the suspects on why we usually has germs in our body that sometimes causes us to be ill, that's why our group decided to make an *Aloe vera* Sanitizer. *Aloe vera* gel has alleged to be useful for dry skin conditions, cosmetic ailments, hair and scalp problems and many more. *Aloe vera* Hand Sanitizer is more effective at killing microorganisms than soaps. *Aloe vera* Hand Sanitizer will help us stay our hands clean and far from diseases that can harm us and lead us to serious problems or even death.

Objectives :

1. To make low cost and easily manufactured hand sanitizer.
2. Existing sanitizers have been compared to determine the best type on the basis of cost, material availability and effeteness.
3. *Aloe vera* act as moisturizer. It prevents our skin from dryness.
4. Alcohol sterilizes the skin.
5. Glycerin prevent dry, rough, scaly, itchy skin irritations. Skin becomes softer healthier.
6. Orange contain vitamin C which helps the body to form collagen and elastin which will keep your skin looking younger.

Methodology :

1. Preparation of the required material.
2. Cut the *Aloe vera* into half and after that scrubbed the gel out of the leaf.
3. It is mixed the following : Alcohol, *Aloe vera* Gel, Glycerine and Orange peel extract.
4. Lastly after mixing it, put it in a container.

Results and Discussion :

All the hand sanitizers used in the market are found to be effective against the common bacteria and other microorganisms which can be contagious. The efficacy of sanitizers was found to be very effective against several microbes, especially bacteria as compare to Lifebuoy hand sanitizer.

In present study the bacterium used *Staphylococcus aureus* was found to be sensitive to the above mentioned Lifebuoy sanitizers.

Effect of *Aloe vera* Hand sanitizer on *Staphylococcus aureus*

Effect of Hand sanitizer Lifebuoy on *Staphylococcus aureus*

Conclusion :

In our present study hand sanitizers irrespective of alcoholic / non-alcoholic are found to be effective in controlling the bacteria. It is therefore recommended to use the hand sanitizer before and after the practical in laboratories.

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Comparative Study of Chlorophyll Content in Healthy and Infected Beans from Dahiwadi Region.

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A b s t r a c t

Pathogens have a remarkable impact on metabolism of their host plants. Chlorophyll metabolism is activities which is seriously affected by infections. In the present study, it was observed that the uninfected plants were containing more chlorophyll than in infected plants. Hence it is established that the infection alterations in photosynthesis and as a result, disruption of normal phloem transport.

K e y w o r d s : Beans, Mosaic disease, chlorophyll, Metabolic alterations

Introduction

Bean is one of the earliest recognized oriental Pulse. From time immemorial, it is being cultivated in India for both as fresh and dried vegetable. The Bean family Leguminosae is largest dicot family from tropical group, especially abundant in the Indo-Malaysian region. This family consists of more than 18000 plant species in 650 genera. It is one of the oldest leguminous crops of the world like *Cajanus, Cicer* and *Pisum*. It is being cultivated in several parts of the world, mainly in the countries like India, China, Japan, Taiwan, Nigeria, Australia etc. Maharashtra has a good contribution in the total production of Beans. A high proportion of the dry Beans from the state, India exports Beans mostly to the countries viz. USA, UK, Saudi Arabia, Canada and Singapore.

Materials and Methods

Estimation of chlorophyll content

For chlorophyll estimation, 1 g of freshly cut and well mixed representative samples of leaves was taken. It was ground to a fine pulp with addition of 20 ml of 80% chilled. It was centrifuged at 5000 rpm for five minutes at 4°C and the supernatant was transferred into a 100 ml volumetric flask. The residue was again ground in 20 ml of 80% chilled acetone, centrifuged as earlier and the supernatant was transferred to the same volumetric flask. Chlorophyll a, chlorophyll b and total chlorophyll contents were calculated using the following formulae:

mg chlorophyll $x\frac{v}{1000w}$

Chlorophyll a: [12.7 (A 663) – 2.69 (A 645)] X $\frac{v}{1000w}$

Chlorophyll b: [22.9 (A 645) – 4.68 (A 663)] $\frac{v}{1000w}$ X

Where, A = absorbance at specific wavelength,

v = final volume of the chlorophyll extract and

w = fresh weight of the tissue extracted.

Results and Discussion

Healthy as well as infected plants, the carbohydrate level was observed to be increasing up to 60 and 90 DAI, after which a decline was observed. The healthy plants exhibited the highest carbohydrate level at 60 DAI and it was observed to be 23.61 mg g^{-1}. The infected plants showed the highest carbohydrate level at 90 DAI and it was 14.72 mg g^{-1}, and thereafter declined to 11.92 mg g^{-1} and 7.26 mg g^{-1} respectively.

Estimation of chlorophyll

The estimation of chlorophyll in healthy and infected plants comprised of estimations of chlorophyll a, chlorophyll b and total chlorophyll content at different days of interval. Throughout the estimation the chlorophyll content was found much lower in infected plants when compared to healthy plants. The healthy plants showed an increase in total chlorophyll content, from 1.73 mg g^{-1} at 30 DAI to 1.97 mg g^{-1} at 120 DAI, whereas infected plants showed a decline from 1.14 mg g^{-1} to 0.56 mg g^{-1} during the same period of observation. The chlorophyll a content of infected plants declined to the level of 0.37 mg g^{-1} at 120 DAT from 0.74 mg g^{-1} at 30 DAI. During the same period the healthy plants had an increase in chlorophyll a content.

The results revealed that the infected plants showed a significant reduction in the chlorophyll content than in healthy plants due to the viral infection. Viral diseases have a huge impact on production, productivity .

Post infection decrease in reducing sugars, non-reducing sugars and total sugars in the plants infected with TLCV was reported[1] (Raghavendra, 2002). A significant reports of decreased starch content in virus infected plants. This might be due to the alterations in photosynthesis and as a result of disruption of normal phloem transport. The viruses depend on a host plant for its replication. They alter the metabolic system of the host and bring

drastic effects over the hosts. Carbohydrate and chlorophyll alterations due to viral infections are very widely reported and discussed by various scientists.

Table.1 Changes in total chlorophyll content of ginger leaves in response to virus infection, mg g-1

Day after Infection	Changes in Chlorophyll content (mg g-1on fresh weight basis)					
	a		B		Total	
	Healthy	Infected	Healthy	Infected	Healthy	Infected
30	1.36	0.89	0.56	0.38	1.92	1.27
60	1.89	1.23	0.99	0.48	2.88	1.71
90	1.66	0.56	0.64	0.20	2.30	0.76
120	1.56	0.39	0.58	0.16	2.14	0.55

The estimation of chlorophyll in healthy and infected plants comprised of estimations of chlorophyll a, chlorophyll b and total chlorophyll content at different days of interval. Throughout the estimation the chlorophyll content was found much lower in infected plants than healthy plants. Chlorophyll degradation is a common characteristic phenomenon in viral infections and the present findings are in terms with that of other reports.

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Study Of Medicinal Plants From Man Tahesil , District Satara

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ABSTRACT

The presence work is carried to find out use of medicinal plants by the local people for their ailments . Therefore the intensive survey and investigation is carried out in dry zone of Man Tahesil (Satara) and observed above medicinal plants which are being used by the local people for the therapy of Various ailments . The list of medicinal plants with their therapeutic use is presented in this paper .

Key words : Medicinal plants, Man Tahesil, Local People, Ailment .

INTRODUCTION

Man Tahesil is located at 17.98ºN and 74.43º E in Satara district at Maharashtra state . It receives very less rain fall from June to September and has been declared as Drought prone place by Government of Maharashtra (2001 Census) . Main crops include Jowar ,Bajara in rainfed region. The Taluka is rich in medicinal plants and more than 50% People use these plants as Medicare . Now a days people are diverted to make the available land under cultivation by destroying natural vegetation . Therefore there is a need of conservation of medicinal plants which play very important role to cure most of the diseases like common cold , Cough ,Diarrhoea blood sugar , headache ,wounds healing & stomachacheetc . (Alkashiva , 2002) (DnyaneshwarP.Ghorband and Sharad D. Biradar (2011) .

Material and Method

Man Tahesil is divided into two parts as Eastern irrigation zone and Western rainfed zone . The present study is carried out in rainfed zone . The data is collected by using questionnaires and by personal contact of local people , local medicineman , Ayurvdacharyaetc . Unknown plants were brought to laboratory and identified using .About villages out of 127 were covered books during present study and information of medicinal plants was collected . Help of local Ayurvedic Doctors is also taken . Some books on medicinal plants are referred during the study (Sharma 2004 ;Drury 2006 and

Jain 2013) The data is tabulated in the form of Botanical Name , Local Name and their use .

RESULTS AND DISCUSSIONS

A list of Medicinal plants and their uses are depicted in Table No . 1 . Over plant species were identified during the study . Adekunleet.al . (2002) have mentioned 105 different medicinal plants used for traditional health care in Ogumstate of Nigeria .Punjani (2002) given the list of 63 ethano medicinal plants used to cure human diseases in Banaskanta district of Gujarat . Ingale and Patil (2014) assessed over 30 medicinal plants for the parameters of Abundance , Density and Frequency . During the study some people (Vaidu) have denided to provide the information about medicinal plants and their uses . However we tried to collect the information of such plants in present area It is found out that some medicinal plants are being irradicated by the people during developmental activity . Therefore it is need to conserve such plants more over the knowledge of medicinal plants must be passed from generation to generation . The younger generation has not interest in the knowledge system of their forefather . They may forget this system .Therefore it is urgent need to collect whatever knowledge they have to be recorded or preserved in scientific way otherwise use of medicinal plants by local people for cure their ailment will become extinct .

Table No.1 : Details of Medicinal Plants used by Villagers of Man Tahesil

Botanical Name	Family	Local Name	Locality	Morphology	Parts used	Traditional Uses
Acacia nilotica	Mimosaceae	Babhul	Vavarhire,Shingnapur, Waghmodewadi, Pandharwadi,Kolewadi	Dark brown ,rough bark . Leaves bipinnately compound with spines . Flowers golden yellow in ploboseheads ..	Stem , Leaves , and Flowers	Tender shoots chewed after scorpion sting .Flower extract used as a tonic in diarrhea and dysentery . Leaves are eaten in throat infection . Bark powder used in pneumonia Tender stick branch is chieved for strengthening gums &toavoid dental diseases .

Achyranthus aspera	Amaranthaceae	Aghada	Godsewadi, Jagatapwasti, Kulakjai,Shindi,Malawadi,Takewadi	Perennial herb with woody base , leaves are petiolate ,apposite ,Flowers are greenish white	Root, Leaves	Roots crushed in water given in scorpion sting and dog bite , Leaves with milk of goat in asthama ,Leaves prevents ulcers . Leaf extract used in skin diseases .
Aegle marmelos	Rutaceae	Bel	Partawadi,Sirwali,Parkandi,Kasarwadi,Andhali.	Bark is grey outside and rough .Wood is hard with long thorns , Leaves are alternate .Spines present in axile of leaves . aromatic .	Leaves, Fruit	Chewing of leaves in piles , Ripened fruits in anemic dysentery , Vomiting and jaundice .
Allium sativum	Amarylidaceae	Lasun	Malawadi , Shindemala ,Gondawale , Pingali,Ukirde .	It groves upto 1.2 m in height . Producess hermaphrodite flowers . They are herbaceous perennials ..	Entire plant	It reduces cholesterol . Garlic extract used in reducing systolic blood pressure . Garlic cloves used against chest problems .it is used as blood purifier ,Juice of garlic is used for relief of ear –ache ,garlic oil used on headache .
Aloe vera	Liliaceae	Korpad	Surupkhan wadi, Shirkewasti, Waghmodewadi,Kalewadi,Bhawanwadi.	Short succulent plant . Adventitious root system .	Leaves	Fleshy part of leaf baking with sugar given in fever and cough , fleshy part with jaggery in menstrual problems .Leaves extract used for smoothen hairs .
Argemonemaxicana	Papaveraceae	Billinga	Satrewadi,Pandharwadi, Takewadi, Malawadi	Branching herb with yellow flowers .Leaves are thistle like .stem is oblong and spinous .	Stem latex ,Root ,Leaves	Latex employed on viral infection of eyes ,conjunctivitis . Extract of leaves and flowers used against skin diseases ,Root extract used in hepatitis.
Azadirectaindica	Meliaceae	Kadulimbb	Sitamai,Kulkajai,Teldara,Gaidara	Adventitious root system ,Leaves are	Bark , Leaves and seeds	Bark in gynaecological problems ,Leaf juice in acidity , seed oil applied on wounds .

				imparipinnate and leaflets are apposite , .Flowers are scented 5mm long ,pentamerous .		Leaf petioles are cheived to cure stomach & intestinal disorders as well as to reduce acidity . Riped fruits are eaten to kill warms in intestine . Smoke of fresh leaves repaleinsects .
Boerhavi adiffusa	Nyctaginaceae	Punarnava	Bhadewadi, Partawadi, Tondale , Garpirwadi	Roots are elongated ,fusiform ,tuberous ,stem is cylindrical , branched ,reddish brown .	Shoot	Leaf juice on jaundice ,gas trouble and constipation . It is used as diuretic and expectorant .
Calotropi sprocera	Asclepiadaceae	Rui	Kasarwadi , Bhandwali, Pingali, Bijwadi,Pangari, Wadgaon.	Height 8-10 feet . The leaves are sessile or subsessile ,opposite ,ovate ,cordate at the base .	Stem and flowers	Latex on joint swelling and cabuncles and removal of spines from legs . Dried powder of petals with honey in whooping cough .
Cardiosp ermum helicabu m	Sapindaceae	Kapalphodi	Pachwad, Kisvewadi, Kacharewadi .	It is climbing herbaceous plant . Tap root system .	Leaves	Leaf decoction in rheumatism and piles .
Carica papaya	Caricaceae	Papai	Godsewadi, Jagatapwasti, Kulakjai,Shindi, Malawadi, Takewadi	Tap root system , stem is aerial , branched ,woody ,Leaves are compound ,green and shows reticulate venation . Fruits is dark green in colour with many black seed	Unripe fruit latex	Fruit latex applied on piles . Fruit juice is used toincrease the level of blood cells . The pieces of riped papaya is applied onface skin for removal of spot on the skin The mixture pf papaya leaf latex ,Hing and extract is tken is dengu fever to increase plateles .

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Home Automation Project Using IoT

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Abstract

A home automation common tasks include turning off lights when no one is in the room, locking doors via smartphone, automates air condition systems that can sense and memorize temperature settings and appliances that help you reduce the time you spend in the kitchen. This project revolves around creating a home automation system prototype with the main focus being the ability to control our all home appliances through the internet. The system consists of a central device, a server and an Android application. The central device is a microprocessor, in this case, a Node MCU Wi-Fi Module that connects to the Internet and receives an order to control home appliances.

. The server manages users and devices, and handles the communication between the application and the central device. Users and devices are stored in a database on the server. This brought up some problems concerning powering the device using batteries. The software of the prototype is mostly working but due to the same time limitations not all planned features could be implemented.

Keywords: Home Automation System, a Node MCU Wi-Fi Module, Android, Wireless Communication, Home Appliances, Arduino,Blynk Etc.

Introduction

A simple definition for home automation is the ability to do tasks automatically and monitor or change status remotely. Common tasks include turning off lights when no one is in the room, locking doors via smartphone, automates air condition systems that can sense and memorize temperature settings and appliances that help you reduce the time you spend in the kitchen.

Home automation or demotics is building automation for a home, called a smart home or smart house. A home automation system will control lighting, climate, entertainment systems, and appliances. It may also include home security such as access

control and alarm systems. When connected with the Internet, home devices are an important constituent of the Internet of Things ("IoT").

A home automation system typically connects controlled devices to a central hub or "gateway". The user interface for control of the system uses either wall-mounted terminals, tablet or desktop computers, a mobile phone application, or a Web interface, that may also be accessible off-site through the Internet. Home automation can quickly bring the future in to our homes by incorporating security, climate, and household gadgets and transforms our regular home into a futuristic smart home.

Advantages

- There are many plus points for user by automating your home.
- Gives you a peace of mind with security solutions.
- Save time by accessing and controlling daily tasks with the touch of a button.
- Save money and help build a friendly environment by avoiding wastage of electricity. Managing all of your home devices from one place. The convenience factor here is enormous.
- Flexibility for new devices and appliances. Smart home systems tend to be wonderfully flexible when it comes to the accommodation of new devices and appliances and other technology.
- Maximizing home security. Improved appliance functionality.

Methodology

- Who is the system for?
- Firstly you need to establish who the system will be used by – just yourself, the whole family or a client. Establishing who the system is for will enable you to get a grip and start to detail whats required across the home. .
- Decide what parts of your home you want to control.
- Home Automation is about integrating many parts of your home into one solution, this can include audio and video entertainment, lighting, heating or security.

- How do you want to control your home In the early days of multiroom and home automation, the only option was often simple hard button panels or simple remotes which offered limited control and interaction with your home.
- Planning the stages of installation Involve everyone in planning Getting the timings right Don't cut corners!

Objectives

One home automation application that has recently started to become mainstream is the ability to control home appliances using a smartphone application or through the internet using google assistance (Android application). This project aims to develop a prototype of a product capable of Home Appliances, with an emphasis on low cost and open source configurability. The end goal beyond this project would be a product that would hopefully allow people to connect to many other home devices through Wi-Fi.

Conclusion

Throughout the home automation system many problems arose that could not be solved during the designated time period. One major issue relate to the ability to control the home appliances from long distance. Home automation is still one of those areas that are very new, with various features and options, and growing user demands. Home automation industry is trying to evolve and offer a great user experience to the customer. Either you are opting for full automation system or plug n play or DIY solutions, with a little programming background or some familiarity with electronics can help you create awesome home automation systems as per your needs.

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Online Medicine Store

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Abstract:-

Online Medical system is online web portal where doctors, hospitals do the task of providing online treatment to the patients. In this portal, doctors/hospitals upload diseases, symptoms/disease, pairs of symptoms, actual diagnosis with treatment and diet control .treatment can be done by selecting symptoms or pair of symptom age wise. After payment done, he/she gets prescription along with the list of medical stores then by selecting appropriate nearby medical store Patients gets home delivery of medicines. The service can be accessible on both PCs, Laptops and mobiles.

The service of this portal can be accessible on mobile by installing app.

Key Words: Medical System, Hospitals, Treatment, Common Diseases, Doctors, Patients, Portal.

Introduction

Online medical system provides online treatment to the patient along with the home delivery of medicines for that patient have to login to the portal. Patients after login, decide whether to get treatment from doctors or hospitals. Once decided, he/she gets list of diseases, choose the disease, choose their symptoms. Before treatment is shown to patient, he/she is asked to pay for treatment. Once payment is done then he/she gets prescription. Once he/she gets prescription, he can download it or send it to nearby medical store which is registered onto this portal. If he/she sends prescription to medical store then medical store provides home delivery with cash on delivery service. Medical store has to register onto this portal to access the benefit of selling medicines online. The main objective of this web portal is to give online treatment. Patients get the advantage of high profile doctors online. Patients get treatment at lower cost online. Medical stores will deliver medicines at home. We decided to choose this medical portal, because it is good concept and not available in India. We have done some related work, like, we have visited some doctors and hospitals regarding how will our project be useful for them. They have approved this concept and are ready to help us.

The Project is about the collection of medicine which is unused by the patient who

recovers completely and medicine becomes waste that medicine can be collected and used further.

Advantages

1.Patient Safety

2.Cost Benefits

3.Access to Prescription Records

4.Improved Workflow

5. It preserves privacy.

6.It is easier to compare sites and their prices.

7.It helps save more money

8.It is convenient for people who are confined at home or are living far from pharmacies.

Objectives

The aim and objective of this medicine donator project are to prepare a portal for the collection of unused medicine for further utilization by a needy person. There must be a login for the user, admin. Admin can see all details of user donated medicine
There must be a form like registration of the new user. Medicine donate form. It's must be tracked in the SQL Server database.

Methodology

In this part of the walkthrough, you will create a Web application project and add anew page to it. You will also add HTML text and run the page in your browser.

To create a Web application project

1.Open Microsoft Visual Studio.

2.On the File menu, select New Project.

3.Name your project BasicWebApp and click the OK button.

To add a page to the Web application

1.Close the Default.aspx page. To do this, click the tab that displays the file name and then click the close option.

2.In Solution Explorer, right-click the Web application name (in this tutorial the application name is Basic Website), and then click Add -> New Item.

The Add New Item dialog box is displayed.

1.Click Add to add the web page to your project.

2.Visual Studio creates the new page and opens it.

To add controls to the page

1.In the Toolbox, expand the Standard group if it is not already expanded.

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2.Drag a Textbox control onto the page and drop it in the middle of the div element box that has Welcome to Visual Web Developer in the first line.

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4.Drag a Label control onto the page and drop it on a separate line below the Button control.

Conclusion

online medical system as a web portal and as a android application installing .apk file. the system is beneficial for both doctor and a patient and doctors. Admin perform their business and get 10% of doctors fees or amount. Medical stores also get online business by providing home delivery of medicines to the patient. Thus paper work and lengthy process can be avoided.

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1. www.google.com

2. www.youtube.com

Online plant Nursery Asp.net Website

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Abstract

Plant nursery is generally through note books, which is laborious and consume more time for data entry and retrieval. To conquer this difficulty and attract youth towards nursery entrepreneurship, this unique Nursery Management Information System (NMIS) has been developed. It is developed using Java-SE, Swings at frontend and MySQL Workbench at backend. Along with it, Type-4 JDBC connectivity makes the software platform independent and increases its usability. NMIS database has been designed with modification, updation and revision facilities. Access of data through various searches such as species-wise, date-wise search etc and facilities such as printing of bill facilitates easy data retrieval in desired mode. NMIS facilitates efficient nursery management while executing task in speedy and eco-friendly manner.

Keywords:-Seedling, Nursery, Management, Dynamic, Asp.net and Software.

Introduction

A nursery is a portion of agriculture where plants are propagated, nurtured, grown, and sold out to the home garden or commercial purpose. Under favorable conditions, improved quality seedlings are grown until they are prepared for planting on a small scale or in big scale. A nursery is a place where plants are propagated and grown to a desired age. They include retail nurseries which sell to the general public, wholesale nurseries which sell only to businesses such as other nurseries and to commercial gardeners, and private nurseries which supply the needs of institutions or private estates. Plant spread systems and practices is the center of cultivation nurseries. The planting materials for agricultural estates are raised from seeds and vegetative parts. The job of Mother Plants is essential and significant. The destiny of nursery relies upon the quality and honesty of mother plants.

Advantages

1. Economy of propagates.

Intensive care for the seedlings – protection against animals, diseases, insects and rodents, regular maintenance practices, watering / irrigation and manuring in the

nursery.

2. Raising seedlings in the nursery affords selection of vigorous and disease-free seedlings for transplanting into the field.

3. Ease of genetic activities.

4. The nursery allows for a better medium of growth for the plants than when directly seeded on the field.

5. Nursery affords ease of carrying out propagation techniques like, budding, grafting and even mar cutting / air-layering.

Objective

Following objectives are taken into consideration while designing & developing this website.

1.Provided Whole information about the Nursery Website to provide latest updates about our Plant Nursery.

2.To provide facility to website owner to sell their product online.

3.To avoid the misunderstanding between customers and Plant Nursery.

4.To provide facility to use as an effective advertising media.

5.To provide current news and events of Plant Nursery to the user.

6.To provide latest updates about new Plants.

Methodology

In this part of the walkthrough, you will create a Web application project and add a new page to it. You will also add HTML text and run the page in your browser.

Create a Web application project

1.Open Microsoft Visual Studio.

2. On the File menu, select New Project.

3. Name your project BasicWebApp and click the OK button.

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4. Drag a Label control onto the page and drop it on a separate line below the Button control.

Conclusion

To make our environment green and free from pollution, we should plant more plants. And foundation more seedlings are needed. In these case nursery is try only we believe that there is a need to strengthen research with the provision of facilities for rapid multiplication of plant materials.

Given proper plant material, equipment and techniques, large quantities can be produced. Once again, adaptive research in plant material is very important in ascertaining which is the most suitable source for continuous supply of seedling.

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Online Test Web site for Students

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Abstract

The project entitled "ONLINE EXAMINATION" is aimed to conduct examinations in an efficient manner without time wasting for the checking of paper. The main objective of our software is to efficiently evaluate the candidate thoroughly through a fully automated system that not only saves time but also give fast result. In this automated system there is no need of paper and pen. The user can write exam without going to the exam center. Also the website will provide a good practice for the candidates who are preparing for the entrance examination.

The project contains two modules namely administrator, and user. The control for all the process of the examination belongs to the administrator module. The user in the hostel is the one who visit and register the website.

Keywords: Asp. Net studio, Question & Answers, test.

Introduction

Online Examination will reduce the huge work done by teachers, administrators and also students. Responses by the candidate will be checked automatically and instantly. Reduce paper work. Result will show immediately that reduces student anxiety. Can be used anywhere anytime as it is web based application.

Useful for teachers for managing question paper and exam. Online exam can be conduct any time. Online exam can improve the standards of student's examination whereas in the traditional examination systems pen and paper are used which require more effort on the part of students and instructors.

This online examination system helps to take test of students online and generate results online, by just adding questions and answers it also adds keywords related to answers. This online exam software has two modules namely the Admin and Student, admin can login and have access of adding students, questions and answers, keywords of answer related, he/she can also view students, results, change student's password and can set time limit for test.

Methodology

In this part of the walkthrough, you will create a Web application project and add a new page to it. You will also add HTML text and run the page in your browser.

To create a Web application project

1.Open Microsoft Visual Studio.

2. On the File menu, select New Project.

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3. Drag a Button control onto the page and drop it to the right of the Textbox control.

4.Drag a Label control onto the page and drop it on a separate line below the Button control.

Advantages

1. **It saves paper:**

You never have to print an exam for your students and hand them out. Saves paper. Saves trees. Everybody happy.

2. It saves time:

You can setup an exam in such a way that it wills auto-grade itself. If you only use multiple choice questions you never have to check an exam again. The online exam system will take care of that hassle. Completely automated.

3. It saves more time:

The distribution of the exam doesn't take you any time. Just upload the email

addresses of your students and send them an invite. And after the exam they get their result instantly.

4. It saves you money:

You don't need to buy any paper. Sending an email is free. On top of that you save on the logistics: your students don't have to assemble in classroom to take the exam. They can do it within a given time frame from their own device. You don't have to rent a classroom. You don't have to hire someone to check the students taking the exam. It saves the student money: Students don't have to travel to a specific location to conduct the exam. So even for students from remote area's it's possible to take the exam.

Conclusion

Online examination system is a user friendly system, which is very easy and convenient to use. The system is complete in the Sense that it is operational and it is tested by entering data and getting the reports in proper order. But there is always a scope for improvement and enhancement. During the development of this, coding standards are followed for easy maintainability and extensibility.

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Students Attendance "Online Website"

Kumbhar Rutuja S. & J. T. Mohite*

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Abstract

Student attendance system deals with the maintenance of the student's attendance details. It is generates the attendance of the student on basis of presence in class. It is maintained on the daily basis of their attendance. the staffs will be provided with the separate username to make the student's status. The staffs handling the particular faculty responsible to make the attendance for all students. Only if the student present on that particular period, the attendance will be calculated. The students attendance reports based on weekly and consolidate will be generated.

Keyword- Attendance, Students, Asp.net Studio, SQl Server 2008.

Introduction

The project definition name describe many ways, Student attendance management system, Attendance portal, Online attendance System, School attendance system, College attendance system etc. The main aim of Student attendance system project is to maintain attendance records of student for any organization school or college. In this asp.net project post we will discuss attendance system project for school students. We developed this attendance system as website application using C# language in Visual Studio ASP.Net and use sql server for database server. Attendance System is software developed for daily student attendance in schools, colleges and institutes. If facilitates to access the attendance information of particular student in a particular class. The information is sorted by the operators, which will be provided by the teacher for a particular class. This system will also help in evaluating attendance eligibility criteria of a student.

Advantages

1. Reduce paperwork and save time and money with mobile and cloud-based attendance management system.
2. Eliminate duplicate data entry and errors in time and attendance entries.
3. Improve visibility to track and manage student attendance & absenteeism across multiple campuses.
4. Real-time status tracking of leave requests.

5.Automatic calculation of leave and reward points accrued.

6.Easy attendance recording using RFID & Biometric based attendance system.

7.Track the attendance of teachers and staff, assign work and manage allocation.

8.Keep the parents informed about the student's performance via Email & SMS alerts.

9.Auto-generate various types of reports of class or student attendance.

10. Increased security and confidentiality with role-based permissions to users.

Objectives

The objectives of developing Student Attendance Management System are identified based on the review of the problem statements. The purposes are listed as below:

i. To store, access and manage student attendance data for every lecture and lab classes.

ii. To automatically calculate number of absences and the percentage of present of the students based on subjects with respective lecture and lab classes.

iii.The objective of the student attendance management system is to reduce the time that is consumed when attendance is taken manually. Unlike the manual process, an online system easily helps management to analyze student's attendance details as per requirement. A detailed summary of student attendance can be obtained in an instant.

Aim:-

The main objectives of our work are:

• Data of student has been computerized without using any manual effort.

• Parents get the SMS about their ward status day to day.

• Easy to generate the report.

• Rapid access to any information regarding the students' attendance. II. LITERATURE SURVEY

Methodology

In this part of the walkthrough, you will create a Web application project and add a new page to it. You will also add HTML text and run the page in your browser.

To create a Web application project

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3. Drag a Button control onto the page and drop it to the right of the TextBox control.

4.Drag a Label control onto the page and drop it on a separate line below the Button control.

Features:

- A simple online application designed for all attendance requirements.
- Capable of storing unlimited records.
- Fully compatible - simply requires an internet connection to run smoothly.
- Connects teachers and parents on-the-go.

Conclusion

This software reduces the amount of manual data entry and gives greater efficiency. The User Interface of it is very friendly and can be easily used by anyone. It also decreases the amount of time taken to write details and other modules. The online attendance management system will reduce human efforts and save time. There is chance of error in manual attendance as well as it required lot of calculation for report generating. By using of the proposed system there will not be chance of errors and we will easily generate reports. The developed system will very helpful in saving valuable time of students and lecturers, paper and generating report at required time. By using proposed system student attendance will improve. Due to this system parent will get information about attendance of ward. This will improve the performance of student.

References -www.google.com

Isolation and characterization of Dye Degrading bacteria from soil

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Abstract- The present study isolated dye degrading bacteria from soil. Total two strain were isolated from soil sample. These two potent bacteria which degraded Reactive Green HE4BD and Reactive Red H8B dye up to 10mg/100ml with 0.0036%, 0.0014% & 0.0030%, 0.001% decolorization respectively. Along with this two strains also subjected for colony characteristics, morphological characteristics and biochemical characteristics.

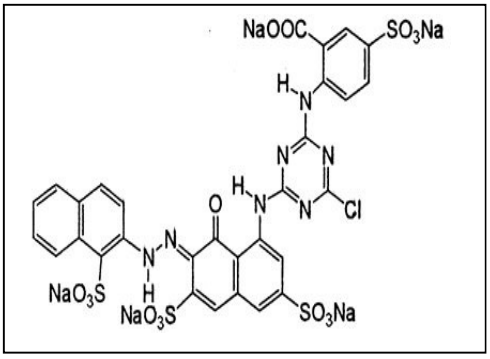
Key words- Reactive Green HE4BD, Reactive Red H8B , textile industry,

Introduction-

In modern life, rapid industrialization and urbanization resulted in the discharge of large amount of waste in to the environment, which in turn creates pollution. Water is essential for survival and existence of life on planet earth. The waste water and sewage are released from the industries, that wastes are entering into the water bodies, it is one of major source of environment toxicity, it also affect the soil micro flora and aquatic ecosystem. The most environmental problem faced due to the textile dyeing industry is that the industry produces large volumes of high strength of aqueous waste effluents.(N.Sriram &D.Reetha)

The first human made synthetic dye, mauevin, was discovered in 1856 that took over the natural dye quickly. Since then, over 100000 dyes have been generated worldwide with an annual production of over 7×105 metric tones. Synthetic dyes are widely used in textile, paper, food, color photography, paper printing, plastic, cosmetics, pharmaceutical, leather and toy industries (Zollinger, 1987; Carliell et al., 1995).

SELECTED DYE



Dye structures

1. **Reactive Red H8B**

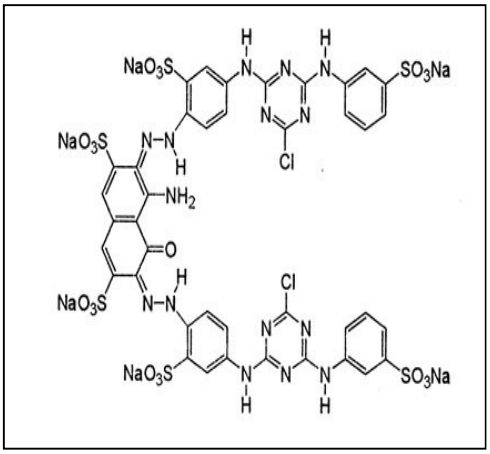
Name: C.I.Reactive Red 31, Reactive RedH8B

Molecular Structure: Single azo class

Molecular Formula: $C_{30}H_{15}ClN_7Na_5O_{15}S_4$

Molecular Weight: 992.14

CAS Registry Number: 12237-00-2



2. **Reactive Green HE4BD**

Name: C.I.Reactive Green 19, Reactive Green KE4BD

Molecular Structure: Azo class

Molecular Formula: $C_{40}H_{23}Cl_2N_{15}Na_6O_{19}S_6$

Molecular Weight: 1418.94

CAS Registry Number: 61931-49-5/68110-31-6/51357-74-5

Materials and Methods-

1)Sample collection -

The sample selected for the study was soil and collected from the disposal site of an industry.. Sample was collected in clean polythene bottle and brought to the laboratory and stored in refrigerator for further study. Different dyes were also collected, which were mostly used in that industry. They are as follows,

1. Reactive Green HE4BD

2. Reactive Red H8B

2) Isolation of bacteria from soil sample -

The isolation of bacteria was done by using enrichment culture technique. Enrichment was done in four different flasks containing 50 ml of sterile screening media broth. Media was sterilized at 121 °c for 18 mins. and add 1gm, 2gm, 3gm & 4gm soil sample respectively in each flask. The flask was incubated at room temperature for 4 days. 5ml of sample withdrawn from each flask and absorbance was measured for each consecutive day to confirm enrichment.

The enriched samples were directly streaked on screening media. The plates were incubated at 37°c for 24 hours. This isolates were then selected and subjected to purification. The isolates were maintained on nutrient slants by assigning proper code.

3) Characterization of isolates

i. Morphological characterization

Morphological characteristics of the isolates were studied by Grams staining procedure (Huckers modification) and motility by hanging drop method (Desai and Desai 1980).

ii.Biochemical studies

Enzymatic tests, Amylase test, Casein hydrolysis test, Urea hydrolysis test, Gelatinase test, Oxidase test, Catalase test, Nitrate reductase test, Hugh and Leifson's test, Sugar fermentation tests

4) Decolourisation time test

100ml of screening media per 0.1gm of selected dye were prepared. 5 ml of screened inoculum were added in each flask and incubated at room temperature. 5ml of sample withdrawn at 48 hours intervals for 8 consecutive days. These sample was centrifuged at 5000 rpm for 10 min and then absorbance of supernatant was measured at 510 nm.

% decolourisation within four days

Each isolate were inoculated in tube containing 5 ml of 0.1gm of dye per 100ml of screening media. These tubes were incubated at 37°c for 4 days. These sample was centrifuged at 5000 rpm for 10 min. and absorbance of supernatant was measured at 510 nm. % decolourisation within 4 days was calculated by formula

% decolourisation = Initial absorbance -final absorbance /Initial absorbance x 100

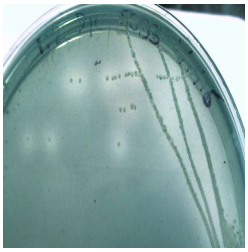
Result and discussion-

1) Isolation of bacteria

Two bacterial isolates were obtained on screening media with dye reactive green HE4BD.

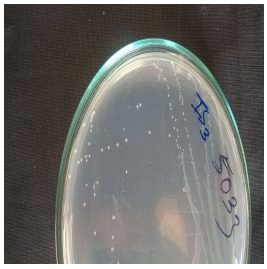
2)Characterization of isolates

Morphological characteristics



Isolation on screening media

Colonies of the isolate IS1on nutrient agar



Colonies of the isolate IS3on nutrient agar

The results of colonial and morphological characteristics of the isolates on nutrient agar were as in following Table.

Isolate	Size	Shape	colour	margine	elevation	opacity	consistency	Gram nature	motility
IS1	1 mm	circular	white	entire	raised	opaque	Moist	Gram positive short rods	motile
IS3	less than 1mm	circular	Bluish white	entire	convex	opaque	moist	Gram positive cocci	Non-motile

It can be seen from above table that the colonies of two isolates were similar in case of shape, margin, consistency and opacity. IS1 colony having 1mm size, white colored, raised elevation, motile,& gram positive short rod nature. while IS3 colony having less than 1mm size, bluish white colour, convex elevation, non-motile & gram positive cocci in nature.

TEST	IS1	IS3
Nitrate reductase	+	+
Amylase	-	-
Gelatinase	-	-
Oxidase	-	-
Catalase	+	+

Biochemical characters-

Enzymatic activities of the isolates

It can be seen from above table that both isolates shown amylase, gelatinase, & oxidase, test negative. Nitrate reductase, & catalase, were positive for both isolates. In case of caseinase IS1 shows positive and IS3 was negative.

Sugar fermentation test

Sugars	IS1	IS3
Glucose	(+)	(+)
Maltose	(+)	(+)
Lactose	(+)	(+)
Sucrose	(+)	(+)

From above table both isolates ferment all four sugar.

Isolates	Oxidative	Fermentative
IS1	+	+
IS3	+	+

Hugh and Lefson's test Both isolates ferment carbohydrates oxidative as well as fermentative manner.

Decolourisation time test

Absorbance of decolourising dye were represented in following table ;

Days	Control		2nd day		4th day		6th day		8th day	
	NC	C	NC	C	NC	C	NC	C	NC	C
Green HE4BD	1.15	0.80	1.34	0.70	1.56	0.57	1.60	0.49	1.79	0.31
Red H8B	1.53	1.54	1.71	1.49	1.74	0.90	1.83	0.76	189	0.53

[NC- Non-centrifuged , C-Centrifuged]

From above table it is seen that after each day of incubation OD of each dye get increased and After centrifugation it is seen to be decreased.

Decolourisation after 8 days was shown in following photographs

Control Test

Control Test

% decolourisation within four days were represented in following table

Isolates	Green HE4BD	Red H8B
IS1	0.0036%	0.0014%
IS3	0.0030%	0.001%

From above table it is seen that IS1 decolorize Green HE4BD dye 0.0036% and Red H8B dye 0.0014%.while IS3 isolate decolorize Green HE4BD dye0.0030% and Red H8B dye 0.001%.

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Isolation of Nitrogen Fixing bacteria from Soil and Development of Macron capsulated Preparation.

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Abstract :-Nitrogen fertilizers are required for maximum yield of many type of plants / crops and specially for cereals such as a wheat. This element is essential for synthesis of nucleic acid, chlorophyll and other cellular components. Today, to ensure sufficient nitrogen the agriculture applies chemical fertilizers. The use of chemical nitrogen fertilizers has increased 10 fold over the last 40 years, representing a world wide cost of $ 20 billion, Thus novel fertilization strategies are needed to reduce fertilizer inputs and their environmental consequence in crops from agro-ecosystem

Key words - Nitrogen Fertilizers, Agro-ecosystem

Introduction-

Nitrogen-fixing bacteria (NFB) have been suggested as an attractive alternative to reduce the application of N-based fertilizer on soil by farmers for concomitant environment and economic benefits. NFB can be found associated with roots (Diazotrophic bacteria), within plant tissue (Endophytic bacteria) and forming structure (Nodules) in roots which play an essential role in the acquisition of N from atmosphere in legume plants (Martinez-Viveros al 2010). an optimized microencapsulation process for such NFB requires stabilizing cells , potentially enhancing their availability and stability in the production , storage and handling. Encapsulated cell formulation have several advantages over free cell formulation for example , encapsulation of cell protects from biotic stresses , and abiotic stresses , (the inhibitory effect of toxic compounds) , improves physiological activity , provides enhance survival and supply of encapsulated nutritional additives , increase cell densities and preferential cell growth in various internal aerobic and anaerobic zones of encapsulated material. The aim of this study was to develop a new form of dehydrated bio-fertilizer (macrocapsules) with NFB that can overcome the main drawbacks of liquid inoculum and favour their application in crop fields.

Materials and Methods :-

Sample was collected from soybean field situated at Dahiwadi, Tal - Man

Isolation of nitrogen fixing bacteria :-

a. Isolation of *Rhizobium* :

First of all, the soil sample was serially diluted upto 10^{-5} using sterile distilled water of the last dilution was inoculated into 50 ml of sterile yeast extract mannitol broth for enrichment. The flask was incubated at 30^0c. for 72 hours for proper enrichment. After 3-4 days , a loopful from the enriched culture was streak on YEMA inoculated at 30^0c for 72 hours.

Characterization of isolates :

Morphology and cultural characters :Colony characteristics of the growth on YEMA plates were recorded and its Gram nature and morphology was studied under light microscope and motility of organism were studied by Hanging Drop Technique. Isolates *Rhizobium* were suitably preserved on YEMA agar slants and kept at refrigeration temperature.

Microencapsulation process –

Mixture of sodium alginate and standard corn starch was used as encapsulation matrix. These polymers were sterilized separately as a dry powder in autoclave at 121^0c for 20 minutes before dispersion in sterile distilled water. Sodium alginate was first dissolved in water for 30 minutes , followed by addition of cornstarch. Then the cells were added into 30 ml of encapsulated matrix solution and mixed homogenously. The mixture was placed in a syringe and extruded drop by drop into 1.5 % chilled $CaCl_2$ solution for reticulation. After 30 minutes , the macrocapsules (about 5-6 mm diameter) were washed 3 times with sterile water prior to drying. The encapsulated beads were preserved in water and checked periodically for viability and the results were recorded.

Pot Trials of soybean plant-

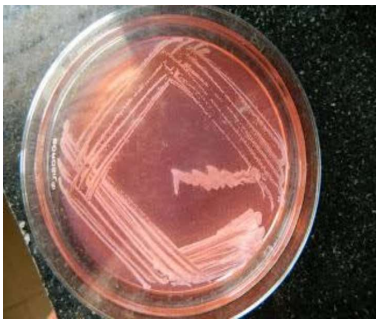
To check the nitrogen fixing ability of *Rhizobium* , simple pot trials were taken. Three pots were taken and named as A, B, and C. In pot A, only soybean seeds were planted and was kept as control. In pot B, soybean seeds soaked overnight in Rhizobial

suspension were planted and in pot C soyabean seeds soaked in immobilized Rhizobial suspension were planted. All the 3 pots were watered everyday for three weeks.

After three weeks, the plant was breaked out carefully so that the root system is maintained intact. Then, the number of root nodules along with numbers of leaves and length of shoot were measured from all three pots and results were recorded.

Result and discussion-

A .Isolation and characterization of *Rhizobium* from soil sample-



Isolation of *Rhizobium* on YEMA plate

B. Cultural and Biochemical character

Size	Shape	Color	Margin	Elevation	Consistency	Opacity
1 mm	circular	white	entire	Convex	moist	Opaque

Colony characteristics.

Morphological characteristics.

Gram nature	Motility
Gram negative short rods.	Motile.

Biochemical characteristics of *Rhizobium.*

Characteristics	Results
Gram reaction	Gram negative
Oxidase	-
Catalase	-
Growth on -	
Glucose	-
Fructose	-
Maltose	-

Pots	Soyabean seeds	No. of root nodules	Length of shoot
A	Soyabean seeds alone	0	7 cm
B	Soyabean seeds +Rhizobial suspension	4	14 cm
C	Soyabeanseeds + Immobilized Rhizobial suspension.	9	17 cm

The figure shows comparison between :- A) as control : Growth of plant without *Rhizobium*. B) Growth of plant with *Rhizobium* . C) Growth of plant with immobilized *Rhizobium.*

Observation of plants shown that the plant without Rhizobial culture had very poor growth as compared with the plant with Rhizobia and immobilized Rhizobia.

Discussion- The isolates were characterized and confirmed by using various biochemical tests , nitrogen fixing ability of *Rhizobium*to increase the viability as well as nitrogen fixing ability of nitrogen fixing bacteria immobilization was done. The results obtained were excellent. This bacteria help plant to grow faster.

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Preparation of $CoMn_2O_4$ Catalyst Using the Sol-Gel Method for Activation of Peroxymonosulfate and Degradation of UV Filter 2-Phenylbenzimidazole- 5-sulfonic Acid (PBSA)

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Abstract:

We have prepared $CoMn_2O_4$ catalyst using sol-gel and combustion method and characterized by X-ray diffraction spectroscopy (XRD) and Scanning Electron Microscopy (SEM). The obtained novel catalyst was then used for catalytic degradation of commonly used UV filter, 2-phenylbenzimidazole-5-sulfonic acid in water and activator of peroxymonosulphate (PMS). Here SO_4 were main reactive oxygen species.

Keywords: $CoMn_2O_4$; catalytic degradation; peroxymonosulfate; UV filters; 2-phenylbenzimidazole-5-sulfonic acid (PBSA)

Introduction:

The key to the application of the SR-AOPs is to increase the yield of SO_4 Usually, the methods of activating PS have included heat [2], UV [2], and transition metal ions [2]. However, some of these methods can be costly, whilst others would cause secondary pollution. This work was aimed at studying the performance $CoMn_2O_4$ in activating PMS for degradation properties of a common UV filter, 2-phenylbenzimidazole-5-sulfonic acid (PBSA) [1,2]. Generally, metal oxides could be prepared using several methods, i.e. coprecipitation, hydrothermal, and sol-gel methods. Amongst them, sol-gel method is considered an attractive synthetic method in which prepared metal oxides have a higher degree of structural and compositional uniformity [3,4]. Therefore, in this study, $CoMn_2O_4$ was prepared using the sol-gel method and combustion then it was characterized using the following techniques: SEM, and XRD [5]. Moreover, the effects of various factors on degradation of PBSA were assessed, and the main reactive oxygen species (ROS) in PMS/$CoMn_2O_4$ system were confirmed as stimulating activation mechanisms.

Material & Methods

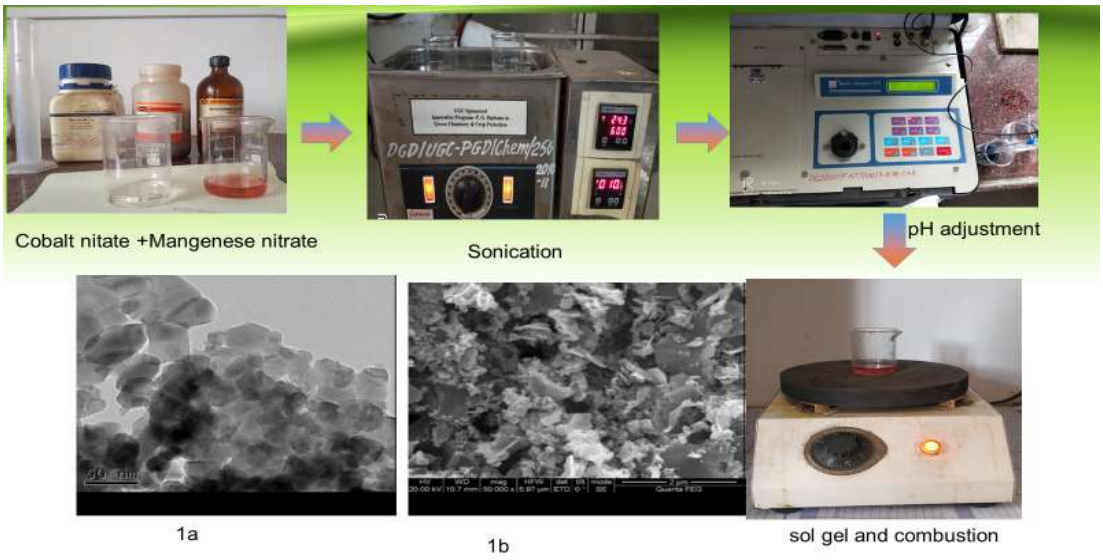
Materials: Cobalt nitrate (Co $(NO_{3)2}$), Manganese nitrate (Mn $(NO_3)_2$), Distilled water, Glycine, Urea, Citric acid, Ammonia.

Preparation of $CoMn_2O_4$ Catalyst:

The $CoMn_2O_4$ catalyst was prepared using the sol-gel method as described in Reference [4]. Typically, Co $(NO_{3)2}$ () and Mn $(NO_3)_2$ () were dissolved in 10 mL of distilled water in a clean beaker, and then glycine (0.9 g) was dissolved in 10ml distilled water in another beaker. The two obtained solutions were then completely dissolved using sonication method. Afterwards, glycine solution was slowly added to nitrates solutions, which was stirred until a gel was formed. The pH of solution was 3.05 which was adjusted to pH 6-8 Solution was heated to 150 ^{0}C to form a dry gel which was then heated to 300 ^{0}C to form $CoMn_2O_4$ nanoparticles by combustion method. Similar method was repeated by using urea and citric acid instead of glycine.

Characterization Methods: The crystal structure of the synthesized sample was confirmed through the X-ray diffraction spectra recorded in the 2_ range of 5–80 (scan rate of 0.06_ s1), using a Cu–K 154 nm) wavelength D8-advanced X-ray diffractometer (XRD) at 40 kV and 30 mA. The specific surface area and the pore size distribution were determined using the TriStar II3020 surface area and porosity analyser at the liquid nitrogen temperature (196 C).

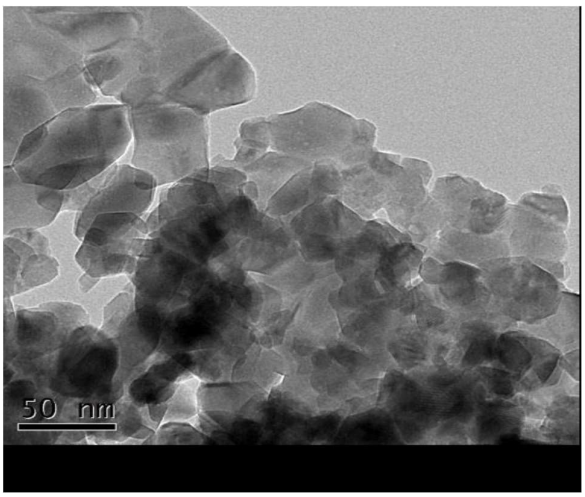
Catalytic Test Procedure: Thereafter, 100 mL PBSA solution (1 g/L) was added in a conical flask. A certain amount of PMS was then added to the reaction solution, and the mixture was shaken in a water bath at 25^0 C. The catalyst $CoMn_2O_4$ was then added to initiate the reaction. Then, degradation took place.



3. Results and Discussion

Characterization of the Catalyst:

The morphology and structure of the $CoMn_2O_4$ were revealed by the SEM and TEM images. As shown in Figure 1a, it can be seen that the sample was in the form of irregular flakes with a uniform distribution, where fine particles were distributed on the edge of the block. There was a certain agglomeration and fluffy accumulation, as well as many pores between the particles. As presented in Figure 1b, it can be seen that the grains of the $CoMn_2O_4$ powder had an irregular polyhedral structure.



Furthermore, the energy-dispersive X-ray (EDX) elemental analysis spectrum of the $CoMn_2O_4$ in Figure 1c indicated that the catalyst contained C, O, Co, and Mn elements. The content of C, O, Co, and Mn was calculated with the average of four values on different spots, and their values were 5.97, 35.08, 19.48, and 39.46 wt % (Weight %), respectively.

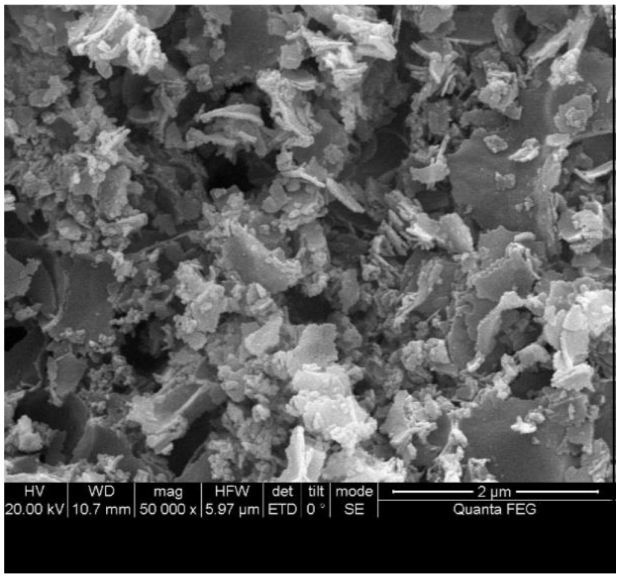


Figure 1. Scanning electron microscopy (SEM) (**a**), and energy-dispersive X-ray (EDX) analysis (**c**) of $CoMn_2O_4$

Advantages of Metallic Nanoparticle

a. Enhance Rayleigh scattering

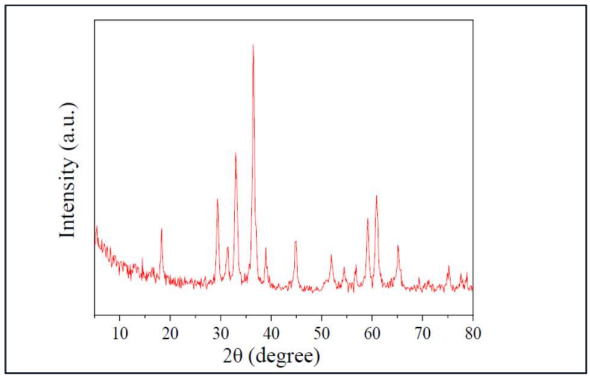
b. Doping.

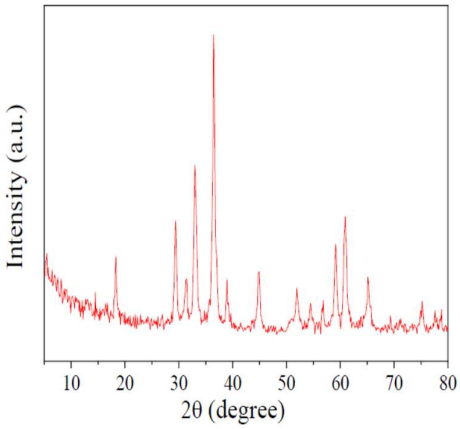
c. Strong plasma absorption

d. Biological system imaging

Disadvantages of Metallic Nanoparticles a. Particles instability: Nanomaterials can undergo transformation, as they are thermodynamically unstable and lie in the region of high energy local minima. This leads to deterioration of quality, poor corrosion resistance, and main concerned is retaining the structure becomes difficult.

b. Impurity: While synthesizing nanoparticles, nitrides, oxides, formation can aggravated from the impure environment. As nanoparticles are highly reactive, there can also be high chances of impurity as well. In solution form, nanoparticles should be synthesized in form of encapsulation. So, it becomes a challenge to overcome impurity in nanoparticles.





c. Biologically harmful: nanomaterials has been reported toxic, carcinogenic and cause irritation as they become transparent to the cell dermis

d. Explosion: exothermic combustion can lead to explosion, as fine metal particles act as strong explosives.

e. Difficulty in synthesis: while synthesizing nanoparticles, it should be encapsulated, because it is extremely challenging to retain the nanoparticles size in solution form [9].

Application:

- Used in thermal decomposition, degradation, precipitation and as a photocatayst.
- $ZnGa_2O_4$ can be used in Doping and in semiconductors.
- $CoMn_2O_4$ enhances rate of reaction in oxidations.
- $CoMn_2O_4$ increases rate of electrical conductivity in electrochemistry.
- Electroluminescence

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Synthesis and Antimicrobial Activities of thiazolidine-2,4-dione Derivatives

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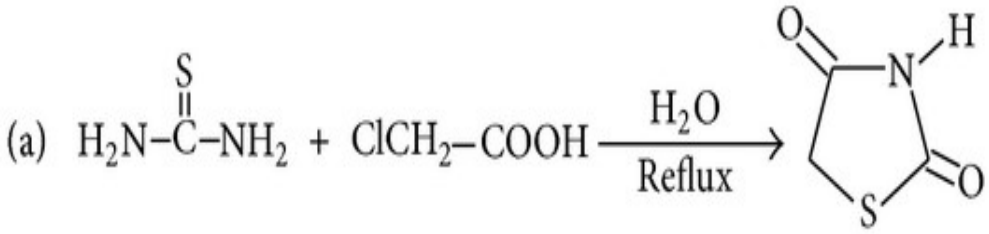
Introduction

Thiazolidine is a very important class of compounds which special consideration because it belongs to a group of substances with activity in medicinal chemistry. This nucleus is associated with antibacterial, antifungal, antiviral, antituberculosis, anticancer, and antiparasite biological activities [1–4]. The use of new synthetic methods and structure-activity relationship studies has made possible a broad study of new drugs with different actions. The computational search for possible mechanisms of 4-thiazolidinones anticancer activity has been studied together with the medical chemistry which permits the optimization of existing drugs [5].

The biological activities of the literature reports on the results of a number when the substituents and their positions on the thiazolidine ring are changed [6]. In this case, medicinal chemistry is an important aid in the discovery of new active molecules using small heterocyclic rings to increase the biological activity of certain nuclei [7]. Due to the importance of the core of the thiazolidine ring, introducing arylidene groups of the thiazolidine ring in order to test the antimicrobial activity of compound against microorganisms.

Material and Methods

The chemical reagents were supplied by Loba chemical and were used without further purification. Purity of the compounds was checked using thin layer chromatography (TLC) plates (silica gel G) in the appropriated system for each compound. All melting points were measured in a capillary tube. Infrared spectra of KBr pellets were recorded using a FTIR7600 spectrometer.



Scheme 1

Procedure for Preparation of the Synthesis of Thiazolidine-2,4-dione

Compound (thiazolidine-2,4-dione) was synthesized by refluxing monochloroacetic acid and thiourea in water. This compound was synthesized according to a published procedure [16]. Molecular formula $C_3H_3O_2NS$; yield 78%; mp 118–120°C; Rf 0.48 (0.9 : 0.1 $CHCl_3$/MeOH). Recrystallization: water.

Microbiological Activity

Gram-positive, Gram-negative, and alcohol acid resistant bacteria and yeast were selected for the examination of antimicrobial activity in vitro. For the evaluation of the antimicrobial activity, first a disc diffusion test was used to screen the antimicrobial activity of all compounds. The compounds that had inhibition zones greater than 10 mm of diameter were submitted to a second test for the determination of minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC). The tests were performed as follows.

Disk Diffusion Method

Paper discs (Whatman number 2) with 6 mm diameters were impregnated with 20 μL of a 15,000 μg/mL solution of the synthesized compounds and dissolved in DMSO. The discs were then placed in medium sown with one of the microorganisms. The following standard drugs were used as controls for B. Subtilis, M. Smegmatis, C. Albicans and cefalexin bacteria. The tests were carriedut 3 times, with the results expressed (in millimeters) as mean ± SEM of the diameters of the inhibition zones formed around the discs. The negative control test was carried out with DMSO soaked discs.

Table:Inhibition & Antimicrobial activity of compounds tested against different microorganisms

Synthesizes compounds	B. Subtilis	M. Smegmatis	C. Albicans
2a	4	16	8
2b	2	2	0
2c	2	2	0
Cefelexion	<2	<17	<9

Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC)

A multiwell plate (96 wells) was used to determine the minimum inhibitory concentration (MIC) at pH 7.4 and the two fold serial dilution technique was applied. A 1,280 μg/mL stock solution was prepared from the product. A standardized suspension of microorganisms was prepared for use with a 0.5.tube. The plate was incubated for 24 hours and thereafter an indicator dye was applied to show if there was microbial growth in the well. MIC was determined as the concentration of the last well where there was no microbial growth. From this experiment, the content of the wells was sown on plates with Müeller-Hinton agar medium to establish the minimum bactericidal concentration (MBC), which is the concentration where there is no colony growth. All analyses were performed in triplicate(**table**)

Result and Discussion

Synthesis :The compounds (**2a**–**c**) were synthesized by Knoevenagel condensation with nine aromatic aldehydes yielding 5-arylidene-thiazolidine-2,4-dione derivatives**.** The infrared spectrum of these compoundsshowed a strong absorption band of the functional group ranging between 1566 at 1775 cm^{-1} corresponding to C=C and 1775–1676 cm^{-1} concerning the carbonyl in positions 2 and 4 of the thiazolidine-2,4-dione ring.

5-(3-Methoxy-4-hydroxy-arylidene)-thiazolidine-2,4-dione (**2a**). Yield 70%; mp 260°C; Rf 0.50 ($CHCl_3$/MeOH 9 : 1). Recrystallization: ethanol; IR (KBr 1%, cm^{-1}) 1566 (C=C); 1730–1670 (C=O).

5-(2,4-Dichloro-arylidene)-thiazolidine-2,4-dione (**2b**). Yield 65%; mp 203°C; Rf 0.51 ($CHCl_3$/MeOH 9.6 : 0.4). Recrystallization: ethanol; IR (KBr 1%, cm^{-1}) 1570 (C=C); 1737–1675 (C=O).

5-(3,4-Dichloro-arylidene)-thiazolidine-2,4-dione (**2c**). Yield 59%; mp 174°C; Rf 0.50 ($CHCl_3$/MeOH 9.5 : 0.5). Recrystallization: ethanol; IR (KBr 1%, cm^{-1}) 1571 (C=C); 1735–1676 (C=O).

Conclusion

An antimicrobial activity of compounds were synthesized and tested against Gram-positive, Gram-negative, and alcohol acid resistant bacteria and yeast. All compounds were active against all Gram-positive bacteria. One of the compounds was the most active, inhibiting Gram-positive, Gram-negative, and alcohol acid resistant bacteria and also the yeast. The chemical structures of the compounds were determined by physical methods IR..

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Comparative Analysis of Water from Different Sources Within College Locality

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Abstract:-The aim of this study is to analyze the microbiological quality of the available water sample collected directly from various sources of college locality to check the water quality and evaluate the awareness in students for maintaining cleanness and hygiene conditions for storage of drinking water. Hence, the water samples were collected and analyzed for their quality and quantity as well as prevalence of various water borne pathogens, indicators organisms to check for presence of fecal contaminants using various media. Present study indicate that water testing would ensure the supply and availability of contamination-free drinking water and awareness among the people towards sanitation and hygienic conditions for storage of drinking water is needed to keep away the use of contaminated water.

Key words:- Fecal contamination, SPC, MPN.

Introduction- The human body has 55% to 78% water depending on body size. The percentage of water observed in different body parts are as – muscular tissues 75%, brain contains 90% water, bones 22%, and blood 83%. Since, water is one of the essential components required to our body. Clean and safe water is an absolute need for health and productive life. The quality of the water supplied is important in determining the health of individuals and whole communities. The problem is found in developing countries like India, Nepal where water treatment does not exist in most of the places, if available though.

Sewage pollutes surface and ground water, domestic waste, industrial and agricultural effluents containing simple nutrients to highly toxic substances. The pollution of drinking water is responsible for large number of mortalities and morbidities due to water borne diseases like typhoid, cholera, diarrhea, dysentery, hepatitis, as well as many protozoa and helminthes infections.

The present study intends to assess the microbiological quality of water from different water sample in college locality. The primary goal of this research is to analyze the water quality parameters to ensure that the water is safe for drinking. Hence the study has been designed to examine the microbiological quality of available water.

Materials and Methods-

1) Sample collection – Total three (Lab, hostel and tank) water samples was collected from college locality for analysis.

2) Qualitative Analysis:-

i) Presumptive test:- A series of lactose broth fermentation tubes were inoculated with measured amount of water sample and incubated at 37°c for 24 hours.

ii) Confirmed test:- A loopful of culture from positive presumptive tube was streaked on EMB agar plate & incubated at 37°c for 24 hours.

iii) Completed test:- The colonies on EMB agar plate was transferred into BGLB broth and incubated at 37°c for 24 hours.

3) Quantitative Analysis:-

i)Standard Plate Count (SPC):- The 3 different water samples from college locality was taken (water tank , lab and hostel water sample) .The serial dilution was prepared and each dilution were spread on nutrient agar plates and incubate all the plates at 37^0c for 24 hrs .

ii)Most Probable Number (MPN):-Total 15 tubes was taken for each sample testing,5 tubes containing single strength medium with 0.1 ml water sample inoculation,5 tubes containing double strength medium with 1ml water sample and 5 tubes containing double strength medium with 10ml water sample inoculation. All tubes was incubated at 37° C for 24 hrs. And after incubation result was compared with MacCradey's table.

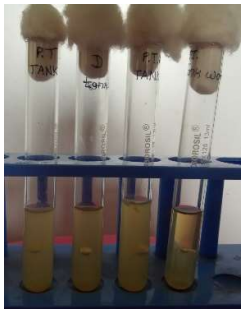
Result and discussion-

1)Qualitative Analysis:-

i) Presumptive test:-

Lab sample

Hostel sample



Tank sample

All tubes shows gas production thus, presumptive test was positive for all three water samples and proceed for confirmed test**.**

ii) Confirmed test:-

Lab sample **Hostel sample** **Tank sample**

Positive test showing black centered green colored metallic sheen colonies. Out of three water samples only lab water sample shows positive confirmed test. Therefore this sample proceed for completed test.

iii) Completed test:- Lab sample

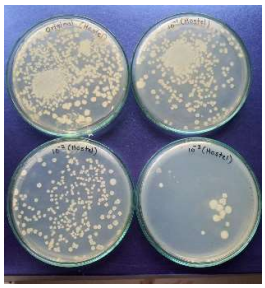
Before incubation after incubation

After incubation gas production was observed in tube. Therefore lab water sample was fecally polluted.

2)Quantitative Analysis:-

i)Standard Plate Count (SPC):-

Lab sample



Hostel sample

Tank sample

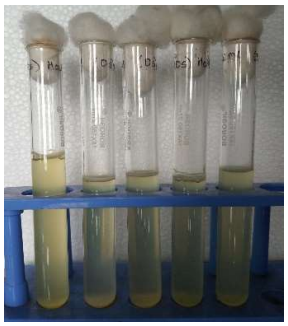
Dilution factor	Colony count of water sample		
	Laboratory	Water tank	Hostel
Original	Uncountable	Uncountable	250
10^{-1}	216	211	118
10^{-2}	115	108	70
10^{-3}	77	74	45

SPC of lab water sample- 2282.7×10^{-1}
SPC of hostel water sample- 2225.4×10^{-1}
SPC of tank water sample- 1254.5×10^{-1}

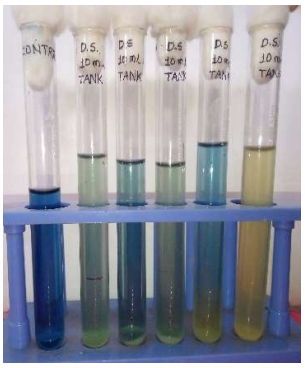
ii)Most Probable Number (MPN):-

Lab sample

Hostel sample



Tank sample



Amount of water sample	Medium with number of tubes	Before incubation	After incubation number of tubes showing yellow colour		
			Lab	Hostel	Tank
0.1 ml	Single strength(15 tubes)	All tubes showing blue colour	4	0	0
1ml	Double strength(15 tubes)		5	5	4
10ml	Double strength(15 tubes)		5	5	4

According to MacCradey's table MPN index /100 ml was showing below,

MPN index of lab water sample = 1600, MPN index of Hostel water sample = 240

MPN index of Tank water sample = 34

According to MacCradey's table MPN index of all three water sample was greater than 2.Therefore no any one water sample was safe for drinking purpose.

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Effect Of Heavy Metals On The Growth Of Pathogenic Bacteria

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Abstract:- This paper examines the effect of heavy metals on microorganisms in the aqueous environment. the mechanism by which metals may exert toxic effects on microbes and the factors affecting microbial response to metals; the ways in which microbial activity may alter the metal balance of an environment and the modifications produced in microbes by heavy metals ions; the effect of the toxic copper ion on the growth, respiration, magnesium content, cytochrome synthesis and osmotic sensitivity of some organisms studied in the laboratory. the feasibility of the participation of microbes in geochemical processes considering the demonstrable resistance to toxic metals by some bacteria and fact that natural environments may contain high levels of metals rendered less toxic by binding to natural chelating compounds.

Key words- heavy metal, MIC

Introduction-Microorganisms are ubiquitous in nature and involved in almost all biological processes of life. Heavy metals have been found in increasing proportions in microbial habitats because of rapid urbanization and natural processes (Issazadeh et al., 2013). Metals like nickel, copper (Clausen, 2000), cobalt and zinc have been playing a major role both directly or indirectly in almost all metabolic processes, growth and development of microorganisms (Tamer et al., 2013). However, increasing concentrations of metals beyond tolerance levels have forced these organisms to adapt to various biological mechanisms to cope with this condition (Nikaido, 2009). Some mechanisms like metal efflux systems, complexation, reduction of metal ions or utilization of the metal as a terminal electron acceptor in anaerobic respiration helps microbes to tolerate heavy metal accumulation (Nageswaran et al., 2012).Bacteria that is resistant to such heavy metals (Narasimhulu et al., 2010) and have the ability to grow in high concentrations of these metals play an important role in their biological cycling which has great potential in bioremediation of poorly cultivable soil high in heavy metal content (Nyamboya et al.,

2013). The present study is formulated to evaluate the effect of increasing metal concentration on growth of bacteria. Two metals such as copper and Lead were used for metal tolerance tests against four strains (*K. pneumonia, E. coli* , *S. aureus and B. subtilis*) in which *K. pneumonia* and *E. coli* are Gram negative whereas *S. aureus and B. subtilis is* Gram positive.

Growth of microorganisam is affected by various environmental factor like temperature, pH, salt concentration, UV radiation etc. Growth of microorganiosm can be also be affected by heavy metal ion like silver, mercury, copper, lead they show effect on growth of microorganism even in small quantity so it is called oligodynamic effect. In higher concentration they show inhibitory action.

Materials and Methods-

Test organisms

Four common bacterial species *S. aureus* (ATCC25923)*, E. coli* (ATCC25922) and *K. pneumonia* (ATCC700603) *B.Subtilis* were included in the study. The bacteria were made as stock by mixing 100 µl of suspension in 10 ml of sterile nutrient broth and grown overnight. The organisms were maintained by sub culturing them on nutrient agar at regular intervals and used throughout the study.

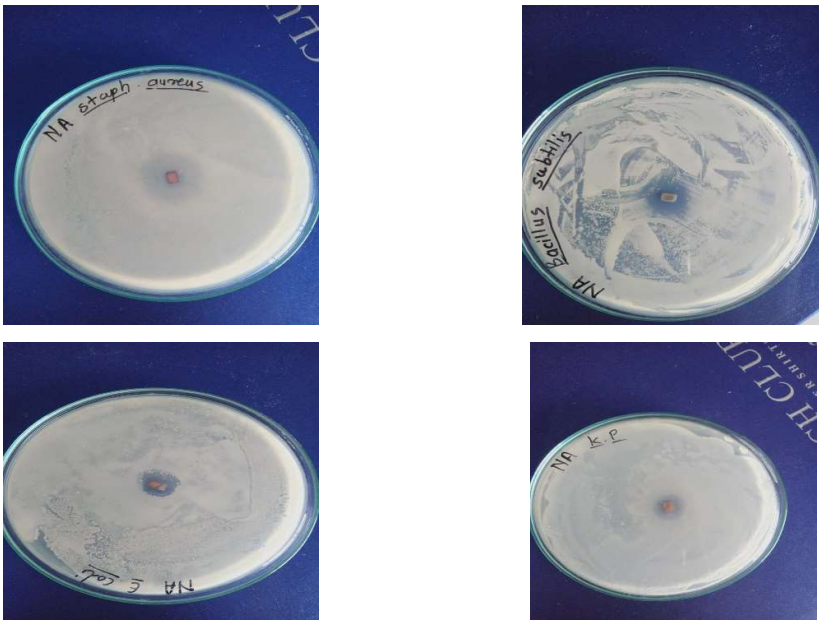
Preparation of metal ion

Two metal ions such as copper and lead were used in this study. 10% HNO_3 solution was prepared. Copper foil was deep into alcohol and then flame out for sterilization Then cool the foil and keep into 10% HNO_3 solution for 5 to7 minute for ionization.

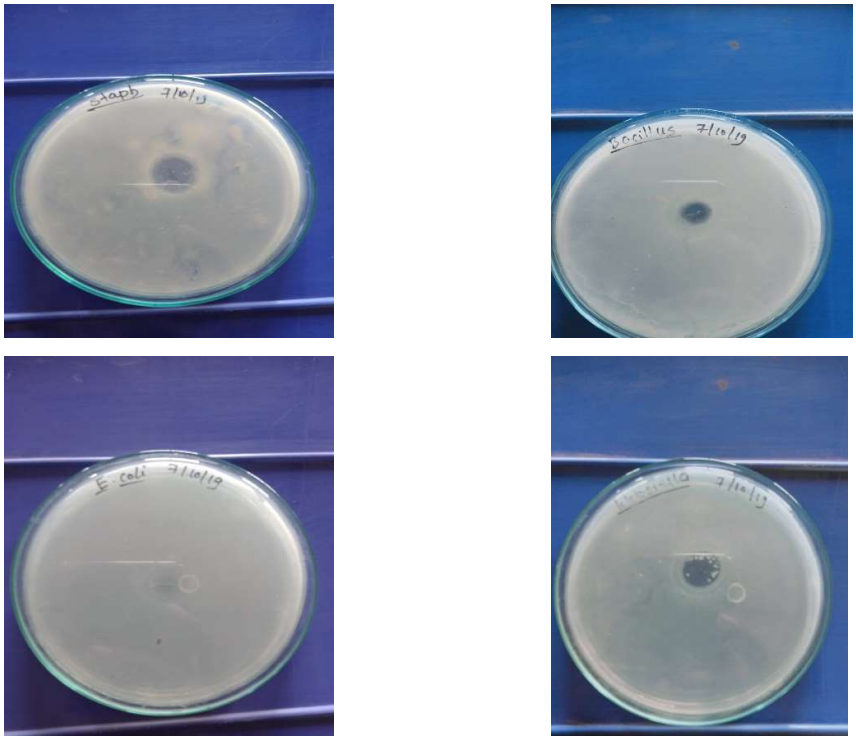
Testing of metal ion effect on microbial growth

For testing metal ion effect of microbial growth nutrient agar was used. Four pathogenic culture (*K. pneumonia, E. coli* , *S. aureus and B. subtilis*) was spread on sterile nutrient agar plate with the help of sterile glass spreader and then treated cu foil and lead was placed on agar surface and slightly press it with forcep and then incubate all the plates at 37^0C for 24 hrs.

Result and discussion-



Effect of copper on growth of bacteria.



Effect of Lead on growth of bacteria

Sr.no.	Metal ions	Inhibitory zone(cm)			
		E.coli	***B.subtilis***	***K.pneumoniae***	***Staph.aureus***
1	Copper	2cm	2.5cm	1.5cm	3cm
2	lead	1cm	1.5cm	2cm	2.5cm

On the basis of above study it is concluded that copper inhibit *staph aureus* effectively than other three bacteria and lead was efficiently inhibits *staph aureus* than other three bacteria.

Further studies-

These heavy metals further tested against various other pathogenic bacteria.

To find out MIC of heavy metals.

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Effect of Flower Extract of *Lantana Camara* Against *Sitophilus Oryzae*

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Abstract

Sitophilus oryzae is most destructive pest causing important economic losses to stored grains and minimizes the quality of grains. Plant origin insecticides are alternative to control pests as they contain rich source of bioactive molecules. In the present study efficacy of flower extract of *Lantana camara* was evaluated against adult of *Sitophilus oryzae*.

Toxicity was assessed through direct contact application method. Adults were exposed with treated wheat grains and mortality was recorded after 1, 2, 3, 4 & 7 days. The flower extract of *Lantana camara* shows high mortality (60%) after 7 day exposure in high concentration.

Result suggests that we can make bioinsecticide based on flower extracts from plant for use against integrated pest management.

Keywords: *Lantana camara*, *Sitophilus oryzae*

Introduction:

India is a agricultural country and main base of economy is depend upon agriculture. But agriculture is seasonal and based on rain fall hence after harvesting proper storage is essential for further need. Insects are serious pests of stored grains and it causes more damage to stored products (Rajshekhar et al, 2010).

Rice weevil, *Sitophilus oryzae* (Curculionidae: Coleoptera) Distributed world-wide and is found in warm climate region. It is the most destructive pest of stored grain and causes high loss in grain weight. The rice weevil found in storing places like godowns. The host range of this rice weevils are rice, sorghum, wheat, barley, maize etc.. *Lantana camara (*Verbenaceae : lamials) is widely distributed in tropical & subtropical region in the world. For the controlling of insect pests the synthetic insecticides are used but it is harmful to environment as well as humans. So there is need to derived chief and safe insecticide from natural products of plants which contain secondary metabolites act against insect pest (Dayan et al, 2009). Therefore, the present study was find effect of flower extract of *Lantana camara* on *Sitophilus oryzae* (Metcalf et al, 1960).

Material and Methods:

Insect Culture: Insect culture of *Sitophilus oryzae* (Rice weevil) collected from wheat grains of local godowns in Dahiwadi. These insects were rare on clean and un-infected variety of jawar. They are maintained in laboratory at 28±2°C temperature and related humidity at 70± 5%. Adults of *S. oryzae* were used for the experiment.

Preparation of flower powder:

The flowers of ***Lantana camara,*** was collected in and around Dahiwadi region. Collected flowers were washed by water and shade dried for 4-5 days in at room temperature in the laboratory and then makes it in powdered form using domestic grinder.

Preparation of flower Extract:

The flower powder of ***Lantana camara,*** extracted separately with **ethanol solvent** by the **Soaking method** according to **Adriana, *et al,* (2008)**.

Then the yellow residue of extract obtained and sealed in vials and store in refrigerator at 4°C for the experiment.

❖ **Bioassay:**

The insecticidal activity of ethanol solvent extract of ***Lantana camara,*** against adults of *S. oryzae* was studied by direct contact application method (Kumar *et al.* 2016). Five different concentrations (5 to 25 mg/ml) were prepared for analytical grade in Acetone. The extract was mixed with wheat grains separately (0.5 ml/50gm) and air dried for 10 min. The ten unsexed adults of *Sitophilus oryzae* was released in treated wheat grains. Three replications were maintained for each concentration of different solvent extract. Same volume of Acetone treated to grains was served as control. Insect mortality was recorded after 1, 2, 3, 4 and 7 days exposure respectively.

Result and Discussion:

In the treatment of plant *L. camara* ethanol solvent flower extract against the *Sitophilus oryzae* revealed high mortality at 7 day exposure when compared to control. Maximum mortality caused at 0.05% concentration of ethanol solvent flower extract treatment. In general the rate of mortality was increased with increasing the concentration of plant extracts. Results demonstrated that, high concentration dose of extracts shows more mortality than low concentration dose.

As mortality of *S. oryzae* after 7 days exposure is treated with 25 mg/ml concentration *L. camara* is 60% in the ethanol extract, at the same time grains treated with

5 mg/ml concentration of *L. camara* mortality had shown 20% in ethanol extract (Table No. 1).

The natural insecticides are used for the control of stored products because of their relatively high efficacy against all stages of insects (Tunc. et. Al. 2000, Akhtar et.al. 2008). The use of plant products to protect stored grain from insect pest depredation is an age old practice (Ukeh 2008). Essential oils, extracts and the chemical ingredients have been used greatly in grain protection in many laboratory and field trials (Isman 2006; Ravindra et al. 2009). Many studies have reported bioactive compounds from plant extracts with repellent/antifeedant/insecticidal activity against stored-product insect pests (Upasani et al. 2003; Akhtar et al. 2008; Yao et al. 2008). Plant products and essential oils have been used for grain protection in small scale in different parts of the world, particularly India, China and Africa (Golob and Gudrups1999). The ethanol extracts of *Cassia tora* and *Clerodendrum inerme* (5 %) were used as grain protectants against *S. oryzae* (Yankanchi and Gadache, 2010). Volatile compounds of many plant extracts are composed of many bioactive molecules, which exhibit fumigant/contact activity. The extracts of *L. camara* were used to protect grain against almond moth (Gotyal et al. 2010). The methanol extract of *L. camara* was most toxic against *S. oryzae*, followed by ethyl acetate and hexane (Rajashekhar, *et al.* 2014). These result suggest that there may be different bioactive compounds in this extract. So work in future on the characterization of active component in this extract and also work on the effective concentration for human consumption.

Table No. 1: Efficacy of flower extract of *Lanatan camara* against *S. oryzae*

Sr. No.	Conc. Of extract mg/ml	Percent Mortality				
		1 day	2 day	3 day	4 day	7 day
1	5	0	5	5	5	20
2	10	0	10	5	10	25
3	15	0	10	10	15	50
4	20	0	15	15	20	60
5	25	5	15	20	50	60
6	Acetone treated	0	00	00	00	00

Conclusion:

In present study indicated that ethanol flower extract of *Lantana camara* was toxic to *Sitophilus oryzae*. It is good source of botanical pesticide for ecofriendly pest control strategies against stored grain pests.

Acknowledgement:

We thankful the Principal of the Dahiwadi College Dahiwadi for providing the facility to research work. And also thankful DST FIST for the financial support.

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Fumigant toxicity of *Lagenaria siceraria* against *Tribolium casatneum*

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ABSTRACT

Tribolium castaneum is commonly known as red rust flour beetle. It is major pest of stored grains and highly infested with their product. Fumigant toxicity of leaf extract of *Lagenaria siceraria* evaluated against the adult of *Tribolium castaneum*. Toxicity assessed through fumigant bioassay method. Insect mortality recorded after 24 hours. Result of this study indicated that leaf extract of *Lagenaria siceraria* have shown good fumigant toxicity against *Tribolium castaneum*.

Keywords: *Lagenaria siceraria*, *Tribolium castaneum*, Fumigant toxicity.

Introduction:

The red flour beetle *Tribolium castaneum* (Tenebrionidae: coleoptera) is most common destructive pest of stored grains. The red flour beetle is of Indo –Ausrtalian origin and it is distributed world wide. The adult stage is more harmful. They bores the grains and leave behind powder and thin brown shells in the grains. Their infestation gives odour to the grains (Paranagama *et al.* 2003). Hence to control them is important. The currently used synthetic fumigant is effective on this stored pests but it is harmful for non-target animals like human being. So instead of synthetic fumigants the botanical fumigants are much more effective (Isman, 2000).

Lagenaria siceraria (Cucurbitaceae) is widely distributed in tropical & subtropical region in the world. It is commonly known as bottle gourd (Heiser 1979; Decker walters *et al*. 2001; Erickson *et al*. 2005). The present study was conducted for analyze the fumigant toxicity of leaf extract of *L. siceraria* on red flour beetle.

Material and Methods:

Insect Culture: Insect culture of *Tribolium castaneum* collected from wheat grains of local godowns in Dahiwadi. These insects were rare on clean and un-infected variety of wheat. They are maintained in laboratory at 28±2°C temperature and related humidity at 70± 5%. Adults of *T. castaneum* were used for the experiment.

Preparation of leaf powder:

The leaf of *Lagenaria siceraria***,** was collected from the crop field. Collected leaves were washed by water and shade dried for 4-5 days in at room temperature in the laboratory and then makes it in powdered form using domestic grinder.

Preparation of leaf Extract:

The leaf powder of *Lagenaria siceraria***,** extracted with **ethanol solvent** by the **Soaking method** according to **Adriana, *et al,* (2008)**.

Then the green residue of extract obtained and sealed in vials and store in refrigerator at 4°C for the experiment.

Bioassay:

Toxicity of ethanol solvent leaf extract of *Lagenaria siceraria***,** against adults of *T. castaneum* was studied by fumigant bioassay method (Jaykumar *et al.* 2017). Five different concentrations (0.5%, 1%, 1.5%, 2%, 2.5%) were prepared for analytical grade in Acetone. Add 0.5 ml extract on the Whatman No.1 filter paper (3 cm diameter) and dried for 1-2 minute. The 10 adults of *T. castaneum* released in each plastic bottle (100 ml volume) and treated filter paper was pasted on underside of the screw cap and cap was tightly closed. Three replications were maintained for each concentration of extract. Same volume of Acetone treated to filter paper was served as control. Insect mortality was recorded after 24 hr. exposure.

Result and Discussion:

In the treatment of plant fumigant toxicity of extract against the *Tribolium castaneum* revealed high mortality at 24 hrs. exposure when compared to control. Maximum mortality caused at 2.5% concentration. In general the rate of mortality was increased with increasing the concentration of plant extracts. Results demonstrated that, high concentration dose of extracts shows more mortality than low concentration dose. In this experiment maximum mortality after 24 hr at 2.5% in *Tribolium castaneum* is 60%.

The fumigant toxicity of *Lagenaria siceraria* to adults of *Tribolium castaneum* has shown in Table No. 1. The ethanol extract is effective against *Tribolium castaneum* is after 24 hr. at 0.5%, 0.1%, 1.5%, 2% and 2.5% concentration mortality is 20, 40, 40, 60 and 60% respectively.

In the present study shown that at higher concentration 2.5% the mortality is higher 60% after 24 hr. The plant extract showed adult mortality when tested for fumigant toxicity. The fumigant toxicity effect of plant extracts and plant essential oil have been reported against stored grain pests(Chaubey, 2011, Lee, et al 2002, Shaaya, *et al*. 1991). The petroleum ether extract of *Argemone mexicana* seed is effective as fumigant against *Tribolium castaneum* (Hasan ali, *et al,* 2017). The ethanolic extract of *Argemone mexicana* seed shown the 100% failure of egg hatching *Aedes aegypti* (Sakthivadivel, 2003).

The seeds of *Azadirachta indica* were reported to show insecticidal activity against a variety of insect species and azadirachtin, the active principle, exhibited insect antifeedant, moult inhibiting and anti gonadotropic effects in insects (Schmutterer 1990, Morgan 2009). However, its bitter taste and lack of contact toxicity restricts its use and unsuited on stored products meant for human consumption.

Plant products and essential oils have been used for grain protection in small scale in different parts of the world, particularly India, China and Africa (Golob and Gudrups, 1999). The ethanol extract of *Cassia tora* and *Clerodendrum inerme* were used as grain protectants against *S. oryzae* (Yankanchi and Gadache, 2010). Volatile compound of many plant extracts are composed of many bioactive molecules, which exhibit fumigant/contact toxicity. The extract of *L. camara* were used to protect grain against almond moth (Gotyal et al. 2010). The effectiveness of this extract in causing mortality could be due to the presence of active compounds such as terpenoids, alkaloids, steroids, and flavonoids (Ouko et al., 2017). Triterpenoids of various plant extract have be to proven have toxic effect against coleopterans (Mabilao et al. 2006, IIeke et al., 2011).

Table No. 1. Fumigant toxicity of *Lagenaria siceraria* against *Tribolium castaneum*

Sr. No.	Conc. Of extract (%)	Percent Mortality
		24 hr
1	0.5	20
2	1	40
3	1.5	40
4	2	60
5	2.5	60
6	Acetone treated	00

Conclusion:

In present study *Lagenaria siceraria* shown the good fumigant toxicity against *Tribolium castaneum*. This is preliminary study of this work for better or clear result we need to increase exposure time.

Acknowledgement:

We thankful the Principal of the Dahiwadi College Dahiwadi for providing the facility to research work.

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Ouko, R. O., Koech, S. C., Arika, W. M., Njagi, S. M., Oduor, R. O. and Ngugi, M. P. 2017. Bioefficacy of organic extracts of *Ocimum basilicum* against *Sitophilus zeamias*. *Entomology, Ornithology & Herpetology,* **6(1):** 1-7.

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Repellent Activity of Ethanolic Leaf Extract of *Lagenaria Siceraria* Against *Tribolium Castaneum*

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ABSTRACT

In the present study, ethanol solvent leaf extracts of *Lagenaria scieraria* was evaluated repellent activity against the *Tribolium castaneum*. Repellency test performed by filter paper disc method (12 cm diameter divided into two equal parts) with different concentrations (0.5%, 1%, 1.5%, 2%, 2.5%). Repellency was recorded after 1, 2, 3, 5, 24 and 48 hours. Result indicated that ethanol leaf extract of *Lagenaria scieraria* was more effective against *Tribolium castaneum*.

Keywords: *Lagenaria scieraria*, *Tribolium castaneum*.

Introduction:

In India, the stored products are damaged by pests which are the most serious and cause economic loss. *Tribolium castaneum* (Coleoptera: Tenebrionidae) is a worldwide pest and originated from Indo-Australian. It is commonly known as red flour beetle. It is reddish brown in color. It attack on stored grains, flour, cereals etc. Red flour beetle have chewing mouthpart but do not bite or sting (Good NE, 1936 ; Smith EH, Whitman RC, 1992).

The red flour beetle, *Tribolium castaneum* (Coleoptera: Tenebrionidae) is a worldwide and one of the most serious pest (Adarkwah et al.,2010). It is attack on stored grains, flour, cereals etc. In many years, synthetic insecticides are used to protect stored grains. But it is harmful for human health and environment (Lamiri et al.,2001). So there is need to derived botanical products which effect on the stored grain pests and control their growth (Coitinho et al., 2006). The application of synthetic insecticides has number of problems such as environmental pollution, toxicity to non-target organism, hazards for mammals and insecticide resistance (Yusof and Ho, 1992; Cosimi et al., 2009; Sousa et al., 2009).

Lagenaria siceraria (Cucurbitaceae) commonly known as bottle gourd. It is widely cultivated in tropical and subtropical region (H. X. Wang et al., 2000). In india, the plant used as medicine. It is used to reduce inflammation, pain and also treatment of diseases such as cough, fever, diabetes mellitus and skin (Gill NS et al., 2012; Kirtikar KR et al., 2005).

Repellents from botanical products are easy as compared to synthetic chemicals (Shadia, 2011). Hence in the present work, chosen plant species were tried to management of *Tribolium castaneum*.

Material and Methods:

Insect Culture: Insect culture of ***Tribolium castaneum*** (Red rust flour beetle) collected from wheat grains of local godowns in Dahiwadi. These insects were rare on clean and un-infected variety of wheat. They are maintained in laboratory at 28±2°C temperature and related humidity at 70± 5%. Adults of *T. castaneum* were used for the experiment.

Preparation of Leaf powder:

The leaves of ***Lagenaria siceraria,*** was collected in and around Dahiwadi region. Collected leaves were washed by water and shade dried for 4-5 days at room temperature in the laboratory and then makes it in powdered form using domestic grinder.

Preparation of Leaf Extract:

The leaf powder of ***Lagenaria siceraria,*** extracted separately with **ethanol solvent** by the **Soaking method** according to **Adriana, *et al,* (2008)**. Then the green residue of extract obtained and sealed in vials and store in refrigerator at 4°C for the experiment.

Bioassay:

The repellent activity of ***Lagenaria siceraria,*** extract against adults of *T. castaneum* was determined in plastic tub (12 cm diameter) (Muhammad, S. 2014). Five different concentrations (0.5%, 1%, 1.5%, 2%, 2.5%) were prepared for analytical grade in Acetone. Filter paper discs (12 cm diameter) was cuts in half and 0.5 ml of each concentration was applied to one half of the filter paper. The other half of the disc 0.5 ml acetone was applied. The treated half circles were air dried to evaporate the solvent completely. Each treated half disc was then attached with cellophane tape and placed in tubs. Then ten adult insects were released in the middle of the tubs. The same was done in three replicates. Counts of the insect present on each half circle were made after 1, 2, 3, 5, 24 and 48 hr. The value in the data then percent repellency was calculated.

Result and Discussion: In the treatment of plant of *Lagenaria siceraria* ethanol solvent leaf extract against the *Tribolium castaneum* revealed high repellency at 48 hr. exposure when compared to control. Maximum repellency caused at 2.5% concentration of ethanol solvent leaf extract treatment. In general the rate of repellency was increased with increasing the

concentration of plant extracts. Results demonstrated that, high concentration dose of extracts shows more repellency than low concentration dose.

As repellency of *T. castaneum* after 48 hr. exposure is treated with 2.5% concentration *L. siceraria* is 77% in the ethanol extract, at the same time fliter paper treated with 0.5% concentration of *L. siceraria* repellency had shown 33% in ethanol extract (Table No. 1). Bottle gourd (*Lagenaria siceraria*) was one of the first domesticated plants and the only one with a global distribution during pre- Columbian times. However, native to Africa, bottle gourd was in use by humans in East Asia, as early as 11,00 years ago (BP) and in the Americans by 10,000 BP(Kistler *et al,*2014).

This plant is well known eco-friendly and is not toxic to plants, animals and human. Moreover, it is clearly proved that crude or partially purified plant extracts are less expensive and highly efficacious for the control of mosquitoes rather than the purified compounds or extracts (Jang *et al*, 2002; El-Sheikh *et al*, 2012).

All doses of the plant extracts used in the present study exhibited some repellency activity against the adults of *Tribolium castaneum*. The repellent activity of the plant extracts tested varied depending on the dose of the extracts.

Diethyl ether fruit extract exhibited 100% repellent activity against *C. maculates*, *S. oryzae* and *Tribolium castaneum*. The seed extracts of *A. mexicana* found more effective against *Tribolium castaneum* (Soundarajan, L. M. 2009).

Table No. 1: Repellent activity of leaf extract of *Lagenaria siceraria* against *T.castaneum*

Sr. No.	Conc. Of extract (%)	Percent Repellency					
		1 hr	2 hr	3 hr	5 hr	24 hr.	48 hr
1	0.5	44 ± 0.34	54 ± 0.67	43 ± 0.34	47 ± 0.89	30 ± 0.58	33 ± 0.34
2	1	54 ± 0.67	60 ± 0.67	57 ± 0.67	50 ± 0.58	47 ± 0.34	57 ± 0.34
3	1.5	60 ± 0.58	64 ± 0.67	60 ± 0.58	60 ± 0.58	50±0.58	60 ± 0.58
4	2	64 ± 0.67	67 ± 0.34	60 ± 0.58	64 ± 0.58	74 ± 0.34	74 ± 0.34
5	2.5	64 ± 0.67	67 ± 0.34	64 ± 0.67	67 ± 0.58	74 ±0.89	77 ± 0.34
6	Acetone treated	0	00	00	00	00	00

Conclusion:

Repellent activity of plant extract of *Lagenaria siceraria* was tested against *Tribolium castaneum.* The above results indicate that the repellent activity of *L. siceraria* increase with increase in concentrations against *T. castaneum.*

Acknowledgement:

We thankful the Principal of the Dahiwadi College Dahiwadi for providing the facility to research work. And also thankful DST FIST for the financial support.

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Toxicity of Flower Extract of *Lantana Camara* Against *Tribolium Casatneum*

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ABSTRACT

Tribolium castaneum is commonly known as red rust flour beetle. It is major pest of stored grains and highly infested with their product. Fumigant toxicity of flower extract of *Lantana camara* evaluated against the adult of *Tribolium castaneum*. Toxicity assessed through fumigant bioassay method. Insect mortality recorded after 24 hours. Result of this study indicated that flower extract of *Lanatana camara* have shown good fumigant toxicity against *Tribolium castaneum*.

Keywords: *Lantana camara*, *Tribolium castaneum*.

Introduction:

The red flour beetle *Tribolium castaneum* (Tenebrionidae: coleoptera) is most common destructive pest of stored grains. The red flour beetle is of Indo –Ausrtalian origin and it is distributed world wide. The adult stage is more harmful. They bores the grains and leave behind powder and thin brown shells in the grains. Their infestation gives odour to the grains (Paranagama *et al.* 2003). Hence to control them is important. The currently used synthetic fumigant is effective on this stored pests but it is harmful for non-target animals like human being. So instead of synthetic fumigants the botanical fumigants are much more effective (Isman, 2000).

The *Lantana camara* is one of the most commonly known noxious weed distributed worldwide. It is the native of Central and South America. (Rakesh kumar 2016) It is small perennial shrub which grows upto 2m tall. It has small tubular shaped flowers and arranged in clusters This plant shows fumigant toxicity against various insects pest. The present study conducted to analyze the fumigant toxicity of flower extract of *Lantana camara* against *Tribolium castaneum.*

Material and Methods:

Insect Culture: Insect culture of *Tribolium castaneum* collected from wheat grains of local godowns in Dahiwadi. These insects were rare on clean and un-infected variety of wheat.

They are maintained in laboratory at 28±2°C temperature and related humidity at 70± 5%. Adults of *T. castaneum* were used for the experiment.

Preparation of flower powder:

The flowers of ***Lantana camara,*** was collected in and around Dahiwadi region. Collected leaves were washed by water and shade dried for 4-5 days in at room temperature in the laboratory and then makes it in powdered form using domestic grinder.

Preparation of flower Extract:

The flower powder of ***Lantana camara,*** extracted with **ethanol solvent** by the **Soaking method** according to **Adriana, *et al,* (2008)**.

Then the yellow residue of extract obtained and sealed in vials and store in refrigerator at 4°C for the experiment.

Bioassay:

Toxicity of ethanol solvent extract of ***Lantana camara,*** against adults of *T. castaneum* was studied by fumigant bioassay method (Jaykumar *et al.* 2017). Five different concentrations (0.5%, 1%, 1.5%, 2%, 2.5%) were prepared for analytical grade in Acetone. Add 0.5 ml extract on the Whatman No.1 filter paper (3 cm diameter) and dried for 1-2 minute. The 10 adults of *T. castaneum* released in each plastic bottle (100 ml volume) and treated filter paper was pasted on underside of the screw cap and cap was tightly closed. Three replications were maintained for each concentration of extract. Same volume of Acetone treated to filter paper was served as control. Insect mortality was recorded after 24 hr. exposure.

Result and Discussion:

In the treatment of plant fumigant toxicity of extract against the *Tribolium castaneum* revealed high mortality at 24 hrs. exposure when compared to control. Maximum mortality caused at 2.5% concentration. In general the rate of mortality was increased with increasing the concentration of plant extracts. Results demonstrated that, high concentration dose of extracts shows more mortality than low concentration dose. In this experiment maximum mortality after 24 hr at 2.5% in *Tribolium castaneum* is 90%.

The toxicity of ethanol extract of *Lantana camara* to adults of *Tribolium castaneum* has shown in Table No. 1. The ethanol extract is most effective against *Tribolium castaneum*

is after 24 hr. at 0.5%, 0.1%, 1.5%, 2% and 2.5% concentration mortality is 25, 45, 70, 70 and 90% respectively.

In the present study shown that at higher concentration 2.5% the mortality is higher 90% after 24 hr. The plant extract showed adult mortality when tested for fumigant toxicity. The fumigant toxicity effect of plant extracts and plant essential oil have been reported against stored grain pests(Chaubey, 2011, Lee, et al 2002, Shaaya, *et al*. 1991). The petroleum ether extract of *Argemone mexicana* seed is effective as fumigant against *Tribolium castaneum* (Hasan ali, *et al,* 2017). The ethanolic extract of *Argemone mexicana* seed shown the 100% failure of egg hatching *Aedes aegypti* (Sakthivadivel, 2003).

The natural insecticides are used for the control of stored products because of their relatively high efficacy against all stages of insects (Tunc. et. al. 2000, Akhtar et.al. 2008). The use of plant products to protect stored grain from insect pest damage is an age old practice (Ukeh 2008). Essential oils, extracts and the chemical ingredients have been used greatly in grain protection in many laboratory and field trials (Isman 2006; Ravindra et al. 2009). Many studies have reported bioactive compounds from plant extracts with repellent/antifeedant/insecticidal activity against stored-product insect pests (Upasani et al. 2003; Akhtar et al. 2008; Yao et al. 2008).

The seeds of *Azadirachta indica* were reported to show insecticidal activity against a variety of insect species and azadirachtin, the active principle, exhibited insect antifeedant, moult inhibiting and anti gonadotropic effects in insects (Schmutterer 1990, Morgan 2009). However, its bitter taste and lack of contact toxicity restricts its use and unsuited on stored products meant for human consumption.

Plant products and essential oils have been used for grain protection in small scale in different parts of the world, particularly India, China and Africa (Golob and Gudrups, 1999). The ethanol extract of *Cassia tora* and *Clerodendrum inerme* were used as grain protectants against *S. oryzae* (Yankanchi and Gadache, 2010). Volatile compound of many plant extracts are composed of many bioactive molecules, which exhibit fumigant/contact toxicity. The extract of *L. camara* were used to protect grain against almond moth (Gotyal et al. 2010). The effectiveness of this extract in causing mortality could be due to the presence of active compounds such as terpenoids, alkaloids, steroids, and flavonoids (Ouko et al., 2017). Triterpenoids of various plant extract have be to proven have toxic effect against coleopterans (Mabilao et al. 2006, IIeke et al., 2011).

Table No. 1. Toxicity of ethanol flower extract of *Lantana camara* against *Tribolium castaneum*

Sr. No.	Conc. Of extract (%)	Percent Mortality
		24 hr
1	0.5	25
2	1	45
3	1.5	70
4	2	70
5	2.5	90
6	Acetone treated	00

Conclusion:

In the present study *Lantana camara* shown the good toxicity against *Tribolium castaneum.*

Acknowledgement:

We thankful the Principal of the Dahiwadi College Dahiwadi for providing the facility to research work. And also thankful to the Head, Department of Zoology for supporting the research work.

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Green synthesis of thiazine of flavanone derivatives and their antimicrobial activity

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Abstract:

A new series of flavanone derivatives were synthesized [1a-1i] from thiazine of chalcone and N, N-dimethylaniline in the presence of polyethylene glycol. All synthesized compounds were characterized on the basis of IR, NMR spectroscopic data. All the compounds have been screened for antimicrobial activity by the cup-plate method. The results reveal that some of the synthesized thiazine of flavanone derivatives were exhibited moderate to good antibacterial and antifungal activity..

Keywords : Synthesis, flavanone , Antimicrobial activity.

Introduction:

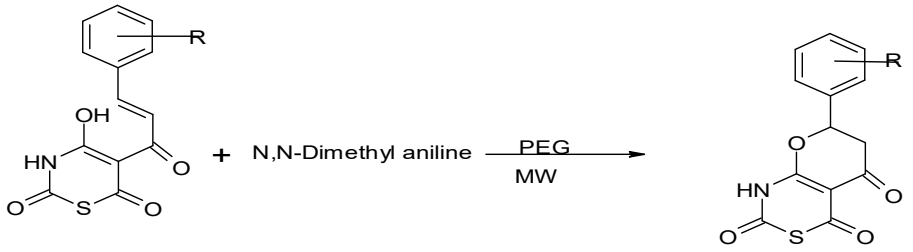
Heterocycles are abundant in nature and involved synthesis of pharmaceutical and biological important molecules. Thiazine and their derivatives are played important role in heterocyclic chemistry. A large number of thiazine derivatives also exhibited various biological activities such as Antimicrobial, Anti-inflammatory, Antioxidant, Antipyretics, Antitumar, Calcium channel modulators[1]. The chalcones have been used as intermediates for the synthesis of various heterocyclic compounds. Literature review reveals that chalcones exhibited various biological activities such as Antimicrobial,Antifungal, Analgesic[2], Insecticidal [3], Antiviral[4] activities. Flavonoids are widely present in the plant kingdom exhibiting a broad range of biological activities, including antibacterial, antifungal, antiviral, anti-allergic, anti-inflammatory, and anti-proliferative and antioxidant activities. Recently, we reported the antimicrobial efficacy of synthetic flavanone derivatives. In addition, there is increased interest in bioactive halogenated compounds. Here, we use an improved synthetic approach to obtain a series of flavanone derivatives that were assessed for antimicrobial activity's. A modified synthetic approach was developed based on a conventional route to efficiently obtain a small library of flavanones. Owing to the biological significance of flavanone compounds and continuation of our ongoing study on antimicrobial agent, we planned to synthesize a combined molecular framework that involves these two same active pharmacophores and their increasing importance in pharmaceutical and biological field. Therefore a series of new flavanone derivatives [1a-1i]has been synthesized and screened their antimicrobial activities.

Experimental Method:

The melting points were recorded on electro-thermal apparatus and are uncorrected. The purity of the compounds was checked by TLC on pre-coated SiO2 gel (HF254, 200 mesh) aluminium plates (E Merk) using hexane and ethyl acetate visualized in iodine chamber. IR spectra were recorded in KBr on a perkin-Elmer model-983. 1HNMR spectrum recorded on Varian Mercury 300MHz instrument using CDCl3, DMSO-d6 as solvent (chemical shift in δ ppm), using TMS as internal standard.

General Procedure for preparation for preparation of thiazine of flavanone derivatives.

A solution of 2'-hydroxychalcone (2 mmol), and N, N-dimethylaniline (2 mmol) in polyethylene glycol (2ml) was placed in an 50 ml beaker. This mixture was irradiated under MW in a domestic microwave oven for 20 seconds. The progress of the reaction was monitored by TLC. Then, the reaction mixture was cooled and poured into cold water and neutralized with 10% HCl. The precipitated solid was filtered, washed with water. The reaction mixture was purified by column chromatography using pet ether and ethyl acetate to obtain solid. All other flavanones **1a-1j** was prepared by the same procedure.



[1a-1i]

Scheme

Table No. 1: Physical analysis of Synthesized compounds (1a-1i):

Comp.No.	**R1**	M. P. ^{0}C	Yield %
1a	C_6H_5	99	80
1b	4-$OCH_3C_6H_4$	135	77
1c	4- $NO_2C_6H_4$	105	75
1d	4.$N(CH_3)_2C_6H_4$	101	70
1e	4- ClC_6H_4	86	85
1f	2-ClC_6H_4	141	77
1g	4- OHC_6H_4	167	80
1h	2- $NO_2C_6H_4$	182	82
1i	4-$CH_3C_6H_4$	123	79

Table No. 2 : Spectral Data of Synthesized Compounds(1a-1i)

Comp.No.	IR(KBr) V(cm-1)	1H NMR (CDCl3) δ in ppm
1a	3210(N-H),3045(=C-H),1613,1554 (C=C), 1689(C=O)	5.40(t, 1H),7.30(d, 2H),6.65-7.85(m, ArH)
1b	3210(N-H),3045 (C-H),1613,1554 (C=C), 1685(C=O)	5.43(t, 1H),7.13(d, 2H),6.65-7.85(m, ArH)
1c	3210(N-H),3045 (C-H),1613,1554 (C=C), 1680(C=O)	5.23(t, 1H),7.13(d, 2H),6.65-7.85(m, ArH)
1d	3210(N-H),3045 (C-H),1613,1554 (C=C), 1689(C=O)	5.23(t, 1H),7.13(d 2H),6.65-7.85(m, ArH)
1e	3210(N-H),3045(C-H),1613,1554 (C=C), 1684 (C=O) ,775(C-Cl)	5.23(t, 1H),7.13(d, 2H),6.65-7.85(m, ArH)
1f	3210(N-H),3045 (C-H),1613,1554 (C=C), 1685(C=O), 775(C-Cl)	5.23(t, 1H),7.13(d, 2H),6.65-7.85(m, ArH)
1g	3210(N-H),3045 (C-H),1613,1554 (C=C), 1682(C=O)	5.23(t, 1H),7.13(d, 2H),6.65-7.85(m, ArH)
1h	3210(N-H),3045 (C-H),1613,1554 (C=C), 1688(C=O)	5.23(t, 1H),7.13(d, 2H),6.65-7.85(m, ArH)
1i	3210(N-H),3045 (C-H),1613,1554 (C=C),	5.23(t, 1H),6.13(d, 2H),6.65-7.85(m, ArH)

Table No. 3 : Antimicrobial activity of Synthesized Compounds

Comp. (100µg/ml)	**Antibacterial**				**Antifungal**	
	S. Aureus	**B. Subtilis**	**E. Coli**	**P.aeruginosa**	**C. albicans**	**A. niger**
1a	**12**	**13**	**11**	**05**	**09**	**07**
1b	**15**	**19**	**17**	**09**	**17**	**15**
1c	**15**	**14**	**21**	**10**	**12**	**08**
1d	**16**	**12**	**16**	**12**	**10**	**09**
1e	**17**	**18**	**19**	**18**	**20**	**15**
1f	**17**	**19**	**20**	**17**	**19**	**16**
1g	**16**	**17**	**10**	**18**	**16**	**15**
1h	**13**	**11**	**12**	**09**	**13**	**10-**
1i	**14**	**12**	**19**	**08**	**09**	**13**
Streptomycin	**17**	**20**	**22**	**19**		
Flucanazole -					**21**	**17**

Antimicrobial activity: The synthesized compounds (1a-1i) were screened for their in vitro antimicrobial activity by using cup plate method. Antibacterial activity was screened against two gram positive bacteria Staphylococcus aureus, Bacillus subtilis and two gram negative bacteria Escherichia coli, Pseudomonas aeruginosa by measuring the zone of inhibition on agar plates at concentrations 100 µg/mL. Antifungal activity was screened against Candida albicans, Aspergillus niger by measuring the zone of inhibition on agar plates at concentrations 100 µg/ml and reported in Table-3. Nutrient agar was employed as culture medium and DMSO was used as solvent control for antimicrobial activity. Streptomycin and Flucanazole were used as standard for antibacterial and antifungal activities respectively.

Results and Discussion:

The structures of all synthesized compounds are confirmed by IR, 1H NMR spectroscopy. Spectral data are shown in table 2. The compounds were evaluated for their antimicrobial activity. Most of the compounds exhibited good to moderate antibacterial and antifungal activity against the tested microorganisms. The antibacterial activity is shown in Table 3. The Compound 1b (R =OCH3), 1d (R = 4-N(CH_3)$_2$), 1e (4-Cl),1f(2-Cl),1g(4-OH) showed good activity against various pathogens as compared to standard drug Streptomycin and flucanazole. The remaining compounds 1a (R = 4-H), 1c (4-NO_2), 1h (2-NO2), 1i (4-CH3) exhibited moderate activities as compared to standard drugs. The antifungal activities are shown in Table 3. The Compounds 1b (R =4-OCH3) 1e (4 –Cl), 1f (2-Cl), 1g (4-OH) showed good activity against Candida albican, Aspergillus niger. while The remaining compounds (1a,1c,1d,1h,1i) exhibited moderate activities as compared to standard drugs. As we consider all results obtained from antibacterial and antifungal tests together we can say that entire compounds tested are active towards bacteria and fungi.

Conclusion:

In conclusion, we have synthesized new thiazine of flavanone derivatives [1a-1i]. Then characterization and tested for their antimicrobial activities against various types of bacteria and fungi. The results reveal that some of the compounds of the series exhibited promising antibacterial and antifungal activity compared to standard drugs.

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Use of Efficient method for the synthesis of pyrazole derivatives and evaluation of their antimicrobial activity

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Abstract:

A new synthesis of thiazine of pyrazole derivatives [1a-1i] from thiazine of chalcone with hydrazine hydrate in the presence of Bayer yeast under solvent free condition. All synthesized compounds were characterized on the basis of IR, NMR spectroscopic data. All the compounds have been screened for antimicrobial activity by the cup-plate method. The results reveal that some of the synthesized thiazine of pyrazole derivatives were exhibited moderate to good antibacterial and antifungal activity..

Keywords : Synthesis, pyrazole, Antimicrobial activity.

Introduction:

The synthesis of new analogs of bioactive heterocyclic compounds represents a major challenge in synthetic organic and medicinal chemistry. Due to their wide range of biological activities. Thiazine derivatives are an important class of heterocyclic compounds. They possess varied biological activites such as antimicrobial and anticoagulant activites , anticancer , and analgesic, anti-inflammatory, antimycobacterial , anti-tubercular , ant malarial, anti-HIV, fungicidal , antibacterial antidiabetic and hypolipidaemic, antiproliferative, Antiplatelet aggregation, Enzyme inhibitory[1,2,3] activites.

Pyrazole is known to be one of the most potential families of nitrogen-containing compounds[4]. Pyrazole derivatives exhibit a broad spectrum of biological profiles, for instance, anti-tubercular, anti-AIDS, anti-malarial,Anti-microbial, antitumor, anticancer and antifungal[5,6]. In addition, pyrazoles have also been found as promising anti-hyperglycemic, anti-depressant, anti-convulsant, anti-pyretic, anti-anxiety and insecticidal agents. Bipyrazole shows diuretic, cytotoxic and cardiovascular efficacy. It has achieved great attention since the privileged framework is frequently observed as a bioactive component in commercially available medicines, for example, Floxan (anti-inflammatory medicine), pyrazomycin (anticancer), difenamizole (anti-inflammatory drug). It is also utilized in paint and photographic industries and in the development of heat resistant resins.

Owing to the above facts and in continuation of our research work on novel biologically active hetrocycles and their increasing importance in pharamaceuatical and

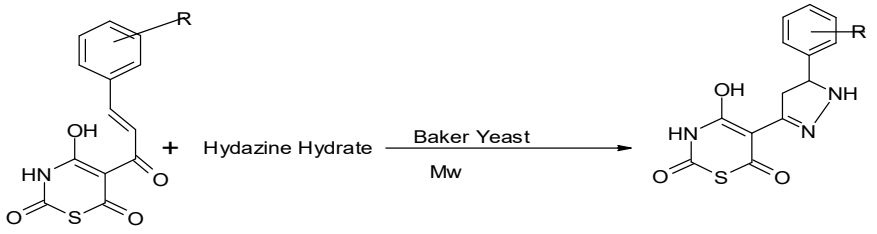
biological field. Therefore ,we synthesized new 7- thiazine of pyrazole derivatives using thiazine of chalcone with hydrazine hydrate in the presence of Baker yeast under solvent free condition and screened their antimicrobial activities.

Experimental Method:

The melting points were recorded on electro-thermal apparatus and are uncorrected. The purity of the compounds was checked by TLC on pre-coated SiO2 gel (HF254, 200 mesh) aluminium plates (E Merk) using hexane and ethyl acetate visualized in iodine chamber. IR spectra were recorded in KBr on a perkin-Elmer model-983. 1HNMR spectrum recorded on Varian Mercury 300MHz instrument using CDCl3, DMSO-d6 as solvent (chemical shift in δ ppm), using TMS as internal standard.

General Procedure for preparation for preparation of thiazine of flavanone derivatives.

The solution of thiazine chalcones (0.01 mol), hydrazine hydrate (0.01 mol) and baker's yeast were added in 100 ml beaker under solvent free condition. This mixture was irradiated under MW in a domestic microwave oven for 10-50 seconds. The progress of the reaction was monitored by TLC. Then, the reaction mixture was cooled and poured into cold water. The product obtained were filtered and washed with water, dried and recrystallized from ethanol.



[1a-1i]

Scheme

Table No. 2 : Spectral Data of Synthesized Compounds(1a-1i)

1a IR (KBr) v (cm-1): 3409(O-H) 3310(N-H), 3045(=C-H),1613,1554 (C=C),1657(C=N) 1677(C=O) 1H NMR (400 MHz, CDCl3)**:** 6.40(t, 1H), 7.30(d, 2H),7.25-7.95 (m, ArH) .

1b IR (KBr) v (cm-1): 3350(O-H) 3290(N-H), 3045(=C-H),1613,1554 (C=C),1657(C=N) 1677(C=O) 1H NMR (400 MHz, CDCl3)**:** 6.31(t, 1H), 7.35(d, 2H),7.15-7.85 (m, ArH) .

1c IR (KBr) v (cm-1): 3340(O-H) 3350(N-H), 3045(=C-H),1613, 1554 (C=C),1657(C=N) 1677(C=O) 1H NMR (400 MHz, CDCl3)**:** 6.21(t, 1H), 7.37(d, 2H),7.05-7.95 (m, ArH).

1d IR (KBr) v (cm-1): 3260(O-H) 3250(N-H), 3049(=C-H),1613, 1554 (C=C),1657(C=N) 1677(C=O). 1H NMR (400 MHz, CDCl3)**:** 6.31(t, 1H), 7.47(d, 2H), 7.05-7.70 (m, ArH)

1e IR (KBr) v (cm-1): 3360(O-H) 3370(N-H), 3045(=C-H),1613, 1554 (C=C),1657(C=N) 1677(C=O) 1H NMR (400 MHz, CDCl3)**:** 6.21(t, 1H), 7.37(d, 2H),7.05-7.95 (m, ArH).

1f IR (KBr) v (cm-1): 3340(O-H) 3350(N-H), 3045(=C-H),1613, 1554 (C=C),1657(C=N) 1677(C=O) 1H NMR (400 MHz, CDCl3)**:** 6.41(t, 1H), 7.23(d, 2H),7.25-7.75 (m, ArH). 1g IR (KBr) v (cm-1): 3340(O-H) 3350(N-H), 3045(=C-H),1613, 1554 (C=C),1657(C=N)

1677(C=O) 1H NMR (400 MHz, CDCl3)**:** 6.41(t, 1H), 7.23(d, 2H),7.25-7.75 (m, ArH).

1h IR (KBr) v (cm-1): 3360(O-H) 3370(N-H), 3045(=C-H),1613, 1554 (C=C),1657(C=N) 1677(C=O) 1H NMR (400 MHz, CDCl3)**:** 6.21(t, 1H), 7.37(d, 2H),7.05-7.95 (m, ArH).

1i IR (KBr) v (cm-1): 3340(O-H) 3350(N-H), 3045(=C-H),1613, 1554 (C=C),1657(C=N) 1677(C=O) 1H NMR (400 MHz, CDCl3)**:** 6.21(t, 1H), 7.37(d, 2H),7.05-7.95 (m, ArH)

Table No. 1: Physical analysis of Synthesized compounds (1a-1i):

Comp.No.	**R1**	M. P. ^{0}C	Yield %
1a	C_6H_5	124	75
1b	4-$OCH_3C_6H_4$	120	71
1c	4- $NO_2C_6H_4$	105	77
1d	4.$N(CH_3)_2C_6H_4$	87	79
1e	4- ClC_6H_4	96	80
1f	2-ClC_6H_4	114	82
1g	4- OHC_6H_4	132	76
1h	2- $NO_2C_6H_4$	109	89
1i	4-$CH_3C_6H_4$	90	75

Table No. 3 : Antimicrobial activity of Synthesized Compounds

Comp. (100µg/ml)	Antibacterial				Antifungal	
	S. Aureus	B. Subtilis	E. Coli	P.aeruginosa	C. albicans	A. niger
1a	14	11	09	07	11	09
1b	13	09	12	12	15	13
1c	11	12	21	15	19	15
1d	15	11	15	16	12	13
1e	11	19	13	11	18	17
1f	17	10	21	14	20	15
1g	09	14	10	19	14	12
1h	11	12	15	07	11	14-
1i	08	15	20	09	12	10
Streptomycin	17	20	22	19		
Flucanazole -					21	17

Antimicrobial activity: The synthesized compounds (1a-1i) were screened for their in vitro antimicrobial activity by using cup plate method. Antibacterial activity was screened against two gram positive bacteria Staphylococcus aureus, Bacillus subtilis and two gram negative bacteria Escherichia coli, Pseudomonas aeruginosa by measuring the zone of inhibition on agar plates at concentrations 100 µg/mL. Antifungal activity was screened against Candida albicans, Aspergillus niger by measuring the zone of inhibition on agar plates at concentrations 100 µg/ml and reported in Table-3. Nutrient agar was employed as culture medium and DMSO was used as solvent control for antimicrobial activity. Streptomycin and Flucanazole were used as standard for antibacterial and antifungal activities respectively.

Results and Discussion:

All synthesized compounds were confirmed by IR, 1H NMR spectroscopy. Spectral data are shown in table 2. The compounds were evaluated for their antimicrobial activity. Most of the synthesized compounds showed good antibacterial and antifungal activity against the tested microorganisms as compared to standard drug Streptomycin and flucanazole. The antibacterial activity is shown in Table 3. The Compounds 1d, 1f, 1e showed good activity against gram positive bacteria **S**. Aureus and B. Subtilis. The Compounds 1c, 1f, 1i,1g showed excellent activity against gram negative bacteria E. Coli and P. aeruginosa. as compared to standard drug Streptomycin and flucanazole. The remaining compounds exhibited moderate activities as compared to standard drugs. The

antifungal activities are shown in Table 3. The Compounds 1c, 1f, 1e showed significant activity against Candida albican, Aspergillus niger. While The remaining compounds exhibited moderate activities as compared to standard drugs.

Conclusion:

In conclusion, we have developed simple, efficient, convenient procedure for synthesis of substituted pyrazole derivatives. Antibacterial screening of the synthesized compound was done and found to possess excellent activity against some of the selected strains of bacteria while some were found to be moderate activity. Antifungal activity of all the synthesized pyrazoles also showed remarkable activity.

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शिंदी खुर्द गावचा जलव्यवस्थापनातील सहभागचा चिकित्सक अभ्यास

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प्रस्तावना:-

भारतात जलव्यवस्थापन हि मोठी समस्या आहे. महाराष्ट्रात अनेक तालुक्यात नेहमी दुष्काळ सदृश्य परिस्थिती असते. हित्तोंतो बाब विचारात घेऊन महाराष्ट्र सरकारने गाव पातळीवर पाणलोट व्यवस्थापन करण्यासाटी जलयुक्त शिवार हा उपक्रम सुरु केला आहे. महाराष्टातील अनेक गावे दुष्काळाचा सामना करत आहेत. पाणी हे मानवाचे जीवन आहे. पाणी असल्या शिवाय पृथ्वीवरील कोणताच सजीव जगू शकत नाही. जल व्यवस्थापनासाठी व महाराष्ट्राला दुष्काळ मुक्त करण्यासाठी पाणी फौंडेशन हि योजना २०१६ साली अमीर खान व किरण राव यांनी सुरु केली यामध्ये मी शिंदी खुर्द या गावाचा अभ्यास केला आहे.

उद्दिष्टे :-

१. शिंदी खुर्द गावातील अगोदर अस्तित्वात असणार्या जलसंधारण रचनांचा अभ्यास करणे
२. शिंदी खुर्द गावातील पाणी बचती साठी केलेल्या तंत्रज्ञानाचा अभ्यास करणे
३. जलसंधारनासाठी मनुष्यबळ व यांत्रिक यांच्या सहायाने केलेल्या रचना यांचा अभ्यास करणे .

संशोधन पद्धती / माहिती संकलन :-

सदर शोध निबंध हा प्राथमिक व दुय्यम तथ्य सामग्रीवर आधारित असून त्यासाठी सातारा जिल्हयातील माण तालुक्यातील शिंदी खुर्द गावातील अभ्यास केला असून साधा यादृछिक नमुना निवड पद्धतीचा वापर करून ३० कुटुंबाचा तसेच शिंदी खुर्द गावातील ग्राम पंचायत कडून

माहिती गोळा करून त्याचे विश्लेषन केले आहे. माहिती संकलनासाठी प्रश्नावली मुलाखत व प्रत्यक्ष निरीक्षण या तंत्राचा वापर केला आहे.

गृहीतके :- १.जल व्यवस्थापणामुळे पाण्याच्या भूजल पातळीत वाढ झाली आहे.

२.शेतीला पुरेसा व मुबलक पाणीपुरवठा उपलब्ध झाला आहे.

विषय विवेचन :

टेबल क्रमांक ;- १

अगोदरच अस्तित्वात असणाऱ्या रचनांचे सर्वेक्षण व दुरुस्ती

प्रकार	संख्या
माती नाला बांध	३५
सिमेंट नाला नाला बांध	१६
पाझर तलाव	०१
एकूण	५२

टेबल क्रमांक १ वरून असे दिसून येते कि, पाणी फौंडेशन या योजने अंतर्गत गोदरच अस्तिवात असणाऱ्या रचनाचे सर्वेक्षण व दुरुस्ती करण्यावर केंद्रित केले गेले. त्यामध्ये माती ,नाला, बांध सिमेंट नाला बांध ,पाझर तलाव या सारख्या जुन्या रचनेची सर्वेक्षण करण्यात आले आहे.

बहुतेक गावात पाझर तलाव / नाला बांध हे नादुरुस्त असतात. नवीन उपचारांच्या तुलनेत या जुन्या उपचारांची दुरुस्ती हि कितीतरी स्वस्त असते. जुने उपचार हे अनेक वेळेस मोक्याच्या sites वर असतात. त्यामुळे हे जुने उपचार repaire करणे खूपच गरजेचे असते

टेबल क्रमांक ;- २

गावाचे रब्बीचे एकूण क्षेत्र	१८८.० हेक्टर
गावाचे उद्दिष्ट	९४.० हेक्टर
गावाने पूर्ण केलेले उद्दिष्ट	१५६.० हेक्टर
स्पर्धे पूर्वी केलेली जलबचत	१५२.०० हेक्टर
१. ठिबक	२७.५ हेक्टर
२. तुषार सेट	११६.० हेक्टर
३. B. B. F.(बेड)	१०.२ हेक्टर

पाणी बचत तंत्रज्ञान टेबल क्रमांक २ वरून असे दिसून येते कि ,जलबचतीच्या तंत्राचा वापर केल्याने मोठ्या प्रमाणात पाण्याची बचत होते. ठिबक, तुषार, बी. बी. एफ. या माध्यमातून पाण्याचा मर्यादित वापर केला जातो. ठिबक सिंचनापेक्षा तुषार सिंचनाचा वापर केल्याने

मोठ्या प्रमाणात पाण्याची बचत होते. त्यामध्ये तुषार सिंचनाचा वापर केल्याने सर्वात जास्त म्हणजेच ११६.० हेक्टर जमिनीसाठी पाण्याची झालेली बचत वरील आकडेवारीनुसार दिसून येते .

टेबल क्रमांक ;- ३

मनुष्यबळाचा आणि यंत्राचा वापर करून बांधण्यात आलेल्या रचना किंवा उपाय

मृदा आणि जलसंधारण रचना	मनुष्यबळाचा वापर	यांत्रिक काम
गावची लोकसंख्या	१३३७ जनगणनेनुसार	-
गावचे उद्दिस्त	८०२२ घनमीटर	१४५९०० घनमीटर
पूर्ण केलेली उद्दिस्त	१११४१ घनमीटर	२५०३२१ घनमीटर
सलग समतल चर	११२८.०९ घनमीटर	७८०.७२ घनमीटर
compartment बंडिंग	६९५०.१८ घनमीटर	७०८०.०९ घनमीटर
छोटे मातीचे बांध	२३८.४८ घनमीटर	१६२७४५.०६ घनमीटर

टेबल क्रमांक २ वरून असे दिसून येते कि , जलसंधारणासाठी किंवा पाणी साठवण्यासाठी किंवा गाळ अडवण्यासाठी मनुष्यबळाचा आणि यंत्राचा वापर करून वेगवेगळ्या जलसंधारण रचना तयार करण्यात आल्या. त्यामध्ये सलग समतल चर, लहान मातीचे बांध याच्यासारख्या रचना तयार करून मोठ्या प्रमाणात जलसंधारण करण्यात आले. त्यामध्ये छोटे मातीचे बांध याचे यांत्रिक काम १६२७४५.०६ घनमीटर एवढ्या मोठ्या प्रमाणात झालेले दिसून येते .

टेबल क्रमांक;- ४

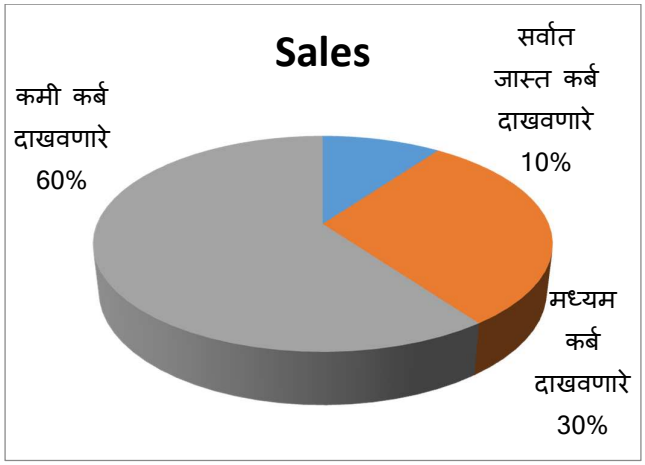
- माती तपासणी

गावाची खातेदार संख्या ----------५७२

गावचे उद्दिस्त ----------२६४

गावाने माती तपासणी केलेली खातेदार संख्या ----------४५५

सेंद्रिय कर्ब टक्केवारी दर्शवणारा तक्ता ;-



वरील तक्तावरून असे दिसून येते कि, कमी सेंद्रिय कर्ब असणाऱ्या जमिनी जास्त लोकांकडे असलेले दिसून येते तर भरपूर सेंद्रिय कर्ब असणाऱ्या जमिनी कमी लोकांकडे असलेले दिसून येते.

- सेंद्रिय कार्बन तपासणी नंतरची उपाय योजना ;-

सेंद्रिय कर्बाचे प्रमाण	निष्कर्ष	उपाय
०.५ % पेक्षा कमी	जमिनीतील मुलद्रव्यांची उपलब्धता फारच कमी आहे .	बायोगॅस पासून निर्मिती झालेले कंपोस्ट खत प्रती हेक्टरी नांगरण्यापूर्वी टाकणे
०.५ % ते १ %	जमिनीतील मूलद्रव्यांचे उपलब्धता मध्यम आहे .	बायोगॅस पासून निर्मिती झालेले कंपोस्ट खत प्रती हेक्टरी नांगरण्यापूर्वी टाकणे.
१ % पेक्षा जास्त	जमिनीतील मुल्द्रव्यांव्यांची उपलब्धता जास्त आहे .	जमिनीचा कस चांगला आहे. जमीन पिक घेण्यास योग्य आहे.

निष्कर्ष ;-

जलव्यवस्थापणामुळे पाण्याचा योग्य प्रमाणात वापर केला असून भूजल पातळीत मोठ्या प्रमाणात वाढलेली दिसून आली आहे . त्याचबरोबर जलव्यवस्थापणामुळे मृदेची धूप कमी झालेली दिसून आली . व यामुळे शेतीला पुरेसा मुबलक पाणीपुरवठा उपलब्ध झालेला दिसून आला . त्याचबरोबर गावातील लोकांच्या आरोग्यात व राहणीमानात दर्जा सुधारलेला दिसून आला . शेतीच्या विकासाबरोबर गावातील लोकांच्या उत्पनात वाढ झाली . त्यामुळे जलसंधारण हि योजना अत्यंत महत्त्वाची ठरलेली आहे .

उपाययोजना :-

१) जलव्यवस्थापण योजनेचा प्रचार व प्रसार करणे .

२) मातीची सुपीकता टिकून ठेवण्यासाठी सेंद्रिय खताचा जास्तीत वापर करणे .

३) जमिनीतील सेंद्रिय कर्बाचे प्रमाण वाढवणे आवश्यक आहे .

४) जल सर्वंधना बरोबरच वृक्षाची लागवड मोठ्या प्रमाणात करणे .

५) पाण्याची बचत करण्यासाटी ठिबक,तुषार सिंचन, शेततळे, विहीर याचा वापर करणे .

संदर्भ ;-

१) भारतीय अर्थ व्यवस्था डॉ. घाटगे , डॉ वावरे , निराली प्रकाशन ,

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इंधनाच्या वाढत्या किमतीतील बदलांच्या प्रवाहांचा अभ्यास

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प्रस्तावना

जगातील कोणत्याही प्रगत देशाच्या अभ्यास केला असता.आपल्या लक्षात येते की जो देश औद्योगिक दृष्ट्या प्रगत आहे. तसेच दळणवळनाची सुसज्जता आहे. त्या देशाचा आर्थिक विकास झाल्याचे आपल्याला दिसून येते. मात्र जगात औद्योगिक क्रांती ज्या बाबीमुळे घडून आली,ती म्हणजे पेट्रोलियम पदार्थ होय. कोणत्याही देशाची अर्थव्यवस्था पेट्रोलियम पदार्थावर अवलंबून असते. ज्या देशात या पदार्थाची मुबलकता आहे. अशा देशांची संपूर्ण अर्थव्यवस्था यावर अवलंबून आहे.उदा.Opec countries मात्र जगातील सर्वच भागात पेट्रोलियम पदार्थ उपलब्ध नसल्यामुळे ज्या देशांत त्याची मुबलकता कमी आहे, त्या देशांना आपल्या एकूण उत्पन्नाचा खूप मोठा भाग पेट्रोलियम पदार्थांच्या आयतीवर खर्च करावा लागतो. भारतासारख्या देशाला आपल्या एकूण पदार्थांपैकी 80% पेट्रोलियम पदार्थ इतर देशांकडून आयात करावे लागतात. त्यामुळे पेट्रोलियम पदार्थांच्या किमतीत झालेल्या चढ-उतारचा मोठा परिणाम भारताच्या अर्थव्यवस्थेवर होत असल्याचे आपण पाहिले. तसेच जागतिक बाजारपेठेतील कच्या तेलाच्या किंमतीचा देखील पेट्रोलियम पदार्थाच्या किंमतीवर परिणाम होत असतो. त्यामुळे पेट्रोलियम पदार्थाच्या किंमतीतील वाढ बाह्य शक्तिवर तसेच अंतर्गत शक्तिवर अवलंबून असते. प्रत्येक देशाची धोरणे वेगळी असतात. त्याचा परिणाम पेट्रोलियम पदार्थाच्या किंमतीच्या चढ-उतार होत असतो. त्यामुळे देशातील उद्योगधंद्याच्या विकासावर त्याचा अप्रत्यक्ष परिणाम दिसून येतो.

❖ कच्या तेलाचे झटके :

१) १९७३ - तेलाचे पहिले संकट,ज्यात किंमती 400% वाढल्या.

२) १९७८ - तेलाचे दुसरे संकट, ज्यात किंमती 100% वाढल्या.

३) १९९० - यामध्ये ९ महिन्यासाठी तेलाच्या किंमती वाढल्या होत्या.

अशा प्रकारे बाह्य घटनाचा परिणाम देखील इंधनातील दर वाढीवर होत असल्याचे दिसून येते.

❖ उद्दिष्ट्ये

१) पेट्रोलच्या वाढत्या किंमतीचा चिकित्सक अभ्यास करणे.

२) तेलाच्या वाढत्या किंमतीवर परिणाम करणाऱ्या घकांचा अभ्यास करणे.

३) पेट्रोलच्या वाढत्या किंमतीचा देशाच्या अर्थव्यवस्थेवर होणारा प्रतिकूल परिणामांचा अभ्यास करणे.

४) सरकारचे पेतोलियम पदार्थांच्या संदर्भातील धोरणांचा अभ्यास करणे.

५) देशाच्या एकूण उत्पन्नापैकी पेट्रोलियम पदार्थांच्या आयतीसाठी केल्या जाणाऱ्या खर्चाचा अभ्यास करणे.

❖ संशोधन पध्दती

सदर शोध निबंध हा दुय्यम सामग्रीवर आधारित असून त्यासाठी संदर्भ ग्रंथ,पुस्तके,नियतकालिके,मासिके,वर्तमानपत्राचे विविध अंक आणि भारत सरकारच्या अधिकृत वेबसाइट इत्यादीमधून शोध निबंधासाठी , आवश्यक असणारी माहिती संकलित केली आहे.

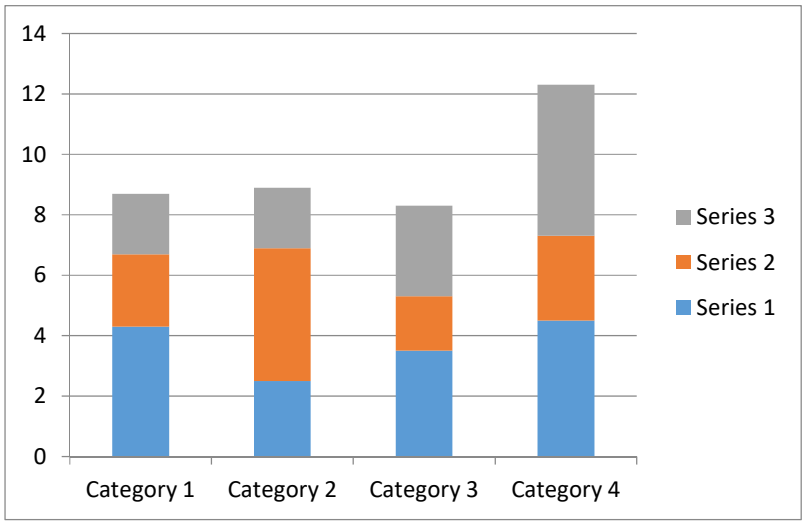
❖ विषय विवेचन

भारत देशाकडे जगातील एक वेगाने वाढवणारी अर्थव्यवस्था म्हणून पाहिले जाते. आज भारत विकासाच्या सर्वोच्च अवस्थेकडे मार्गक्रमण करत आहे. मात्र,पेट्रोलियम पद्धर्थाच्या बाबतीत देशाला इतर देशांवर अवलंबून राहावे लागत आहे. भारत आपल्या एकूण गरजेपैकी 80% कच्या पेट्रोलियम पद्धर्थांची आयात करतो. त्यामुळे या आयातीमुळे देशाच्या अर्थव्यवस्थेवर ताण पडत आहे. भारत फक्त आपल्या गरजेच्या 20% एवढे कच्या पेट्रोलियम पदार्थांचे उत्पादन करतो आहे.मात्र पेट्रोलियम पदार्थांच्या वापरमध्ये जगात भारत , अमेरिका,चीन नंतर तिसरा सर्वात मोठा वापरकर्ता आहे.मात्र, अलीकडच्या काळात देशात पेट्रोलियम पद्धर्थांच्या किंमतीत मोठया प्रमाणात अर्थव्यवस्थेवर परिणाम होत आहे. त्याच बरोबर सामान्य लोकांच्या जीवनावर देखील त्याचा परिणाम होत आहे. पेट्रोलियम पदार्थांमध्ये पेट्रोल च्या किंमती मोठया प्रमाणात वाढ होत असल्याचे दिसू आले मी माझ्या संशोधन पेपरात गेल्या वर्षभरातील म्हणजे जानेवारी 2019 ते डिसेंबर 2019 मधील पेट्रोलियम किंमतीतील चढ-उताराचा अभ्यास करण्याचा प्रयत्न केला आहे. याच बरोबर या काळात कच्या तेलाच्या किंमतीतील चढ-उतारचा देखील अभ्यास करण्याचा प्रयत्न केला आहे.

पेट्रोलच्या किंमती

(२०१९ जानेवारी ते डिसेंबर)

वरील तक्त्याच्या सहाय्याने आपण पेट्रोलच्या किंमतीचा अभ्यास करणार आहोत. तक्त्याचे निरीक्षण करता आपल्या लक्षात येईल. की वर्ष २०१९ मध्ये जानेवारी पासून ते डिसेंबर पर्यंत पेट्रोलच्या किंम तीत सातत्याने वाढ होत असल्याचे दिसून येते. त्यासाठी आपण भारतातील प्रमुख चार शहरातील पेट्रोल च्या किंतीचा आढावा घेतला. यामध्ये प्रामुख्याने दिल्ली, कोलकत्ता, मुंबई, चेन्नई या शहरातील पेट्रोल च्या किंमतीचा समावेश आहे. यावरुन असे लक्षात येते की वरील प्रमुख चार ही शहरातील पेट्रोल च्या किंमती वाढ झालेली आहे दिल्ली मध्ये जानेवारी महिन्यात पेट्रोल ची किंमत ७१.०९ एवढी होती तर डिसेंबर मध्ये ७४.९५ एवढी वाढली. तर कोलकत्ता मध्ये वर्षाच्या सुरवतीला



पेट्रोल ची किंमत ७३.१८ एवढी होती तर डिसेंबर मध्ये ७७.६१ एवढी वाढली. त्याचप्रमाणे मुंबई मध्ये जानेवारीत ७६.७२ तर डिसेंबर मध्ये ८०.६० एवढी वाढली. तर चेन्नई मध्ये जानेवारीत ७३.८० तर डिसेंबर मध्ये ७७.९२ एवढी वाढली.

कच्या तेलाच्या किंमती (२०१९)

महिना	किंमत ($)(कच्चे तेल) Per barrel
जानेवारी	५९$४१.
फेब्रुवारी	६३$९६.
मार्च	६६$१४.
एप्रिल	७१$२३.
मे	७१$३२.
जून	६४$२२.
जुलै	६३$९२.
ऑगस्ट	६२$८३.
सप्टेंबर	६२$८३.
ऑक्टोबर	५९$७१.
नोव्हेंबर	६३$२१.
डिसेंबर	६५$२४.

वर्ष २०१९ मधील कच्या तेलाच्या आंतरराष्ट्रीय बाजारातील किमतीचा आढावा घेतल्यास लक्षात येते की जानेवारी ते डिसेंबर प्रत्येकी कच्या तेलाच्या barrel ची किंमतीत सातत्याने चढ उतार असल्याचे दिसून आले. मात्र भारतात तेलाच्या किंमतीत सातत्याने वाढच झालेली दिसून येते.

कारणे

१. आयात कर : कच्या तेलाची परदेशातून आयात करत असताना त्याच्यावर आयात देश आयातकर आकारतात.

२. अबकारी कर : कच्या तेलाची आयात करून रिफायनरी मध्ये त्याचे शुद्धीकरून त्यातून पेट्रोल, डिझेल इ. पेट्रोलियम पदार्थांची निर्मिती होत असते. अशा देशात उत्पादित सर्व वस्तूंवर अबकारी कर आकारला जातो.

३. वाहतूक खर्च : रिफायनरी पासून पेट्रोलियम पदार्थांची देशातील वेगवेगळ्या भागात वाहतूक करावी लागते त्यासाठी प्रचंड वाहतूक खर्च येतो.

४. डीलरचा नफा : पेट्रोलची विक्री करणारे डिलर देखील त्यांना फायदा होण्यासाठी किमतीत वाढ होत असते.

५. VAT कर : प्रत्येक राज्य शासन देखील केंद्र सरकार ज्या प्रमाणे अबकारी आकारते त्याच प्रमाणे VAT या प्रकारचा कर आकारते त्यामुळे पेट्रोलच्या किमतीत वाढ होते.

निष्कर्ष

१. पेट्रोलच्या किंमतीत सातत्याने वाढ होत असल्याने दिसून आले.

२. केंद्र सरकार व राज्य सरकारच्या कराचा परिणाम पेट्रोलियम किंमतीवर होत असल्याचे दिसून आले.

३.आंतरराष्ट्रीय बाजारातील कच्चा तेलाच्या किमतींचा परिणाम देखील देशातील पेट्रोलच्या किंमतीवर होत आहे.

उपाय

- देशातील पेट्रोलियम किंमतीवर नियंत्रण प्रस्थपित करण्यासाठी केंद्र सरकार आणि राज्य सरकार यांनी योग्य समन्वय साधून प्रयत्न करणे गरजेचे आहे
- केंद्र सरकार आणि राज्य सरकार आपल्या कर प्रणाली मध्ये बदल केल्यास पेट्रोलच्या किंमतीवर नियंत्रण प्रस्थापित करता येवू शकते .
- देशात पेट्रोलियम पदार्थांच्या साठ्यांचा शोध घेणे गरजेचे आहे ज्यातून आपली आयात कमी होण्यास मदत होईल.
- पेट्रोलियम पदार्थांच्या वापरा ऐवजी पर्यायी वस्तूच्या निर्मितीवर भर देणे गरजेचे आहे.

संदर्भ सूची:-

1) शेतकरी मासिक
2) Agricultural: geography Majid Hussian

सेंद्रिय शेती हि काळाची गरज

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प्रस्तावना:-

भारत हा एक कृषी प्रधान देश असुन शेती हि भारतीय अर्थव्यवस्थेतील सर्वात महत्त्वाचे क्षेत्र म्हणून ओळखले जाते. आजही भारतातून जवळजवळ 75% लोकचे या उदरनिर्वाहाचे प्रमुख साधन शेती आहे. बहुतांश लोकांना प्रत्यक्ष व अप्रत्यक्ष रोजगार पुरविण्याचे काम शेतीने केले आहे अनिश्चित व लहरी हवामान विशेषत: पाऊस नैसर्गिक आपत्ती बी-बियाणे,खते रोग-किडनाशकांचा वाढत्या किंमती खतांची उपलब्धता,पीक ओलितांसाठी पाणी पुरवठा त्यामुळे शेतमालाचा घसरणारा उत्पादनाचा दर्जा आणि विक्री व्यवस्था व शेतकऱ्यांना मिळणारा दर, कुशल व अकुशल मजुरांची त्रुटी अशा सर्वात जास्त विपरित परिस्थितीत शेतकरी जगत आहे त्याचबरोबर दिससेंदिवस मानवाच्या वाढत्या रासायनिक शेतीमुळे मानवाच्या व पर्यावरणाच्या आरोग्यावर विपरीत परिणाम होत आहे. मानवाला विविध आजार अंपगत्व मंदत्व, अंधत्व, वांजुटेपणा. या सर्व समस्या दिवसेंदिवस वाढत आहे त्याचबरोबर गेल्या काही शतकामध्ये मानवाला आर्युमान कमी झालेले दिसते. रासायनिक शेती त्यापासुन निर्माण होणारे अन्नधान्य हे होय. या सर्व समस्यांवर खरा व शाश्वत पर्याय आहे तो सेंद्रिय शेती त्यासाठी अनिश्चित उत्पन्न देणाऱ्या आरोग्याला हानी पोहचवणाऱ्या रासायनिक शेती करून सेंद्रिय शेती पद्धतीकडे वाटचाल करताना शेतकरी, शास्त्रज्ञ, कृषी खाते, कृषी विद्यापीठे व बिगर सरकारी संस्था या सर्वांनी समन्वयाने कार्य करून निसर्ग निर्मित शेती व्यवस्थेवर व निसर्गचक्रातील सर्व सजीवांना पुरक असलेयला सेंद्रिय शेती पद्धतीची आवश्यकता आहे.

अभ्यास पद्धती:-

प्रस्तुत शोध निबंध हा प्रामुख्याने कृषी, मासिके, पुस्तके, वर्तमान पत्र विविध कृषी संस्था Report मधील आकडेवरी अशा दुय्यम साधन सामग्री चा वापर करून माहिती व आकडेवरी गोळा केली आहे

उद्दिष्टये :-

1) सेंद्रिय शेती संकल्पनेचा अभ्यास करणे.
2) जागतिक पातळीवर सेंद्रिय शेतीचा अभ्यास करणे.
3) भारतातील सेंद्रिय शेतीचे स्वरूपाचा अभ्यास करणे.
4) सेंद्रिय शेतीचे फायदे अभ्यासणे.

गृहितके:-सेंद्रिय शेतीच्या पद्धतीमुळे रासायनिक खतांचा वापर कमी होवून उत्पादनात वाढ होते.

*माहिती विश्लेषन:

❖ सेंदिय शेतीचा इतिहास:-

1) 1940 "सेंद्रिय शेती या शिर्षकाचे पहिले पुस्तक:-

सर अल्बर्ट हावर्ड यांच्या ॲन ॲग्रीकल्चर टेस्टामेंट (कृषी क्षेत्रातील पुरावे) या पुस्तकात सेंद्रिय शेती पद्धतीविषयी ठामपणे लिहले. 1947 दि सॉईल अन्ड हेल्थ ए स्टडी ऑफ ऑरगॉनिक ॲग्रीकल्चर या लॉर्ड नॉर्थबोर्ण यांच्या सेंद्रिय शेती या शब्दप्रयोगातुन हॉवर्ड सेंद्रिय शेतीची पुस्तके लिहली.

2) 1947 वाढत्या कर्क रोगाचे कारण कृषी रसायने:-

फ्रान्स देशामध्ये सेंद्रिय शेतीचा प्रसार होण्यास सुरूवात झाली वाढत्या कर्करोगाचे तसेच मानसिक आजारांचे कारण कृषी रसायणे असली पाहिजेत या निष्कर्षावर डॉक्टर आणि ग्राहक वर्ग पोहचला.

3)1950 सेंद्रिय शेतीच्या संज्ञा:-

1950 च्या दशकात शाश्वत शेती हा फक्त वैज्ञानिक दृष्टीने पहिला जाणारा मुद्दा होता नवीन रसायनांचा शोध व त्याचा कृषी क्षेत्रात वापर यावर जास्त एकाग्रता होती. अमेरिकेत 1950 च्या सुमारास जी.आय.रोडले या सेंद्रिय शेतीची संज्ञा प्रसिद्ध केली.

4)1959 - फ्रान्समध्ये सर्वप्रथम सेंद्रिय शेती करणाऱ्या शेतकऱ्यांचे मंडळ (असोसिएशन स्थापन केले.)

5) 1990 सेंद्रिय शेतीला घाऊक बाजारपेठ :-

घाऊक बाजारपेठे मध्ये सेंद्रिय मालाला ग्राहकांना दर वर्षासाठी 20% या प्रमाणात मागणी वाढण्यास सुरवात झाली त्या वेळी मालाची प्रतवारी तसेच त्या मालाबद्दलची सुरक्षितता या बाबीकडे लक्ष दिले

6) मार्च 2008 सेंद्रिय शेतीची व्याख्या:-

IFOM संस्था:- सेंद्रिय शेती ही अशी पीक उत्पादन पद्धती आहे की ज्यात मातीचे आरोग्य. पर्यावरण मानवाचे आरोग्य संभाळले जाते निविष्ठाचा वापर असा असावा कि प्रतिकूल परिणाम होणार नाही. नावीण्य विज्ञान यांचा मेळ घालते. ज्यांचा फायदा पर्यावरण जीवनाची गुणवत्ता वाढविण्यासाठी होता.

❖ सेंद्रिय शेतीची वैशिष्ट्ये:-

- मुदा संवर्धन
- पिके, प्राणी, वनस्पती व पर्यावरणाच्या आरोग्यास पोषक व समतोल
- मानवी आरोग्यासाठी वरदान
- जमिनीतील पोत सुधारणेत वाढ

- पिक रचनेत बदल व विविधता
- नैसर्गिक पद्धतीने किड नियत्रंण
- सातत्याने उत्पादनात वाढ व खर्चात घट याद्वारे उत्तम आर्थिक नियोजन

❖ जागतिक सेंद्रिय शेती :-

1990 पासुन जागतिक पातळीवर सेंद्रिय कृषी मालाचे उत्पादन वाढत आहे. 2010 पर्यंत जवळ जवळ 65 देशातील सेंद्रिय शेतीला मान्यता देण्यात आली होती. जागतिक सेंद्रिय शेतीत ऑस्ट्रेलियाचा प्रथम क्रमांक लागतो त्यानंतर युरोप, अमेरिका, आफ्रिका, चीन, ब्राझील स्पेन, जर्मनी, भारत या देशामध्ये सेंद्रिय शेतीवर भर दिला जात आहे.

सेंद्रिय शेती केली जाणारे जगातील प्रमुख दहा देश

अं.क्र	देश	सेंद्रिय शेतीचे प्रमाण
1	ऑस्ट्रेलिया	२७.१५
2	अर्जेंटिना	३.०१
3	चीन	२.२८
4	अमेरिका	२.०३
5	स्पेन	२.०२
6	इटली	१.८०
7	ऊरग्वे	१.६६
8	फ्रान्स	१.५४
9	भारत	१.४९
10	जर्मनी	१.२५

(स्त्रोत FIBL सर्व्हे 2018)

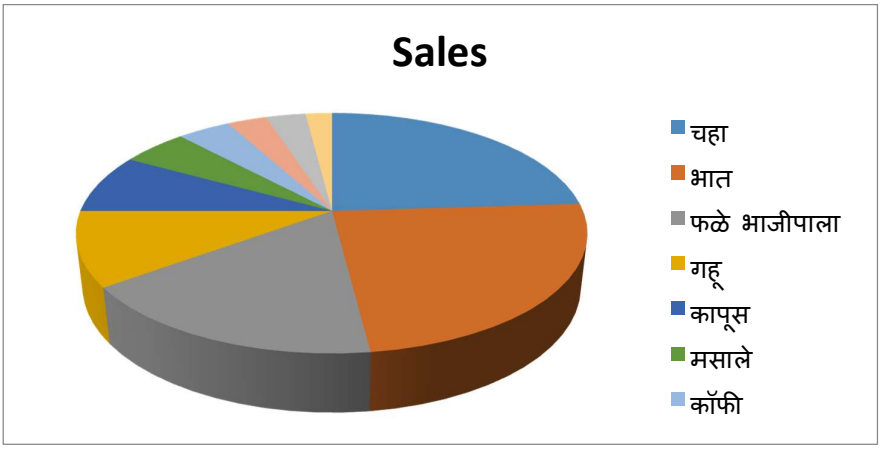
भारतातील सेंद्रिय शेतीचे स्वरूप:-

भारतात प्राचीन काळापासून सेंद्रिय शेती केली जात आहे. आजही काही ठिकाणी सेंद्रिय शेती मोठ्या प्रमाणात केली जाते. परंतु वाढती लोकसंख्या व वाढती अन्नधान्याची मागणी याचा विचार केला तर सेंद्रिय शेतीची वाढ १०% पर्यंतच आहे. भारतमधील सेंद्रिय शेतीचा आवशक्यता लक्षात घेता भारत सरकारणे सेंद्रिय शेती राष्ट्रीय संस्था स्थापन केली आहे. तसेच अपेडा (APEDA) सारख्या संस्थाची स्थापना करून Indian Organic या बोध चिन्ह द्वारे प्रमाणित सेंद्रिय कृषी मालाची बाजारपेठ देश आणि विदेशात उपलब्ध करून देण्याचा प्रयत्न सुरु आहे.

भारतामध्ये सेंद्रिय उत्पादन खालील तकत्याप्रमाणे आढळते.

*भारतातील सेंद्रिय उत्पादने(%)

अंक्र.	पिके	टक्केवारी
१	चहा	२४
२	भात	२४
३	फळे भाजीपाला	१७
४	गहू	१०
५	कापुस	०८
६	मसाले	०५
७	कॉफी	०४
८	कडधान्ये	०३
९	काजु	०३
१०	इतर	०२



❖ सेंद्रिय शेतीतील प्रमुख घटक:-

१)पशुधन :-

सेंद्रिय शेतीमध्ये गाई म्हैस,शेळ्या मेंढ्या अशा पशुधनाची पैदास व त्याची वाढ हा अत्यंत महत्त्वाचा घटक आहे. पंशुच्या मुलमुत्रापासुन आपणास शेणखत मिळते शेणखताचा उपयोग जमिनीची सुपिकता वाढविण्यासाठी करता येतो शिवाय गोबर गॅस मिळतो पशुधनाने प्रामुख्याने दुध, लोकर, मासं इ. गोष्टी मिळतात.

२)पिके:-

पिकांचे उत्पादन घेणे हा सेंद्रियशेतीचा मुख्य घटक आहे मनुष्य व प्राण्यासांठी पिकांचे उत्पादन घेतले जाते. पिके घेताना मानवी आरोग्याच्या द्ष्टीने विचार केला जातो. तसेच जमिनीची उत्पादन क्षमता टिकवून ठेवण्यासाठी पिक रचनेत बदल केले पाहिजेत. किड नियंत्रण, धुप नियंत्रण, तण नियंत्रण हे फायदे मिळतात.

३)जल व्यवस्थापन:-

सेंद्रिय शेती पद्धतीमध्ये जलव्यवस्थापन नैसर्गिक रित्या होते म्हणजे सेंद्रिय शेती पिकांना पाणीपुरवठा कमी लागतो कारण सेंद्रिय घटकांच्या पुरवठ्यामुळे जमिनीची पाणी धरून ठेवण्याची क्षमता जास्त आहे.

४)सेंद्रिय खते :-

सेंद्रिय खते हे सेद्रिय शेतीची मुलभुत वैशिष्टये मानले जाते. सेंद्रिय खतामध्ये शेणखत, हिरवळीचे खत, गांडुळ खत, कोबंडी खत, रक्तीखत, पेंड खत इ. समावेश होतो त्यामुळे जमिनीची सुपीकता टिकुन राहण्यास मदत होते.

५)जमिनीचे आरोग्य:-

रासायनिक खते किटकनाशके व पाणी यांच्या अतिरिक्त वापरामुळे जमिनीचे आरोग्य बिघडते सेंद्रिय शेतीमुळे जमिनीचे आरोग्य चांगले राहते जमिनीची धुप कमी होते. जमिनीचा ओलावा धरून ठेवण्याची क्षमता वाढते.

- ❖ सेंद्रिय शेतीची फायदे:-
    १) जमिनीची सुपीकता टिकते व समाधानकारक उत्पादन मिळते.
    २) सेंद्रिय शेतीमुळे मानवी आरोग्य पशुधन व जमिनीचे आरोग्य सुधारण्यास मदत होते.
    ३) पिकांच्या विविधतेमुळे विविध प्रकारचे शेती उत्पादन मिळते.
    ४) जमिनीचा पोत सुधारतो.
    ५) विदेशी चलनाची बचत होते.
    ६) लोकांच्या दवाखन्यावरील खर्चात बचत होते.
    ७) कुपोषण, बालमृत्युचे प्रमाण कमी होण्यास मदत होते.
    ८) मानवी पर्यावरणास अनुकुल राहते.
    ९) रासायनिक खतामुळे होणाऱ्या प्रदुषणास पायबंद येतो.
    १०) गोबर गॅस निर्मिती उर्जेची बचत होते.
- ❖ सेंद्रिय शेतीच्या यशस्वीतेसाठी उपाययोजना:-
    १ सेंद्रिय शेतीचा प्रचार/प्रसार करणे.
    २) विषारी कृषी रसायनांचे दुष्परिणाम शेतकरी बांधवा पर्यंत पोहचवणे.
    ३) सेंद्रिय शेतीबाबत मोफत प्रशिक्षण आवश्यक.

४) सेंद्रिय शेतकऱ्यांना सवलती देणे.

५) सेंद्रिय शेती पर्यटन कल्पना रुजवणे.

❖ निष्कर्ष/ सारांश :-

अलिकडील काळात शेतकरी पिकांचे अधिक उत्पादन होण्याच्या दृष्टीने जास्तीत जास्त रासायनिक खतांचा किटकनाशकांचा वापर करीत आहेत. रासायनिक खते किटकनाशके वापरण्यात सोपी तात्काळ भरपुर उत्पादन देणारी असली तरी त्याचे कालातरांने दृष्परिणाम दिसतात. रासायनिक खते व किटकनाशके विषारी असल्यामुळे जमिनीतील पोषकक्षम विषाणु मरण पावतात. जमिनीवरील विषारी घटक द्रव्ये वाढत्या पाण्याबरोबर जलाशयात मिसळतात व पाणी दुषित होते. विषारी घटकद्रव्ये पिकांकडून शोषली जातात. सर्वामुळे मानवाचे, प्राण्यांचे पशुपक्ष्याचे, वनस्पतीचे जमिनीचे आरोग्य धोक्यात आले त्यामुळे पर्यावरण समतोल बिघडून पावसाळा, हिवाळा, उन्हाळा, ऋतू चक्र बदलत आहे. या सर्व दृष्टी कोनातून विचार केल्यास सेंद्रिय शेती हि आजच्या काळाची एक गरज बनलेली आहे.

संदर्भ सूची:-

3) शेतकरी मासिक

4) Agricultural: geography Majid Hussian

5) गरज सेंद्रिय शेतीच: प्रा.डॉ.जे.एस.इंगळे

माण तालुक्यातील खाजगी वाहन चालक (वडाप) चालकाच्या आर्थिक सामजिक परिस्थितीचा अभ्यास

टोणे पी .के* वाघमारे ए. यू ,गोसावी एस .एन
दहिवडी कॉलेज दहिवडी ता . माण ,जि. सातारा
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प्रस्तावना :

कोणत्याही देशाच्या औद्योगिक अर्थव्यवस्थेत दळणवळणच्या विविध साधनांना अन्यन साधारण महत्व आहे . देशाच्या आर्थिक सामजिक व राजकीय प्रगतीचे मोजमाप वाहतुकीच्या विविध प्रगती वरून करता येते .मानवी रचनेत व स्थितानतरात वाहतुकीच्या विविध साधनांचा मोठा वाटा आहे . वाहतुकीत मालाची एका ठीकानाहून दुसऱ्या ठिकाणी ने आण केला जातो अशावेळी अनेक व्यक्ती एका भागातून दुसर्या भागात प्रवास करतात .या व्यक्ती मध्ये अचार विचारांची देवाण घेवाण होते मनुष्य प्रवास करतो तेव्हा तो आपल्या बरोबर आचार ,विचार संस्कृती ,धर्म इत्यादि कल्पनाची देवाण घेवाण करीत असतो . वाहतुकीच्या साधनांमुळे समाजाला एका प्रवासाची गती येते .कामाचा वेग वाढतो इतर लोकांशी संपर्क वाढल्याने वैचारिक देवाण घेवाण होउ शकते. निष्क्रियता झुगारली जाते उतसाहाचे वातावरण पसरते आणि एकंदर वैचारिक पातळी उंचावते .

उद्दिष्ट्ये

१ खाजगी वाहन चालकांच्या त्यांच्या आर्थिक,सामाजिक,परिस्थितीचा अभ्यास करणे.
२ खाजगी वाहन चालक यांचा उत्पन्नाचा व खर्चाच्या बाबीत माहिती अभ्यासणे.
३ खाजगी प्रवासी वाहतुकीच्या व्यवस्थापनाचा अभ्यास करणे.
४ खाजगी व्यवसायात भेडसावत असणाऱ्या सामाजिक व आर्थिक प्रश्नांची माहितीचे अवलोकन करणे.

संशोधन माहिती संकलन

सदर शोध निबंध हा प्राथमिक तथ्यावर आधारित आहे सदर संशोधना साठी सातारा जिल्ह्यातील माण तालुक्यातील खाजगी वाहन चालक (वडाप) चालकाच्या आर्थिक सामाजिक परिस्थितीचा विचार केला असून साधा यादृच्छिक नमुना निवड पद्धतीचा वापर करून ३० कुटुंबाचा आभ्यास केला आहे माहिती संकलनासाठी प्रश्नावली प्रत्यक्ष निरीक्षण मुलाखत तंत्राचा वापर केलेला आहे.

गृहीतके

खाजगी वाहन चालकाच्या वडाप व्यवसायात सामजिक, आर्थिक परिस्थितीत सुधारणा निर्माण झालेली दिसून येते.

विषय विवचेन :

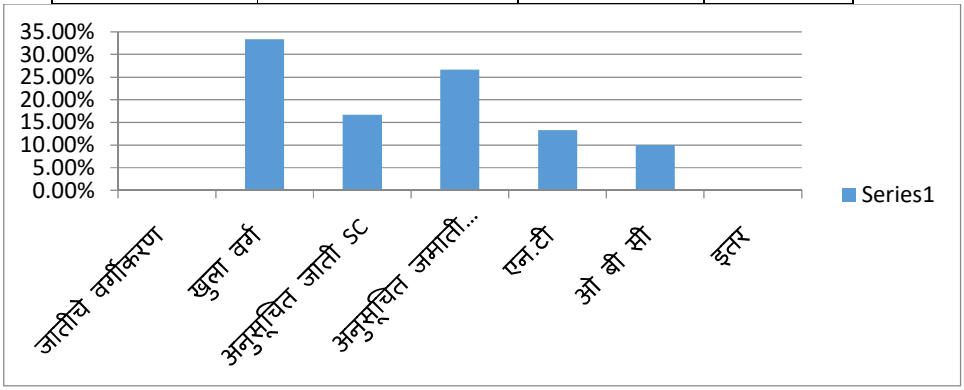
सामाजिक परिस्थिती:-

खाजगी प्रवाशी वाहतूक करण्याऱ्या वाहन चालकाचा सामाजिक परिस्थितीचा अभ्यास करत असताना त्याचे वय, वेवाहिक स्थिती ,शिक्षण कुटुब पध्दती ,धर्म ,जात ,सवयी इत्यादी विचार केला जातो

टेबल क्रमांक १ जात

- जातीनुसार वर्गीकरण

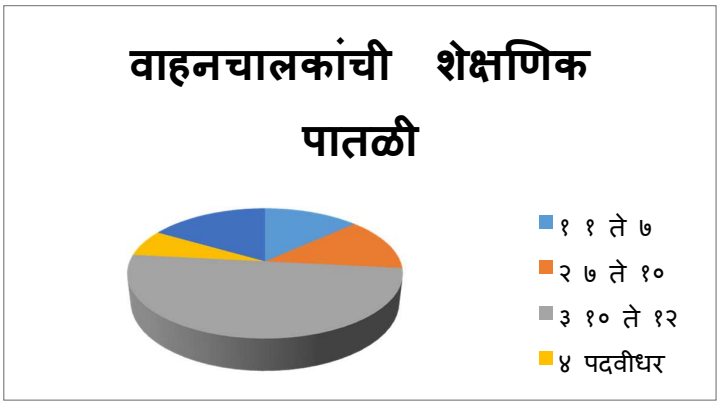
अ .क्र	जातीचे वर्गीकरण	चालक संख्या	प्रमाण %
१	खुला वर्ग	10	33.33%
२	अनुसूचित जाती SC	12	16.66%
३	अनुसूचित जमाती ST	28	26.66%
४	एन.टी	16	13.33%
५	ओ बी सी	8	10%
६	इतर	0	0



वडाप चालकांच्या जातींच्या वर्गीकरणाच अभ्यास केला आहे .त्यावरून असे दिसून येते कि खुल्या वर्गाची वाहन चालकांची संख्या जास्त आहे .तर इतर समाजाशी तुलना करता खुल्या वर्ग चे प्रमाण ३३.३३% इतके आहे व OBC या समाजाची वाहन चालकांची संख्या कमी असलेले दिसून येते .त्याचे प्रमाण ८.००% इतके असल्याचे दिसून येते .

- शेक्षणिक पातळी

अ/क्र .	शिक्षण	वाहनचालक	प्रमाण
१.	१ ते ७	४	१३.३३
२.	७ ते १०	४	१३.३३
३.	१० ते १२	१५	५०
४.	पदवीधर	२	६.६६
५.	पद्वितर	५	१६.६६



वडाप चालकांच्या शेक्षणिक पातळीचा अभ्यास केला आहे .त्यावरून असे दिसून येते कि १० वी ते १२ वी शिक्षण असणार्यांची संख्या सर्वाधिक आहे .त्याचे प्रमाण ५०% इतके आहे आणी पदवीधर वन चालकांची संख्या सर्वात कमी असल्याचे दिसून येते त्याचे प्रमाण ६.६६% इतके आहे .

वडाप आर्थिक परिस्थिती

वडाप व्यवसाय करून बेरोजगार दूर होऊन घरात आर्थिक स्थैर्य यावे या आपेक्षेने अनेकजण त्यात उतरले आहेत काराण स्वतःच्या उदार निर्वाहाच्या गरजा भागवता येणाया एवढी उत्पन्न मिळते .म्हणून या व्यवसायात अनेक तरुण आहेत

अ./क्र.	साधन	चालक संख्या	प्रमाण
१.	वडाप व्यवसाय	९	३०%
२.	शेती	११	३६.३३%
३.	शती मजुरी	२	६.६६%
४.	संलग्न उद्होय्ग	५	१६.६६%
५.	पशुपालन	३	१०%
६.	नोकरी	०	०%

- उत्पनाचे साधन :

वडाप चालकांच्या उत्पन्नाच्या साधनांचा चा अभ्यास केला आहे .त्यावरून असे दिसून येते कि वडप व्यवसाय बरोबर दुसर्या उतपान्नाच्या साधनामध्ये शेती चे प्रमाण जास्त आहे .ते ३६.६६ % आहे व उत्पन्न्यचा च्या साधनांमध्ये शेतमजुरीचे प्रमाण सर्वाधिक कमी आहे ते ६.६६ % इतके आहे .

मासिक उत्पन्न :

अ./क्र.	मासिक उत्पन्न	वाहन चालक संख्या	प्रमाण
१.	१०००० ते २००००	१८	६०
२.	२०००० ते ५००००	१२	४०
३.	५०००० पेक्षा जास्त	००	००

अ./क्र.	वडाप व्यवसाय स्वीकारन्याची कारणे .	चालक संख्या	प्रमाण
१.	नोकरी नाही .	१५	५०
२.	जगण्याचे अन्य साधन नाही .	५	१६.६६
३.	स्वतःची शेती नाही.	५	१६.६६
४.	स्वयं रोजगार शोधला पण मिळाला नाही .	३	१०
५.	इतर करणे .	२	६.६६

वडाप चालकांच्या वार्षिक उत्पन्नाचा अभ्यास केला आहे .त्यावरून असे दिसून येते कि १०००० ते २०००० उत्तपन्न मिळवणाऱ्या वाहन चालकांचे प्रमाण सर्वात जास्त आहे ते ६०% इतके आहे . व २०००० ते ५०००० उत्तपन्न मिळवणार्या वाहन चालकांचे प्रमाण कमी आहे .ते ४०% इतके आहे .

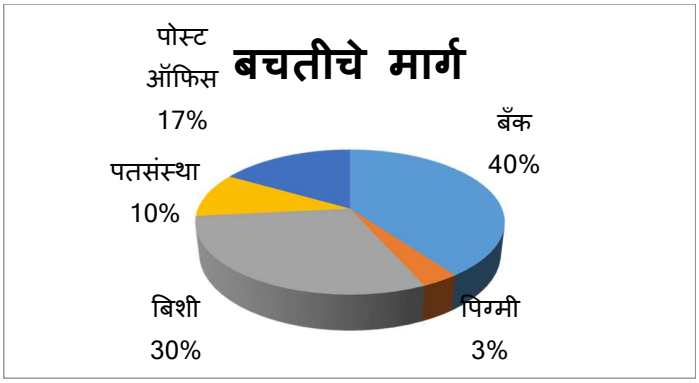
व्यवसाय :

वरील कोष्टकावरून असे दिसून येते, कि नोकरी मिळत नसल्याने वडाप व्यवसाय स्वीकारनाऱ्यांची संख्या सर्वाधिक आहे .ती ५०% इतकी आहे व इतर कारणास्तव वडाप व्यवसाय स्वीकारनाऱ्यांची संख्या सर्वात कमी आहे ती ६.६६% इतकी आहे .

- बचत करण्याचे मार्ग :

अ./क्र.	बचतीचे मार्ग	वाहन चालक संख्या	प्रमाण
१.	बँक	१२	४०

२.	पिग्मी	१	३.३३
३.	बिशी	९	३०
४.	पतसंस्था	३	१०
५.	पोस्ट ऑफिस	५	१६.६६



वडाप चालकांच्या उत्पन्न बचतीच्या मार्गाचा अभ्यास केला आहे .त्यावरून असे दिसून येते कि सर्वात जास्त प्रमाण मध्ये बचतीच्या मार्गामध्ये सरकारी बँकांच वापर होतो .त्याचे प्रमाण ४०% इतके आहे व सर्वात कमी बचतीच्या मार्गांमध्ये पिग्मी चा समावेश होतो त्याचे प्रमाण ३.३३ % इतके आहे .

निष्कर्ष :

१)खुल्या वर्गा तील चालकाचे प्रमाण ३३.३३%असून ते इतर प्र वर्गाशी तुलना करता सर्वात जास्त आहे .सर्वात कमी प्रमाण ओबीसी प्र वर्गाचे आहे

२)१०ते १२ वी शिक्षण गटातील चालकाचे प्रमाण सर्वात जास्त म्हणजे ५०%असून पदवीधर शिक्षण गटातील चालकाचे प्रमाण ६.६६% एवढे कमी आहे .

३)वडाप चालकांच्या व्यवसायात अविवाहित तरुणांची संख्या जास्त आहे .

४)एकत्र कुटुंब पद्धतीतील चालकांचे प्रमाण जास्त आहे .

५)३१ ते ४५ वयोगटातील चालकांचे प्रमाण ५०% आहे व ते इराणशी तुलना करता जास्त आहे .

६)वडाप चलाकांचे पूरक व्यवसाय बहुतांशी शेती असल्याचे दिसून येते .

७)वडाप चालकांचे सरासरी जास्तीत जास्त मासिक उत्पन्न १०००० ते २०००० असल्याचे दिसते .

८)नोकरी /रोजगार उपलब्ध होत नाही म्हणून वडाप व्यवसाय स्वीकारणार्यांची संख्या जास्त.

९)४०% चालक बँकेत बचत करत असल्याचे दिसते .

उपाययोजना :

१. अनेक वाहनांचे चालक वेगळे व मालक वेगळे आहेत ते दिवसाची कमाइ करून मालकांना देतात .त्या वाहन चालकाचे उत्पन्न अल्प राहते .त्यांचे उत्तपन वाढवण्या साठी अशा गरजू लोकांना राष्ट्रीय कृत बँकेने अधिक जाचक अटी न घालता कर्ज पुरवटा करावा .

२. वडाप चालकानां दुर्बल घटक म्हणून शासनाने मान्यता द्यावी ,आणि त्याना काही आर्थिक सावलती दिल्या जाव्यात .

३.वाहनचालकांनी ,मालकांनी प्रवाशांशी सभ्यतेने वागावे .

४. ज्या भागात वडाप जास्त चालते आणि महामंडळाच्या गाड्या रिकाम्या फिरतात तेथे वाहतूकीचे फेर सर्वेक्षण करावे .गाड्यांच्या वेळा , गर्दीची ठिकाणे निश्चित करावीत

५. जी गोष्ट सहज शक्य आहे , व्यवहार्य आहे लोकांची प्रचंड सोय करणारे आहे याचा राजकीय यंत्रणेने गाभिर्याने विचार केला पाहिजे .

भारतीय अर्थव्यवस्थेतील मौल्यवान धातूच्या किंमतीतील प्रवृत्तीचा अभ्यास

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प्रस्तावना

सोन्याच्या किंमतीत गेल्या काही व ार्ति सतत होत असणारी वाढ ही सरकारसाठी मोठी चिंतेची बाब ठरू पाहत आहे.सोने भारतीय लोकांच्या गळयातील ताईत.सोने नावाच्या तांबुस झाक असलेल्या पिवळया रंगाच्या धातुने भारतीयांच्या मनावर अशी काही जबरदस्त मोहीनी घातली आहे की काही विचारायची सोय नाही.ही मोहीनी काही फक्त आजचीच नाही तर पिढयानपिढया पोसलेली गेली ोकडो नव्हे तर हजारो व ार्षापासून, अगदी रामायण महाभारताच्या काळापासूनची आहे.सनातनपुर्व कालखंडापासून(इ.स.१६०० ते १७७५) सोने या धातूला रा ट्राची संपत्ती म्हणून व्यापारवादयांनी मान्यता दिल्यामुळे सोन्याला आर्थिक दृ टया अत्यंत महत्वाचे स्थान प्राप्त झाले.'अधिक सुवर्ण—अधिक संपत्ती—अधिक सत्ता' असे तत्व व्यापार वादयांनी मांडल्यामुळे विदेशी व्यापारमध्येही सोन्याचे महत्व वाढत गेले. जगातल्या इतर लोकांच्या मनावर ही सोन्याची मोहिनी पडलेली आहे.अगदी ग्रीक आणि रोमन काळामध्ये सुद्धा या सोन्याची मोहिनी युरोपीयन लोकांवर पडली होती.पण हळुहळु इतर लोक या सोन्याच्या मोहिनीतून बाहेर पडू लागले पण भारतीयांना अजून तरी हे फारसे जमलेले नाही असे दिसून येत आहे.

- **उद्दिटये:—**

१.सोने या धातूचा इतिहास अभ्यासणे.
२.सोने या धातूच्यामागील काळातील किंमती व सोन्याच्या दरवाढीची कारणे समजावून घेणे.
३.सोने या धातूच्या दरवाढीवर उपाय सुचवणे.

- **संशोधन पद्धती—** प्रस्तुत ोधनिबंध हा प्रामुख्याने दुय्यम साधनसामग्रीवर आधारीत असुन त्यासाठी प्रामुख्याने आर.बी.आय.व इंटरनॅशनल गोल्ड कौन्सिल यांचे अहवाल,विविध पुस्तके,मासिके,विविध वर्तमानपत्रे व संकेतस्थळे यांचा वापर केलेला आहे.

➢ माहिती चे विश्लेषण

'सोने' या धातुचा इतिहास— सोने वजनदार,मुल्यवान,चमकदार पिवळया रंगाचा धातु असून त्याच्या असाधारण गुणधर्मामुळे याला संपुर्ण ऐतिहासिक काळात मौल्यवान मानले गेले आहे.'सोनं'—पृथ्वीवरील मानवतजातीला माहित झालेला पहिला मौल्यवान धातु. सोन्याचा इतिहास किमान सहा हजार व ार्षांचा तरी आहे.ओळखता येणारा व वास्तविक काळ माहित असलेला सोन्याचा वापर ईजिप्त व मेसोपोटेमिया येथे इ.स.पू.४००० च्या सुमारास झालेला आढळतो. इलियड आणि ओडेसि हे महाकाव्य लिहिणा—या कवी होमर पासुन संत शिरोमणी तुकारामापर्यंत आणि प्लेटो

ॲरिस्टॉटल पासुन विश्वरत्न डॉ.आंबेडकरापर्यंत सर्वानी सोन्यावर लिहले.

अ.न.	वर्ष	किंमत रुपये(१०)	वार्षिक वाढ	पंचवार्षिक वाढ
१.	१९९५	४,६८०	१.७८%	
२.	२०००	४,४००	३.८९%	
३.	२००५	७,०००	१९.६५%	
४.	२०१०	१६,३५०	७.६७%	
५.	२०१२	२८,१५०	३५.३४%	
६.	२०१५	२६,३४३	८.१६%	
७.	२०१८	३१,४३८	५.९६%	९.५९%
८.	२०१९	४०,०००	२७.२३%	

तालिका क्र १.१

भारतातील सोने या धातूची भाववाढ (१० ग्रॅम)

(स्त्रोत – वर्ल्ड गोल्ड कौन्सिल अहवाल १९९५ –२०१९)

वरील तालिका क्र १.१ वरून असे दिसून येते कि १९९५ मध्ये १० ग्रॅम सोन्याचा दर ४६.८०रू एवढा होता तो १९९६ ला ५१६० रू एवढा वाढलेला दिसून येतो.तर १९९७ ला तो पुन्हा ४७२५रू एवढा कमी झालेला दिसून येत आहे.१९९७ ते २००२ पर्यंत तो कमी–कमी झालेला दिसून येतो आहे.२००३ ते २०१३ पर्यंत मात्र सोन्याचे दर सातत्याने चढत्या दराने वाढत आहेत.ते पुन्हा २०१४–१५ या व ार्षिमध्ये कमी झालेले असून २०१६ ते २०१८–१९ या व ार्षिपर्यंत वाढतच आहेत परंतु २०१८–१९ मधील वाढ ही अत्युच्च वाढ असलेली दिसून येत आहे.पहिल्यांदाच सोन्याच्या दरामध्ये उच्चांकी वाढ पाहायला मिळत आहे.यावरून असे म्हणता येईल की,सोने या मौल्यवान धातूच्याकिंमती या क्वचित प्रसंगी त्या कमी झालेल्या आहेत.अन्यथा त्या वाढतच असलेल्या दिसून येतात.

- **भारतातील सोन्याच्या दरवाढीची कारणे:–**

१.सोन्याचे आकर्षण व प्रतीसाठा – सर्वसामान्य भारतीयांना पुर्वापार सोन्याचे मोठे आक र्षिण आहे.मुख्यत: या धातुला परंपरागतरित्या प्राप्त प्रति ष्ठेपायी आहे.ज्याच्याजवळ अधिक सोने तो अधिक श्रीमंत व प्रति ष्ठीत समजला जातो.यातुन देवदेवताही सुटलेले दिसुन येत नाहीत.उदा.तिरूपती बालाजी,शिर्डी साईबाबा इ.या देवस्थानाकडे अधिक सोने असल्यामुळे ती अधिक प्रति ष्ठेची समजली जातात.

२.घरगुती वापरासाठी सोन्याची खरेदी– भारतात घरगुती वापरासाठी सोन्याची खरेदी मोठया प्रमाणात होत असलेची दिसून येते.भारतात सोन्याचे मंगळसुत्र आणि इतर दागिने सौभाग्याच लेणं म्हणुन परिधान केले जातात. धार्मिक

कार्य,संस्कृतीमध्ये सोन्याला महत्वाचे स्थान आहे.कारण सणासुदीच्या काळात व विविध सांस्कृतिक कार्यक्रमामध्ये सोन्याचे दागिने वापरण्याची प्रथा आहे.

३.आर्थिक अडचणीत मदत– कुठल्याही गुंतवणुकीच्या तुलनेत सोन्याची रोकड सुलभता सर्वात जास्त आहे.म्युच्युअल फंड्स,मुदत ठेवी,शेअर्स किंवा पोस्टातील गुंतवणुक या सर्वांची द्रवणीयता चांगली असली तरीही रोकड मिळायला १–२ दिवस लागतातच.सोन्याचे पैसे मात्र तुम्हाला ताबडतोब मिळू ाकतात.चांगल्या प्रतिचे सोने व ीनुव ि तसंच राहाते. लग्नकार्य,देणी–घेणी आपत्कालीन प्रसंगात आर्थिक अडचणींचे निराकरण तात्काळ करण्यासाठी सोन्याची आवश्यकता आजही समाजाला वाटते.सोने या धातूचे गरज पडेल तेव्हा पैशामध्ये सहज रूपांतर करता येते.म्हणून सोन्याची खरेदी वाढते,त्यामुळे त्याच्या दरामध्ये वाढ होते.

४.सोन्याच्या उत्पादनात घट– सोन्याच्या उत्पादनात घट झाली आहे.व त्यामानाने मागणी जास्त आहे.ही मागणी पूर्ण करण्यासाठी सोन्याची आयात करावी लागते.भारतात मागणीच्या ८०टक्के सोने आयात होते.परंतु प्रचंड मागणी पुढे ही आयात कमी पडते.त्यामुळे सोन्याचे दर वाढतात.

५.वार्षिक परतावा जास्त– बॅंका,पोस्टाच्या ठेवी,शेअर अथवा म्युच्युअल फंडात गुंतविलेल्या पैशातून गुंतवणुकदारांना अपेक्षेइतका परतावा मिळत नाही.त्यामुळे देखील अनेकजण आपल्याकडील पैसा हा सोन्यामध्ये अथवा जमीन खरेदीत गूंतवितात.बॅंकामधील ठेवीवरील व्याजावर देखील लोकांना उत्पन्न कर भरावा लागतो. वाढत्या महागाईच्या दिवसात गुंतवणुकदारांना हा परतावा कमी वाटतो.सोने ही अमुल्य वस्तु सध्या सरासरी २५ टक्के किंवा त्यापेक्षा जास्त वा िक परतावा देते. हे गुंतवणुकदारांच्या लक्षात आल्यामुळे सोन्याची किंमत व आयात वाढत गेली.

६.सोन्याचा राखीव साठा– मध्यवर्ती बॅंका महत्वाच्या चलनाचा व सोन्याचा साठा राखीव म्हणुन ठेवतात. सोन्याला मागणी वाढण्याचे आणखी एक महत्वाचे कारण असे आहे.की जगातील अनेक मध्यवर्ती बॅंका महत्वाच्या चलनांचा व सोन्यांचा साठा राखीव म्हणून आपल्याकडे ठेवतात.२००८ मध्ये डॉलर अथवा युरो यांचा राखीव म्हणून साठा करण्यापेक्षा सोन्याला प्राधान्य देऊ लागले व त्यांनीही मोठया प्रमाणावर सोने खरेदी करण्यास प्रारंभ केल्यामुळे किंमती वाढत गेल्या.

७.डॉलरचे अवमूल्यन– आंतरराट्रीय बाजारात डॉलरचे अवमूल्यन,व्यापार युद्ध,कच्चा तेलाचे वाढलेले भाव यामुळे बाजारपेठेत अस्थिरता दिसत आहे.व्यापार युद्धामुळे गुंतवणुकदारांनी डॉलरमधील गुंतवणुक कमी करत सोन्यामध्ये गुंतवणुक करण्यास सुरूवात केली आहे.याचा परिणाम थेट सोन्याच्या भावावर झाल्याने ही भाववाढ झाली आहे.

८. आंतरराट्रीय घटक– आंतरराट्रीय मॉनिटरी फंड आणि जागतिक बॅंकेच्या अहवालात जागतिक अर्थव्यवस्थेत स्थिरता आल्याचे म्हटले आहे यामुळे ही सोन्यात गुंतवणुक वाढली आहे त्याच बरोबर अमेरीका या देशाने व्याजदरात कपात केली आहे.जेव्हा ही अमेरीकेत व्याजदरात कपात होते.तेव्हा सोन्याचे दर वाढतात.

९. अमेरीका–इराण दरम्यान तणाव कायम असल्यामुळे सोने खरेदी वाढली आहे.

१०.**अमेरिका**–चीन दरम्यानचे व्यापार युद्ध ही समस्या आहे.जगाच्या व्यापारात मंदीचे वातावरण आहे.यामुळे खासकरून आशियायी देशांतील चलन कमकुवत झाले आहे.

- **निष्कर्ष**

१. सोन्याच्या दरात वारंवार वाढ होत आहे.

२. प्रत्येक देशामध्ये चलन निर्मिती साठी सोन्याच्या गरज असल्याने सोन्याच्या धातूचे साठे मध्यवर्ती बँकेकडे राखीव ठेवल्याने सोन्याच्या किमतीत वाढ होत आहे.

३. महिलांकडून सोन्याचा वापर सण समारंभ प्रतिष्ठा इत्यादी साठी केला जातो.

४. देवदेवतांना सोने किवा दागदागिने अर्पण केले जातात.

५. सोन्याच्या मागणीप्रमाणे आयात केली जात नाही.

उपाय– बॅक ठेवी,पोस्ट ठेवी,म्युच्युअल फंडोअर मधील गुंतवणुकीतून अधिक परतावा मिळणे अपेक्षित आहे. तसेच सोन्याच्या मागणीप्रमाणे आयातीत वाढ होणे आवश्यक आहे.सोन्याला प्रति ठेच्या तराजुमध्ये तोलने चुकीचे आहे.देवदेवतांना सोने किंवा मौल्यवान दागिने दान करणे किंवा अर्पण करण्यावर मर्यादा आणणे आवश्यक आहे. सोन्याप्रमाणे इतर वस्तुही परिवर्तनीय असाव्यात त्यामुळे जेव्हा समाजातील लोकांना पैशाची गरज असेल तेव्हा त्या वस्तूचे पैशामध्ये रूपांतर सहज झाले पाहिजे शिवाय जागतिक अर्थव्यवस्थेतील मंदीचे सावट कमी करून म्हणजेच मंदीची अर्थव्यवस्था न राहता अर्थव्यवस्थेत सर्वसाधारण किंमत पातळी निर्माण करण्यासाठी प्रयत्न करणे आवश्यक आहे.तसेच देशादेशामधील ताण तणाव ,युद्धजन्य परिस्थिती न राहता ांतता प्रस्थापित होण्याची गरज आहे.

➢ संदर्भसुची–

१.भोसल आणि काटे,'भारतीय अर्थव्यवस्था' फडके प्रकाशन,कोल्हापूर २०११.

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३. बिझनेस चॅलेंज – मासिके – संपादक – साहिल मुजावर

४.प्रबोधन प्रकाशन ज्योती – फेब्रु २०१४

५.विविध वर्तमानपत्रातील लेख.

६.संकेतस्थळे

A Study of Mobile Usage of the Under Graduate Level Students

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INTRODUCTION:

Mobile phones are without question the most common form of electronically meditated communication in the world. Nowadays it becomes very important machine in the world. From previous two years India became largest country in the usage of mobile phone. Use of mobile technology very largely developed in countries ruler area especially in the youth of ruler Region. The study of usage of mobile phones in students gives us a selective information regarding to the use of mobile phones in the youth of India.

The topic of our research project is A study of mobile usage by the students of Dahiwadi College Dahiwadi. We have studied 50 students from Dahiwadi College Dahiwadi. All the students are from different faculties like B.A, B.Sc, BCA, B.COM etc. The main purpose of our study is to find out mobile usage habits of students.

Significance of the study:

We all are living in 21th century. Mobile phone became the most usable machine in the world. Almost every person have it. A large number of students are using mobile phones. Some students are every time busy in their smart phone. After research we will understand student's purpose, time behind using the mobile phone, favourite features and some common general information. This all data will be very helpful to spread awareness in students regarding to the mobile usage. Today major health issues are coming from addiction of the mobile usage so the data will be helpful to fix it as well. Also the various habits of students regarding to the mobile use can be identified for the next researches which will be very useful.

Objectives of the study:

The following research is based on the realistic data collected from the fifty students. The main objectives are

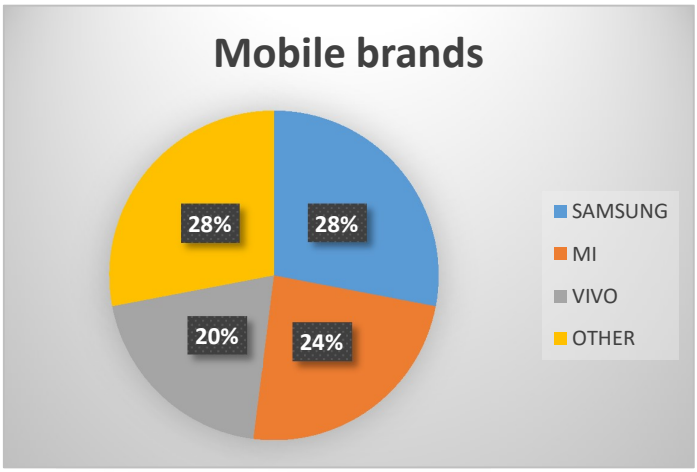
1. To understand favourite features of the mobile phones.
2. To spread awareness of mobile phones usage.
3. To collect some common general information related to cell phone use.
4. To know the use of mobile technology in the study .
5. To understand average usage of mobile phones.

Hypothesis:

The smart phone have great demand in today's world. Especially in students it becomes the sign of prestige. They are using their phones for multiple purposes .They use it for call, watching various videos on YouTube, reading newspaper etc. These are very useful but the addiction to the use of cell phones adds them in trouble. The collection of realistic data will helpful for understanding the student's mind-set behind the mobile usage. The various habits of the students are designed on the basis of their smart phones. So by knowing the information of the mobile use, the habits of the students can be changed. There are a number of advantages and disadvantages of the cell phone. The detailed data will bring us to the closer analysis of the use of mobile phone. The information achieved from the students will be more authentic for the further future analysis. Therefore the research will be much more beneficial for students, teachers, and parents etc.

Methodology:

In the primary research, study was done in Dahiwadi College Dahiwadi. Interview, survey and questioner are the three common methods which we are used as methodology. The methodology used in research is generally based upon the question paper sheet. The question paper sheet is filled by the students which were involved in the research. Also we have used the interview as the medium of methodology. We had asked some relevant questions regarding to the usage of mobile phone. This is the most favourable methodology applied in this research project. The survey has been done in senior college. The format of the survey based on the mixed method of seeking qualitative and quantitative responses from the students. The collected questions has common background which deals with the daily usage of mobile phone. The survey has been done with only that students which have their own mobile phone. The very simple methods are used in the research. It will help students to answer the questions which are asked to them.

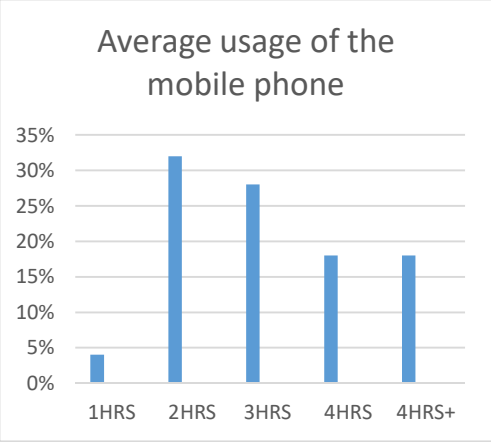


Findings:

1. Maximum students are using android phone.
2. All the students are using smart phone differently.

3. Samsung, vivo and MI are the most used smart phone brands.

4. Commonly most of the students are using their smart phone for 2 to 3 HRS.



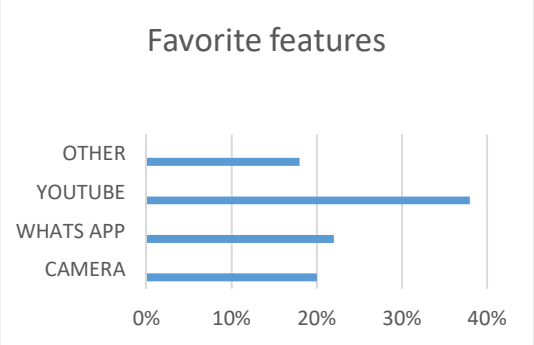
5. More than 80% students are using dual Sims.

6. What's app, YouTube and camera are the most favourite features.

7. 38 % percent student are using audio books on the mobile phone.

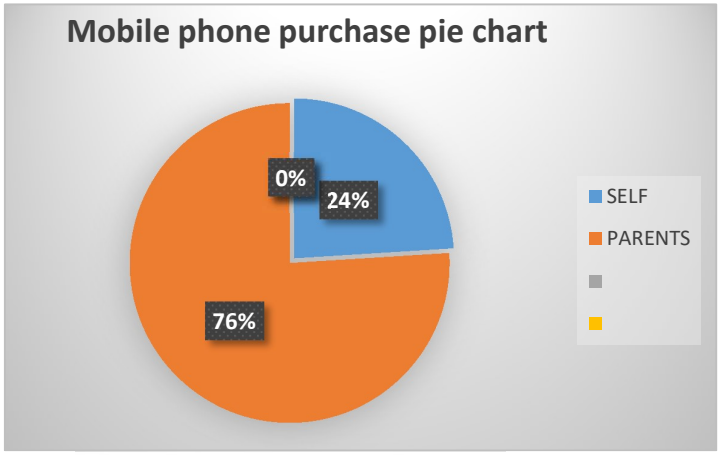
8. Very few students are reading Newspaper on the mobile phone.

9. Maximum cell phones are brought with the help of parents.



9. Only 5 % students have their own twitter account.

11. Many students are using mid-range smart phone.

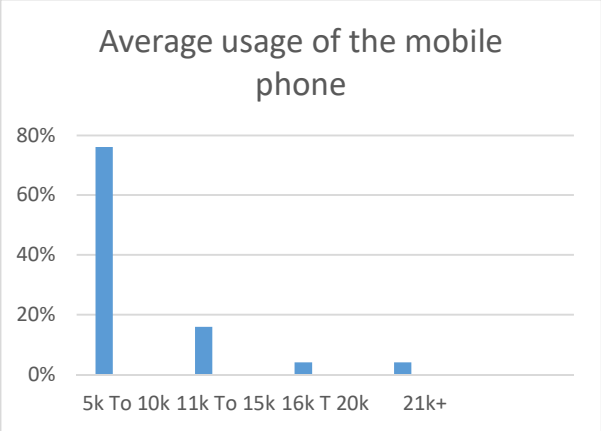


Conclusion:

The aim of the research is to understand the mobile usage of the students in Dahiwadi College Dahiwadi. The data obtained from the survey by asking some relevant questions to the students.

1. The study concludes that some mobile phone features such as YouTube, camera, what's app are the most favourite features.

2. Many students are using android phones.



3. The extremely popular brands are Samsung, MI, Vivo.

4. Maximum students are using mid-range smart phones.

5. Finding from the present study shows that students are highly addicted to the smart phones.

6. Few students are using mobile phone for the purpose of study.

7. The world's most famous application called as twitter is unpopular in students.

8. Mainly the mobiles are provided by their parents to the students.

9. This research could have practical benefits such as to understand the mind-set of the students.

10. The practical information from present research will make students aware about their mobile usage. Also the findings from this study may be used as the foundation for the future usage.

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A Comparative Study on Proficiency Level of 4th Standard Student of English and Marathi Medium School.

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Introduction

We did survey of English medium and Marathi medium Schools and we collected information. Finally, we collected information after analyzed collected data we reached towards the conclusion and we successfully completed our research and made this project. We are very happy to present this project. We enjoyed this work very much because we got different experience in our life.

Significance of Study

Significance of our topic is as follows.

1. To know proficiency level of 4th standard students.
2. We understand the mentality of students.
3. We understand the grasping capacity of the 4th standard students.
4. We checked the comparative study of English and Marathi medium school.
5. The students from English medium and Marathi medium, they get different facility for study.
6. In different environment and surrounding how 4th standard students acquire knowledge.
7. Student studied well for sake of knowledge, entertainment, competition and being good person.
8. The students of different background get similar knowledge from education system.
9. Students get different facility for acquire knowledge.
10. School attempted many activities to give knowledge, entertainment to students and keep excited towards life.

Objectives of the Study

We have some objectives of this study are as follows.

1. 4th standard is the base of the everyone that's why we choose 4th standard students for data collection.
2. To study the 4th standard student's proficiency level through est.
3. To know the proficiency level of 4th standard students.
4. To increase their interest in general study of English.

5. To motivate them for next study
6. To check grasping capacity of student.
7. To check remembering capacity of 4th standard students.
8. To check how much students interested in study.
9. To aware students about general study and increase their interest.

Hypothesis

The student gets safe and good facility in English medium school as well as Marathi medium school. Students also tried to be best in their work of study and also they tried to be best in their different kind of activity which conducted by the school. Principal of both schools are very much excited towards their work and also they worked very enthusiastically. Students of English medium school are behaved very confidently as like to Marathi medium school's students.

Methodology

we have to do research and we have to do field work and for sake of collect information we made question paper of 20 marks after studied of 1st – 4th standard books. Then we went to visit 2 English medium school and 2 Marathi medium schools and there we took examination of 100 students of each medium and we collected data for a project. After collecting data, we checked question paper and we got percentage of proficiency level of 4th standard students of English medium and Marathi medium schools. We got too much difference between these two different mediums school students. After analysis of data we reached towards the conclusion.

Conclusions

1. As compared to English medium school, Marathi medium schools' student get good knowledge. Creativity is there in Marathi medium schools. All walls of schools were painted by different kinds of numbers, shapes letters and general knowledge.
2. English medium schools' students' proficiency level is of 75.75% and Marathi medium schools' students' proficiency level is of 93.08%.
3. Hence the conclusion is Marathi medium schools' students have good grasping capacity for general knowledge and so on.
4. English medium schools' students studied only one language- English- so they are poor in Marathi, their mother tongue as compared to Marathi medium schools' student.

5. on the other hand, Marathi medium schools' students are very excited and studious with full of energy hence they improve themselves all around.
6. English medium schools' students get good facility but they cannot use it properly and Marathi medium schools' students always try to get good knowledge from all directions.

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Linguistic Proficiency of Under Graduate Level Students: A Case Study

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Introduction:

Language is absolutely central to our learning: without it we cannot make sense or communicate our understanding of a subject. "Language proficiency or linguistic proficiency is the ability of an individual to speak or perform in a language". We are very happy to present this research paper in front of you. We made this research paper on the subject. We made a questionnaire to collect information about linguistic proficiency of B.A. Students and then we collect data for analysis of B.A. Students of different subjects like English, Political Science, Economics, Marathi etc.

Significance:

The language acquisition is a complex process. The scientific study of this process could help the teachers and educationists to draft policies for teaching.

Objectives:

1) The study of the linguistic proficiency of students.
2) Get the information about linguistic proficiency of Dahiwadi College Dhaiwadi's students.
3) To check the interest of English grammar in the students of 3rd year.
4) To increase their interest in English grammar

Hypothesis:

Students of 3rd year of Dahiwadi college Dahiwadi have the poor understanding power of English. They cannot grasp it properly.

Methodology

Interview

Questionnaire

Firstly we meet to senior students of Dahiwadi College Dahiwadi and used questionnaire to collect information about linguistic proficiency.

Findings

All the research detail is shown in the following table.

Marks	Students	Percentage

15+	56	56%
10+	42	28%
Below 10	2	2%

It appears from the above table student's linguistic proficiency power of Dahiwadi College Dahiwadi is satisfactory. This table shows the quality of a hundred students. Based on the questionnaire while preparing the research paper the primary information was collected it has been noticed that 56% of the students are in A grade. 28 % students are in B category. 2% students are included in C category. It is obvious from this that the condition of the DCD part 3rd students in linguistic proficiency is satisfactory.

Table No 2: Marks wise analysis

	Excellent (4-5)	Average (3)	Poor (0-2)
Correct spelling	74%	20%	6%
Sentence pattern	48%	46%	6%
Translation	82%	16%	2%
Essay writing	28%	30%	42%

It appears from the above table 74% of the students excel in correct in spelling writing performance of 6% of students is unsatisfactory so 20% of the students in correct spelling. There is inference 48% of students have excel in sentence pattern. The performance of 6% of the students is unsatisfactory in sentence pattern in it up to 48% of students are an average. The performance of 82% of students is very good in translation. The performance of 2% of the students is unsatisfactory. In translation 16% of the students are in the average. In the essay writing 28% of students are good at performance. The performance of 42% of the students is unsatisfactory. In the essay writing 30% of students are average.

Conclusion

It was noticed when preparing a paper the progress of linguistic proficiency is very good for the students of B.A.The table above shows that 98% of the students are satisfied. From table second it appears that the condition of students is very satisfactory in correct spelling, sentence pattern, and translation. But the condition of the students of B.A.| in essay writing is very pathetic.

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A Study of Reading Habits of Under Graduate Students

Kokare Seema Shivaji

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Introduction

We are very happy to present this research paper in front of you. The topic of our project is "*A Study of Reading Habits of Under Graduate Students".* We have studied 50 students of our college. These students are from various faculties like B.A., B.com. B.Sc. and BCA. We have studied this project because how and many students are reading books.

Significance of Study

1. How many students use library for reading.
2. We understand the mentality of students who read the books regularly.
3. The students of various faculties using library, internet, books for reading.
4. This books are in various languages like Hindi, Marathi and English for reading.
5. We understand the varieties of book for reading.
6. Students read the books for sake of knowledge, entertainment, research and study.

Objectives of the Study

1. To study varieties of reading.
2. To study how many students read regularly or occasionally.
3. To study how many books are available in college library for reading.
4. To find out various library sources of reading importance and interest of extra reading and time given for it.
5. What are the types of reading materials read by them specially books, newspapers etc.
6. Books, periodicals and newspapers in what language they read?
7. Investigate the barriers of reading purpose of reading.

HYPOTHESIS

The college students do not use other books. They use only syllabus books for reading. They don't study fiction or non-fiction outside the syllabus. They don't read novel, drama, autobiography, biography etc. The less number of students read other books except syllabus. In this generation students only study exam oriented books.

a) Reading habits declining day by day.

b) Reading habits provide real pleasure of life.

Research Methodology

Interview

Survey

Questionnaire

First of all we went to classrooms and asked some questions to the students-

I. Have you personal library?
II. Do you use dictionary?
III. Have you downloaded audio books?
IV. Which newspaper do you read?
V. How many books are related to syllabus?
VI. Who is your favorite author and book?

The students gave us information about different reading methods. Many students read only text book/ syllabus books. Very few students read other books.

We have studied 50 students. They are various faculties like B.A. , B.Com ,B.Sc. and BCA etc. We found that these students are not reading other books. They read only syllabus books. There are few students who read other books like novel, inspiration books, entertainment books etc. In this generation students do not read other books except syllabus. They read only syllabus oriented books.

FINDINGS

We successfully completed our research for the reading habits of study of Dahiwadi College, Dahiwadi and from that we find information as following.

1. 44% students using their personal library.
2. 84% students use a dictionary for reading.
3. 64% students have installed different kinds of English dictionary in their cell phones.
4. 54% students downloaded in PDF.
5. 94% students read text book regularly.
6. 26% students downloaded different books in audio form in their cell phones.
7. 10% students visit their college library, 38% student visits regularly and 52% student visits college library occasionally.
8. Maximum students used to read *Sakal & Pudhari* newspapers

As per above we collected information and successfully we got conclusion about a study of reading habits of students of Dahiwadi College, Dahiwadi.

Conclusion

We found in this project there are less students read other books. There are more students read syllabus books. This is the conclusion of our project. In day to day life students have no time to read other books. In this generation students do not read books. They are busy in mobile, TV, computer etc. They only read books for marks. This is the intension of this generation students.

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Online News Paper Reading Habit of College Students

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Abstract:

A newspaper publishing various contain to the information of various current events. Newspaper can cover various fields such as sport, education, business and politics etc. The present study to know the various points of view a study of online reading newspaper habit of the students in collage. The main factor of this research is students. A total of 50 questionnaires were distributed among the students and 35 questionnaires were received. The study it was discovered that maximum students read online newspaper daily. It was also indicating that favorite newspaper among the students is in Marathi.

Key words: Online Newspaper, Media, News reading behavior

Introduction:

Newspaper is a part of daily routing life. It contains various current eventsit can cover various fields such as sport, education, business and politics etc. Newspaper typically published daily and magazines are published weekly. Daily breaking news are includes in newspaper. Most of the thinks to know because of news paper it is a main part of life. Traditional methods are back by life is a offline newspaper reading. Now the current trend is reading online newspaper. It is easy to read anywhere at bus, collage, home etc. it is more time saving to read online news paper.

Objectives of the study:

1) To study the news reading habits among the students.
2) To know the problems of readingonline news paper.
3) The aim to identify their reading attitudes, purposes, preferences and tastes.

Hypothesis: All students are aware to read a online newspaper.

Scope of the study:

The present study is aimed to identify the reading habits of online news paper within college students in Dahiwadi College Dahiwadi.This study only focusing on only commerce student.

Limitation of the study:

This study is limited to the Dahiwadi college Dahiwadi commerce students in Maan tehsil of Satara district.

Research Methodology:

The specific purpose of the paper is to study thoroughly the reading habits of the students in the college. The data was collected using the questionnaire method. A total of 50 questionnaires were distributed among the students and 35 filled in questionnaires were obtained from the respondents. Sufficient time was given to the respondents to furnish the information. The data collected through questionnaire was analyzed with simple percentage and averageThe secondary data collected from articles or news paper. Also the data analysis simple random sampling method.

Review of literature:

Bolchuluun yadamuren (2011) explode the variables affecting to the students reading habits of online news paper, new information of technology. Their findings are most of the people didn't use online news paper because of they don't know about it.

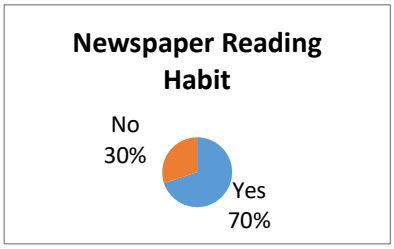
Dipika Majumder and Md.Mehedi Hasan (2013), the researcher r found that the research is the majority of the respondents spent less than one hour in reading newspaper. Self -subscription is the main source of newspaper. Print copy is still used as the best medium of newspaper for the respondents.

Analysis & Interpretation:

The collected information is tabulated by using statistical method, table and percentage. The data Analyses are given below.

A) Newspaper Reading Habit:

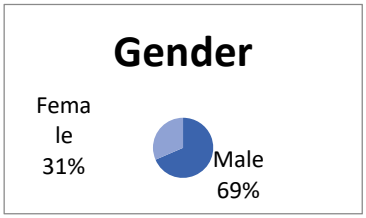
Newspaper Reading Habit	Students	Percentage
Yes	**35**	**70%**
No	**15**	**30%**
Total	**50**	**100%**



The Above table shows that the 70% students are habit to read the news paper and 30% students are not habit to read the paper.

B) Gender wise Distribution of Questionnaire:

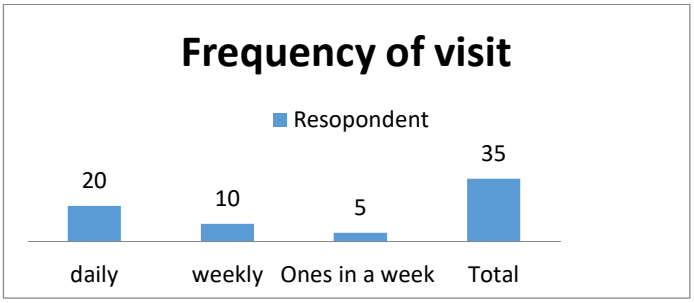
Reading of online news paper	Gender	Percentage
Male	24	69 %
Female	11	31%
Total	**35**	**100%**



The Above table shows that the 69% of male and 31% of female read online news paper.

C) Frequency of visit the online reading news paper:

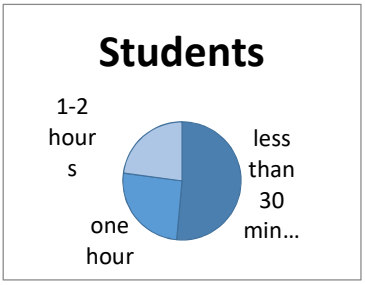
Frequency of visit	Respondent	Percentage
Daily	20	57%
weekly	10	28%
Ones in a week	5	15%
Total	**35**	**100%**



The Above table shows that the 57% of Daily, 28% weekly, 15% once in a week read online news paper.

D) Reading online news paper tospenttime:

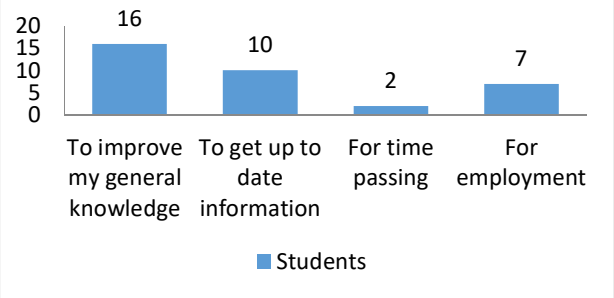
Time Spent	Students	Percentage
less than 30 minutes	18	52%
one hour	9	26%
1-2 hours	8	22%
Total	**35**	**100%**



The Above table shows that the 52% less than 30 minutes, 26% one hour, 22% 1-2 hours read online news paper.

E) Motives behind reading Newspaper:

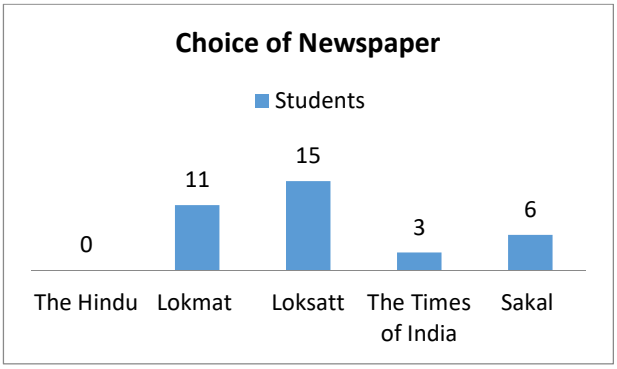
Reading of Newspaper	Students	Percentage
To improve general knowledge	16	46%
To get up to date information	10	29%
For time passing	2	5%
For employment	7	20%
Total	**35**	**100%**



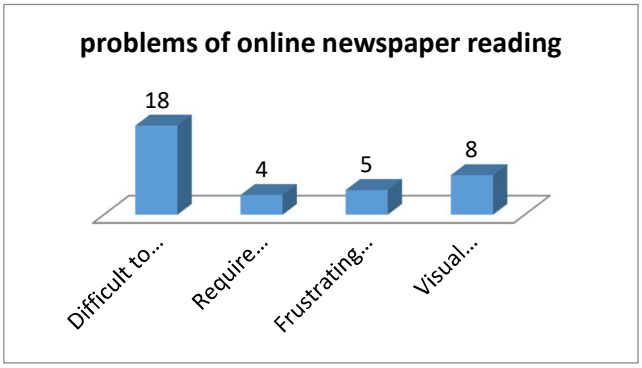
The Above table shows that the 46%of to improve general knowledge ,29% To get up to date information,5% For time passing,20% For employment.

F) Choice of Newspaper:

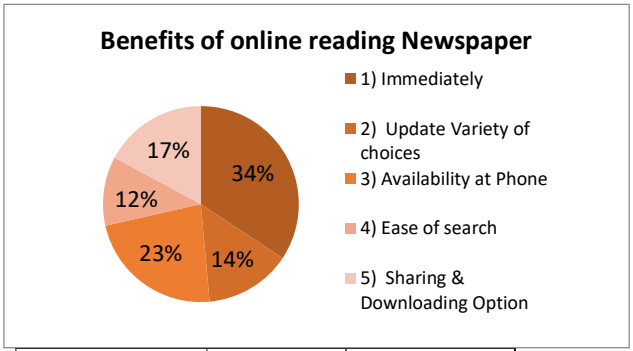
Sr no	News paper	Students	Percentage
1	The Hindu	0	0%
2	Lokmat	11	32%
3	Loksatt	15	42%
4	Times of India	3	9%
5	Sakal	6	17%
	Total	**35**	**100%**



The Above table shows that the 32%of the students are read to Lokmat, 42% of the read to The Times of India, 9% of the students The Times of India and 17% of the students read Sakal.



G)Benefitsof reading online news paper:



Benefits	Students	Percentage
Immediately	12	35%
Update Variety of choices	5	14%
Availability at Phone	8	22%
Ease of search	4	11%
Sharing & Downloading Option	6	18%
Total	**35**	**100%**

The Above table shows that the benefits gives to the 34% students gives immediatelybenefit by reading newspaper and only 12% students are sharing & downloading news.

H) Problems of online newspaper reading:

Problems	Students	Percentage
Difficult to read	18	51%
Require Internet Connection	4	11%
Frustrating Advertisement	5	15%
Visual problem	8	23%
Total	**35**	**100%**

The Above table shows that the 51% students faced problems by difficult to read the news paper and 4% students are require internet connection.

Conclusion:

Now reading online newspaper is most important think in daily life because it's easy to read anywhere at any time no specific place and time require reading online newspaper. It gives benefits to reading online newspaper is updating contain, available to your phone within second.

Finding:

The findings of the present study are

1) Majority of the student's 57% reading news papers daily.
2) Majority of the students spent time in reading news paper is less than 30 minutes.
3) Majority of the students prefer to read online news paper in Loksatt.
4) Majority of the students prefer to improve my general knowledge.
5) 34% student's gives immediately benefit by reading newspaper and only 12% students are sharing & downloading news.
6) 51% students faced problems by difficult to read the news paper and 4% students are require internet connection

Suggestion:

1) Reading newspaper by online easy and time saving.
2) Now the students are prefer to read the online newspaper because get up to date information & availability anywhere to read the paper.

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A Study on Financial Literacy of Working Women in Man Tehsil

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Abstract:

The present research paper attempts to check the financial literacylevel of the working women. The researcher has prepared a questionnaire and circulated among the working women of Man Tehsil. The research work tries to check their financial knowledge and how it is shaped by their attitude and behavior. This research also attempts to check their knowledge of modern means of investment like share market, mutual fund, health insurance, etc.We found out that the financial literacy level of women is based on their financial knowledge, attitude, and behavior. The study found working women have better knowledge of fixed deposit and saving account. They are not aware of modern means of investment like share market, mutual fund, health insurance,etc.

Key words: Financial Literacy, share market**,**mutual fund, health insurance, etc.

Introduction:

Women empowerment is one of the biggest challenges before the nation. It can be achieved only when the women in the country will be educated about financially literate and financial independent. Financial literacy is one of the main factors in the process of women empowerment. This is because financial literacy helps them to improve their confidence, lifestyle and living standard. Financial literacy may help them make better decisions about financial management.The goal behind teaching financial literacy is to help people develop a stronger understanding of basic financial concepts-that way; they can handle their money better.

Objectives of the Study:

1) To study the level of financial literacy of working class women in Man Tehsil.
2)To know the awareness level of working class women about various financial ways of investment.

Review of Literature:

1) **Rojes. V. Coalbe(2016)** explores the variables affecting to the professional women and their awareness about financial literacy. The researcher has based his study only on the professional women. The major finding of the research is that most of the women didn't take financial decision in family. They dependent and are not aware about insurances, mutual fund, etc.
2) **Mrs. Malti Chijwani (2014)**the paper studies the level of financial literacy among working women in Pune region. The research also aimed at assessing the knowledge of females towards investment in various financial instruments.

Hypothesis:

1) The level of financial literacy amongst the working women is high.

Scope of the study:

1) This research highlights the level of financial literacy of working women.
2) The sample collected for this study is from Man tehsil in Satara district.

Research Methodology:

The specific purpose of the paper is to study thoroughly the financial literacy of working women. The data was collected using the questionnaire method. Fifty questionnaires were distributed among the Working Women and thirty-five filled in questionnaires were obtained from the respondents. The data collected through questionnaire was analyzed with simple percentage and cluster random sampling method.

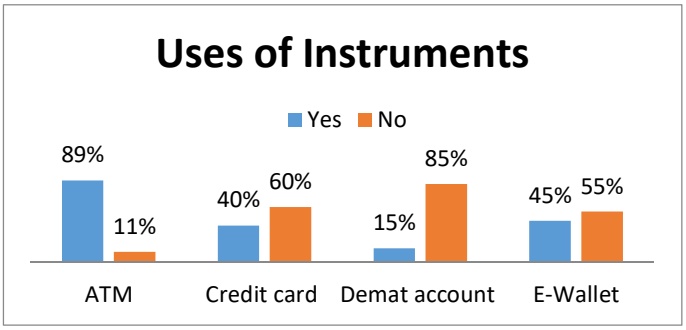
The secondary data collected from articles, newspaper, journals, websites and books.

Analysis of the Study:

The collected information is tabulated by using statistical method, table and graphs. The data Analysis is given below.

- **Uses of Instruments:**

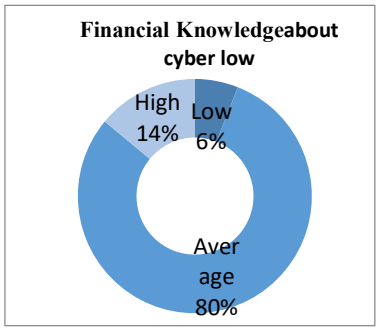
Uses of Instruments	**ATM**	**%**	**Credit Card**	**%**	**Demat Account**	**%**	**E-Wallet**	**%**
Yes	31	89%	14	40%	5	15%	16	45%
No	4	11%	21	60%	30	85%	19	55%
Total	**35**	**100%**	**35**	**100%**	**35**	**100%**	**35**	**100**



The Above table shows that the 89% women use ATM facility whereas only 15% women have Demat account.

- **Financial Knowledge about cyber low :**

Financial Knowledge about cyber low :	**Respondent**	**%**
Low	2	6%
Average	28	80%
High	5	14%
Total	**35**	**100%**



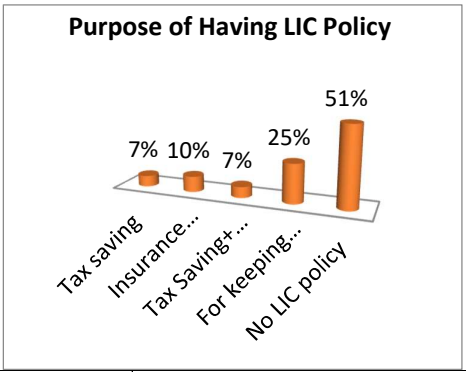
The Above table shows that the 80% of women are having average level of financial knowledge about cyber low where as the only 14% women are having high financial knowledgeabout cyber low**.**

- **Purpose of Having LIC Policy:**

Purpose of having LIC Policy	**Respondent**	**Percentage**
Tax saving	2	7%
Insurance Cover	3	10%
Tax Saving+ Insurance	3	7%

For keeping Money safe	9	25%
No LIC policy	18	51%
Total	**35**	**100%**

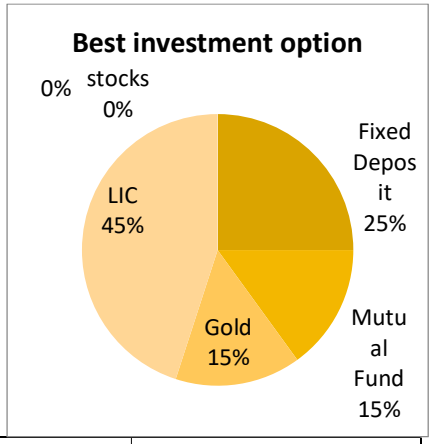
The above table shows that the 51% women donot have LIC policywhereasthe 25% women have purchased LIC policy so as to keep their money safe.



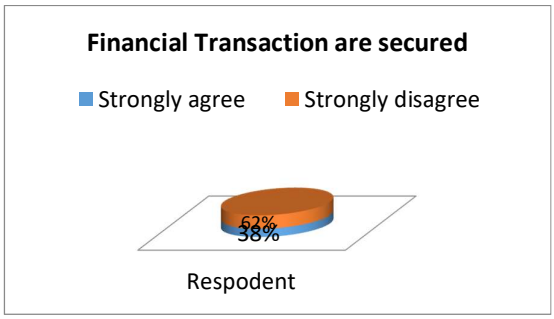
- **Best Investment Option :**

Best Investment Option	Respondent	Percentage
Fixed Deposit	9	25%
Mutual Fund	5	15%
Gold	5	15%
LIC	16	45%
stocks	0	0%
Total	**35**	**100%**

The above table shows that 25% women are having best option for investment whereas the none of them know nothing about stock market and 15% women don't know about investment in mutual fund.



Financial Transaction are secured	Respondent	%
Strongly agree	13	38%
Strongly disagree	22	62%
Total	**35**	**100%**



The above tables shows that the 62%womrn are strongly disagree about financial transaction are secured whereas the 38% women are secured about financial transaction.

Findings:

The following are the findings of the present research paper

1) The 89% of women are using ATM services whereas only 15% women have the Demat account.

2) The 80% women have average level of financial knowledge where as the only 14% women have high knowledge of financial investment.

3) The 51% of women have not purchased LIC policy whereas the 25% of women have purchased LIC policy so as to keep their money safe.

4) The 25% women have best option for investment whereas the 0% women don't know about stock market and 15% women don't know about mutual fund investment.

Suggestions:

1)Financial awareness program needs to be arranged through the government agencies.

2) There is needed to make working class women aware about the government bank facilities like JAN DHAN YOJANA scheme.

3) Working Womenshould improve their knowledge about financial literacy.

Conclusion:

Financial literacy among working women is very low. In these days, women are equally working with men in almost all professions. Still, they are dependent on the male members in the family. Now, there is a need to create more awareness program conducted through the government agencies in the form of workshop, seminar, planning for financial management course at different levels to get more knowledge about financial literacy.

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Study on Students awareness of e-Wallet

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Abstract:

e-Wallet is a type of payment which works electronically. Which is used online through a computer or a smart phone? It's using same process like credit or debit card. Cashless technology is an upcoming new technology &it becoming a very popular trends in almost every filed. Demonetization has forced a lot of place to accept digital payment. Use of e-wallets helps in moving away from cash based economy. The present study analysis of the Awareness of students of e-Wallet.

Keywords: e-Wallet, Cashless Transaction, Smartphone, Demonetization, e-Commerce.

Introduction:

e-Wallet means electronic wallet. It is like electronic card which is used for transactions made online through a computer or smart phones. The use of e-wallet is same as debit or credit card. An individual's bank account can also be linked to the digital wallet. Mobile wallets are used by people who would rather not carry a physical wallet when making in store purchases. For this reason, these wallets have to be used on mobile and easy to carry platforms, Apply pay, Samsung Pay and Android pay are the examples of e-wallet.

Objectives of the study:

1) To study the awareness level on various e-wallet services among the commerce students.
2) To study the preferences towards the usages of e-wallets among thecommerce students.
3) To study the problems of e-Wallet.

Hypothesis:

1) There are no significant differences between level of education and students preferences towards e-wallet.
2) There are no significant differences between age, gender and students preferences towards e-wallet.

Scope of the study:

The study is conducted only to the commerce students of Dahiwadi College Dahiwadi. The functional scope is finding out the awareness level and also suggests the reason for the poor practices of e-wallet services.

Limitation of the study:

This study is limited to the Dahiwadi college Dahiwadi commerce students in Maan tehsil of Satara district.

Research Methodology:

This study is based on primary and secondarydata.
The primary datacollected from 50 students by using questioners and personal interview.
The secondary data collected from articles or news paper.

Review of literature:

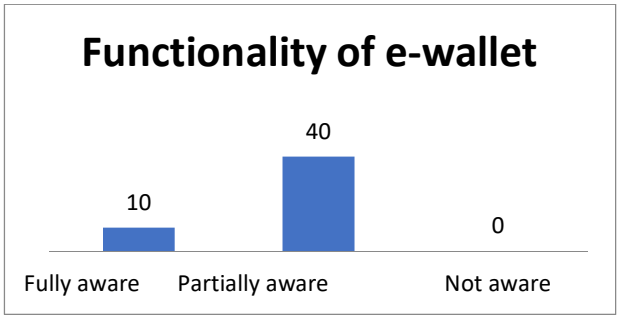
Jinimol. P(2018)explode the variables affecting to the consumer awareness of e-wallet, new information of technology. Their findings are most of the people didn't use e-wallet because of they don't know about it.

M.Manikandan&Dr.S.chandramohan(2016)in their articlesdiscuss about the trends & services of e-wallet. It is found that there is a significant difference between the place of living and the various e-wallet services.They suggest in his articles that the advertisement should be made in the social media network which will capture young people to get into the usage.

Analysis of the study:

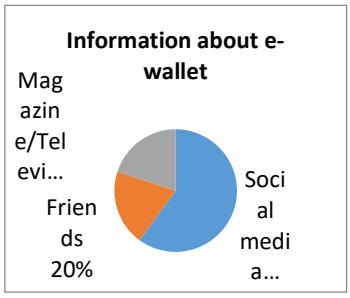
- **Functionality of e-Wallet:**

Fully aware	Partially aware	Not aware
10	40	0



The Above table shows that the 20% fully aware about functionality about e-wallet its How to use e wallet and 80%are partially aware about e-wallet.

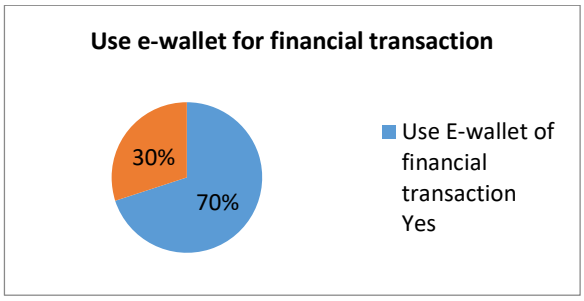
Information about e-wallet;



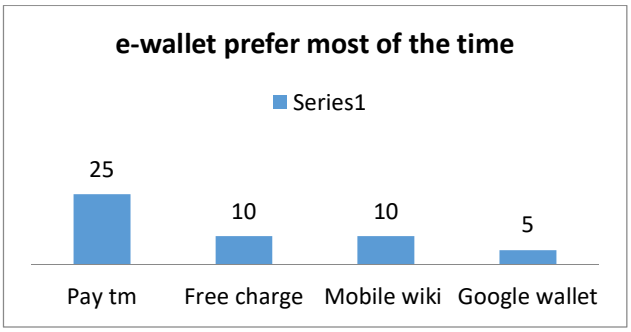
Social media	**Friends**	**Magazine/Television**
30	**10**	**10**

The above table shows that the 60%people get information about the e-wallet by social media,20%friends,20%of television or Magazine.

Use E-wallet of financial transaction	**Yes**	**35**
	No	**15**



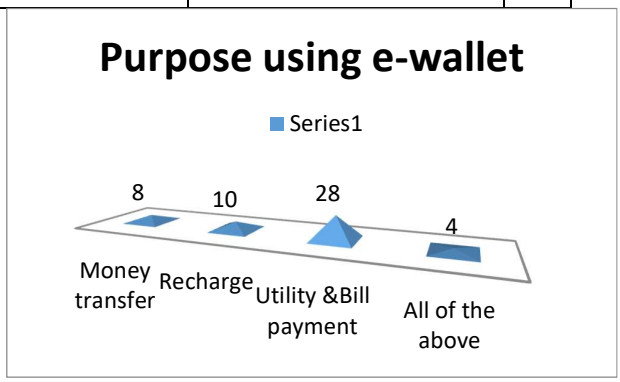
The above table shows that the 70% use e-wallet of financial tranctions,30% not use e-wallet transaction.



E-Wallet prefer most of the time	Pay tm	25
	Free charge	10
	Mobile wiki	10
	Google wallet	5

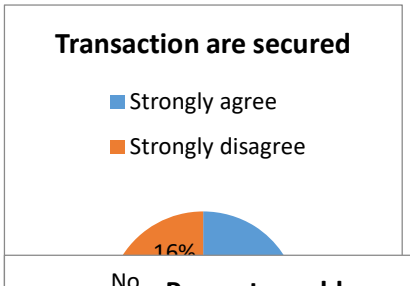
The above table shows that the 50%most of the times prefer pay tm, 20% Free Charge,20% Mobile wiki ,10% Google wallet.

Purpose using E-Wallet	Money transfer	8
	Recharge	10
	Utility &Bill payment	28
	All of the above	4



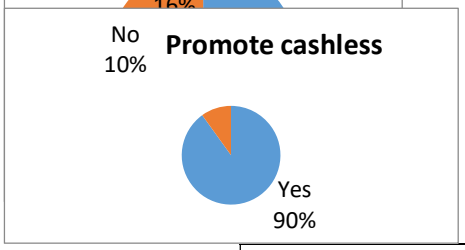
The above table shows that the people using e-wallet are 16% of money transfer,20% recharge ,56%of utility &bill payment,8%of all of the above.

Transaction are secured	Strongly agree	42
	Strongly disagree	8



The above table shows that theTransaction are secured by 84% of Strongly agree, 16% of Strongly disagree.

E-Wallet promote cashless payment to next level	Yes	45
	No	**5**



The above table shows that thee-Walletpromote cashless payment to next level of 80%.

Modes of payment	Time saving	40
	Ease of use	0
	Security	0
	All of the above	10
Payment via E-Wallet	Smartphone	50
	Computer	0

	Both	0
Use of E-Wallet	Only once	30
	5-10 times	10
	More than 10 times	10
useful mode of payment	Yes	50
	No	0
Continue using E-Wallet	Yes	38
	No	12

Conclusion:

e-Walletis a component of payment system. Easy to use without having to enter your debit/credit card details for every online transaction. You can pass on the benefits of your e-wallet to your friends and family as well. It is easy to use, flexibility and safety. It saves lot of user's time.

Finding:

1) 20% fully aware about functionality of e-wallet and 80% are partially aware of e-wallet.

2) The 60%people get information about the e-wallet by social media,20%friends,20%of television or Magazine.

3) 70% use e-wallet of financial tranctions,30% not use e-wallet transaction.

4) 50%most of the times prefer pay tm,20% Free Charge,20% Mobile wiki ,10% Google wallet.

5) The people using e-wallet are 16% of money transfer,20% recharge ,56%of utility &bill payment,8%of all of the above.

6) The E-Wallet promotes cashless payment to next level of 90%.

Suggestion:

1) Now its need to change the traditional method for payment & use the digital or electronic method for payment.

2) e-wallet is use very simple process by Smartphone or computer it use internet.

3) Now days uses of e wallet is more reliable &secured. It's more time consuming process.

References:

1)M.Manikandan&Dr.SChandramohan(2016),2278-6238,A Study on Awareness levels of mobile wallets services among management students.

2)BhagyashriR.Pachpande,akashA.Kamble(2018) Study of E-Wallet Awareness and its Usage in Mumbai,https://www.academia.edu/35992584/study_of_E-Wallet_Awareness_and_its_Usage_in_Mumbai

A study of Cattle Insurance Awareness in Rural Area

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Abstract:

The study was conducted into access the effectiveness of cattle insurance program among rural peoples in Man Tehsil. Primary information was collected through face to face interview of 40 respondent randomaly selected from Man Tehsil. Questionnaire was used to collect the primary information. The primary result show that,78% respondent know about cattle insurance but only 40% respondent have taken insurance of their cattle. Majority of respondent i.e.75% respondent prefer to Government sector for insurance and 69% of insured respondent's remark the service as good.

Introduction:

Cattle are considered one of most valued Asset of rural community. Marginal small, medium, respondent earn considerable portion of their income from cattle rearing. Since peoples mostly depend on so much them. It becomes important to get cattle insurance for coverage against cattle loss.

Review of Literature:

Raj K.Adhikari & Sagar Bidari (2018) explores awareness of cattle insurance. The major finding of the researcher is that cattle insurance can minimize the negative impact and recommends of government priority and support to take cattle insurance.

Objectives:

1) To Study awareness level of cattle insurance.
2) To provide suggestion to improve awareness among the people for the cattle insurance.

Scheme:

Coverage of Cattle Insurance	Exclusion of Cattle Insurance
➢ Natural Accident ➢ Diseases. ➢ Surgical Operation ➢ Terrorist Attack ➢ Strike, Riot and civil commotion risk.	➢ Unskilled Treatment ➢ Such disease/Accident that were contracted before policy ➢ International killing ➢ Air or sea transport and transit beyond 80km ➢ Any kind of partial disability ➢ No Tag –No Claim provision is applicable to the policy.

Hypothesis:

1) Majority respondent aware in cattle insurance.
2) Majority of respondent prefer to Government sector for insurance

Scope of Study:

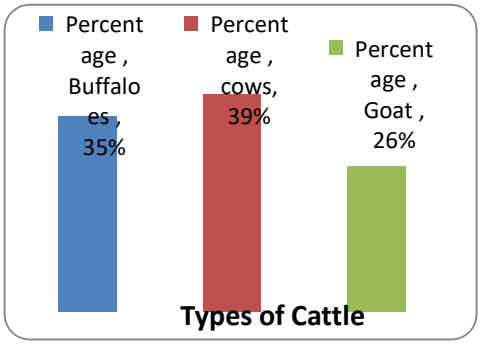
1) The study of awareness of cattle insurance in rural area is limited for Man tehsil. In satara District.
2) This Research highlights cattle insurance awareness among the rural area.

Methodology:

In this study 40 respondents were select by using Random sampling method in Man tehsil. Two sources of data are used:

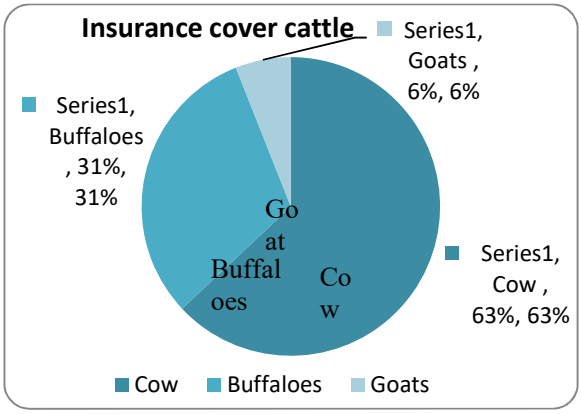
Primary: personnel interview and Questionnaire.

Secondary: journals, Books, Government Websites.



Analysis:

Types of Cattle	Types	Respondent	%
	Buffaloes	25	35%
	cows	28	39%
	Goat	19	26%



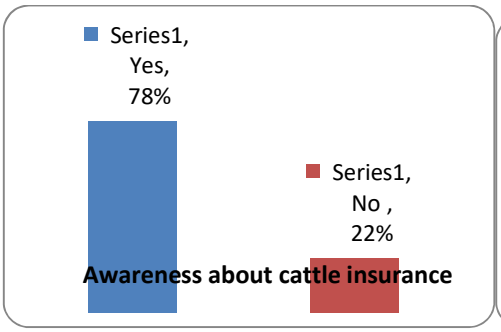
The number of insurance for cow (63%) is more than of compare to buffaloes and goats. the percentage of insurance cover for goats & buffaloes is less .

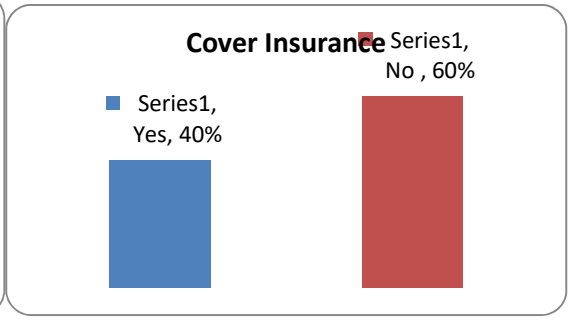
Awareness about cattle insurance	Yes	No
	78%	22%

The table shows that 78% respondents know about cattle insurance but they have not insured their cattle ,22% respondents do not know about cattle insurance.

Insurance cover Cattle	Types of cattle	Respondents	%
	Cow	10	63
	Buffaloes	5	31
	Goats	1	6

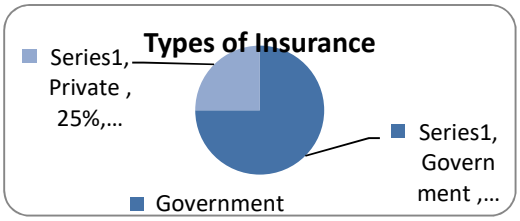
Percentage insurance Cover	Yes	No
	40%	60%





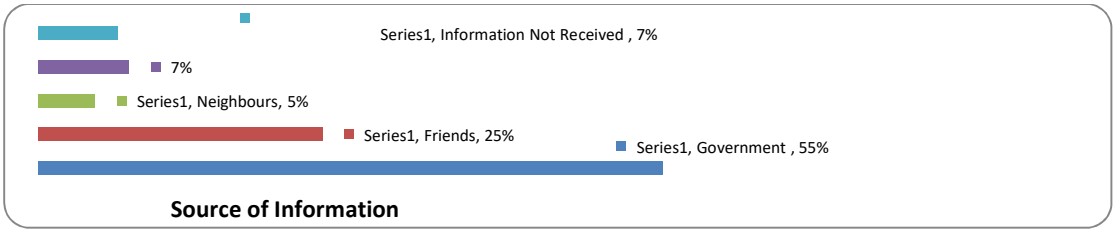
40% respondents have insured their cattle. But 60% respondents have not insured their cattle.

Types of Insurance	Government	Private
	75%	25%



In study 75% respondents have insured their cattle in government sector and 25% respondent have insured in private sector respondent prefer government policies to private sector policies.

Source of Information	**Respondents**	**Percentage**
Government	22	55%
Friends	10	25%
Neighbors	2	5%
Media	3	7%
Information Not Received	3	7%



Among the difference sources of awareness, respondent knew about cutlet insurance because of Government sector. There are 55% aware due to government sector, 25% Friends, 5% Neighbours, 7% Media, and 7% not yet received any information.

Satisfaction Level	Respondents	%
Very Good	5	31
Good	11	69
Unsatisfactory	0	0

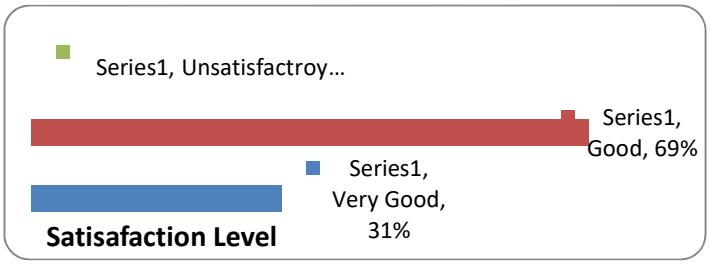


Table shows that respondents are in general satisfied with the service provide by insurance agencies. i.e. 69% respondent good satisfied 31% very good satisfaction level.

Findings:

From the above Analysis observe that

- Cattle insurance more taken in government sector.
- Most of respondents are aware of cattle insurance but they have not taken more cattle insurance.
- More than 50% respondents are satisfied with the service by agency.

Suggestions:

- Awareness for the cattle insurance can be created by service provides through SMS, TV and Radio.
- The involvement of private sector can be increase.
- The effectiveness of the insurance program can be increased by simplifying the procedure
- In Rural area every village should organize camp for importance and need of cattle insurance.

Conclusions:

- There are more respondent are aware about cattle insurance but they do not take cattle insurance.
- Insured respondent prefer to government sector to private sector.
- In Source of information government sector is more convenient than other source for respondent.

References:

1) Raj K.Adhikari, Sagar Bidari (2018). Effectiveness of livestock program in Dhadling District of Nepal.

2) Aditya Pandey (2018). Pet and Cattle Insurance: The Untapped Market In India.

Student Research Activity