

Dombivali Shikshan Prasarak Mandal'  
K. V. Pendharkar College of Arts, Science & Commerce (Autonomous)

DEPARTMENT OF BANKING & INSURANCE

presents

CHRYSALIS



1.

## INTRODUCTION

- ❖ ABOUT THE DEPARTMENT
- ❖ EVALUATION PATTERN
- ❖ KEY HIGHLIGHTS OF THE DEPARTMENT
- ❖ ACTIVITIES (2022-23)
- ❖ CENTRE OF BANKING EXAMS TRAINING

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## **Introduction:**

**Department of banking and Insurance was established in year 2003-04.**

### **❖ Vision :**

**To nurture students for holistic development and make them competent professionals in Banking, Finance & insurance domain.**

### **❖ Mission:-**

**To develop professionally qualified, and competent , To develop professionally qualified and competent banking, finance, insurance, and capital market services professionals primarily through a process of education, training, examination, counselling, consultancy, and continuing professional development programs.**

**To groom candidates with sound Knowledge and skills set required for banking, finance, insurance, and capital market services**

**To constantly strive for better teaching learning process**

### **❖ Objectives:-**

**To be a catalyst for grooming prospects in the field of banking, finance, insurance, capital market, licensed financial co-operatives, and other financial industries and organizations**

**To continuously upgrade the knowledge and skills of students.**

**B.com Banking and Insurance is a special degree course designed by the University for providing expertise knowledge in the fast growing area of Banking and Insurance. It is a B.com degree with special subjects related to Banking & Insurance having semester pattern syllabus covering 40 subjects across 6 semesters.**

**Professional Pattern of Examination :**

**Each Paper of 100 marks covering Internal marks 40 and External marks 60.**

**Internal Examinations are conducted before term end examination which comprises of 20 marks class test and 20 marks for assignments, projects, open book test, presentations, etc.**

**External Examinations are conducted at the term end.**

**External Examinations of Semester I to VI would be conducted as per approved evaluation pattern in academic council and guidelines of BOEE.**

**Minimum Passing % required is 40% in Internal and External exams i.e. 16 out of 40 and 24 out of 60 respectively.**

**Semester End Evaluation Pattern:**

| Semester            | Internal Marks | External Marks | Total Marks |
|---------------------|----------------|----------------|-------------|
| F.Y ( Sem I & II)   | 40             | 60             | 100         |
| S. Y (Sem III & IV) | 40             | 60             | 100         |
| T. Y (Sem V & VI)   | 40             | 60             | 100         |

## **Key highlights of the department:**

**❖ High Qualified Faculties**

**❖ Professional Approach**

**❖ Well designed and Industry oriented curriculum**

**❖ Glorious Results**

**❖ On the Job Training Programs**

**❖ Technology based teaching**

**❖ Class strength 60 students each batch**

**❖ Centre for Banking exam training**

# ACTIVITIES CONDUCTED FOR THE YEAR 2022-23

| NAME OF THE ACTIVITY  | DATE                | NO OF STUDENTS PARTICIPATED | CLASS               |
|---|---------------------|-----------------------------|---------------------|
|   |                     |                             |                     |
|   |                     |                             |                     |
| PARENTS MEETING   | 24/12/2021          | 16(TY)                      | FYBBI,SYBBI & TYBBI |
| ACCOUNTAHOLICS  | OVER SEVERAL MONTHS | 35 (average)                | FYBBI               |
| INTERCOLLEGIATE QUIZ – ON THE OCCASION OF WORLD BANKING DAY | 04/12/2021          | 326                         | inter-collegiate    |
|   |                     |                             |                     |
|   |                     |                             |                     |

## **Commencement of centre for banking exams training from the academic year 2022-23.**

The Department of banking and insurance would be starting centre for banking exams training from the academic year 2022-23.

### Course Details

❖ Duration of the course (in hours): 100

❖ Duration of the Course (in months): 04

❖ Learning Outcomes of the Course:

Students would get prepare for banking exams

Students will get guidance for Banking exams and career opportunities for the same Students will learn overall syllabus of banking exams

Students would get prepare for pre and mains exams

Job opportunities in IBPS PO , IBPS Clerk , IBPS RRB Officer Scale I , IBPS RRB Office Assistant , RBI Grade B Officer , RBI Office Assistant., NABARD Grade A and B Officer , NABARD Development Assistant, etc.

❖ Commencement of coaching: last week of November

❖ Context of the Course: All Students (Any Faculty) : Interdisciplinary

❖ Eligibility for Admission: XII Pass (Any Stream)

# संघर्ष

संघर्ष ही संघर्ष हे  
मंजिल को पाना लक्ष है  
माना थोडासा वक्त हे,  
राहों में काटे , रक्त हे  
पर इनसे भि जाना हे गुजर,  
हाथो में लाना पुरा बल्.....

ना यूही मिलेगी मंजिल हमको  
उसके पीछे भि कष्ट हे  
ना धुंधला धुंधला सा हे कोई  
वो ध्येय हमारा स्पष्ट हे  
संघर्ष .....

यहा वहा की बातें ना अब  
पुरा ध्यान मंजिल की और  
मेहनत् की री हे आज  
कल जो कामयाबी मचाये शोर  
ईस बात की कुदरत साक्ष है...  
संघर्ष .....

--दिव्या वाकळे

## Thinking hats



# Reflection

I thought of lotus ponds  
Of distant sirens songs  
And cities of crystal light  
Of crimson dawns alight  
With radiance of curly clouds  
Silent moors where heather crowds  
The eyes in this precious morn  
When I feel I am new born  
It is neither easy to speak  
Of those emotions that break  
Into the soul from a deepest place  
Nor can I find that silent space  
To take you all in meditation  
To bathe in the lack of elation  
In a place where all thought ceases  
Where to be alive just pleases



## **BOOK REVIEW OF LIFE OF PI**

**It is the third book by the Canadian author Yann Martel which was published in 2001. It has been translated in 41 languages. Yann Martel is the son of diplomat & spent his childhood in Costa Rica, Canada, France & Mexico. .**

**The life of pi tells the story of pi, a teenage boy from India, who finds himself trapped in a lifeboat in the pacific ocean with a tiger. At the start of the story we learn about pi's childhood in Pondicherry in India. His father owns the city zoo & the family home is in the zoo.**

**Pi & his brother helped their father at the zoo & he learned a lot about animals. When Pi was 16 his parents decided to close the zoo & move to Canada. They sold some of the animals to zoos in North America & family traveled by ship to Canada taking the animals with them. On the way there was a terrible storm & ship sank**

**Sadly, Pi's family & the sailors all died in the storm, but Pi survived & found himself in lifeboat with a hyena, zebra, orangutan & a tiger. Pi was scared of animals & jumped into the ocean. Then he remembers there were sharks in water & decided to climb back into the lifeboat. The animals in the boat killed each other, till only Pi & the tiger were left alive.**

**Luckily for Pi, there was some food & water on the lifeboat, but he soon needed to start catching fish. He fed the tiger to stop it killing & eating him. He used whistle & his knowledge of animals to control the tiger.**

**Pi & the tiger spent 227 days in the lifeboat. they lived through terrible storm & burning heat of the sun. Finally, they arrived at the coast of Mexico.**

**In the end, I would like to conclude that 'Every cloud has a silver lining' which means that you should never feel hopeless because difficult times always lead to better days.**

**Pallavi Rajesh Bihade**

**TYBBI**

# सौंदर्य निसर्गाचे

--दिव्या वाकळे

TYBBI

नजर रोखूनी पाहत जावे  
सौंदर्य डोळ्यात न मावे,  
निसर्गाचे अनोखे रूप जणू  
नेत्रामधे जतन करावे

निळे पांढरे रंग जणू मज  
क्षितिजापार घेऊ जावे  
हे सौंदर्य आभालचे  
आयुष्य भर मि डोळ्यात जपावे

किलबिल किलबिल पाखरांची  
जनु मधुर संगीत घेऊन येई  
वऱ्हा वरती डोलती वृक्ष जसे  
संगीतावर् त्यास नाच येई

असे अनोखे रूप तयाचे  
हरवून जाईल भान स्वतः चे  
निसर्गाच्या या सानिध्यात  
मन रमावे प्रत्येकाचे



## POLLUTION DUE TO URBANISATION

Pollution has been a long-standing problem in the world for a few decades. It is something that causes harm to our environment, human and also animals. Pollution refers to when there is a poisonous substance that makes something impure around it. Pollution can be in air which refers to the harmful and toxic fumes in the air produced by vehicles, factories, smoking etc. water pollution refers to the contamination of water bodies by toxic substances, plastic, oil spills, etc. soil or land pollution refers to the waste from chemical factories which causes fertility problems to the soil. Noise pollution refers to unpleasant noises which are due to traffic or factories.

ALL these types of pollution cause equal damage to the planet. Urbanisation refers to the process of rural areas and villages developing into urbanised towns and cities. Urban localities are classified by having infrastructure, health facilities, education etc. which is very good for human beings. These things will raise the standard of living. But what about the environment when a factory opens in rural areas, it paves the way for the people living around the area to avail employment there. Pollution affects the quality of life more than one can imagine. It works in mysterious ways, sometimes which cannot be seen by the naked eye.



. However, it is very much present in the environment. For instance, you might not be able to see the natural gases present in the air, but they are still there. Similarly, the pollutants which are messing up the air and increasing the levels of carbon dioxide is very dangerous for humans. Increased level of carbon dioxide will lead to global warming.

Further, the water is polluted in the name of industrial development, religious practices and more will cause a shortage of drinking water. Without water, human life is not possible. Moreover, the way waste is dumped on the land eventually ends up in the soil and turns toxic. If land pollution keeps on happening at this rate, we won't have fertile soil to grow our crops on. Therefore, serious measures must be taken to reduce pollution to the core.

### **How to Reduce Pollution?**

After learning the harmful effects of pollution, one must get on the task of preventing or reducing pollution as soon as possible. To reduce air pollution, people should take public transport or carpool to reduce vehicular smoke. While it may be hard, avoiding firecrackers at festivals and celebrations can also cut down on air and noise pollution. Above all, we must adopt the habit of recycling. All the used plastic ends up in the oceans and land, which pollutes them.

So, remember to not dispose of them off after use, rather reuse them as long as you can. We must also encourage everyone to plant more trees which will absorb the harmful gases and make the air cleaner. When talking on a bigger level, the government must limit the usage of fertilizers to maintain the soil's fertility. In addition, industries must be banned from dumping their waste into oceans and rivers, causing water pollution.

To sum it up, all types of pollution is hazardous and comes with grave consequences. Everyone must take a step towards change ranging from individuals to the industries. As tackling this problem calls for a joint effort, so we must join hands now. Moreover, the innocent lives of animals are being lost because of such human activities. So, all of us must take a stand and become a voice for the unheard in order to make this earth pollution-free.

## Movie Review- Mimi

A story of a girl residing in Rajasthan who signed up to be a surrogate for an American couple without thinking about the upcoming consequences and legal implications of her decision

The 25 -year- old girl who hopes to fulfill her dreams of becoming an actress in Mumbai, by using the enormous money that she will get from American couple who are looking for surrogate mother. She wasn't looking to feed her family but she wished to be a Bollywood star. At the same time the American couple were looking for someone to buy their baby. Pankaj Tripathi , played the role of a doctor who sets up all and convinced Mimi (kriti Sanon) to become a surrogate mother by promising her to get 20 lakhs rupees. A deal is struck ,cash exchanges hands and Mimi gets pregnant. Together with Shama(Sai Tamhankar) and Bhanu (Pankaj Tripathi) found the way to hide her secretly from Mimi's parent

After the sonogram the couple came to know that the child is disabled . So they decided they'll not take the child and they returned back to America without informing Mimi and Bhanu. But after Mimi and Bhanu came to know about it she tried to search them but unfortunately nothing worked. Then she decided to take the responsibility of the child. More cuteness and chaos ensued with the birth of a white child. It was hard to believe for the villagers and Mimi's family. But later all of them accepted it. Later the family asked that who is the child's father Mimi, as she can't tell the truth, said Bhanu's name. He later took care of her and her child too.

After the child became 4 years old when the American couple saw the video of child on the mobile, they came back to ask Mimi ,if they could take back the child with them but Mimi refused..the couple tried hard but nothing happened. But later on she realized that the child's future will be not so good if he lives here. So she took the decision that she would give the child to them again. But at the time she gave child to them, they already have adopted a Indian girl child from NGO .And here is the happy ending of the story as Mimi got her child back and the couple also adopted the child .

The movie is like Rollercoaster .It a combination of drama and comedy . All actors and supporting actors have played excellent roles in it namely Supriya Pathak, Manoj Pahwa, Aidan Whvtock and Evelyn Edward's. The movie has won many awards . Some of them are Best actor in a leading role - Female kriti Sanon. Best actor in a supporting role - Female Sai Tamhankar . Best actor in a leading role - Male Pankaj Tripathi and many more. The one thing that I learn from the movie is that no other relationship is precious than mother and child relationship in the whole world. The chemistry between the lead and supporting actors is great . It is now added to one of my most favorite movie list..They had lifted up each other in such a way that the success of movie is glorious.

## कुठं कुठं जायचं हवा खायला

लोणावळा, खंडाळा, कोल्हापूरचा पन्हाळा,  
बघतोय तिकडं धुरच काळा  
कुठं कुठं जायचं हवा खायला.... राया....  
कुठं कुठं जायचं हवा खायला

गाडी, पैसा आहे आमच्या दिमतीला,  
मस्तानी बाजीरावांची परंपरा सांगायला  
कार्बनडायऑक्साइड आहे आता सोबतीला  
प्राणवायूचाही श्वास लागायला लागलाय आता कोंडायला  
कुठं कुठं जायचं हवा खायला.... राया....  
कुठं कुठं जायचं हवा खायला....

झाडे लावा, झाडे जगवा शाळेत आपण शिकलोया,  
प्रगतीच्या नावाखाली अक्कल गहाण टाकलीया  
उद्योग सगळे करतांना जंगले आपण तोडलीया,  
पुढच्या पिढीसाठी किमान ऑक्सिजन तरी सोडूया.  
कुठं कुठं जायचं हवा खायला.... राया....  
कुठं कुठं जायचं हवा खायला....  
काहीतरी विचार हवा आता करायला,  
होता का हो पुढं तुम्ही, हे सर्व थांबवयाला,  
नाहीतर बसतील चटके हो सर्वांना,  
तेव्हा येईल का हो अक्कल आपल्याला.

# शिरवळ्या

साहित्य

२ वाटी तांदूळ पीठ

२ वाटी ओल्या नारळाचा खवलेला किस  
जिरे,

गूळ १ वाटी

चवीपुरते मीठ

कृती

शिरवळ्या कृती

प्रथम एका पातेल्यात वाटी पाणी उकळत ठेवणे..

एका परातीमध्ये दोन वाटी तांदळाचे पीठ घ्यावे व चवीपुरते मीठ घालावे.. उकळते पाणी त्या पिठामध्ये घालावे.. पाच मिनिटे पीठ तसेच ठेवून देणे.. एका टोपामध्ये एक लिटर पाणी उकळत ठेवावे.. पीठ मळून घ्यावे.. मळलेल्या पिठापासून मध्यम आकाराचे तीन ते चार गोळे करावे.. आणि ताकद असलेल्या टोपावर एक स्टीलची गाळणी ठेवावी.. आता चकलीच्या साच्यामध्ये बारीक चाळण लावून टोपा वर ठेवलेल्या चाळणीमध्ये शेवया गाळून घ्याव्यात.. त्यांना तीन मिनिटं वाफवून घ्यावे.. तीन मिनिटं झाल्यानंतर एका ताटात त्यांना गाळून घ्यावे..

नारळाचा रस

दोन वाटी ओल्या नारळाच्या खवलेला किस घेणे व त्यात थोडेसे जिरे व मीठ टाकावे.. मिक्सरमध्ये त्याचे बारीक वाटण करून घेणे.. गाळणी मध्ये थोडे थोडे पाणी टाकून त्याचा रस करून घेणे.. १ वाटी गुळ टाकून सर्व मिश्रण एकजीव करून घेणे.. अशा या गोड नारळाच्या रसासोबत गरम गरम शिरवळ्या खारून घ्याव्यात..



# FRIENDS

They picked me up when I was down,  
They turned my life around  
If I didn't have them , what would I be?  
A blessing is what they mean to me.  
They filled my heart with love  
God has sent them as gift to me  
If I didn't have them what would I be ?  
Treasure is what they mean to me  
When they are with me ,there is no reason to be sad,  
They had taken all my sorrows and bad .  
If I didn't have them what would I be ?  
A best friend is what they mean to me  
I'm glad that they came into my life  
I'm glad that I feel the way inside  
If I didn't have them what would I be?  
The world is what they mean to me.

- SAKSHI SINGH - TYBBI

## A NEW FREIND

The afternoon heat in Champakvan was unbearable. Cheeku rabbit was thirsty. He went to the nearby pond to drink water. No one was sitting by the pond except him. "I will quickly drink some water and go home," he thought. But as soon as his tongue touched the water, he heard a terrifying animal hissing. He jumped back and looked up. He saw large bubbles coming out on the surface of the water, but he could not see anyone there. He silently kept watching the surface for some time but saw no one.

"Is it a crocodile?" he thought. But he was sure that there were no crocodiles in this part of the forest. He was still thirsty and went closer to the pond to drink more water. Again, he heard the hissing sound. He swiftly raised his head and saw bubbles. A head popped out of the water.

"Oh no!" frightened, he ran away and hid behind the bushes. It was a strange creature. Cheeku observed it dancing in the water as its head would come out at a corner of the pond and then dive in. Then, its head would come out at another corner. This went on for a while. All of a sudden, it came out of the pond completely.

Cheeku was terrified. It was of the size of an elephant with a stout body, but small legs. The creature started grazing. Cheeku was greatly relieved as it meant the creature was a herbivore, an animal who eats plants. The creature was slow in movement too.

After observing it for a while, Cheeku thought that he need not be frightened of it.

But he was scared to approach the new creature. He tried to go close to it, but it started hissing again and stared back at Cheeku.

"Go away! Get away from me! Who are you? I am angry with you. Go away!" the creature said. Cheeku ran as fast as he could and hid behind a tree. But he was curious to know what this creature was doing in Champakvan. He gathered courage and went back to the pond.

"This is our forest. Who are you? And what are you doing here?" Cheeku asked, his voice stuttering. The creature stared at Cheeku for some time, it then slowly went back into the water. Cheeku was certain that this animal would not be able to harm him as he could run fast. "You did not tell me who you are. You are not an elephant, are you?" Cheeku asked again. "I told you to get away from here. Or I will run, catch you, and beat you up," the creature threatened. Cheeku started laughing. "Foolish fellow! You cannot beat me in a race. I am a rabbit, the one who flies in the air. And look at you...," he managed to say just this much before the creature came out running fast towards him.

Cheeku ran away as he was scared the creature would crush him.

After chasing Cheeku for some time, the creature went back in the water. Cheeku was trembling with fear. He went and hid in the bushes.

The creature could sense Cheeku's fear. "I am sorry but I am very sad, therefore, I am angry," the creature shouted back from the water.

Cheeku came out of the bush. Seeing his sad face he felt pity for the creature.

"Why are you sad? If you want, you can share your problem with me. Maybe I can help you," he offered.

The creature softened and said, "I am a Hippopotamus. My name is Harry." "A Hippopotamus!" Cheeku was surprised. "Oh! I know about you. You are the third-largest land animal after the elephant and rhinoceros. Also, Hippopotamuses are generally 12 feet long and 5 feet wide, and are heavy.

Am I right?"

Harry nodded his head.

**"I know that you are very heavy, but I am unaware of the numbers," Cheeku said eagerly. "Please tell me something about yourself. There are no hippos in our forest. So we do not have much knowledge about you."**

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**Harry swam closer to Cheeku then said, "3,500 kgs! But don't judge us by our weight. Many hippos are about 4,000 kgs but can run at a great speed. We eat around 40 kgs of grass every day and we roam at night in search of our food."**

**Cheeku stared at him in surprise and said, "Despite being so heavy, how do you manage to swim in the water?"**

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**Harry burst out laughing, "I cannot swim, but I am so heavy that I reach the bottom straight away. I manage to walk or run and cover a good distance in no time. Many other animals call me a sea horse."**

**"I thought you swim like a fish but you are more like a sea horse. Then why don't you stay on land? It will be more fun."**

**Harry smiled at Cheeku's invitation and said, "No, no! Hippos are the closest living relatives to whales and so we prefer spending more time in the water, soaking in it. We come on land only at night in search of food. We don't like roaming around in the sun as the sunlight really troubles us and our skin is sensitive."**

**"Your skin is sensitive? But I have heard that your skin is so thick that even spears cannot penetrate it," laughed Cheeku.**

**"That is correct. Our skin may be hard but it is very sensitive to the rays of the sun. Therefore, we stay in water for more than 16 hours a day. We can stay alive in water without breathing for more than 5 minutes. But when we're on land, we cannot survive for long. We cannot live without water," said Harry.**

**"Don't you worry, my friend! You can live here peacefully. All the animals of this forest will be happy to have you here," Cheeku said.**

**Harry said sadly, "I am not unhappy because I am new here, but because I am separated from my group. I miss them. We are social animals and we live in groups. I cannot live without them."**

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**Harry told him that hippopotamuses live happily in a group of 40 to 45 as they easily get angry when alone.**

**Cheeku felt bad for Harry and started wondering how he would be able to find his family. After thinking for some time, he got an idea and his face brightened up. He said, "Don't worry. My friend, Molly eagle will fly around and find your family.**

**She can go to all water bodies and look for them. Once she finds them, you will be with them soon. Molly will lead the way."**

**Hearing this, Harry's face bloomed like a flower, "Thank you! You have solved my problem. If not today, then certainly tomorrow I will be able to unite with my family."**

**He was so happy and started dancing and splashing water.**

**Cheeku enjoyed the cool splashes in the afternoon heat. He had met a hippo for the first time in his life and was very happy to have made a new friend.**

**-TRUPTI VARAL**

**FYBBI**

## **A STUDY OF FACTORS INFLUENCING INVESTORS BUYING BEHAVIOUR TOWARDS PURCHASE OF LIC INSURANCE PLANS**

**INTRODUCTION:** Life insurance is actually an agreement between the insured and the insurer in which the policy holder agrees to pay a regular premium to the insurer. In return, the insurer guarantees monetary protection to the insured in case of any accident or mishaps. If the insured dies in an accident, financial help is provided to his family members. Thus, life insurance is necessary as it provides protection to not only you but also to your family in case of any unwanted disaster.

**OBJECTIVES:** Exploring various factors that influence investment decisions of customers in life insurance. Investigation and analysis of the impact of different factors on the investment decisions of the customers' life insurance. Assessing the benefits of customers in making life insurance investment decisions. Exploring and assessing the factors responsible for life insurance as an investment option.

**HYPOTHESIS:** H1= Customers are satisfied with purchasing LIC policy. H0= Customers are not satisfied with purchasing LIC policy. H2= Customers prefer purchasing LIC policy for receiving tax benefits. H0=Customers don't prefer purchasing LIC policy for not receiving tax benefits.

**SCOPE:** Lots of people die prematurely from illness or accident and, if you happen to be the sole breadwinner in the family and you were to pass away. It could have devastating consequences for your ability to pay household expenses, maintain their standard of living. It is secure to your family's financial future by buying a life insurance policy. Life insurance is a bit of extra money that is invested.

**LIMITATIONS:** Generalization of the study- the study cannot be universally applied as the study confines to Dombivli city only. Although different factors influencing the customer's choice were taken, it may be needed that other aspects and factors not taken into account needed to be explored and studied. There were financial and time constraints during the study.

**REVIEW OF LITERATURE:** Ravi Kumar Tati (2018), in his Research studies "FACTORS INFLUENCING THE CHOICE OF INVESTMENT IN LIFE INSURANCE POLICY", D. Sneha (2020), in her research study "FACTORS AFFECTING CUSTOMERS INVESTMENT TOWARDS LIFE INSURANCE POLICIES - A STUDY"

**FINDINGS:** The policy holders are showing interest in saving, and the majority of the respondents prefer to save 2% to 15% of their disposable income in the form of an insurance policy. It is found that the majority of the people like to invest in both short term policies and long term policies. It was also found that family, salaried people and housewives are major in investing in insurance.. It was also found that the majority of the respondents know up to 3 insurance companies only and LIC is being one among them.

**CONCLUSION:** The policy holders are showing interest in saving, and the majority of the respondents prefer to save 2% to 15% of their disposable income in the form of an insurance policy. It is found that the majority of the people like to invest in both short term policies and long term policies. It was also found that family, salaried people and housewives are major in investing in insurance. The tax benefits, risk coverage, protection for the family and long term savings are the major factors influencing the investors choose insurance policy. It was also found that the majority of the respondents know up to 3 insurance companies only and LIC is being one among them.

•

**A STUDY OF CUSTOMER SATISFACTION OF HDFC HOME LOAN ACCOUNT HOLDER  
WITH REFERENCE TO DOMBIVILI**

**INTRODUCTION:-** Banks in India have played a critical part in the country's socioeconomic advancement since independence. The banking sector is dominant in India, accounting for more than half of the financial sector's assets. Indian banks have been undergoing an exciting period of fast transformation as a result of financial sector reforms that are being implemented in stages. Both public and private banks are increasing their adaptability in terms of their goals and products. Private banks, on the other hand, are now in a stronger position to be people's first choice. India's private banks outperform in terms of innovation and operational performance. They deliver superior service because they are motivated by profit.

**OBJECTIVE & HYPOTHESIS:-** To estimate customer satisfaction with regard to HDFC home loan. To investigate the challenges clients face when applying for mortgage loans. To do research on the difficulties borrowers face when repaying loans .

**H0:-** Complex or lengthy procedure for loan application influences customer to take home loan.

**H1:-** Easy procedure for loan application influences customer to take home loan.

**SIGNIFICANCE OF STUDY:-** This study will assist HDFC in tailoring their services to the needs of the customer. These institutions can create strategies by thoroughly analyzing client responses. This study will also assist housing loan providers in better understanding the aspirations and experiences of current borrowers.

**FINDINGS:-** The employment sector accounts for the majority of the respondents' jobs. Most of the respondents to the survey didn't use the loan. The majority of respondents said they have been unable to obtain a loan due to the high interest rate. The majority of people consider the interest rate when taking out a loan. The employment sector accounts for the majority of the respondents' jobs. Most of the respondents to the survey didn't use the loan. The majority of respondents said they have been unable to obtain a loan due to the high interest rate. The majority of people consider the interest rate when taking out a loan.

**CONCLUSION:-** Client preferences for home loans are influenced by the customer-friendly environment, processing and disbursement, interest rate, payment terms and conditions, freebies provided by banks, prepayment period, and procedure charge. Prioritizing consumer preferences provides firms with a competitive advantage, avoids wasted spending, and aids in quickly creating a strong following.

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## **A STUDY OF INVESTMENT PATTERN OF SALARIED PEOPLE IN DOMBIVLI CITY**

### **INTRODUCTION:**

- Salary is a form of periodic payment from an employer to an employee, which may be specified in an employment contract. Salary is a fixed amount of money or compensation paid as an employee by an employer in return for work performed. Investment means the purchase by an individual of a financial or real asset that produces returns, proportionate to the risk assumed over some future investment period. For a salaried person, financial planning is a critical thing; the reason behind the same is the limited and fixed flow of income. It is necessary to understand the saving and spending patterns before making an investment. It is observed that managing money wisely is the first step towards the better investment goals. There are various investment avenues available in the market such as equity, debentures, bonds, government bonds, money market instruments, bank deposits, EPF, PPF, insurance policies, etc.

### **OBJECTIVE OF THE STUDY**

a. To analyze the investment preference among the different salaried employees working in Dombivli City. b. To establish the factors influencing investment behavior of the salaried employees. c. To analyze the pattern of investment and saving among the salaried investors. d. To know the aim of investments and motivating factors which influence investment decisions.

**HYPOTHESIS H1:** - Investment pattern of salaried people is provision for future expenses. **H0:** - Investment pattern of salaried people is not provision for future expenses. **H2:** - The risk appetite of salaried people is moderate. **H0:** - The risk appetite of salaried people is high. **SCOPE OF THE STUDY:-** This study is focusing on the preference of Investments by salaried employees and confined to Dombivli city.

### **LIMITATIONS OF THE STUDY**

➤ The primary data has been collected on a structured questionnaire to a sample of investors in Dombivli city, which cannot reflect the opinion of the whole population. ➤ The data was collected within the time limit. ➤ Some were reluctant to share the knowledge regarding income and investment decisions, which they thought was personal. ➤ The information is often biased because of use of questionnaire.

### **FINDINGS AND CONCLUSION**

➤ After the analysis & interpretation of data by the researcher it is concluded that Investors are very well aware about investment avenues that are available in Dombivli, India but still investors are preferring to invest their money in bank deposit, insurance & mutual funds. ➤ The data analysis of research reveals that the risk is concerned as an important factor while doing investment, so remaining avenues are less found less considerable while doing investment by investors. ➤ Basic objective of salaried people for creating an investment is future expenses and wealth creation.

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**SUJAL SINGH - TYBBI**

# **A study of agriculture insurance among farmers in rural area..**

## **INTRODUCTION**

Insurance is not mandatory or is largely absent in the urban sector. Insurance also provides chances to build Private-public partnerships and reduces dependencies on public resources during the post-disaster reconstruction And relief stages. Communities can rapidly re-establish and restore their business and living arrangements. Agricultural insurance has been shown to increase the rate of uptake of formal credit by farmers that enhance

## **TYPES**

NAIS envisages coverage of all food crops (cereals and pulses), oilseeds, horticultural and commercial crops. It covers all farmers, both loaners and non-loaners, under the scheme. The premium rates vary from 1.5 percent to 3.5 percent of sum assured for food crops. Policy seeker can get his food crops, oil seeds, annual commercial crops insured under crop insurance by Submitting the required documents and paying the premium accordingly But one must choose a policy after evaluating the risks and comparing the different policies and Companies Sum insured will be decided on various factors, such as the type of crop, location, and calamity years in That area and historical yield data . In case of crop loss, the insured needs to intimate the insurance company or local agriculture department Within 72 hours of calamity.

## **RESEARCH METHODOLOGY**

Case study method has been used in this paper. The paper has made an attempt to analyse the growth & Performance of National Agricultural Insurance Scheme of 19 seasons from Rabi 1999-2000 to 2008-2009. It is mainly dependent on secondary data but supplemented by the discussion with some officials of banks, Insurance companies, academicians & some he case study method has been used in this paper. The paper has made an attempt to analyse the growth & performance of National Agricultural Insurance Scheme of 19 seasons from Rabi 1999-2000 to 2008-2009. It is mainly dependent on secondary data but Supplemented by the discussion with some officials of banks, insurance companies, academicians & some

## **HYPOTHESIS**

H0 : farmers are not satisfied with the services provided by agriculture insurance

H1 : Farmers are satisfied with the services provide by agriculture insurance

## **METHODOLOGY ADOPTED FOR THE STUDY:**

- 1.Study area - Kalyan
- 2.Sample size - 65 respondents
- 3.Sampling method used - survey sampling method.
- 4.Data sources - The study is based on primary data that has been collecting using a structure questionnaire.
- 5.Structured questionnaire has 26 questions in it.
- 6.The first part of questionnaire is devoted to the basic information relating to the respondent such as age, Gender, and income level, education.
- 7.The second part of the questionnaire is made to get information about use of Agriculture insurance Among farmers and for this case study primary and secondary data has been collected.

## **CONCLUSION**

The present study compares the performance of three main schemes NAIS, MNAIS and WBCIS and compares The performance of states on cumulative basis for these three schemes based on the data presented in 'Summary Statistics of Crop Insurance Schemes'. The schemes are compared based on three parameters namely claim ratio, Premium per farmer and average claim per farmer. The high claim ratio (more than 300%) for NAIS indicates The high out go in the scheme which resulted from administered pricing of the scheme. In one hand it is a Question mark on viability of the scheme and high dependence on government, on the other it indicated high Benefit for farmers. The actuarial price regime for WBCIS and MNAIS has resulted in healthy claim ratio, Which is less than 100% in both the cases.

# **"A STUDY OF POPULARITY OF POSTAL SCHEME AS AN INVESTMENT OPTION AMONG SALARIED PEOPLE"**

## **Introduction**

India Post is a government-operated postal system in India, part of the Department of Post under the Ministry of Communications. Generally known as the Post Office, it is the most widely distributed postal system in the world. Warren Hastings had taken initiative under East India Company to start the Postal Service in the country in 1766. It was initially established under the name "Company Mail". It was later modified into a service under the Crown in 1854 by Lord Dalhousie

## **Objectives**

- 1. To study the various financial services provided by the post office.**
- 2. To study the different post office savings schemes.**
- 3. To study the benefits of investing in post office investment schemes.**
- 4. To study comparative study of interest rate on different savings schemes.**

## **Hypothesis**

**H1: Mostly people are invest in postal scheme.**

**HO : Mostly people do not invest in postal scheme.**

## **LIMITATION**

- 1.A small sample size of 60 respondents are taken to primary data analysis. So cannot draw proper interference about the respondents from this sample size.**
- 2.Due to shortage of time I have not been able to make a depth study.**
- 3.Limited respondent - 60 respondents.**
- 4.Lack of awareness among people.**

## **Conclusion**

The Post Office savings bank is the oldest and the largest banking system in India. Savings are vital factors for the growth and improvement of the economy of the country. In India, Post Office savings scheme provides a secure, risk free and attractive investment option for the small investors. Post office savings schemes are one of the modes for them to save their valuable earning. Post offices offer various saving schemes like Savings Bank Account, National Savings Certificate Account, Post Office Monthly Income Scheme, Senior Citizen Scheme, Recurring Deposit, Sukanya Samridhi Accounts etc. Investors who prefer a no-risk investment portfolio along with substantial return generation can opt for these postal schemes

**- KOMAL TAMBE - TYBBI**

## **A STUDY ON CUSTOMER SATISFACTION TOWARDS ICICI LOMBARD TWO WHEELER INSURANCE IN DOMBIVLI WEST**

**Introduction:** A Insurance is a means of protection from financial loss. It is a form of risk management primarily used to hedge against the risk of contingent loss. A entity who provides insurance is known as insurer and one who buys the insurance is called as policyholder, while the person covered against the policy is called insured. A amount is paid monthly to protect from any uncertainty called as premium which protects the two wheeler owner from any loss.

**Objectives:** Study the customer satisfaction towards ICICI lombard two wheeler insurance and to understand the customer attitude towards and after sales and services provided by ICICI lombard two wheeler insurance and also to know the customer satisfaction and their feedback.

**Hypothesis:** H1- Customers are aware of ICICI lombard two wheeler insurance  
H0- Customers are not aware of ICICI lombard two wheeler insurance  
H2 - are satisfied with ICICI lombard two wheeler insurance  
H0 - Customers are not satisfied with ICICI lombard two wheeler insurance

**Scope:** To study people having ICICI lombard two wheeler insurance policy

**LIMITATIONS:** The research was limited to 60 respondent and also to Dombivli west only

**LITERATURE REVIEW:** Biswajit Mohanty, Virupaxi Bagodi : The success of two wheeler manufacturers in India depends upon the competitive advantage gained by them through after sales service and providing and maintaining Customer satisfaction in the face of rapid changes in technology is difficult task which can be overcome by timely adding of capacity and upgrading technical manpower and focusing on CRM programs

**CONCLUSION :** Customers are satisfied with the services provided to them. After analysis and interpretation of data conducted by researchers it is concluded that the customer has knowledge of ICICI lombard two wheeler insurance policy. In India two wheeler insurance is used as means of transport and private means of transport so insurance is compulsory for two wheeler in India

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# **A study of customer perception towards HDFC life insurance policies**

## **Summary:**

The study aimed to investigate the customer perception towards HDFC life insurance policies. The majority of HDFC life insurance policyholders expressed satisfaction with their policies. Financial security, peace of mind, and tax benefits were perceived as the most significant benefits of the policies. The customers also highlighted the importance of transparency in the policy documents and the ease of the claim settlement process. The study's scope is limited to a sample of HDFC life insurance policyholders in India and may not represent the opinions of all customers. Further research is suggested to obtain a more comprehensive understanding of customer perception towards HDFC life insurance policies.

## **Introduction:**

HDFC Life Insurance is one of the leading life insurance providers in India. The company offers a range of insurance policies to meet the diverse needs of customers. The study aims to investigate the customer perception towards HDFC life insurance policies.

## **Objective and Hypothesis:**

The primary objective of the study is to assess the level of satisfaction among HDFC life insurance policyholders and identify the key factors that influence their perception of the policies. The hypothesis is that customers who have purchased HDFC life insurance policies are generally satisfied with the policies and perceive them to be beneficial.

## **Scope:**

The study will focus on HDFC life insurance policyholders in India. The research will use a survey method to collect data from a sample of policyholders. The data will be analyzed using statistical methods to draw conclusions about the customers' perception of HDFC life insurance policies.

## **Limitations:**

The study's scope is limited to HDFC life insurance policyholders in India and may not represent the opinions of non-policyholders or policyholders of other insurance companies. The sample size may also be limited, affecting the accuracy of the results.

## **Important/ Main Findings:**

The majority of HDFC life insurance policyholders expressed satisfaction with their policies.

Customers perceive financial security, peace of mind, and tax benefits as the most significant benefits of the policies.

The most common reasons for purchasing HDFC life insurance policies were to secure their family's future and to save for retirement.

Transparency in policy documents and an easy claim settlement process are essential factors for customer satisfaction.

## **Conclusion:**

The study concludes that HDFC life insurance policies are generally perceived positively by policyholders. The policies offer financial security, peace of mind, and tax benefits, which are highly valued by customers. The focus on transparency and an easy claim settlement process has also been appreciated by the customers. However, the study's scope is limited to a sample of HDFC life insurance policyholders and may not represent the opinions of all customers. It is suggested that further research should be conducted to obtain a more comprehensive understanding of customer perception towards HDFC life insurance policies.

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## A STUDY ON THE USAGE OF FIRE INSURANCE AMONG THE LOCAL RETAIL SHOPS IN KALYAN CITY

### Summary

The topic is a project on the usage of fire insurance among small local retail shops. The project involves researching and analyzing how often small local retail shops use fire insurance, what factors influence their decision to purchase fire insurance, and how it impacts their business. The project includes steps such as defining the project scope, conducting research using primary and secondary sources, analyzing data, developing recommendations, creating a report, and presenting the findings to relevant stakeholders. The goal of the project is to provide valuable insights and recommendations for small local retail shop owners, insurance providers, and other stakeholders.

### Introduction

Small local retail shops play an important role in the local economy by providing goods and services to the community. However, these businesses are vulnerable to various risks, including fire incidents, which can cause significant damage to their property, inventory, and equipment. To mitigate these risks, many small local retail shops purchase fire insurance to protect their assets and ensure their business continuity in case of a fire incident.

### Objective and Hypothesis

The objective of this project is to analyze the usage of fire insurance among small local retail shops and identify the factors that influence their decision to purchase insurance, as well as how it impacts their business. The goal is to provide insights and recommendations for small local retail shop owners, insurance providers, and other stakeholders

• Small local retail shops are more likely to purchase fire insurance if they operate in areas with higher risk of fire incidents.

• Small local retail shops with a higher level of inventory or equipment are more likely to purchase fire insurance to protect their assets.

### Scope

The scope of this project includes analyzing the usage of fire insurance among small local retail shops, specifically focusing on the factors that influence their decision to purchase insurance and how it impacts their business. The project will be conducted in a specific area or region, and will include different types of small local retail shops, such as grocery stores, convenience stores, and boutique shops.

### Limitation

The sample size of small local retail shops included in the project may not be representative of the entire population of small local retail shops in the area or region. This could limit the generalizability of the findings. The accuracy of the data collected from primary and secondary sources may be affected by errors or biases, which could impact the validity of the findings.

### Review of Literature

1. V. Ramkumar in 2019, in their topic "A Study of Fire Insurance Claim Settlement Process in India" Published in the Journal of Sustainable Development Studies in 2019. Conclusion: The study found that there is a need for simplification of claim settlement procedures in fire insurance in India.

2. Dr.S. Bhuvanewari in 2016 in their topic "Fire Insurance Claims: An Analysis of Indian Scenario" published in the Journal of Economics and Management in 2016. Conclusion: The research concluded that the lack of awareness about fire insurance and complex claim settlement procedures is the major issues in India.

### Importance

The topic of the usage of fire insurance among small local retail shops is important for several reasons. Small local retail shops are an important part of the local economy, and fire incidents can cause significant damage to their property, inventory, and equipment. By understanding how often these businesses use fire insurance and what factors influence their decision to purchase insurance, we can identify ways to better protect them from fire risks and prevent significant losses

### Conclusion

In conclusion, the usage of fire insurance among small local retail shops is an important topic that requires careful analysis and understanding. Small local retail shops are vulnerable to various risks, including fire incidents, which can cause significant damage to their property and impact their business operations. By conducting a project on the usage of fire insurance among small local retail shops, we can identify the factors that influence their decision to purchase insurance and how it impacts their business.

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SIDDHESH KATHADE - TYBBI

# **A STUDY ON USE OF E-BANKING FACILITY OF KOTAK MAHINDRA BANK**

## **INTRODUCTION:**

E-banking, also known as online banking or internet banking, is a service provided by banks and financial institutions that allows customers to perform various transactions and banking activities through the internet or a mobile app. These activities can include checking account balances, transferring funds, paying bills, and applying for loans.

**OBJECTIVES:** The main objective of the study is to identify awareness about E-banking, use of E-banking. And identify the customer are satisfied security of e-banking. To study about use of e-banking facility of Kotak Mahindra bank. To examine the customer satisfaction level in the e-banking. To identify security of e-banking of Kotak Mahindra Bank.

**HYPOTHESIS:** H1 = E-Banking service are convenient to Kotak Mahindra Bank account holders. Ho = Ebanking service are not convenient to Kotak Mahindra Bank account holders.H2 = E-Banking service are customer friendly to Kotak Mahindra Bank account holders.Ho = E-Banking service are not customer friendly to Kotak Mahindra Bank account holders.

**SCOPE:** The present study undertaken to know the preference of the customer to use E-banking services among account holders of Kotak Mahindra Bank. The problem of the customer is they pay additional charges of the service provided by bank. The study also force of the customer perception that how the e-banking services can be improved.

**LIMITATIONS:** Limitation of study : A small sample size of 67 respondents are taken to primary data analysis. So cannot draw proper interference about the respondents from this sample size. Limited respondent - 67 respondents. Lack of awareness among customers. The study is carried out only in Dombivli and Mulund, so the finding may not represent the whole country.

**REVIEW OF LITERATURE:** 1. Joseph et al. ( 1999), " investigate the influence of internet on the delivery of banking services" found six underlying dimension of e-banking services quality such as convenience and accuracy, feedback and complaint management, effective, queue management accessibility and customization.

**CONCLUSION:** It is observed that age plays an important role with respect to the use of e-banking services. It is found that the senior citizens are less comfortable with use of these services. However the upcoming generation is becoming more and more aware of benefits and convenience of e-banking.

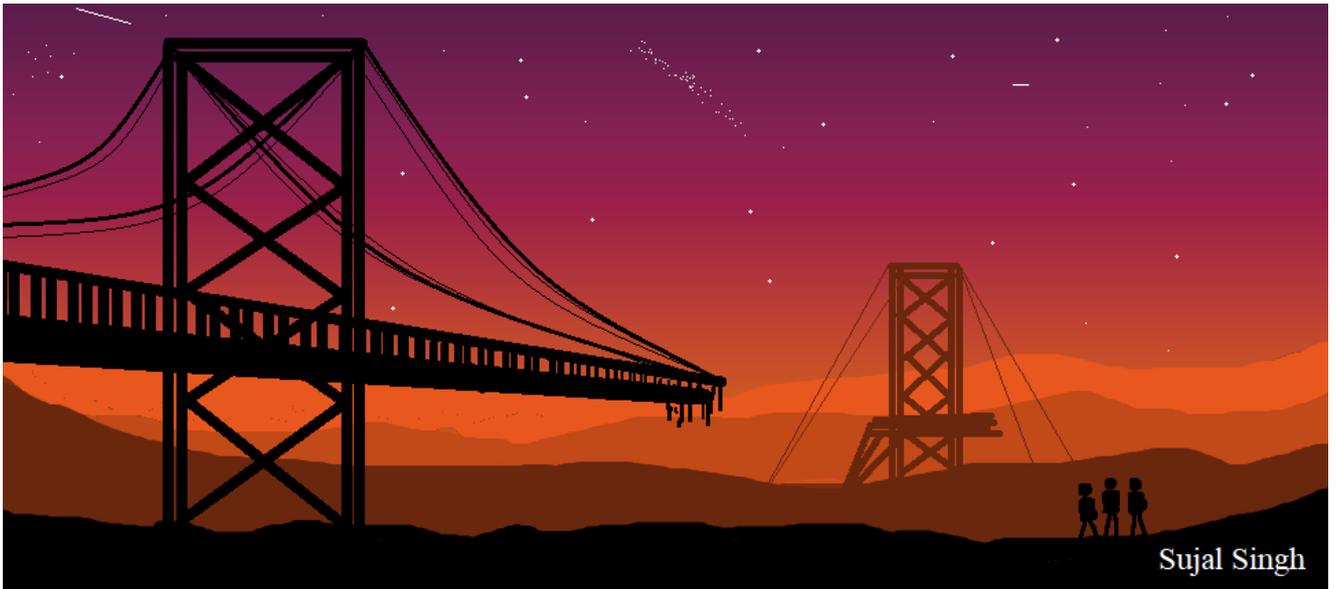
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**KHUSHI GHAG - TYBBI**

### 3. ART & CULTURE



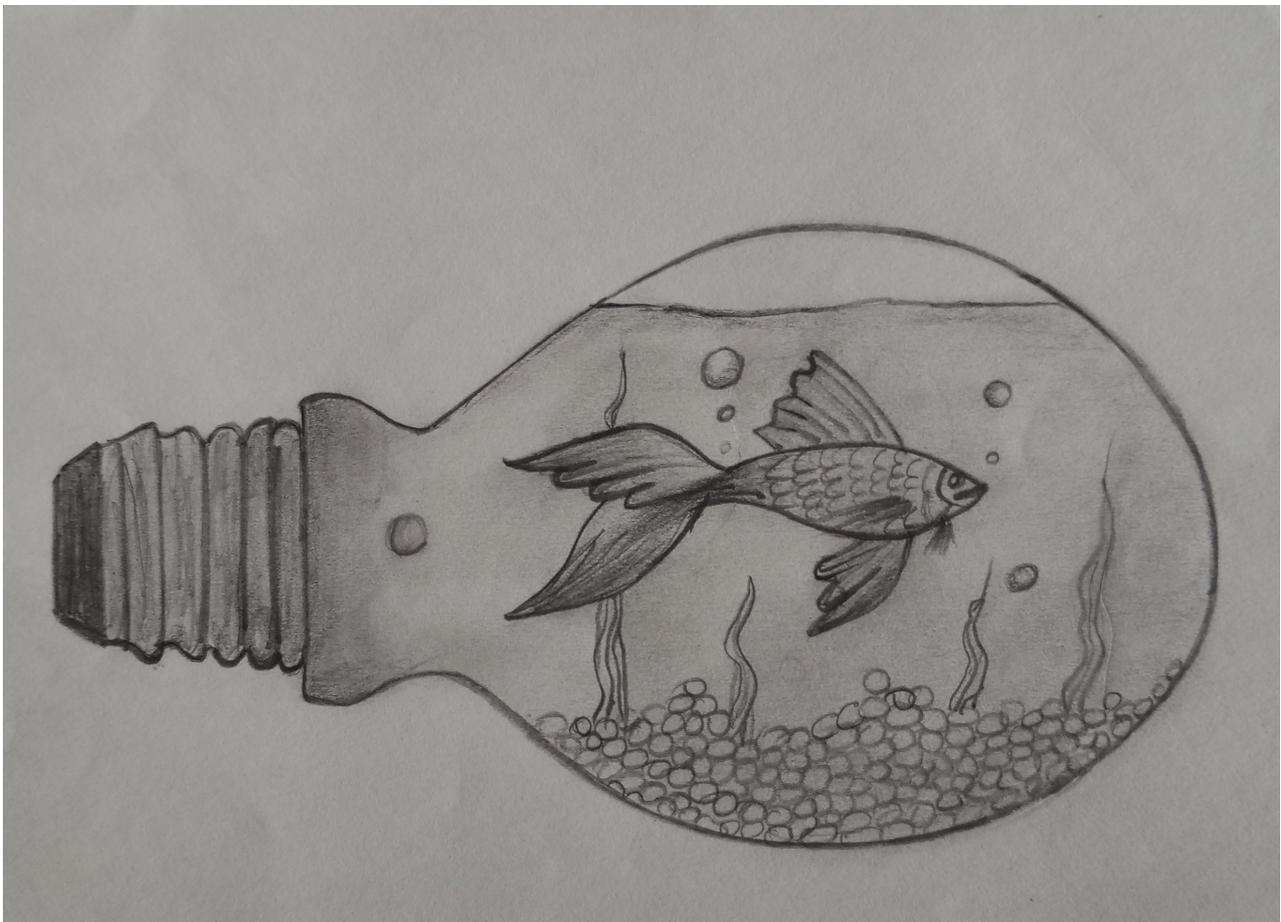
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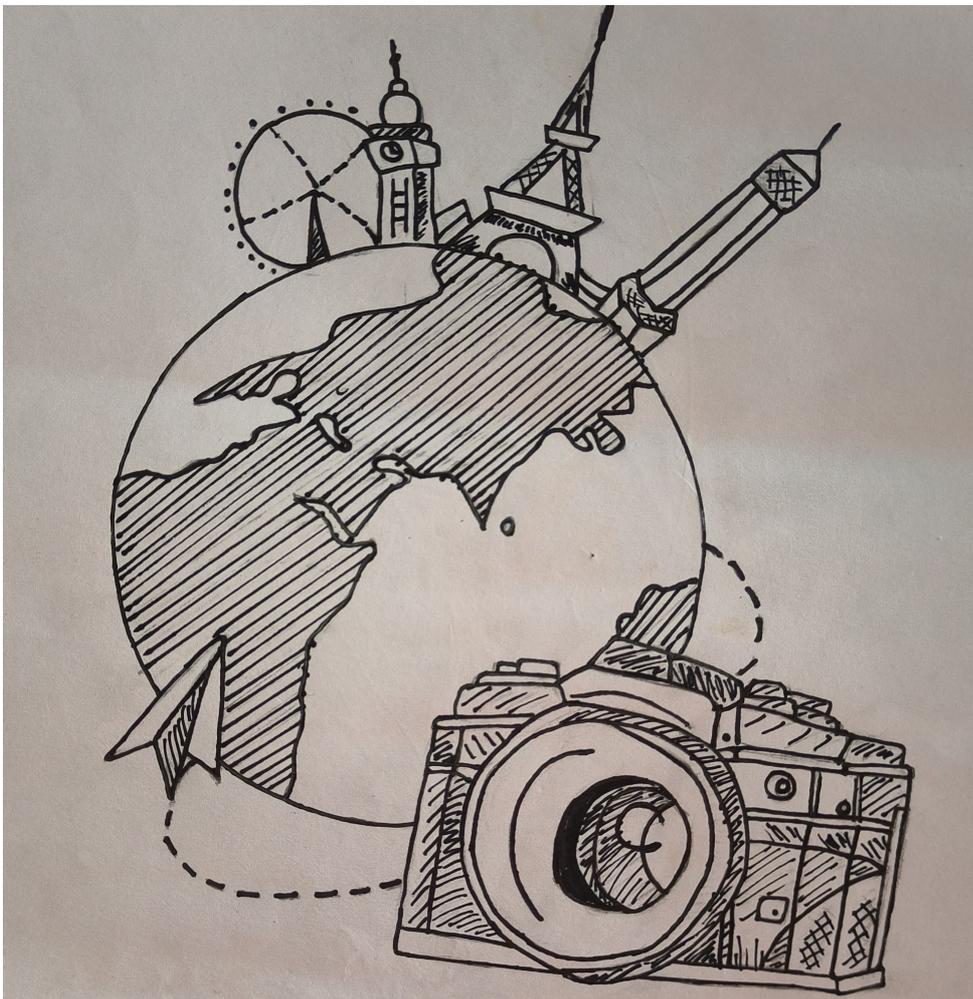
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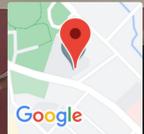
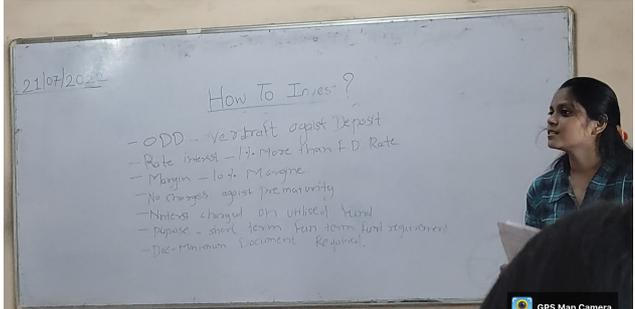
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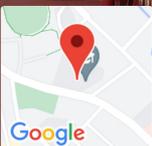




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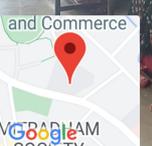
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ISSUE  
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**DOMBIVLI SHIKSHAN PRASARAK MANDAL'S  
K.V. PENDHARKAR COLLEGE OF ARTS, SCIENCE AND  
COMMERCE, (AUTONOMOUS)  
DOMBIVLI (EAST), DIST. THANE**

**BIOSCENE 2022-2023**

**BIOENTREPRENEURS FROM LAST DECADE**



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**BIOENTREPRENEURS FROM LAST  
DECADE  
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# EDITORIAL

I feel fortunate that I am writing this editorial for the Tenth issue of Departmental annual magazine of Biotechnology named “**BIOSCENE – 2022-2023**”. The theme for this year’s magazine is “**Bioentrepreneurs from last decade**”. The Department of Biotechnology was established in the year 2003-2004 by the efforts of former Head of Botany Department Dr. R. G. Bagool and now it is running under the Coordinatorship of Dr. Suman Satyarum.

Our department offers three years B. Sc. Course in the subject Biotechnology. The aim of our department is to encourage students to grow as a Biotechnologist and better human beings who are capable to face challenges of the present world. As educators we encourage students to participate in seminars, workshops and in extracurricular activities that will bring about holistic development of students.

Our department magazine Bioscene is like a bouquet with beautiful articles. It includes articles written by our students, research projects of students, Art work of students and student’s achievements. The students and the teachers get a scope to show their creative power through this magazine. The magazine also contains an elaborate photo gallery providing glimpses of the department activities.

The most important is that it brings out the creative talents of the students and thus helps them to form the habit of reading and writing. It also helps them to hone their intellectual skills as well as benefits in widening the horizons of knowledge. This gives a chance to other students to be inspired by their peers’ experience.

Thus, this magazine is outcome of the efforts put in by our students, all teachers and last but not least the management of DSPM’s K.V. Pendharkar College who has always supported these activities. Here I would like to thank all those who have contributed to make this effort a success. I truly hope that this magazine will make an interesting read.

*By,*

*Ms. Sandeeptha Rathindran*

# ACTIVITY REPORTS

## Department of Biotechnology

### Activity Report 2022-2023 (Term-I)

- An **Expert lecture** on “Book Review – Emperor of all Maladies by Siddharth Mukherjee” was arranged for T. Y. students on 8<sup>th</sup> July 2022. Dr. Amala Patwardhan, Librarian narrated the technique of writing review on a book in the session. All 27 students attended the lecture.
- **Alumni Interaction Lecture was conducted on 9<sup>th</sup> July 2022 for SY and TY biotech students –**  
  
**Session I** - New opportunities in Animal Health care & Food Industry by Mr. Sachin Bhanushali, Production In-charge, Exotic Biosolutions Pvt. Ltd.  
**Session II** - Career Opportunities in business administration – Mr. Pratik Agre, Senior Research Executive, NielsenIQ  
No. of beneficiaries – 50
- **Advanced Learner & Slow learners group** was created to enrich the students’ knowledge in the subject and to enhance their learning skills. A total of 26 students were grouped under Advanced Learners & Slow learners from S.Y. Biotechnology and T.Y. Biotechnology. Students were assigned with various activities like assignment, presentations & flowchart making in the month of July & August 2022.
- **Guru Purnima day** activity was on 14<sup>th</sup> of July, 2022. Theme was ‘Arts meet Biotechnology’, number of beneficiaries - 38 students.

- **T.Y Parent Meeting** was conducted on 23<sup>rd</sup> July 2022. 26 Parents with students attended the meeting. **S.Y Parent Meeting** was conducted on 13<sup>th</sup> August 2022, 29 Parents attended the meeting out of 30.
- **F.Y Induction Programme** for students was conducted on 3<sup>rd</sup> August 2022. The students were informed about Orientation lecture course, Biotech course details, academic calendar and examination pattern. Number of students present -32.
- **Orientation lecture series and practical** were conducted for F.Y Biotechnology students from 04/08/22 to 12/08/22 to familiarize student about the basic concepts & applications in biotechnology, microbiology, biochemistry, & life sciences.
- **Teachers Day activity** was conducted on 6<sup>th</sup> September, 2022. Students from T.Y. Biotech were encouraged to conduct lectures & practical on the same day with In-charge teachers. Total enthusiastic students attended from S.Y, T.Y and F.Y Classes were 66.
- Orientation & Enrollment process for Skill development Certificate course in **Sewage Treatment Plant process** of 2 credits for UG students (3<sup>rd</sup> Batch) was started in the month of October/November 2022.

**Department of Biotechnology**  
**Activity Report 2022-2023 (Term-II)**

- **ACTREC Open day visit** scheduled on 2/12/2022 was organized for T.Y students. The students got opportunity to visit Animal house, Biochemistry & Microbiology, Molecular biology Laboratories and Instrument room.
- **Parent-Teacher meeting** was organized in the month of December 2022 and February 2023 informing the parents regarding Industrial visit to CETP and One day Study tour to YCMOU (Yashwantrao Chavan Maharashtra Open University) and Soma vines, Nashik repectively.
- The Industrial visit to **CETP- Common Effluent Treatment Plant, Koparkhairane** was organised on 6<sup>th</sup> December, 2022 for **SY and TY Biotechnology** students. A total of 51 students were accompanied by 3 teaching faculties.
- **Research Paper Presentation in Avishkar:** A pair of TY students under the guidance of three teaching faculty Dr.Suman Satyarum, Ms.Sneha Pande and Ms.Divya More presented their research project in Avishkar 2022-23. Ms. Anagha and Ms. Tanaya Kalebag under the guidance of Ms. Divya More cleared the Zonal round and got selected for presenting their project at the University level.
- **SY and TY Parent teacher meeting regarding Ward attendance** were conducted.  
First meeting: 24<sup>th</sup> December, 2022  
Second meeting: 12<sup>th</sup> March, 2023  
**FY Parent teacher meeting regarding Ward attendance was conducted on 25<sup>th</sup> March, 2023.**

- A **One day Study tour** to YCMOU (Yashwantrao Chavan Maharashtra Open University) and Soma vines, Nashik was organized on 17<sup>th</sup> February, 2023 for S.Y. and T.Y. Biotechnology students. A total of 46 students were accompanied by 4 Teachers.
- **Remedial lectures** were conducted for ATKT (Theory and Practical) students of all three classes on the following dates:  
T.Y: 28<sup>th</sup> February, 8<sup>th</sup> and 9<sup>th</sup> March 2023  
S.Y: 6<sup>th</sup> to 9<sup>th</sup> March 2023  
F.Y: 16<sup>th</sup> to 20<sup>th</sup> March 2023
- Conduction of Skill development **Certificate course in Sewage Treatment Plant process** of 2 credits for UG students (3<sup>rd</sup> Batch) lectures and practical were started in the month of February and completed in the month of May 2023. A total of 32 students had enrolled for the certificate course.

# ARTICLES

## Bio-Entrepreneurs: A Bridge between Biological Innovations and Entrepreneurship



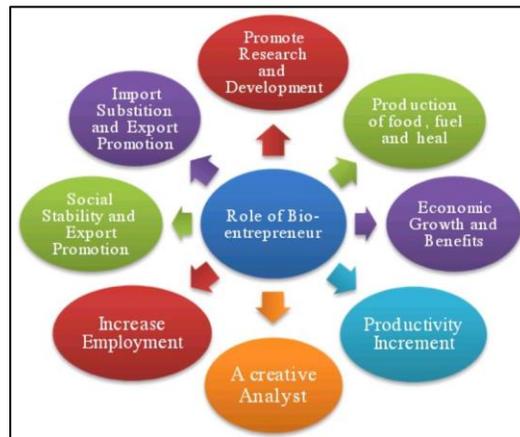
**Bioentrepreneurship** is a blooming field where scientific innovation meets enterprise. It is a combination of two components 'Bio' referring to Biology Or Biotechnology, and 'Entrepreneur' meaning Enterprise. It is an interdisciplinary approach in which attempts are made to imply biology or biotechnology based innovation in a real world business enterprise or simply launching of the product to a large scale consumer access, leading to the development of Bioentrepreneurship.

Bioentrepreneurship, which is the development of an idea that creates value from a life science innovation, is an alternative for those who are interested in pursuing results beyond a publication. It leads to the flow of innovations from Academia to Industry. This integration might be unfamiliar to some, but both involve experimentation, achieving a goal, making high-risk decisions and attempting something novel. Bioentrepreneurship helps solve global problems by turning basic scientific knowledge into innovative and sustainable solutions for society. An example is the use of biotechnology to solve world hunger. The World Bank predicts that by 2050 we will need to produce 50% more food, while factors such as climate change and crop

disease reduce productivity. Biotechnology enables the production of genetically modified organisms (GMOs) in agriculture which has increased crop yields and reduced the use of chemical pesticides.

**Bioentrepreneur** is a person that owns and manages a business and the risks associated with it as well as scientific risks involving the ethical issues that makes a bioentrepreneur different from any other entrepreneur.

Some of the roles associated with a successful bioentrepreneur can be understood by the schematic representation.



### Role of Bioentrepreneur

A successful bioentrepreneur thus bridges the gap between scientific innovation and the business sector. Bioenterprises have applications in many essential fields such as healthcare, agriculture, biodegradable products, and environmental preservation. Here are a few common fields where bioenterprises can be found:

- **Pharmaceuticals:** Several biopharmaceutical drugs can be developed using microorganisms, without any synthetic materials. These drugs are now being developed to cure diseases such as cancer and hepatitis.

- **Agriculture:** Biotechnology can be used to alter the genes of crops and ensure that they give good quality produce. Gene therapy can be used to enhance various features of crops and make them more productive.
- **Biofuels:** Biofuels such as bio-ethanol can be used for energy production, electricity generation, and transportation. These reduce the strain on scarce resources such as fossil fuels.
- **Food processing:** The process of fermentation is used to produce additives, preservatives, and foods such as yoghurt, buttermilk, and cheese. These foods are high in nutrition and have a standard process of production, using different microorganisms.

- **By S.Y. Biotechnology Student,  
Ms. Pratibha Maharana**

# BIO ENTREPRENEURS OF LAST DECADE

by Sahil Nawaz  
from S.Y Biotechnology



## 1. Sam Santhosh

Sam Santhosh is an Indian bio entrepreneur and the founder of MedGenome, a leading genomics and clinical data-driven diagnostics company in India. With a background in bioinformatics and genomics, he has pioneered the use of genomics in clinical diagnostics, enabling personalized treatment options. His vision and leadership have earned him recognition in the field of biotechnology and entrepreneurship.

## 4. DR. RENU SWARUP

Dr. Renu Swarup is the Secretary of the Department of Biotechnology (DBT) in the Government of India. She has played a crucial role in shaping India's biotechnology ecosystem, promoting research, innovation, and entrepreneurship. With her leadership, collaborations between academia, industry, and government agencies have been fostered, translating scientific advancements into practical solutions. Dr. Swarup's contributions have been widely acknowledged, and she continues to drive advancements in biotechnology for societal benefit.



## 3. VISHAL GONDAL

Vishal Gondal is a renowned Indian entrepreneur primarily known for his success in the gaming and fitness sectors. He founded Indiagames, a prominent mobile gaming company, and later started GOQii, a wearable fitness technology company. While not exclusively focused on bio-entrepreneurship, Gondal has shown interest in the healthcare industry, investing in Wellthy Therapeutics, a bio-tech startup. His ventures have contributed to the intersection of technology, healthcare, and wellness in India.

## 4. SAMIR.K.BRAHMACHARI

Brahmachari is a renowned bioinformatics scientist and entrepreneur. He co-founded the Institute of Genomics and Integrative Biology (IGIB) and served as the director-general of the Council of Scientific and Industrial Research (CSIR). He has made significant contributions to genomics research and has been involved in initiatives related to personalized medicine.



## 5. KIRAN MAZUMDAR-SHAW

Kiran Mazumdar-Shaw is an Indian entrepreneur and businesswoman, known for her pioneering contributions in the biotechnology sector. She is the founder and chairperson of Biocon Limited, a leading biopharmaceutical company based in India. Mazumdar-Shaw has been recognized globally for her leadership and impact in the field, receiving numerous prestigious awards and accolades. She is also actively involved in philanthropic initiatives, particularly in the areas of healthcare and education..

**THIS BIO ENTREPRENEUR HAVE CONTRIBUTED GREATLY TO THE GROWTH OF INDIAN BIOTECH INDUSTRY AND HAVE BROUGHT IN SOLUTION TO THE VARIOUS CHALLENGES IN THE HEALTH CARE SECTOR**

- By F.Y. Biotechnology Student,  
Mr. Sahil Nawaz

## BIOENTREPRENEUR OF LAST DECADE “SUCHITRA ELLA”



Suchitra Ella is one such inspiring individual who has made an incredible journey from being a scientist to a bioentrepreneur. She is the Joint Managing Director of Bharat Biotech, one of the leading vaccine manufacturers in the world. Her journey is a truly inspiring one, and it is a story that needs to be shared. In this post, we'll take a look at Suchitra Ella's journey, the challenges she faced along the way, and how she overcame them to become a successful bioentrepreneur. We hope that her story will inspire you to follow your dreams and achieve your goals, no matter how big they may seem.

The journey from scientist to bioentrepreneur is not an easy one. It requires a great deal of passion, determination, and hard work. But for Suchitra Ella, it was a journey worth taking. Suchitra Ella is a scientist turned bioentrepreneur who has made a significant impact on the biotechnology industry in India. Her inspiring story is one of perseverance, innovation, and a deep commitment to making a difference in the world.

Suchitra Ella's journey began in the field of biotechnology, where she obtained a PhD from the University of Hyderabad. She then went on to work in various positions in the biotechnology industry, including as a senior scientist at the Indian Immunologicals Limited. In 1998, Suchitra Ella co-founded Bharat Biotech, a biotechnology company that has since become a leading vaccine manufacturer in India.

Since its founding, Bharat Biotech has made significant contributions to the Indian biotechnology industry. Suchitra Ella has been a key figure in the company's success, leading the development of several innovative vaccines that have improved the health and well-being of people across India and beyond.

Suchitra Ella's inspiring journey from scientist to bioentrepreneur is a testament to the power of perseverance, innovation, and a deep commitment to making a difference in the world. Her story is a source of inspiration for scientists and entrepreneurs everywhere who are working to make a positive impact on society.

Born and raised in a small town in India, Suchitra Ella had a passion for science from an early age. She was a bright student and excelled in her studies, earning a degree in microbiology from Bangalore University. After completing her undergraduate studies, she went on to pursue a master's degree in microbiology from Osmania University in Hyderabad.

During her studies, Suchitra developed a strong interest in research and decided to pursue a career in the field. She completed her PhD in microbiology from the University of Wisconsin, USA, where she gained extensive experience in the field of biotechnology.

After completing her studies, Suchitra returned to India with a desire to contribute to the country's growing biotech industry. She joined Bharat Biotech, a company founded by her husband, Dr. Krishna Ella. Together, they worked to develop affordable and innovative vaccines for a range of diseases that were prevalent in India.

Today, Bharat Biotech is one of the leading biotech companies in India, and Suchitra Ella serves as the Joint Managing Director of the company. Her journey from a small town in India to leading a successful biotech company is truly inspiring and serves as an example of the power of determination and hard work.

Suchitra Ella is a renowned scientist who has made significant contributions to the field of vaccines and biotechnology. She holds a Ph.D. in Genetics and has worked extensively in vaccine development, biotherapeutics, and molecular biology.

During her career as a scientist, Suchitra Ella has worked on many high-profile vaccine projects, including the development of a vaccine for the H1N1 virus that caused a global pandemic in 2009. She has also been involved in the development of vaccines for other infectious diseases such as malaria and dengue fever.

In addition to her work on vaccines, Suchitra Ella has also contributed to the development of various biotherapeutics. Her work on developing recombinant proteins for the treatment of cancer and other diseases has been widely recognized.

Suchitra Ella's work as a scientist not only demonstrates her expertise and knowledge of the field but also her passion for improving human health. Her dedication to finding solutions to some of the world's most pressing health challenges has been unwavering and has earned her the respect and admiration of her peers.

Suchitra Ella is the Joint Managing Director of Bharat Biotech, one of India's leading biotechnology companies. The founding of Bharat Biotech in 1996 was a turning point in Ella's career, as she transitioned from a scientist to a bioentrepreneur. Her expertise in biotechnology and her entrepreneurial spirit were instrumental in the formation of the company, which has since become a major player in India's biotech industry.

As a bioentrepreneur, Ella's role is multifaceted. She is responsible for overseeing the company's operations, strategic planning, and business development. Under her leadership, Bharat Biotech has developed a number of innovative products, including vaccines for diseases such as hepatitis B, rotavirus, and Japanese encephalitis.

Ella's vision for Bharat Biotech has always been to create a world-class biotechnology company that is focused on developing innovative products that address unmet medical needs. Her passion for science and her entrepreneurial spirit have been key drivers in the company's success.

In addition to her role at Bharat Biotech, Ella is also actively involved in promoting entrepreneurship in India's biotech sector. She is a member of several industry associations and is a frequent speaker at conferences and events. Her inspiring journey from scientist to bioentrepreneur serves as a powerful example of what is possible when passion, expertise, and entrepreneurial spirit come together.

The journey to becoming a bioentrepreneur is not an easy one. Suchitra Ella faced numerous challenges along the way. As a woman in a male-dominated field, she struggled to be taken seriously and faced discrimination in the workplace.

Moreover, the lack of resources and funding made it difficult to start her own venture. She faced numerous rejections from investors who were skeptical about investing in a new biotech company.

Another major challenge was navigating the highly regulated and complex nature of the biotech industry. Obtaining necessary licenses and approvals was a time-consuming and expensive process that required extensive knowledge of the regulatory landscape.

Despite these challenges, Suchitra Ella remained determined and persevered. She worked tirelessly to build a strong team and develop innovative products that would disrupt the industry. Her hard work and dedication paid off as she eventually founded her own successful biotech company, Bharat Biotech.

Through her journey, Suchitra Ella serves as an inspiration to aspiring bioentrepreneurs and demonstrates the importance of perseverance, resilience, and determination in the face of adversity.

Bharat Biotech, co-founded by Suchitra Ella, has made a huge impact on the global biotech industry. The company has been at the forefront of vaccine research and development, especially in the fight against infectious diseases. Bharat Biotech has developed several innovative vaccines that have been instrumental in preventing diseases such as hepatitis B, influenza, and rotavirus.

One of the most notable achievements of Bharat Biotech is the development of Covaxin, a COVID-19 vaccine that has been approved by the Indian government for emergency use. This development has been a major boost to India's efforts to combat the pandemic. Covaxin is an inactivated vaccine that has shown promising results in clinical trials, and has been administered to millions of people in India.

Bharat Biotech has also been actively involved in research and development of vaccines for other infectious diseases that affect millions of people worldwide, such as Zika virus, Chikungunya, and Dengue fever. The company has collaborated with several international organizations and research institutions to develop vaccines that are effective and affordable. The impact of Bharat Biotech on the global biotech industry is immense, and the company continues to innovate and develop new vaccines that have the potential to save millions of lives. Suchitra Ella's leadership and vision have been instrumental in the success of the company, and her inspiring journey from scientist to bioentrepreneur serves as a great example for aspiring entrepreneurs in the biotech industry.

Dr. Suchitra Ella, the co-founder and Joint Managing Director of Bharat Biotech, played a significant role in the development of Covaxin, India's first indigenous COVID-19 vaccine. Under her leadership and guidance, the team at Bharat Biotech worked tirelessly to develop the vaccine, which was eventually approved for emergency use in India.

Dr. Ella's dedication to the vaccine development process was evident in her hands-on approach to managing the project. She personally oversaw the clinical trials, which involved more than 25,000 participants across India, and collaborated with other experts and institutions to ensure the vaccine's safety and efficacy.

Dr. Ella's contribution to the fight against COVID-19 has been widely recognized, and she has received several awards and accolades for her leadership and innovation in the field of biotechnology. Her vision and passion for creating affordable and accessible healthcare solutions have inspired many young scientists and entrepreneurs, and her success story is a testament to the power of perseverance and hard work.

The journey of Suchitra Ella is an inspiring one that offers valuable lessons to aspiring bio-entrepreneurs and scientists alike. The first lesson to be learned from her journey is the importance of perseverance. Despite facing numerous challenges, Ella continued to push forward, believing in her vision and her ability to bring it to life. This unwavering dedication and persistence are what led to the success of her company, Bharat Biotech, which has now become a leading player in the biotech industry.

Another lesson to be learned from Ella's journey is the importance of taking calculated risks. Starting a new venture is never easy, and there are always risks involved. However, Ella was able to navigate these risks by making informed decisions and taking calculated risks that

helped her to grow her business. This approach allowed her to expand her company's reach and create new opportunities for growth.

In addition to perseverance and risk-taking, another valuable lesson to be learned from Ella's journey is the importance of innovation. Throughout her career, Ella has been known for her innovative ideas and her ability to bring them to fruition. This has allowed her to stay ahead of the curve and create new products and services that meet the needs of her customers.

Finally, the journey of Suchitra Ella teaches us the importance of giving back. Despite her success, Ella has remained committed to using her resources to make a positive impact on society. This includes supporting social causes and working to improve public health outcomes. By giving back, Ella is not only making a difference in the world but also setting an example for others to follow.

If you're an aspiring bioentrepreneur, there are several things you can do to set yourself up for success. First and foremost, it's important to have a deep understanding of the industry and the science behind it. This will help you identify gaps in the market where you can create innovative solutions that meet unmet needs.

Networking is also key. Attend industry events, join professional organizations, and connect with other bioentrepreneurs. You never know who you'll meet or what opportunities may arise from those connections.

Another important piece of advice is to be resilient and persistent. The road to success is never easy, and setbacks and failures are inevitable. But it's how you respond to those challenges that will determine your ultimate success.

It's also important to have a solid business plan in place, including a clear understanding of your market, your target customers, your competition, and your financials. And don't be afraid to seek out mentorship or advice from more experienced bioentrepreneurs or business leaders. Finally, always keep your eye on the bigger picture. Remember why you started this journey in the first place and stay focused on your goals. With hard work, determination, and a little bit of luck, you can achieve great things as a bioentrepreneur.

In conclusion, Suchitra Ella's journey from a scientist to a bioentrepreneur is truly inspiring and motivational. Her story is a great example of how dedication, hard work, and passion can lead to success, even in a highly competitive field like biotechnology.

As a scientist, she saw the potential to improve healthcare through innovative research and

development of vaccines and drugs. However, she also had the vision to take her scientific knowledge and turn it into a successful business venture.

Her journey has taught us that success doesn't come overnight, and it takes a lot of perseverance, determination, and grit to achieve our goals. She also highlighted the importance of having a supportive team, a strong network, and the ability to adapt to changing circumstances.

Finally, she also emphasized the importance of giving back to society and using her success to make a positive impact on people's lives, especially during challenging times like the COVID-19 pandemic.

In essence, Suchitra Ella's story is a shining example of how one can turn a scientific passion into a successful entrepreneurial journey. It is truly inspiring, and her story will continue to motivate and encourage many aspiring scientists and bioentrepreneurs in the years to come.

We hope you enjoyed reading about the inspiring journey of Suchitra Ella from scientist to bioentrepreneur. Her story is a testament to the fact that with hard work, determination, and a passion for what you do, anything is possible. We hope that her story has inspired you to follow your dreams, no matter how big they may seem. Thank you for reading, and please share this post with anyone who needs a little push in pursuing their entrepreneurial dreams.

- **By F.Y. Biotechnology Student,  
Mr. Abhinandan Dalvi**

# Successful Indian Women Entrepreneurs in Biotechnology

Over the last 100 years, Indian women have had a significant presence in the fields of science, technology, and entrepreneurship. Anandi bai Joshee was the first Indian woman to receive a medical doctorate degree in 1885, Janaki Ammal was the first Indian woman to earn a doctorate in basic science in 1931, and Asima Chatterjee was the first Indian woman to get a doctorate of science from an Indian university in 1944. These inspiring women have created a firm foundation for Indian women in the field of science.

It takes a lot of hard work and determination to start or get into a business. Every entrepreneur, however, must begin somewhere. There is no magic spell for launching a successful business. Business, on the other hand, is free of bias. It makes no difference when or where you begin your adventure. This is exemplified by some Indian female entrepreneurs.

## 1. Kiran Mazumdar Shaw

She is an Indian woman entrepreneur, chairman, and managing director of Biocon India Group. She headed a pioneering firm that used India's native scientific ability to produce clinical research advances. Biocon became the first Indian business to sell enzymes to the United States and Europe.

Biocon was the first Indian business to be approved by the US Food and Drug Administration (FDA) to manufacture a cholesterol-lowering chemical in 2001.

She led Biocon's transformation from an industrial enzyme manufacturer to a fully integrated biopharmaceutical company. She was also awarded the Padma Bhushan Award in 2005 for her pioneering work in industrial biotechnology, which is one of India's highest civilian accolades.

## 2. Dr. Florida Tilton

Dr. Florida is a first-generation entrepreneur who has worked in the biotechnology industry for over a decade. She is a pioneering business visionary who has been involved in the biotechnology field for a long time. Molecular Research, Herbal Sciences, Radioisotope supported Genomic Considerations, Plant tissue culture, Genome evaluation, Plant Genetic

Upgrade, Molecular Oncology, and Bioinformatics are some of her research specialties. She is the Chairperson and Managing Director of Biozone Research Technologies Pvt. Ltd., a private company based in India.

She founded the Department of Biotechnology at Hindustan College of Arts and Science in Chennai, which she led for four years as a professor. While having a conversation with some of her students, she discovered a gap between academics and industries so she decided to resolve the situation by becoming an entrepreneur. She co-founded Biozone Research Technologies with two of her former students in 2008, which marked the start of her business career. Over time, the company has evolved into a biosciences research firm that offers technical and analytical services as well as publishing solutions.

### **Achievements**

SynkroMax Biotech Private Limited, Central Leather Research Institute (CSIR), Asthagiri Foundation, Lifeline Hospitals, and Hindustan Unilever are among the important academic institutions, organizations, and research laboratories with which the company has collaborated throughout the years. They also get recognition from the Government of India's Ministry of Science and Technology.

### **3. Suchitra Ella**

She is the joint managing director and co-founder of Bharat Biotech, International Limited, a multinational biotechnological company of India and its headquarters is located in Hyderabad. She is a scientist and entrepreneur who has manufactured and developed the first COVID vaccine, Covaxin, which has proven to be a lifesaver, along with the Indian Council of Medical Research's National Institute of Virology. It was successful on the different variants of Coronavirus. At Bharat Biotech, she is a strong pillar of support and leadership, overseeing a wide spectrum of operations.

1. She was nominated as the Founding Chairwomen of the Indian Women Network of CII, which provides a platform to women where they come, gather, and discuss their issues.
2. With the aid of her firm, they provided one billion doses of Covaxin to the Indian Government.
3. This COVID vaccine was also approved by WHO and it was provided to foreign countries also.

4. According to her, her company manufactured a mercury-free vaccine for Hepatitis B and the vaccines they manufactured are 99% chemical-free.
5. She and her husband Dr. Krishna Ella got Padma Bhushan on the 73<sup>rd</sup> Republic Day.

#### **4. Dr. Renu Swarup**

She is an Indian scientist and former Secretary of the Government of India, having previously led the Ministry of Science and Technology, Department of Biotechnology (DBT). Now, she has been appointed as a Secretary, Department of Science and Technology for two years or until the age of retirement.

She is also the Chairperson of the Biotechnology Industry Research Assistance Council (BIRAC), a Public Sector Company established by the Government of India to support research and innovation in the biotechnology industry, with a special focus on start-ups and SMEs. She played a key role in the development of India's Biotechnology Vision and Strategy. She is credited for the establishment of the Microbiological Culture Collection, India's largest microbial resource centre.

#### **Role**

She offers a wealth of experience and knowledge to our objective to combat antimicrobial resistance in low- and middle-income nations. She was in charge of putting the DBT's BioCARE (Biotechnology Career Advancement for Women Scientists) Scheme into action. Besides that, in the fields of bioresource development, energy biosciences, and management, Bioprospecting, Plant Biotechnology, Tissue Culture, and other related disciplines she has been in charge of project creation, granting, and management.

1. She received National Entrepreneurship Award in 2017 for her pioneering work in the field of Biotechnology and towards India's Biotechnology Vision and Strategy.
2. The National Centre for Cell Science has named a recently discovered microbial species *Natrialba swarupiae* in her honour to recognise her contributions to microbial diversity research in India and to simplify the provisions of the Biological Diversity Act, 2002.

#### **5. Dr. Sharmilee Mane**

She was graduated from the Institute of Chemical Technology with a bachelor's degree in biotechnology engineering and a master's degree in bioprocess technology. She received a

full government grant from Curtin University in Australia to complete her research and PhD in Chemical Engineering. She worked in secondary agriculture and agro-processing for seven years and has seven years of research experience.

She has written six scientific papers, participated in 13 international conferences, and she has two international patents also. For her research, she has received numerous international honours and grants. Curtin University and Engineers Australia recognised her creative PhD dissertation in secondary agricultural development and awarded her with the “Research Excellence Award” and the “Curtin Commercial Innovation Award.”

### **Her Venture**

PureMe Organics, a venture, was formed with the goal of developing scalable technology for jaggery manufacture from sugarcane and other plant sources, with the goal of benefiting small farmers at the grass-root level through Agrotech commercialization. She has researched and produced an innovative line of Jaggery-based products that are natural, organic, and sustainable, using sugarcane and alternative agriculture sources. Her goal is to redefine sweetness in such a way that it is both healthy to consume and cheap for everyone. They focus on rural farmer empowerment at PureMe Organics and Y D Mane Research Centre, not just through technical help through our Research Centre, but also through other means such as providing financial empowerment to them by sharing the profit.

### **Achievements**

The Ministry of Food Processing and the Ministry of Agriculture and Farmers Welfare have both endorsed her start-up.

### **Conclusion**

Women are taking the lead in today’s workplace. We can learn a lot from them. Businesses and endeavors are more than just a source of profit. They prove that gender is not an impediment to achievement.

**By ms. Sandeeptha Rathindran**  
**Teaching Faculty**

# **T.Y. B.Sc. BIOTECHNOLOGY PROJECTS**

## **PRODUCTION OF BIODEGRADABLE PLASTIC FROM FRUIT WASTE USING GLYCEROL AS A PLASTICIZER**

**Payal Undre , Srushti Vaingankar , Sakshi Yadav, Dr. Seema Agashe**

### **ABSTRACT:**

This study explores the feasibility of using waste materials such as banana peels, watermelon rind, pineapple peels, and orange peels to prepare bioplastics. The materials were dried, ground, and processed with glycerol and acetic acid to form the bioplastics. The resulting bioplastics were characterized for their biodegradability, antimicrobial activity, and water absorptivity. The results showed that the bioplastics prepared from these waste materials exhibited good mechanical strength and thermal stability. Additionally, the bioplastics had a smooth surface and a homogeneous structure. The use of waste materials for bioplastic production presents a sustainable solution for waste management while reducing dependence on non-renewable resources.

**KEYWORDS:** Bioplastic , Banana , Orange ,Pineapple , Peel, Watermelon rind, Glycerol , Non-renewable.

### **INTRODUCTION:**

Plastics are a wide class of polymer composites that use polymers as a major ingredient. The class of synthetic polymers includes polyethylene (PE) (used in plastic bags), polystyrofoam (PS) (used in Styrofoam cups), polypropylene (PP) (used in fibre and bottle), polyvinyl chloride (PVC), and polytetrafluoroethylene or Teflon (PET) (used in food packages, bottles and drain pipes). Meanwhile, semi-synthetic polymers are obtained from natural polymers by subjecting them to a chemical process; this includes natural materials which have been modified and combined with other material. The plastics are made of carbon and hydrogen. Plastic is manufactured in various forms and is a material that can be adapted for many different applications. In addition to the cheap production process, this suitability, combined

with a variety of beneficial properties such as light, durability and flexibility has led to widespread use in today's society. As far as product packaging is concerned, packaging plays a role in product holdings and food safety for the food industry.

Plastic pollution is caused by the accumulation of plastic waste in the environment. It can be categorized in primary plastics, such as cigarette butts and bottle caps, or secondary plastics, resulting from the degradation of the primary ones. It can also be defined by its size, from microplastics - small particles ( $\geq 5$  mm) of plastic dispersed in the environment - to macroplastics. In fact, it is estimated that 80% of marine litter comes from land. This pollution comes mainly from household waste, which is poorly recycled, dumped in landfills or abandoned in nature. This waste is carried by the winds, pushed by the rains into sewers, streams, rivers, and finally in the oceans. Natural disasters such as floods must be considered as other causes of plastic pollution as well. This pollution can have harmful effects on the land and rivers by affecting wildlife and habitat, but also on human health. Because of the chemical additives used during plastic production, plastics have potentially harmful effects on human health. Indeed, exposure to toxic chemicals coming out of plastic can cause cancers, birth defects, impaired immunity and other health problems.

Pineapple is one of the most favourite fruits because it contains many carbohydrates and other nutritional sources. Raw pineapple pulp is 86% water, 13% carbohydrates, 0.5% protein, and contains negligible fat. The pineapple waste which can be produced is including wet skin and its hump. As pineapple skin contains relatively high carbohydrate and sugar, the skin might be used as a raw material for the production of biodegradable plastic. The fruit is a good source of vitamin A, B, C and also calcium, magnesium, potassium and iron. It is also a good source of bromine, a digestive enzyme. An additional plasticizer is required to obtain more plasticity in the plastic. A plasticizer is an organic material with low molecular weight, non-volatile nature, and high boiling point. Furthermore, it can also change the characteristics of a material. Banana (*Musa* spp., Musaceae family) is one of the main fruit crops cultivated for its edible fruits in tropical and subtropical regions. The fruit average is 125 grams, of which approximately 75% is water and 25% dry matter content. The fruits are eaten raw, cooked, or dried and ground as flour and used in baking. Besides, unripe or green bananas are used for cooking various dishes and producing starch. Dried banana peels contain 6–9% protein and 20–30% fibre. Green plantain peels contain 40% starch that is transformed into sugars after ripening. Green banana peels contain much less starch (about 15%) than green plantain peels, while ripe banana peels contain up to 30% free sugars. Making of bioplastics from watermelon rind and orange peel instead of traditional petroleum-

based plastic is believed to be a successful solution to increase the efficiency of the plastic industry. The polymer produced using the watermelon rind and orange peel blended with the glycerol could help in the formation of plastic having the characteristic features of pliability. One of the most significant results obtained during the research is degradation tractability of the developed product. This paper deals with the method to generate bioplastic from watermelon rind and orange peels and help to reduce pollution.

## **MATERIALS AND METHODS:**

### **Preparation of Pineapple peels bio plastic:**

**Materials:** Freshly cut pineapple peels, 25% Acetic acid- 1ml, Dextrose sugar, Urea- 1ml, distilled water, 20% Glycerol- 3ml.

**Method:** The pineapple skin extract was obtained by smoothing and separating the filtrate from the dregs through filtration. The solvent used to extract was water. The production of bioplastic was done by inserting the pineapple skin extract into a cooking pot, and then a few grams of sugar, urea, and 1mL of acetic acid were added into the pot. Afterward, glycerol was added. All ingredients were heated to boil. The boiled mixture was poured into a plastic container with a height of  $\pm 1$  cm each and was closed with newspapers. Then, the plastic sheets were prepared to be measured by its physical properties, microbial ability, degradation ability and water retention ability.

### **Preparation of Banana peels bio plastic:**

**Materials:** 25% acetic acid- 30ml, water- 800 ml, 0.5M HCl- 3ml, 15% glycerol- 2ml, 0.5M NaOH- 3ml.

**Method:** Banana peels were removed from the flesh using a knife. Approximately 300 grams of banana peels were weighed using an electronic balance and were dipped in acetic acid solution for 30 minutes. The peels were then transferred into a beaker containing 800ml of water and boiled for 30 minutes. Excess water was decanted and peels were left to dry for 30 minutes at room temperature. The treated banana peels were transferred into a clean 500ml beaker. The treated banana peels were pureed using a blender. 25ml of the paste was transferred in a 50ml beaker. 3ml of 0.5M HCl, 2ml of 15% glycerol solution, 3ml of 0.5M NaOH was added to the paste and stirred using a spatula. Then the mixture was poured into a mould containing parchment paper and left to dry for 48 hours.

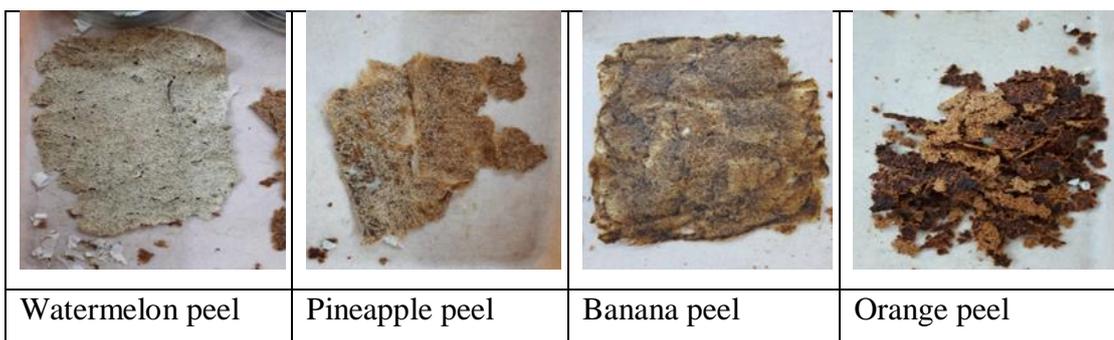
### **Preparation of Orange peels bioplastic:**

**Materials:** 25g orange peels, 0.1 N HCl- 6 ml, Glycerol- 4 ml, distilled water.

**Preparation of Watermelon peels bioplastic:**

**Materials:** Watermelon rinds, Glycerol- 3ml, distilled water- 100ml.

**Method:** Wash the watermelon rind and blend with ratio of watermelon : water 3:1(w/w). Watermelon rind pulp is soaked for 24 h and separated by water and sediment. The precipitate was dried at room temperature with air circulation which was sprinkled on a longboard for 24 h. Five grams of watermelon rind starch was dissolved with 60 ml of distilled water in a beaker and stirred using a magnetic stirrer for 10 mins. Add 3 ml of glycerol in mixture placed on boiling water bath at 80°C for 20 mins. Pour the thick solution on butter paper and air dry for 72 hours. **Method:** Cut the orange peel into small pieces and keep in hot air oven at 120° for 10 minutes. Blend the orange peels with water. Arrange the burner and take 50 grams of orange peel. Add 6 ml of 0.1 HCl in sample and stir with glass rod. Add 4 ml of glycerol to the mixture and mix thoroughly with Distilled water. Pour the sample on butter paper placed into tray and keep it for 48 hours. A thin layer of dry plastic is removed from the plate with the help of the flat end of the spatula slowly.



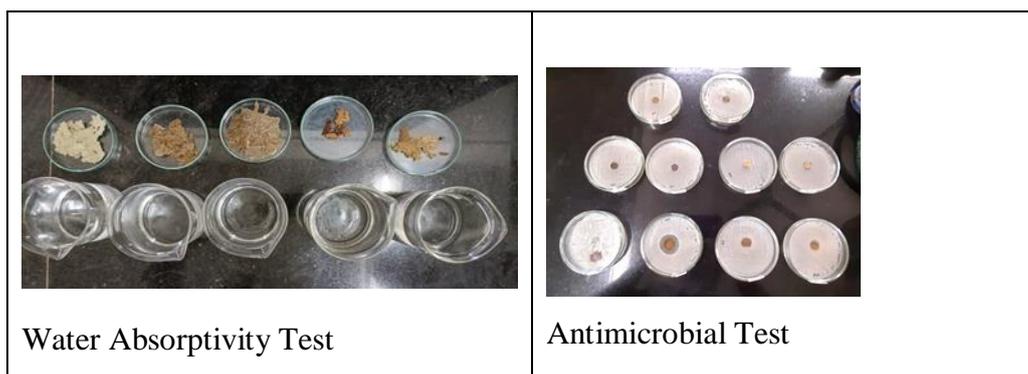
**ANALYSIS AND CHARACTERIZATION**

***Water absorption test :***

Water resistance is an important characteristic in determining a suitable source for bioplastic. The water absorption of the plasticized starch bioplastic film was carried out at room temperature for 24 hours to obtain the maximum water uptake data. Cut small piece of film into 1cm× 2cm size. Record initial weight of the sample. Place the sample in a beaker containing 60ml water at RT for 24 hours. Take the sample out of the water and wipe it off. Record the final weight.

$$WA (\%) = \frac{\text{Final weight (g)} - \text{Initial weight (g)}}{\text{Initial weight (g)}} \times 100$$

Initial weight (g)



***Antimicrobial test :***

There are several methods to evaluate the antimicrobial activity of the bioplastics. This research was used disc diffusion (Kirby Bauer) test as antimicrobial activity test for bioplastics film. Bioplastics with 1 cm diameter were placed on solid nutritive media (nutrient agar) which contain a suspension of gram-positive bacteria (*Staphylococcus aureus*) or gram negative bacteria (*Escherichia coli*) swabbed evenly on its surface. Afterwards, petri dish was incubated for 18- 24 h. After the incubation period, the inhibitory zone (clear zone) was determined around the bioplastic's samples on the agar plate.

***Biodegradability test :***

Biodegradability is the capacity for biological degradation of organic materials by living organisms down to the base substances such as water, carbon dioxide, methane, basic elements and biomass. In other words, the easier the plastic to be decomposed, the quality of the plastic produced will be better. The bioplastic was degraded for 30 days into the soil.

$$\text{Degradation (\%)} = \frac{\text{Initial weight (g)} - \text{Final weight (g)}}{\text{Initial weight (g)}} \times 100$$

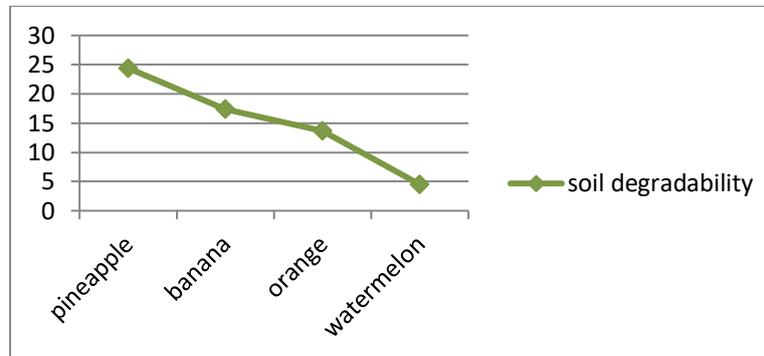
Initial weight (g)

**RESULTS AND DISCUSSION:**

Bioplastic film from banana peels, watermelon peels, pineapple peels and orange peels were successfully prepared by extracting starch and using glycerol as a plasticizer. Later tests were performed to check its durability and efficiency.

Water absorption test indicated the hydrophilic nature of starch molecules which showed affinity towards water. The Water Absorption (%) of Bioplastic was found to be 380% in pineapple, 5.08% in banana, 361.5% in orange and 1287.7% in watermelon rind bioplastics. An antimicrobial test was used to evaluate the ability of a starch-based bioplastic films to inhibit the growth of microorganisms.

A biodegradation test can be used to evaluate the ability of a starch-based bioplastic films to degrade in a natural environment. The Soil Degradability of bioplastic was found to be 24.4% in pineapple peel, 17.43% in banana peel, 13.7 % in orange peel, and 3.81 % in watermelon rind.



| Sample     | Clear zone diameter(mm)                           |  |
|------------|---|--|
|            | Gram positive<br>( <i>Staphylococcus Aureus</i> ) | Gram negative<br>( <i>Escherichia Coli</i> ) |
| Pineapple  | 1.5   | 1.5  |
| Banana     | 0.0   | 0.0  |
| Orange     | 3.0   | 3.0  |
| Watermelon | 0.0   | 0.0  |

### CONCLUSION:

This study aims to investigate the biodegradability, water absorption test, anti-microbial activity to produce biodegradable plastic. The Soil Degradability Test within one month shows some amount of weight loss within the bioplastic. The Soil Degradability of bioplastic was found to be 24.4% in pineapple peel, 17.43% in banana peel, 13.7 % in orange peel, and 3.81 % in watermelon rind. The breakdown of pineapple bioplastic was comparatively more. Hence, Soil degradation of pineapple bioplastic was found to be faster than another bioplastic. The water absorption of the 1cm × 2cm plasticized starch bioplastic was carried out at room temperature for 24 hours to obtain the maximum water uptake data. The bioplastics then filtered from water and wiped off which is then weighed and calculated by formula. The Water Absorption (%) of Bioplastic was found to be 380% in pineapple, 5.08%

in banana, 361.5% in orange and 1287.7% in watermelon rind bioplastics. In antimicrobial test, it was observed that there was no zone of inhibition for banana and watermelon bioplastic surrounding the bioplastic film. From antimicrobial test we can conclude that the prepared banana and watermelon bioplastic does not have any antimicrobial activity against gram-positive and gram-negative bacteria. It is important to note that the absence of a zone of inhibition does not necessarily mean that the starch-based banana bioplastic film is not suitable for use in food packaging or other applications where antimicrobial properties are important. Additional tests and evaluations can be conducted to further assess the film's properties and suitability for a particular application. The orange peels bioplastic showed 3 cm while pineapple peel bioplastic showed 1.5 cm of zone of inhibition against *Staphylococcus aureus* and *Escherichia coli* on Nutrient Agar plate. Hence it can be concluded that orange peels and pineapple peel bioplastic is active against *Staphylococcus aureus* and *Escherichia coli*.

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# **DEVELOPMENT OF PROTEIN RICH PROBIOTIC BEVERAGE USING DAIRY WASTE**

**Shravni Chavan, Ms. Sandeeptha Rathindran**

## **ABSTRACT**

The present research was aimed to develop a value-added probiotic pineapple beverage with acceptable sensory and nutritional characteristics along with its storage stability. Dairy waste – whey, highly rich in probiotic bacteria and pineapple juice rich in dietary fibres, anti-oxidants and vitamins was blended to form the beverage. Five variants of drinks were prepared by blending pineapple juice and whey and each blends having equal sugar and salt. Based on the results of protein estimation, sensory analysis, and storage studies, it was concluded that a whey beverage combination with ripe pineapple juice can be prepared successfully by using the tested levels of, sample D (35% pineapple juice + 65% whey).

### **Keywords:**

Probiotic, Whey, Pineapple juice, Protein content, Whey beverage, Storage stability, Sensory analysis.

## **MATERIALS AND METHODS**

The present study was conducted at Department of Biotechnology, of DSPM's K.V. Pendharkar College, Dombivli (East) Thane, Autonomous.

### **Preparation of whey**

Pasteurized cow milk packet was collected from local shop of Gokul Dairy. Pasteurized cow milk (4% fat, 3.5% protein and 8.5% solids-not-fat) was heated at 84°C for 10 min in a clean vessel using a burner. After cooling the milk at 72°C, 1ml vinegar was added to the milk slowly until greenish whey emerged. Then the coagulum was filtered by using a muslin cloth to drain. The filtrate was then boiled for 15minutes to precipitate whey protein and the clear whey was collected, cooled at room temperature, bottled, and stored at -5°C until further use.

### **Preparation of pineapple juice**

A ripe pineapple was purchased from local markets of Dombivli, India and was washed under running tap water and peeled by hand. It was de-crowned and the eyes were taken out. It was then cut into small pieces with a knife. Small pieces were placed in a kitchen scale blender and thoroughly crushed. The pineapple juice was then filtered through a muslin cloth and the clear juice is stored in a bottle for further use to make beverages.

## Formulation

For the preparation of 20 ml beverage, following five different blends of pineapple juice and whey were used and labelled as A, B, C, D and E

| Sample | Pineapple Juice (%) | Whey (%) |
|--------|---------------------|----------|
| A      | 100                 | 0        |
| B      | 85                  | 15       |
| C      | 75                  | 25       |
| D      | 65                  | 35       |
| E      | 50                  | 50       |

Table 1: Formulation of samples

## Preparation of Whey Based Pineapple Beverage

The samples were prepared by adding corresponding pineapple juice: whey ratio together with sugar (5g sugar per 20ml of beverage) and NaCl (2.5g per 20ml of beverage). Then each mixture was blended and boiled at 75°C for 10 minutes. The beverage samples were cooled to room temperature and the preservative (2g citric acid) was added. They were then filtered and sealed in sterilized glass bottles. Finally, the prepared beverage samples were allowed to cool to room temperature before being refrigerated (7°C).



Picture 1: Samples A, B, C, D, E

Randomly three different concentrations were selected for the namely 'A'. 'C' & 'D' for further tests.

## Protein Estimation

To carry out protein estimation by Lowry's method, standards were prepared from 0.25 mg/ml bovine serum albumin. Test sample is added to the test tubes. Later 2.5 mL of

Analytical Reagent (Alkaline sodium bicarbonate) is added to all the test tubes and incubated at room temperature for 10 minutes. Then 0.2 N 0.5ml Folin reagent is added very quickly, and vortexed immediately. It is then incubated for more 30 min. at room temperature. Using glass or polystyrene cuvettes absorbances were measured at 500nm. Calculated results were compared with locally available branded pineapple juice.

### **Ascorbic acid (Vitamin C) Estimation by DCPIP**

Ascorbic acid estimation was carried out by DCPIP (2,6-dichlorophenol indophenol) titration method. Working standard of 100ug/ml concentration was added with 4% oxalic acid and titrated against DCPIP dye. End point (V-1 ml) appears as pink colour which persists for few minutes. Samples were centrifuged and the supernatant was extracted. It was added with 4% oxalic acid and titrated against DCPIP dye. End point was measured as (V-2 ml). The amount of dye consumed was equivalent to the amount of ascorbic acid. Further calculations were carried out and estimations were observed.

### **pH Analysis**

pH analysis was carried out of randomly chosen three sample A, C and D.

### **Storage Stability by Microbial Testing using Standard Plate Count method**

Microbial testing using Standard Plate Method was performed using Nutrient Agar.

$10^{-5}$  and  $10^{-6}$  dilutions were plated using pour plate method and incubated at 37°C for 24hrs.

### **Sensory Evaluation**

Using 10 untrained panellists, the beverage samples were evaluated for colour, taste, aroma and appearance. The panellists were asked to record their observations on the sensory sheet based on a scale of 10.

## **RESULTS AND DISCUSSIONS**

The research project entitled “Development of protein rich probiotic beverage using dairy waste”. The experiments were conducted to study the process development, quality evaluation and shelf-life studies of whey-based pineapple beverage. Studies on quality were based on Protein estimation, Ascorbic acid estimation, storage analysis and sensory characteristics were determined.

## Protein Estimation

After the absorbance's were noted, they were plotted on the graph and following were the concentrations of protein in each sample.

| SAMPLE | CONCENTRATION OF PROTEIN<br>(gm/ml) |
|--------|-------------------------------------|
| A      | 0.0023                              |
| C      | 0.0054                              |
| D      | 0.0091                              |

Table 2: Concentration of protein of samples

Visibly, there is highest amount of concentration of protein in the sample 'D'. Branded pineapple juice available locally was considered as standard for comparison. The company claims to have 0.1 gm of protein per 100ml i.e., 0.001gm in 1ml and all the samples contained more concentrations of protein than it. Sample D showed the highest concentration of protein 0.009gm/ml which has composition 65% Pineapple Juice and 35% Whey.

## Ascorbic acid (Vitamin C) Estimation by DCPIP

Ascorbic acid Estimation was carried out by 2,6 dichlorophenol indophenol titration. Three readings of each sample were taken along with standard and CBR was calculated. After calculating the readings in the formula, amount of ascorbic acid in each sample was found:

| SAMPLE | AMOUNT OF ASCORBIC ACID<br>(mg/100g of sample) |
|--------|--|
| A      | 2.0  |
| C      | 1.6  |
| D      | 1.1  |

Table 3: Amount of ascorbic acid found in samples

Sample A had highest amount of ascorbic acid due to its composition of 100% pineapple juice.

2,6- dichlorophenol indophenol is a redox dye, self-indicator, and a good oxidising agent. Ascorbic acid is a good reducing agent which changes colour of DCPIP from blue to pink in acidic conditions. The ascorbic acid maximum concentration is present in the fruit sample A by using oxidation reduction method with pink colour as end point was 2mg/100g.

The higher amounts of ascorbic acid were dependant according to the percentage of pineapple juice in the sample. As sample A and C had higher percentage of pineapple juice than sample D, it showed accordingly in the result (Table 4).

### **pH Analysis**

pH of samples A, C and D was checked and all of them were acidic and ranged between 4.0 - 5.6.

### **Storage Stability by Microbial Testing using Standard Plate Count method**

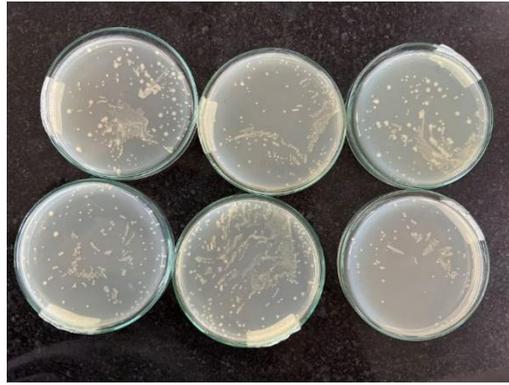
The characteristics of whey-based pineapple beverage were influenced by storage of beverage. The storage studies were conducted after 5days. The results of the study are being presented and discussed in following section.

| <b>SAMPLE</b> | <b>STANDARD PLATE COUNT</b> |
|---------------|-----------------------------|
| A             | $106.5 \times 10^{-5}$      |
| C             | $126 \times 10^{-5}$        |
| D             | $80 \times 10^{-5}$         |

Table 4: Standard Plate Count of the samples

Permissible CFU limit for fruit beverages: 104-107 CFU/ml.

Sample 'D' showed minimum number of count and within the permissible limit of fruit beverages as compared to 'A' & 'C' after 5 days of storage.



Picture 2: Plates after incubation with visible microbial growth

### Sensory Evaluation

Freshly prepared beverages were subjected to sensory evaluation using 10-point scale. The scores obtained by the different samples on different sensory characteristics are presented in below Table. The evaluated sensory characteristics were colour, taste, aroma, and appearance of the samples.

| SAMPLE | COLOUR | AROMA | APPEARANCE | TASTE |
|--------|--------|-------|------------|-------|
| A      | 8      | 7     | 7          | 4     |
| C      | 7      | 5     | 7          | 6     |
| D      | 8      | 7     | 7          | 8     |

Table 5: Sensory analysis of the samples

It can be seen from table that the sample D beverage prepared with the addition of 65% juice and 35% whey scored highest (8) for taste. All the samples seemed similar based on colour and appearance whereas sample A and D scored highest in aroma section and sample D scored highest in the taste section.

### CONCLUSION

In this study, whey-based pineapple beverage was prepared by considering the nutritional and healthy aspects of both whey and pineapple juice. Blending was done as juice: whey ratios

(100:0), (85:15), (75:25), (65:35) and (50:50) and were labelled A, B, C, D and E respectively.

Protein estimation was carried out and was compared to the locally available branded pineapple fruit juice as standard. Sample D showed higher amounts of protein concentration than other samples and standard fruit juice. Thus, we can say the prepared beverage sample D was rich in protein.

5 days old samples were taken to study storage stability among which sample D had the CFU/ml within the permissible limit which is 10<sup>4</sup>-10<sup>7</sup> CFU/ml and thus proved that it can be consumed after storage of 5days.

In sensory analysis, again sample D showed highest points in all the sections thus being favoured by the test panel.

As Sample D with 65% concentration of pineapple juice and 35% concentration of whey was rich in protein content, was probiotic due to presence of whey, showed longer storage stability and scored highest in sensory analysis; it was selected to be the perfect concentration for the development of a protein rich probiotic beverage.

**Study of effect of Biofertilizer on germination and growth of *sinapis alba*,  
*Coriandrum sativum*, *Ocimum basilicum* using growth enhancers**

**Anushka Acharya, Tanvi Parab, Navneet Mehta , Ms. Divya More**

**ABSTRACT**

*Azotobacter*, natural biofertilizer isolated from soil by enrichment on Ashby's mannitol broth by formation of scum. Biochemical and morphological characterization done results in gram negative cocci. Growth enhancers like ash, cocopeat and ferrous sulphate mixed with *Azotobacter* showed increase in growth and seed germination rate. Potential of *Azotobacter* and enhancers for increased germination rate of *Sinapis alba*, *Coriandrum sativum* and *Ocimum basilicum* was studied and found out to be beneficial. Biomass, shoot and root height and length like parameters were studied. Cocopeat and ash was found out to be suitable enhancers and has positive combinational effect on seed germination.

**Keywords:** Biofertilizer, *Azotobacter*, Cocopeat, Ash, Ferrous sulphate

**INTRODUCTION**

Biofertilizers are the living organisms that enrich the nutrient quality of soil. It refers to the use of microbes instead of chemicals to enhance the nutrition of soil. It is also less harmful and causes pollution. Biofertilizers are useful in increasing yield and quality. There are several alternatives available to enhance the soil fertility, one of them is *Azotobacter*. *Azotobacter* is used as a biofertilizer in cultivation of most crops. *Azotobacter* species are gram negative, free living, aerobic, soil dwelling, oval or spherical bacteria that form thick-walled cysts. They are typically Polymorphic and their size ranges from crop products when used in combination with 10 microgram long and 1-2 microgram wide. organic manure and inorganic fertilizers. Biofertilizers add nutrients through the natural processes of nitrogen fixation, solubilizing phosphorus and stimulating plant growth promoting substances. Over the years, chemical fertilizers have helped farmers to increase crop production to meet the increasing demand. However, the overuse of these fertilizers is harmful because they cause air and water pollution and also deplete the minerals from soil. These fertilizers are not harmful to crops or other plants like chemical fertilizers. Use of Biofertilizers in the soil makes the plants healthy as well as protect them from getting any diseases.

The best alternative of chemical fertilizer is necessary because of its adverse effects on soil. It is a nitrogen fixer diazotroph that has several beneficial effects on the crop growth and yield. It helps in synthesis of growth regulatory substances like auxin, cytokinin and gibberellic acid. *Azotobacter* is sensitive to acidic pH salts and temperature. These bacteria were isolated by Beijerinck in 1901. Examples of *Azotobacter* are *Azotobacter chroococcum*, *Azotobacter paspali*. Nitrogen fixation is an important physiological characteristic common to various *Azotobacter*. Nitrogenase enzyme is mainly responsible for nitrogen fixation. Nitrogenase enzyme synthesis is regulated by the *nif* gene.

## MATERIALS AND METHODS

### Enrichment of *Azotobacter* from soil:

1gm of soil sample was inoculated in Ashby's mannitol broth and incubated at RT for 7-8 days.

Isolation and production of *Azotobacter* on agar media:

*Azotobacter* scum was streaked on Ashby's Mannitol Agar media. And incubated at RT for 48 hrs

### Morphological and Biochemical Characterization:

Gram staining was performed on isolated *Azotobacter* colonies; various biochemical tests was performed such as starch hydrolysis test, catalase test, triple sugar iron test, urea agar test. IMVic tests was performed to know properties of *Azotobacter*.

### Experimental setup:

The experiment was carried out for 30 days to study the effect of *Azotobacter* on seeds

|               |  |
|---------------|--|
| P1 (Control)  | Only soil + 10 seeds of each sample (Mustard seed, Coriander seed, Basil seed)         |
| P2 (Standard) | 10 seeds of coriander + Soil   |
| P3 (Standard) | 10 Seeds of Sweet Basil + Soil   |
| P4 (Standard) | 10 Seeds of Mustard + Soil   |
| P5 (Test)     | Soil + 10 Seeds of Mustards + Ash  |
| P6 (Test)     | Soil + 10 Seeds of coriander + Coco peat   |
| P7 (Test)     | Soil + 10 Seeds of Sweet Basil + FeSO <sub>4</sub>                                     |
| P8 (Test)     | Soil + 10 Seeds of Coriander + 10 Seeds of Mustard Seeds + Ash + Coco Peat             |
| P9 (Test)     | Soil + 10 Seeds of coriander + 10 Seeds of Sweet Basil + Coco peat + FeSO <sub>4</sub> |
| P10 (Test)    | Soil + 1p Seeds of Mustard + 10 Seeds of Sweet Basil + Ash + Coco Peat                 |

Table no.1 types of experimental groups.

## RESULTS:

- In enrichment broth scum was observed after the 7-8 days of incubation.



Figure1. Enrichment broth

- Biochemical characterization of *Azotobacter* was carried out which revealed that isolated strain of *Azotobacter* and results are
- Starch Hydrolysis Test **Positive**, Catalase Test **Positive**, Urease Test Negative and Triple sugar iron test **positive**.
- For IMVic tests:  
Indole test Negative, Methyl Red Negative, Voges Proskauer Negative, Citrate test **Positive**.
- From the study it was observed that mustard seeds were more effective as compared to other seeds as it shows very high rate of germination.
- 

| Size | Shape    | Color | Margin | Elevation | Opacity | Consistency | Gram nature         |
|------|----------|-------|--------|-----------|---------|-------------|---------------------|
| 2mm  | Circular | White | Entire | Raised    | Opaque  | Sticky      | Gram negative cocci |

Table no. 2 Colony characteristics of *Azotobacter*.

*Azotobacter* had a significant effect on seed germination and growth of *Sinapis alba* (Mustard), *Coriandrum sativum* (Coriander) and Sweet basil). P2 (Standard Coriander) had the highest percentage of germination.

Germination percentage, Avg shoot height, avg. root height, avg number of leaves, wet weight was calculated using formula.

#### Discussion:

The growth study was carried out to evaluate the effect of *Azotobacter* and various supportive substances such as Ash, Cocopeat and FeSO<sub>4</sub> on Seed Germination and Growth of *Sinapis alba* (Mustard), *Coriandrum sativum* (Coriander) and *Ocimum basilicum* (Sweet basil). *Azotobacter* is used as a Biofertilizer in the cultivation of most of the crops but studying the supportive substance that can enhance the effect of *Azotobacter* in germination and development of the crop.

The study revealed that the seeds showed Highest Percentage (%) of Germination (100%) in P2 (Standard Coriander), P4 (Standard Mustard) P5 (Mustard + Ash) and P6 (Coriander seeds + Cocopeat). Average shoot height was found to be highest in P10 (Mustard + Sweet basil + Ash FeSO<sub>4</sub>). Average Root Height was found to be highest in P9 (Coriander + Sweet basil + Cocopeat + FeSO<sub>4</sub>). Average number of leaves were also calculated and reported highest in P6 (Coriander + cocopeat).

#### CONCLUSION:

From above studies it can be concluded that the isolated strain of *Azotobacter* is effective on germination of plant. Chemical fertilizers are harmful because they release pollution, deplete minerals, and have other adverse effects on the environment. Alternative fertilizers, such as biofertilizers, are better for the environment and provide better results. Thus, it can be concluded that Biofertilizer is more effective than inorganic fertilizer due to its environmentally friendly effects and minimal damage to the environment.

#### Acknowledgement:

The authors are thankful to DSPM'S K.V. Pendharkar college of Arts, science and commerce for infrastructure support.

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# AVISHKAR PROJECT POSTERS

## Degradation of Textile Dyes Using Microbial Consortia Isolated From Effluent

Students: Ms. Darshana Salunkhe & Ms. Ritika Gaikar  
Project Guide: Dr. Suman Satyaram

### DEGRADATION OF TEXTILE DYES USING MICROBIAL CONSORTIA ISOLATED FROM EFFLUENT

CATEGORY: PURE SCIENCE  
LEVEL: UNDER GRADUATE

CODE NO.

#### ABSTRACT:

Environmental pollution caused by the release of wide range of dyes through industrial waste water is a serious problem in present days. Removal of dyes through microorganisms has been identified as a cost effective and environment friendly alternative for disposal of textile effluent. In the present study microorganisms were isolated from dye effluent industry which are dye tolerant and has ability to degrade commonly used textile dyes (Dye1-red, Dye2-pink, Dye3-yellow and Dye-blue). The morphological and culture characteristics of these isolates were studied. Physicochemical parameters of effluent was also studied. The microbial consortia formed has enormous potential in degrading the used dye.

Keyw ord: Biodegradation, Textile dyes, Effluent

#### INTRODUCTION:

Effluent from dye based industries like Textile Industry, is one of the most concerning environmental pollution threatening our biodiversity. About 5-10% of the total dyes are released in textile waste water streams. (Eg-Allura red, Chrysoidine, Martius yellow) Discharge of untreated dye effluent into water resources alters their physicochemical parameters. So degradation of dye is necessary to control environmental pollution.

#### OBJECTIVE:

- Sample collection and solubilization of dye.
- Isolation of microbial consortia from the effluent sample.
- Screening of bacterial isolate for textile dye degradation.
- Dye decolorization and Acclimatization
- To check the physicochemical parameters.

#### MATERIALS AND METHODS-

- ❖ Sample and Dye collection – Effluent sample was collected from Local Textile Industry in MIDC region of Dombivali & 4 Dye's (Dye1-Red, Dye2-Pink, Dye3-Yellow, Dye4-Blue)
- ❖ Isolation of microbial consortia from effluent sample; 3 bacterial isolates (*Bacillus*, *Pseudomonas*, *Aspergillus*) were isolated using selective media.
- ❖ Screening of bacterial isolates using Agar dilution method.(0.5%,1%,3%)
- ❖ Screening of dye decolorization using broth dilution method.(0.5%,1%,3%) and Optical Density using colorimetric analysis.
- ❖ Study of physicochemical parameters of effluent sample (pH , Temperature, Turbidity, TDS(total dissolved solids)

#### SAMPLE & DYE COLLECTION:



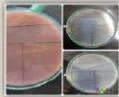
Effluent sample



Dye-1(Red) Dye-2(Pink) Dye-3(Yellow) Dye-4(Blue)

#### Isolation of microbial consortia from effluent sample-

1. MacConkeys agar
2. Sabourauds agar
3. Nutrient agar
4. Cetrimide agar



#### Screening of bacterial isolates using Agar dilution method-



| DYE            | 0.5% | 1% | 3% |
|----------------|------|----|----|
| Dye 1 (Red)    | +++  | ++ | +  |
| Dye 2 (Pink)   | +++  | ++ | -  |
| Dye 3 (Yellow) | +++  | ++ | -  |
| Dye 4 (Blue)   | ++   | ++ | -  |

Note:  
+++ (Extensive growth)  
++ (Moderate growth)  
+ (Less growth)

#### PHYSICO-CHEMICAL PARAMETERS

pH - 2.0  
Color- Brownish  
Temperature- 25°C  
Turbidity - 1mg/ml  
TDS - 0.044mg/ml



#### Screening of dye decolorization using broth dilution method:

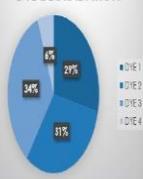
The decolorization percentage of the dye was deduced as-  
Decolorization(%)= (Initial absorbance-Final absorbance) x 100

Initial absorbance



| DYE            | 0.5% | 1%   | 3%   | Control |
|----------------|------|------|------|---------|
| DYE 1 (RED)    | 50%  | 40%  | 0.5% | 50%     |
| DYE 2 (PINK)   | 55%  | 40%  | 0.2% | 50%     |
| DYE 3 (YELLOW) | 60%  | 40%  | 0.6% | 55%     |
| DYE 4 (BLUE)   | 10%  | 0.6% | 0.2% | 10%     |

#### DYE DEGRADATION



#### SIGNIFICANCE:

- The use of microbes does not only ensure a non-toxic process but also have the capability to decolorize very complex synthetic dyes.
- Cost effective.
- Environment friendly process.

#### FURTHER STUDY:

- Identification of the isolated microbial consortia.
- Checking the efficacy of the decolorization before releasing in water bodies.

#### CONCLUSION:

- Three bacterial isolates (*Bacillus*, *Pseudomonas*, *Aspergillus*) were isolated and screened using selective media and gram nature, which were further used for the degradation of dye.
- Screening of bacterial isolates was done using agar dilution method ; tolerance level was found to be about 1%
- Bacteria from textile effluent were subjected to acclimatization with dyes in basal nutrient medium.
- All three isolates showed 50% decolorization of (1%) concentration of dye within 4 days of incubation at 37°C

#### REFERENCES-

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- ✓ Current Research in Microbial Sciences- Bioremediation of machine green dye by two bacterial strains isolated from textile effluents Pages:37-43
- ✓ by Hashad Labe Aminah Kadam: Biodegradation and detoxification of textile azo dyes by bacterial consortium under sequential microaerophilic/aerobic process
- ✓ Malini P Shah: Microbial and Biotechnological technology-Biodegradation of azo dyes by three isolated microbial strains.

# Understanding Health Risk By Identification Of Contaminants In Commercial And Local Market Varieties Of Fish

**Students:** Ms. Prasanna Gaonkar & Mr. Prajwal Rapse  
**Project Guide:** Asst. Prof. Sneha Pande

## Understanding health risk by identification of contaminants in commercial and local market varieties of fish

CATEGORY: ANIMAL HUSBANDRY  
 LEVEL: UNDERGRADUATE

Code no:

### ABSTRACT:

The study of this paper is to understand the health effects associated with eating marine fish which are consumed as a source of protein by a large section of the population, especially those who live near coastlines. Heavy metals are the core group of pollutants of any industrial discharge. Some of heavy metals such as Fe, MN, Zn, Cu, and Cr are essential as they form the cofactor of many enzymes and are also needed in metabolic activities, and metals such as Pb and Hg are non-essential as they take no part in any metabolic activities. Heavy metal analysis of fish was done by using the Semi Micro Qualitative Analysis method in commercial and local varieties of fish samples mainly Mackerel (*Rastrelliger kanagurta*), Golden Anchovy (*Coilia dussumieri*), and Bombay duck (*Harpadon nehereus*). Test for metals such as Lead and Zinc found to be present in all commercial and local market fishes. Hg was only found in commercial samples of Bombay duck. Further confirmation of contaminants can be analyzed.

Keywords:- Contaminants, Heavy metal, Semi micro qualitative analysis.

### INTRODUCTION :

1. Basic qualitative tests using laboratory-grade chemicals are used to estimate heavy metals.
2. The present overview aims to highlight the issue of pollutants in the aquatic ecosystems and fish help. A heavy metal test in fish to check for the irregular level of toxic or potentially harmful metals is important.
3. In the present study, 3-3 samples of commercial and market fish were chosen for screening the presence of heavy metals.



### METHODOLOGY:

**Sample collection:** Samples were collected from local fish market and commercial source.

**Sample preparation:** Wet digestion method was used for the preparation of samples.

**Test:** Sample testing was done using Semi Micro Qualitative Analysis method for confirmation of metals.



Fig no. 7 Samples

### SIGNIFICANCE :

1. Accumulation of heavy metals results in chronic illness and potential damage to the population.
2. Disposal of waste in water bodies causes heavy metal toxicity which harms fish as well as humans. It causes gastrointestinal and kidney dysfunctions, birth defects, cancer in humans as well mortality in different organs of fish.
3. The detection of heavy metals is hence necessary to check the consumption rate of fish.

### FUTURE SCOPE :

1. Study of toxic effects of new pollutants.
2. Management of biosorption of heavy metals.
3. Developing test kits for toxic pollutants.

Table no.1 OBSERVATION TABLE : [L-Local; C-Commercial]

| Test                          | Sample1 Mackerel (L) | Sample1 Mackerel (C) | Sample2 Anchovies (L) | Sample2 Anchovies (C) | Sample3 Bombay duck(L) | Sample3 Bombay duck (C) |
|-------------------------------|----------------------|----------------------|-----------------------|-----------------------|------------------------|-------------------------|
| Chromium (Cr <sup>+</sup> )   | Negative             | Negative             | Negative              | Negative              | Negative               | Negative                |
| Iron (Fe <sup>3+</sup> )      | Negative             | Negative             | Negative              | Negative              | Negative               | Negative                |
| Lead (Pb <sup>2+</sup> )      | Positive             | Positive             | Positive              | Positive              | Positive               | Positive                |
| Zinc (Zn <sup>2+</sup> )      | Positive             | Positive             | Positive              | Positive              | Positive               | Positive                |
| Mercury (Hg <sup>2+</sup> )   | Negative             | Negative             | Negative              | Negative              | Negative               | Negative                |
| Copper (Cu <sup>2+</sup> )    | Negative             | Negative             | Negative              | Negative              | Negative               | Negative                |
| Manganese (Mn <sup>2+</sup> ) | Negative             | Negative             | Negative              | Negative              | Negative               | Negative                |

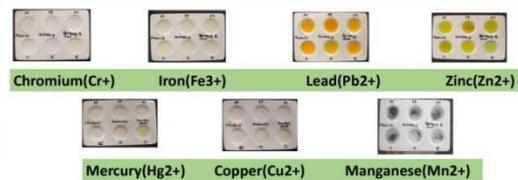


Fig no. 8 Test results for heavy metals

### RESULTS AND CONCLUSIONS:

1. The development of biological monitoring techniques based on fish offers the possibility of checking water pollution with the fast responses of low concentrations of direct-acting toxicants.
2. Segregation of hazardous wastes.
3. Minimization of waste disposal.
4. Humans, the top consumers of fish, hence it is recommended to create awareness & monitoring at all levels.

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# Biogenic Synthesis Of Bioethanol From Agricultural Waste And Analysing Its Potential As An Alternative To Fuel

Students: Ms. Anagha Kadam & Ms. Tanaya Kalebag  
Project Guide: Asst. Prof. Divya More

## BIOGENIC SYNTHESIS OF BIOETHANOL FROM AGRICULTURAL WASTE AND ANALYSING ITS POTENTIAL AS AN ALTERNATIVE TO FUEL

CATEGORY: PURE SCIENCE  
LEVEL: UNDERGRADUATE

CODE NO:

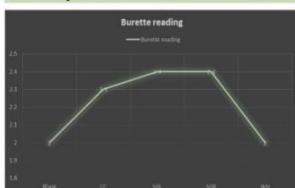
### ABSTRACT

Bioethanol is a renewable resource that can be produced from fermented cellulosic biomass. The use of lignocellulosic materials from agricultural wastes provides a low-cost fermentative substrate. This study aims to produce bioethanol from corn cob, sugarcane bagasse, sugarcane leaves, and wheat husks using a fermentation process and to determine which biomass is an optimum raw source for the production of Bioethanol. Bioethanol was successfully produced using these biomasses through pre-treatment with NaOH for 2 hours. After acid hydrolysis with Concentrated Sulfuric acid, the fermentation is carried out by yeast *Saccharomyces cerevisiae* followed by Distillation. All four samples were tested for Biochemical tests. Detection and estimation of ethanol was done by the Iodoform and Dichromate method. Comparative analysis was made from the obtained data. The extracted bioethanol was put to test in various applications like Flammable gel prepared with help of Carbopol gelling agent which can be renewable and can help reduce the usage of LPG for different chemical reactions.

KEYWORDS: Bioethanol, Distillation, Flammable Gel, Carbopol

### OBSERVATION

#### Graph No.1 DICHROMATE TEST:



#### Table No.1 Qualitative test for Carbs and Ethanol

| Sr. no | Sample                 | Anthrone test | Iodoform test |
|--------|------------------------|---------------|---------------|
| 1      | Corn cob(CC)           | +             | +             |
| 2      | Sugarcane Leaves(SGL)  | +             | +             |
| 3      | Sugarcane Bagasse(SGB) | +             | +             |
| 4      | Wheat Husk(WH)         | +             | +             |

KEYS: '+' POSITIVE; '-' NEGATIVE

### INTRODUCTION

Energy is important factor to global prosperity. Potential use of agricultural waste as an alternative renewable source. The flammable gel is an eco-friendly, user-friendly gel.

### RESULT

Biogenic synthesis of Bioethanol was successfully performed by Fermentation of Agricultural waste. Comparative analysis for Bioethanol production was done. Sugarcane leaves showed maximum Bioethanol production followed by Sugarcane bagasse, Wheat husk. Corn cob showed minimum Bioethanol production. Blue colour stable flame was observed for all samples indicating complete combustion. Corn cob ignited for a longer period followed by Sugarcane leaves, Wheat husk and Sugarcane bagasse.

#### Table No.2 Ignition test for Bioethanol Gel

| Sample | Flame colour | Ignition time |
|--------|--------------|---------------|
| CC     | Yellow       | 2.40 mins     |
| SGL    | Blue         | 2.30 mins     |
| SGB    | Blue         | 1.33 mins     |
| WH     | Yellow       | 1.59 mins     |

#### Fig.1 Fermented samples after Hydrolysis



### SIGNIFICANCE

Bioethanol has the potential to be used as an alternative to Fuel (LPG). Bioethanol-fueled vehicles produce less carbon dioxide emissions. The development of fermentation processes using cheap carbon sources is important for commercial-scale production. Bioethanol gel is non-carcinogenic and non-corrosive. Bioethanol gel innovation offers its own advantages over liquid forms of bioethanol both in terms of economy and security.

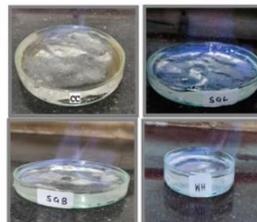
#### Fig.2 Distillation of Biomass



#### Fig.3 Fermented samples after distillation



#### Fig.4 Bioethanol-based Flammable gel



#### Fig.5 Stability and Flame Colour Test



### MATERIALS AND METHODS

- 1. Sample collection**  
Samples were washed thoroughly with tap water, air-dried for 2 days, and ground till fine particles were obtained.
- 2. Pre-treatment**  
Samples were treated with 5% NaOH for 2 hours at Room Temperature.
- 3. Sample hydrolysis**  
The pre-treated samples were further treated with Conc. H2SO4 stirred well and kept at 35 °C for 40 minutes to 1 hour.
- 4. Fermentation and distillation**  
The samples were kept at 30°C for 50-70 hours for desirable growth of *Saccharomyces cerevisiae*. Distillation was carried out using standard distillation apparatus. The boiling point of each sample was maintained up to 100°C.
- 5. Estimation of alcohol content and biochemical tests**  
Qualitative tests for Sugar, Carbohydrate, Glucose, pH, and Refractive index were checked after distillation. The amount of ethanol estimated by Cole's ferrous cyanate method.
- 6. Production of bioethanol gel**  
Distilled water mixed with Carbopol gelling agent and settled for some time. 10% NaOH added till the mixture turns into gel followed by addition of Bioethanol.
- 7. Stability and Flame Colour Test for Bioethanol Gel**  
Bioethanol gel was taken into porcelain dish and then burned. The colour and flame of bioethanol gel combustion was observed and recorded.
- 8. Ignition Time Test**  
Bioethanol gel was put into a porcelain dish and its ignition time was recorded.

### FUTURE SCOPE

Efficient use of Flammable gel.  
Bioethanol based Flammable gel kits production.  
Wide range of Laboratory-scale usage.

### CONCLUSION

Extracted Bioethanol has been successfully experimented. Flammable gel with Carbopol was set to be used as an alternative fuel. Stable, non-sooty flame was observed for a long duration indicating its potential as Biofuel.

### REFERENCE

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4. Wilza Fithri Az-zahra, N. Nurlina Harahap, S. Haidar Putra and M. Zulham Efendi Sinaga **Production of Bioethanol Gel from Sugar Cane Waste with Carbopol as Alternative Fuel**, Chemistry Department, Faculty of Mathematic and Natural Science

# **T.Y. BIOTECHNOLOGY RESULT (ACADEMIC YEAR 2022-2023)**

DEPARTMENT CONGRATULATES MERITORIOUS  
STUDENTS SECURING 'O & A+' GRADE

| <b>Sr. No.</b> | <b>Name of Student</b>    |
|----------------|---------------------------|
| 1.             | Dhanashri Parag Mandra    |
| 2.             | Pratik Narendrasinh Gohil |
| 3.             | Srushti Sujay Vaigankar   |
| 4.             | Anagha Ankush Kadam       |
| 5.             | Anushka Milind Acharya    |
| 6.             | Gayatri Rajesh Chaudhari  |
| 7.             | Riteeka Balaram Gaikar    |
| 8.             | Navneet Rajkumar Mehta    |
| 9.             | Neha Narayan Patil        |
| 10.            | Darshana Subhash Salunkhe |
| 11.            | Shruti Ajay Satam         |
| 12.            | Tanvi Pravin Shinde       |
| 13.            | Payal Pradip Undre        |
| 14.            | Divesh Dipak Wagh         |
| 15.            | Sakshi Dilip Yadav        |

# PHOTO GALLERY

## Expert Lecture - Book Review



## Alumini Interaction



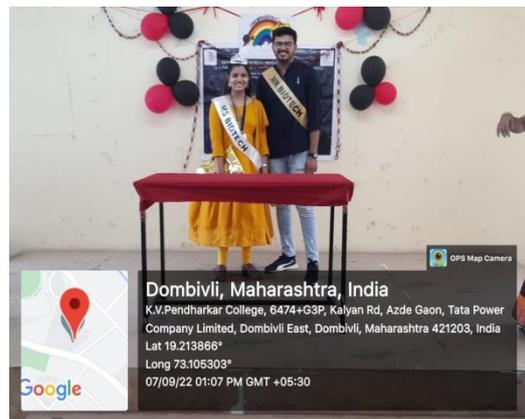
## Guru – Purnima Day Celebration



## Teachers Day Celebration



# Pscicraze (2022-2023)



## ACTREC Visit



## Common Effluent Plant Treatment (CETP) Visit



# One day YCMOU & SOMA Wines Excursion



# Certificate Course in STP Process



# STUDENTS ACHIEVEMENTS

## Annual Gathering and Valay

**Singing Winner**



**Dance Winner**



## Rangoli Winners



# Sports Achievements

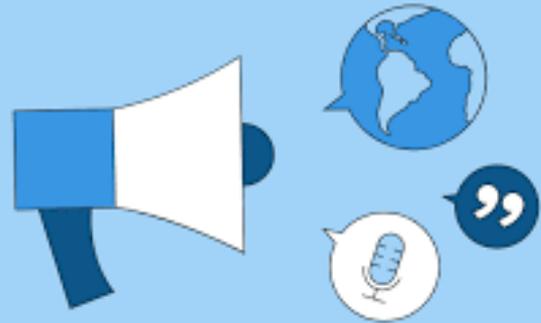
**Ms. Mrunal Kate**  
**S.Y. Biotechnology**



# COMMERCE EXPLORER

2022-2023

ISSUE X



## **COMMERCE EXPLORER**

Students pursuing general B.Com degree of three years, studies curriculum of core subjects of Commerce Prescribed by the University & College, However Commerce Being a dynamic & vast field makes it Imperative to learner to always update with the recent changes taking place in and around the world of Commerce.

To provide a platform to students to study and explore new changes in the different areas of commerce, department of commerce has started departmental magazine “COMMERCE EXPLORER” wherein articles written by the students on current happening in the areas of Business, Marketing, Corporate Law & Management are incorporated.

It gives me a great pleasure to bring out the Tenth issue of the Magazine for the year 2022-23. In this issue students have tried to explore major events which took place in the year 2022-23 & made headlines of leading newspapers. Students have thrown lights on the topics related to Acquisition, Fintech Revolution, Re-Globalization, Social Listening, Wealth Management etc. Magazine also gives the glimpses and report of the activities conducted by the department through commerce association in academic year 2022-23

Mr. B. T. Shirsath

Vice-Principal

# COMMERCE EXPLORER 2022-23

Editorial Board

Publisher

Members of Commerce Association

Guidance By-

Mr. B.T. Shirsath (Vice Principal)

Mrs. Usha Gupta (HOD Commerce)

Ms. Vinita Punjabi (Member)

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# Commerce Association

## A platform for Student centric activities

About Association: Commerce Association is an association of commerce students, formed by department of commerce in the year 2005. Association arranges various activities concerned with development of students. All activities of association are managed by student members only, departmental staff act as a guiding force for the smooth functioning of the association.

DOMBIVLI SHIKSHAN PRASARAK MANDAL'S  
K.V. PENDHARKAR COLLEGE OF  
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LAMP LIGHTING CEREMONY  
A SPIRITUAL AND AUSPICIOUS MOMENT  
ON THE INAUGURATION OF COMMERCE ASSOCIATION



FLORAL WELCOME EXTENDED TO OUR DEAR GUEST MR. NIRANJAN  
DESHPANDE AND AUDIENCE BY MEMBER OF COMMERCE ASSOCIATION

MS. VINITA PUNJABI





**STUDENTS ENLIGHTENED WITH KNOWLEDGE ON “FINANCIAL FREEDOM” BY OUR EMINENT SPEAKER MR. NIRANJAN DESHPANDE.**

# AQUISITION OF ACTIVISION BLIZZARD BY MICROSOFT

## **INTRODUCTION:-**

On January 18, 2022, Microsoft announced its intent to acquire Activision Blizzard for \$68.7 billion in cash. Under the terms of the agreement, which would be expected to close by Spring 2023 pending regulatory and shareholder approval, Microsoft would own Activision, Blizzard Entertainment, and King under the Xbox Game Studios brand.



On January 18, 2022, Microsoft announced its intent to acquire Activision Blizzard for \$68.7 billion in an all-cash deal, or approximately \$95 per share. Activision Blizzard's stock price jumped nearly 40% that day in pre-market trading. The deal would make Microsoft the third-largest gaming company in the world and the largest headquartered in the Americas, behind Chinese company Tencent and the Japanese conglomerate Sony. If closed, it would also be the most expensive video game-related acquisition in to date.[10] Goldman Sachs will serve as the financial advisor to Microsoft, and Allen & Company will be Activision's financial advisors. Simpson Thacher will serve as legal advisor for Microsoft while Skadden will serve as legal advisor for Activision.[11] The deal has been approved by both companies' board of directors and is expected to close in 2023 following international government regulatory review of the action.[12][13] Upon completion of the deal, Activision Blizzard would be a sibling entity to Xbox Game Studios under a new Microsoft Gaming division with Phil Spencer as its lead. The deal would also allow Microsoft to offer.

Activision Blizzard games on its Xbox Game Pass service. Spencer also spoke about reviving some older Activision Blizzard franchises he himself enjoyed, mentioning series such as King's Quest, Guitar Hero and Hexen: Beyond Heretic.[14] Kotick stated that he, Spencer, and Microsoft's CEO Satya Nadella have had discussions in 2021 on their concern of the power of Tencent, NetEase, Apple, Inc. and Google, and that Activision Blizzard lacked the computation expertise in machine learning and data analytics that would be necessary to compete with these companies. According to Kotick, this led to the idea of Microsoft, which does have those capabilities, acquiring Activision Blizzard at an attractive price point. In a statement released on Activision Blizzard's investor website, the company said its industry is the "most dynamic and exciting category of entertainment across all platforms" and that gaming will be the forefront of the development of the emerging metaverse. Some journalists saw this acquisition, and Microsoft's March 2021 acquisition of Bethesda Softworks, as a bid to compete against Meta Platforms, formerly known as Facebook.

The announcement had come in the wake of events related to California Department of Fair Employment and Housing v. Activision Blizzard, A lawsuit raised in July 2021 accusing the company of sexual harassment, employment discrimination and retaliation on the part of Activision Blizzard. Allegations had expanded by November 2021 to include actions that Activision Blizzard's CEO Bobby Kotick had done. The timing of the acquisition was reported by The Wall Street Journal and Bloomberg News to be in response to the ongoing DFEH lawsuit.

Reports from both newspapers stated that Activision Blizzard had been considering a buyout from other companies, including Facebook parent company Meta Platforms, due to the weaker than expected financial performance of their latest game releases and production delays. Based on SEC filings related to the merger, Microsoft approached Activision Blizzard again in the days immediately following the November 2021 Wall Street Journal report regarding a buyout. While Kotick had been hesitant about selling the company, the board had gone ahead with the deal as they continued to fear the ongoing impact of the lawsuit while Kotick had

remains on the board. The buyout would provide a graceful exit for Kotick in the future, ranging in \$252.2-292.9 million over most scenarios.



According to official announcements, under the deal Kotick will remain the CEO of Activision Blizzard, and is expected to keep the position while the deal goes through regulatory processes, as Activision Blizzard remains independent from Microsoft until the deal closes. According to The Wall Street Journal, Kotick "will depart once the deal closes" under Microsoft's management, while Kotick said in an interview that he has an interest in remaining in the company. Microsoft has

yet to speak directly about the Activision Blizzard lawsuit following news of the acquisition, however the company announced a week prior that it would be reviewing its own sexual harassment and gender discrimination policies.

Activision Blizzard's shareholders approved of the acquisition near-unanimously in April 2022.

### **Regulatory response:-**

Due to the size of the acquisition, the deal is being reviewed by several government commerce bodies for antitrust concerns. As of December 2022, Saudi Arabia, Brazil, Serbia and Chile have approved the acquisition with zero regulatory concessions for Microsoft.

### **U.S. Federal Trade Commission (FTC):-**

In the United States, the acquisition was reviewed by the Federal Trade Commission (FTC) rather than traditionally by the U.S. Department of Justice, as the agency had raised more concerns over mergers and acquisitions in the Big Tech sector in the last decade. U.S. Senators Elizabeth Warren, Bernie Sanders, Sheldon Whitehouse, and Cory Booker expressed their concerns about the merger to the FTC as part of the FTC's investigation, saying that both companies have "failed to protect the rights and dignity of their workers" and that the merger should be opposed if "the transaction is likely to enhance monopsony power and worsen the negotiating position between workers and the parties." The FTC formally stated its intention to block the acquisition as proposed on December 8, 2022. The FTC expressed concern that the acquisition would harm consumers of Activision Blizzard's games and give Microsoft too much control of certain parts of the industry, such as cloud gaming. The FTC also pointed to the acquisition of Zenimax, which the FTC claimed that Microsoft had agreed to a concession from the European Union to not make their games exclusive to the Xbox and later broke. In a statement made to Axios' Stephan Totilo, the European Commission stated that they had cleared Microsoft's acquisition of Zenimax unconditionally as they saw no "material impact" on the gaming market even if Microsoft made Zenimax's titles exclusive.

Microsoft responded to the FTC's complaint that Sony itself is one of the largest platforms with exclusive titles that contractually cannot be made for Xbox. They also said they still plan to offer content for multiplayer Bethesda games like Elder Scrolls Online and Fallout 76 for all platforms to avoid undercutting the playerbase. Microsoft also initially challenged the constitutionality of the FTC due to the ability for the Commissioner to be removed by the President at will, and their use of administrative law judges to initially review cases, both which have founding in recent Supreme Court cases, but removed this language in an amended response,

sticking to the video game market In February 2023, the FTC denied a request by Sony to drop a subpoena filed by Microsoft, requesting internal documentation from Sony related to their third-party exclusivity deals. games, leading to higher prices, lower quality and less innovation for console game distributors, which may, in turn, be passed on to consumers. "Microsoft met with the EC regulators on February 21, 2023, announcing that they had secured a ten-year agreement with Nintendo to bring Call of Duty to that platform alongside the Xbox release, as well as a separate ten-year agreement providing Call of Duty and other first-party Microsoft games with NVidia as part of their GeForce Now streaming service.

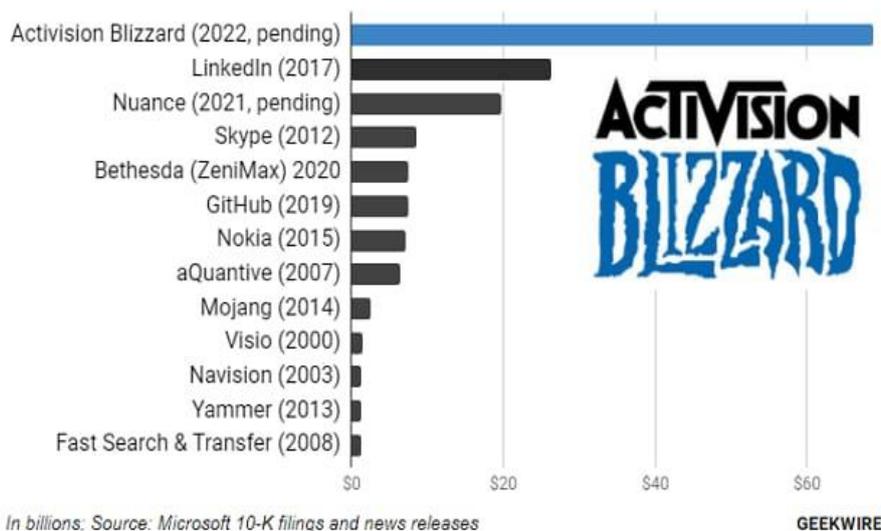


**UK Competition and Markets Authority:-**

The UK's Competition and Markets Authority stated its intent to perform a higher-level review of the acquisition in August 2022. The phase 1 ruling, issued on September 1, 2022, said that the merger "may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom". Preliminary findings of

phase 2 of the investigation was reported on February 8, 2023, concluding that the acquisition "could result in higher prices, fewer choices, and less innovation for UK gamers", as well as less competition in the console and cloud gaming spaces. The CMA has recommended that Activision should at least divest the Call of Duty franchise. The full report is expected on April 26, 2023.

**Microsoft's Largest Acquisitions of All Time**



**European Commission:-**

After receiving a formal notification by Microsoft on September 30, 2022, the European Commission began its first phase review of the acquisition under the EU merger law.[45][46] The Commission sent out a questionnaire to several game industry firms to ask them about the potential impact of the acquisition on their livelihood, including if Microsoft does opt to lock rivals out of Activision games in the future. The Commission

announced on November 8, 2022, that it will conduct an additional review of the merger "to ensure that the gaming ecosystem remains vibrant to the benefit of users in a sector that is evolving at a fast pace." The results of this review are expected by April 2023.

The EC filed its formal complaint against the acquisition on February 3, 2023. The EC said they were considered that Microsoft may be "incentivized to block access to Activision's popular Call of Duty franchise", which could lead to "reduce competition in the markets for the distribution of console and PC vide

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## **SOCIAL LISTENING AND BRAND ACTIVISM**

Brand activism is when a brand or business takes a stand on a social, environmental, economic, or political issue. It's about supporting a cause that aligns with a company's core values, communicating a commitment to creating a positive impact, and putting that commitment into action. Brand activism can be propagated through public statements, volunteering or protesting, donations, social media content, or promotional campaigns.

Social listening is monitoring one or more social media channels for mentions, conversations, and keywords related to your brand, and using those insights to identify opportunities in every facet of your business, from improvements in customer service and company policies to product updates and community activism.

If you don't have a social listening strategy, you're missing out on some of the most valuable data available to help build your business. In fact, nearly two-thirds of marketers agree that social listening has increased in value in the last year. Social media listening tools allow you to build a solid understanding of exactly how customers and potential customers think about you by analyzing what they say on social channels. You can also learn what they think about the competition.

Case studies:

1) In mid-2020, Tanishq, a jewelry firm and subsidiary of Tata-controlled Titan Company in India, released an advertisement as a part of its "Ektavam" (or oneness) campaign, and were caught in the middle of a controversy due to the advertisement showing a Hindu bride and her Muslim in-laws observing a baby shower in the Hindu tradition. As social media rage mounted, Tanishq apologized and withdrew the ad, citing concern for the safety of its employees and store staff. But #Boycott Tanishq trended on social media – and Titan shares dropped 2.6 percent on the Bombay Stock Exchange (Anon, 2021).

2) Another example is that of the eCommerce giant, Amazon, which found itself in the midst of a huge crisis for allegedly selling slippers, doormats, and toilet seat covers with the pictures of Hindu gods and goddesses (including Shiva, Vishnu, Krishna, and Ganesha). An Indian Twitter user

shared images of the products, which claimed to hurt the sentiments of a lot of people across the sub-continent. People expressed their displeasure at it and urged the online retailer to remove these products from its catalog, with angry consumers calling to #BoycottAmazon (BrandEquity, 2019).

As social networks move from clicks to conversations, social listening will gain more importance as we move through the fourth industrial revolution. Social listening can help organisations and brands harness the insights that turned the label ‘chowkidar’ from an affront to adulation, multiplying the positive message tenfold. It is important to envision the bigger picture through social listening and not just limit ourselves to social media monitoring, as that would very much be akin to missing the woods for the trees. From a marketing perspective, well-executed brand activism can increase your awareness—and ultimately market share—among key audiences. Supporting the causes that matter to your existing customers can inspire brand loyalty and engagement. And internally, showing your employees that you care can keep them engaged.

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# TRENDS DRIVING THE FINTECH REVOLUTION IN INDIA.

## **The Origin of Fintech**

Fintech, or "Financial Technology" as the younger generation puts it, has been around longer than you believe.

Online banking has become standard. Investing, paying, and more may be done on a smartphone or computer. What brought us here? Have you considered the amazing technologies behind your daily interface? Cutting-edge financial technology has made the banking business one of the most exciting to enter. Global employment is 40% finance or technology. Any gadget that supports money transfers or other financial services is called fintech. The notion has shaped people's money interactions for decades, if not centuries, despite its prominence in the 21st century.

Although the term "fintech" is most often associated with Bitcoin and new banking start-ups, its origins may be traced back to the late nineteenth century, an industry with a potential of trillion dollars, investors have a lot of reasons to be excited. The very next big thing is being developed by several financial businesses.

## **SOME INTERESTING FACTS (describing current FinTech scenario in India) -**

- India is amongst the fastest growing Fintech markets in the world. Of the 2,100+ FinTech's existing in India today, over 67% have been set up in the last 5 years.
- India is the 3rd largest FinTech ecosystem. Further, India has the highest Fintech adoption rate globally (87%).
- BHIM UPI clocked over 3.2 billion transactions in July 2021, marking a game-changing penetration of digital payments in India. Similarly, UMANG App has witnessed cumulative 1.7 billion transactions.
- It is expected to reach \$1 Tn in throughput and \$200 Bn in revenue by 2030.
- The Indian Neo-banking space has witnessed a 5x uptick in funding in the last year and is expected to hit \$215 Bn mark by 2030.

## **MAJOR TRENDS TO LOOK FOR –**

### **✓ CBDC – Central Bank Digital Currency (E-Rupee)**

Reserve Bank of India defines CBDC (Digital Rupee (₹)) as the legal tender issued by a central bank in a digital form. It is akin to sovereign paper currency but takes a different form, which shall be exchangeable at par with the existing currency and shall be accepted as a medium of payment, legal tender, and a safe store of value.

The Government of India announced the launch of CBDC from FY 2022-23 onwards in the Union Budget placed in the Parliament on February 01, 2022.

With already introducing the first pilot in the Digital Rupee - wholesale segment (₹-W) on November 1, 2022, the Reserve Bank has announced the launch of the first pilot for retail digital Rupee (₹-R) on December 01, 2022, thereby making India one of the front-runners in digital payment domain, as most of the major economies have not introduced the CBDC yet.

- A sovereign currency issued by Central Bank in alignment with the monetary policy
- Fungible legal tender for which holders need not have a bank account

- Expected to lower the cost of issuance of money and transactions
  - Appears as a liability on the central bank's balance sheet
  - Freely convertible against commercial bank money and cash
  - To be accepted as a medium of payment, legal tender, and a safe store of value by all citizens, enterprises and government agencies.
- ✓ **Blockchain, crypto & decentralization –**

Most of us are familiar with Bitcoin, the world's first and largest cryptocurrency. Cryptocurrencies like Ethereum, polygon and crypto terminology are increasingly becoming mainstream, with more people hopping on board than ever before. However, most people are unaware of the significance of the blockchain technology.

According to a report by Research and Markets, about 56% of Indian enterprises are now adopting blockchain tech and making it a part of their core operations. The scale of blockchain disruption in India, as well as the potential future it offers, has the potential to explode, allowing other innovators to tap into the market.

**NFT - Non-fungible tokens (NFTs)** are data units associated with unique digital files. These files can be anything, but more commonly, they're pieces of art, music, or recordings of live performances.

And the first thing that may come to one's mind regarding NFTs is the interconnection with decentralized finance (DeFi). DeFi is a fast-growing financial system based on blockchain technology designed to remove the control of banks and institutions on money, financial products, and financial services.

**Web 3.0 ( the new Internet )** - Web3 is an idea for a new iteration of the World Wide Web which incorporates concepts such as decentralization, blockchain technologies, and token-based economics. It is a democratic internet developed on blockchain where everyone holding the token of a shared currency is part of the decision making/governance process, contrary to the web 2.0 internet where big giants like google, Facebook control our data, privacy & ownership. **Web 3.0 is more than just FinTech, blockchain or technology, it is for the greater good of the humanity.**

**Neo Banks** - To keep it simple, a neo bank is a digital only and mobile-first bank. In India, service providers partner up with traditional banks to create a digital banking platform to give customers seamless banking on the go. Neo banks work best for tech savvy and cashless individuals who are comfortable with a digital only bank. From online payments to saving and investing, neo banks are generally feature packed and super convenient.

the top Neo banks in India have time and technology on their side. Owing to their low-cost and customer-centric operation models, these platforms can gradually build a customer base. However, offering financial services against those with decades of brand equity and customer trust is an uphill climb that will require time and quality service delivery.

**BaaS (Banking as A Service)** - We all know SaaS (Software as a Service). What's the BaaS trend then? BaaS is a comprehensive strategy that allows fintech companies and other third-party organisations to interface with a bank's system via APIs. This enables organisations to construct novel financial services on the regulated infrastructure of the provider bank while also providing open banking services.

Tech-savvy legacy firms can fend off the encroaching threat of fintech's by moving into the BaaS space to share their data and infrastructure. In a matter of years, access to this level of information will become table stakes for digitally native customers — so banks that begin now will be ahead of the curve, and likely rewarded with high demand.

## **Conclusion –**

The growing maturity of the Indian FinTech ecosystem has coupled aggregation of the digital experience of financial services within one of the biggest marketplaces. This shows confidence and instils trust in overseas

markets about the capability of the Indian FinTech sector. Account aggregator could significantly impact lending and other financial services sector and create the next 'UPI moment' in the FinTech space.

Overall, 2023 is expected to be an exciting year for all participants in India's fintech sector, including founders, investors, professionals, regulators, and, of course, customers/consumers of these products and services.

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## **EASE OF DOING BUSINESS GAINS MOMENTUM WITH NEW AMENDMENT IN LLP ACT**

India has been striving to make it easier for businesses to operate and grow in the country. The government has been taking various steps towards creating an advantageous environment for businesses, and one such step is the latest amendment in the Limited Liability Partnership (LLP) Act, which aims to make it easier for businesses to set up and operate as LLPS.

The LLP Act was enacted in 2008 to provide a legal framework for the formation and operation of LLPs in India. LLPs are hybrid entities that combine the benefits of a partnership and a limited liability company. They offer the flexibility of a partnership and the limited liability protection of a company, making it an attractive option for small and medium-sized businesses.

Following the recommendations of the Committee, the LLP Act has been amended by the Limited Liability Partnership (Amendment) Act, 2021 (Amendment Act) notified on 11 February 2022. In addition, the Limited Liability Partnership (Amendment) Rules, 2022 (Amendment Rules) have also been notified on 11 February 2022. The Amendment Act and the Amendment Rules are both, effective from 1 April 2022. Incidentally, this is the first amendment of the LLP Act since it came into force in 2009.

### **Key amendments to the LLP Act:**

#### **1). Improved functioning Registration offices**

The Amendment Act proposes establishment of registration offices by the Central Government at such places as it may deem fit for discharge of various functions under the LLP Act, including registration of new LLPs. Greater flexibility in case of filing lapses.

As an additional relaxation, the erstwhile section prescribing a period of 300 days for late filing has been amended to remove the said time limit.

#### **2). Ease of doing business Concept of small LLPs:**

The concept of small LLPs, in line with the concept of 'small companies' under the Companies Act, has been introduced. Small LLPs will have significantly reduced cost of compliance and will benefit from fewer applicable penalties. To qualify as a small LLP, the contribution by the partners should be limited to a maximum of INR 5,00,00,000 and the turnover should be limited to INR 50,00,00,000

The relaxations available to small LLPs include reduction in

(i) compliances like registering, or recording notice of appointment, cessation, change in name, address, designation of a partner or designated partner

(ii) penalty amount by half of the penalty prescribed under the LLP Act subject to a maximum of INR 1,00,000 for the LLP and INR 50,000 for all partner/ designated partner.

### **3). Residency requirement for designated partners**

The erstwhile provision required every LLP to have at least one designated partner who is a 'resident in India' (similar to the residency requirement for directors under the Companies Act). To meet this requirement, such designated partner had to stay in India for a period of not less than 182 days during the immediately preceding one year. This tenure has been relaxed and the resident designated partner is now required to stay not less than 120 days during the financial year.

### **4). Effective disposal of cases**

i) Adjudication of penalties

The Central Government may now appoint adjudicating officers for the purpose of adjudging penalties under the LLP Act. The Central Government by an order dated 11 February 2022 has appointed registrar of companies of various states as adjudicating officers for adjudging penalties under the LLP Act. This order is effective from 1 April 2022. Further, any person aggrieved by an order of an adjudicating officer may prefer an appeal within a period of 60 (sixty) days to the relevant regional director.

ii) Time bound appeals

As per the Amendment Act, any appeal preferred to the National Company Law Appellate Tribunal (NCLAT) must be filed within 60 (sixty) days, from the date of the order of the National Company Law Tribunal, provided that the NCLAT may, for sufficient cause, entertain an appeal after the expiry of the said period but provided the appeal is preferred within a further period of 60 days. In other words, a maximum appeal time of 120 days has been prescribed under the Amendment Act.

### **5). Enhanced transparency**

i) Stringent compliance in the event of fraudulent activities

It is pertinent to note that for any act committed with fraudulent intention by an LLP or its partners, the defrauding partners shall be punishable with imprisonment of a term which may extend to 5 years as opposed to 2 years provided earlier.

ii) Accounting and auditing standards

The Amendment Act provides that the Central Government in consultation with the National Financial Reporting Authority may prescribe standards of accounting and auditing for LLPs. This will encourage transparency in reporting and avoid manipulations and fraud. A new section 34A has been introduced so as to empower the Central Government to prescribe the Accounting

Standards or Auditing Standards for a class or classes of limited liability partnerships in consultation with NFRA constituted under Companies Act, 2013.

**6). Finance: Debentures**

The Bill for the first time has dealt with the issuance of debentures by an LLP as a mode of fundraising. These debentures shall have a charge on the assets of the LLP and can be raised from entities regulated by SEBI or RBI. This move will definitely attract institutional funding to LLPs which were resistant in providing funds as there were no laws in LLPS that would provide a secured instrument.

**Conclusions:**

In conclusion, the latest amendment to the LLP Act is a positive development for the Indian business environment. It is expected to provide a boost to the ease of doing business in the country and encourage more entrepreneurs to start businesses. The changes introduced by the amendment are expected to simplify and streamline the processes involved in forming and operating LLPs, making it easier for businesses. to comply with regulations and grow their operations.

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## Where are the potentially positive aspects of Re-globalization ?

It consists in the 5R's of Re-globalization: refining, reframing, reforming, redefining, and revisioning globalization. Refining means to improve the mechanisms, including international laws, enacted to make globalization work for more people, and in more socially just ways. Reframing means to acknowledge that globalization cannot be simply a detached and self-declared 'whole', but that it is interrelated with regional and local needs and processes in the sense of 'glocalization'. Reforming means to overhaul the core institutions of globalization, i.e. the international and global bodies, as well as their strategies, policies and politics to make them more efficient and balanced. Redefining means to ask for new concepts of how to understand globalization which go beyond the neoliberal, leftist or populist narratives, and transcend the boundaries of the idealism-realism dichotomy. In the years ahead, this may also include integrating aspects of 'globalization' with some sort of concept of 'cosmologization' given the potentially imminent expansion of humanity into the surrounding extra-terrestrial space. Finally, revisioning means to draft an integrative perspective for the further globalization process, which must include more viewpoints than in the past, including those of the poorest.

The debate about this fivefold correction and innovation model and its related practical policy and anticipation strategies has begun, but is still in the initial phases. The debate is still explorative, descriptive and heuristic and not normative, and so is the umbrella term 're-globalization' itself. To advance the discussion, we can and must neither reduce the five R's to each other, nor integrate them too rashly, nor leave any one of them out, since they are substantially interrelated and continuously interacting and evolving. Most important, they are all needed to properly adjust and better contextualize contemporary's globalization crisis effects which may continue to vary starkly according to place and time.

Second, the perspective lies in the work upon an inter-civilizational terrorization of reglobalization (which in essence may be a re-theorization of globalization) as a (in the ideal case) trans-systemic scientific process leading to the inclusion of broader social, economic and political strata under the new guiding ideas of multiresilience and scale. This could also inspire a positive, albeit perhaps only partial re-calibration of global studies, globalism, and the sociology of globalization in more 'multiversal' ways.

## NEW ECONOMIC CHALLENGES

### 1. An imminent recession

2023 is expected to be the third-worst year for global economic growth this century behind 2009, when the global financial crisis caused the Great Recession, and 2020 when COVID-19 lockdowns brought the global economy to a virtual standstill.

Analysts expect the world's major economies, including the United States and the United Kingdom, as well as the eurozone, to slip into a recession this year as central banks continue raising interest rates to temper demand for consumer goods and services in an effort to rein in raging inflation.

The contraction in advanced economies and a stronger American Dollar will hurt exports, spelling trouble for export-oriented Asian economics

## 2. Increasing Debt Burden

A second consequence of the pandemic and the recovery plans put in place is a huge increase in national debt. This poses a particular problem for emerging countries where the economic impact of the pandemic has been somewhat mitigated thanks to the temporary suspension of debt servicing for the poorest of them. The consequences of taking this measure away are still a matter of conjecture.

Governments are not the only ones left with huge debts; companies in the private sector are in the same situation, and here we are thinking primarily of companies in the service sector, for example in tourism, culture and aviation. Furthermore, the disruption of global supply chains, rising raw material prices and high goods transportation costs are also causing concern among companies.

## 3. Sanctions on Russian oil

The European Union's embargo on Russian oil products came into effect on Feb. 5, building on the \$60 oil price cap implemented by the G-7 (Group of Seven) major economies on Dec. 5

China, India and Turkey in particular have ramped up purchases to partially offset a fall in Russian crude exports to Europe of 400,000 barrels a day in January

Russian net oil output was down by only 160,000 barrels a day from pre-war levels in January, with 8.2 million barrels of oil shipped to markets worldwide, according to the IEA's oil market report.

# GEOPOLITICAL CHALLENGES

## 1. The rise of Chinese soft power

China will continue to extend its soft power and its commercial and economic clout over many areas of the world that were previously seen as reliable democratic partners of the West. For instance, we saw tensions earlier in the year in the South Pacific, while Saudi Arabia will continue to play off the West against China.

We expect such trends to gain traction, and they could be seen as escalatory by the West as its global influence diminishes. We're already seeing this in some UN votes, such as the one condemning Chinese human rights abuses in Xinjiang. It was defeated because various countries voted with China: a clear indication that its soft power is on the rise.

## 2. G20 tensions likely to emerge

The leaders of the world's biggest economies assemble in Bali this week for the annual G20 summit. They do so facing multiple interconnected global crises. Russia's war in Ukraine, economic slowdown in China, heightened Sino-American tensions over Taiwan, precipitous worldwide increases in costs of living, and growing global food shortages provide a worrying backdrop to the summit.

Beyond this perfect storm of predicaments, the G20's Indonesia hosts have set an ambitious agenda. Leaders are set to discuss issues spanning the environment, health, security and development. Busy and contentious days at the top table of global governance await.

Despite it being the most powerful political leaders sitting around the summit table, there is actually little that G20 leaders can do to address the multitude, magnitude and complexity of crises the world now faces. They meet at a time of conflict over the most dangerous geopolitical flashpoints and without consensus on how to respond to political, economic and social upheaval.

While the G20 has always been composed of competitors on the world stage, in Bali the likes of China, Russia and the US will meet with open antagonism. The G20 can govern as a club of rivals, but not as one of adversaries. As a consensus-based forum, it's simply not designed for an international domain riven with such geopolitical tension.

### 3. The rise of cyber alliances and emerging cyber threats

As the Ukraine war intensified in April, a series of cyber attacks hit German wind power companies. The attacks disrupted the systems of almost 2,000 wind turbines. The group behind the attack was alleged to be aligned with Russia.

Of course, a cyber attack on Germany was not unexpected. Because of the Ukraine war, and the growing chasm between Russia and the West, a drawn-out cyber campaign between both sides was inevitable.

But, what was unexpected was the target: Germany's clean energy sector. It was a sign that a new era of cyber warfare was underway. Now, "targets" that had flown under the radar (like the supply chain of Toyota), or targets that nobody expected to be hit due to their non-threatening nature (like Germany's sustainable infrastructure), were suddenly fair game.

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## **WEALTH MANAGEMENT**

The face of wealth management is changing rapidly due to a number of factors, including technological advancements, shifting demographics, and evolving customer expectations. Here are some of the key trends that are driving this transformation:

- **Technology-driven disruption:** Technology is driving rapid change in the wealth management industry. Robo-advisors, artificial intelligence, machine learning, and other advanced technologies are enabling firms to automate many of the tasks that were previously performed by human advisors. This is making it easier and more affordable for individuals to access wealth management services.
- **Growing demand for personalized services:** Customers are demanding more personalized services that are tailored to their unique needs and preferences. Wealth management firms are responding by investing in sophisticated data analytics tools that can help them gain a deeper understanding of their customers' financial goals and risk tolerance.
- **Shifting demographics:** The demographic makeup of wealth management clients is also changing. Younger investors are increasingly looking for socially responsible investment options, while older investors are seeking ways to preserve their wealth and generate income in retirement.
- **Regulatory changes:** The regulatory landscape for wealth management is also evolving, with new regulations and guidelines being introduced to protect consumers and ensure that wealth management firms are operating in a transparent and ethical manner.

Overall, the changing face of wealth management is creating both challenges and opportunities for firms in this industry. To succeed in this environment, wealth management firms will need to stay agile and adapt quickly to changing customer needs and market conditions.

In terms of challenges that I see, probably the top of mind for me is wealth transfer that we are seeing as the baby boomer generation ages. They are holding on that generation is holding onto a lot of wealth. They are holding on to a lot of property and they are not aging gracefully. And they are holding really, really tight as they age. And we are just sort of reaching that first level of those baby boomers turning 70, 75. And we are starting to see a lot of needs for assisted living,

needs for supportive housing, needs for families to be really involved in the care of their elders. And the baby boomers are on, they are stubborn and independent. And so seeing the emotional ramifications, not to mention the financial ramifications of that echo through a family is something that I am seeing a lot of. And so it's not just the wealth transfer but it's the emotional ramifications that come with seeing mom, seeing dad, seeing auntie needing more care, potentially having funds to pay for that care, wanting to stay in a home that is not really set up for that and that's someone can't live independently anymore.

In today's environment clients are being faced with times to which they are not accustomed to interest rates are currently paying less than 1% and there unfortunately trying to survive on that interest earned and they are incapable to do so and so what I really focus on is working with clients explaining strategies and ideas that they may not be familiar with in other words trying to educate the client that there are other products out there and so they become more familiar and comfortable with thinking outside the box. We tend to what we have always done but sometimes that's just not going to work in today's challenging environment.

NAME- TRUPTI RAVINDRA KOLHE

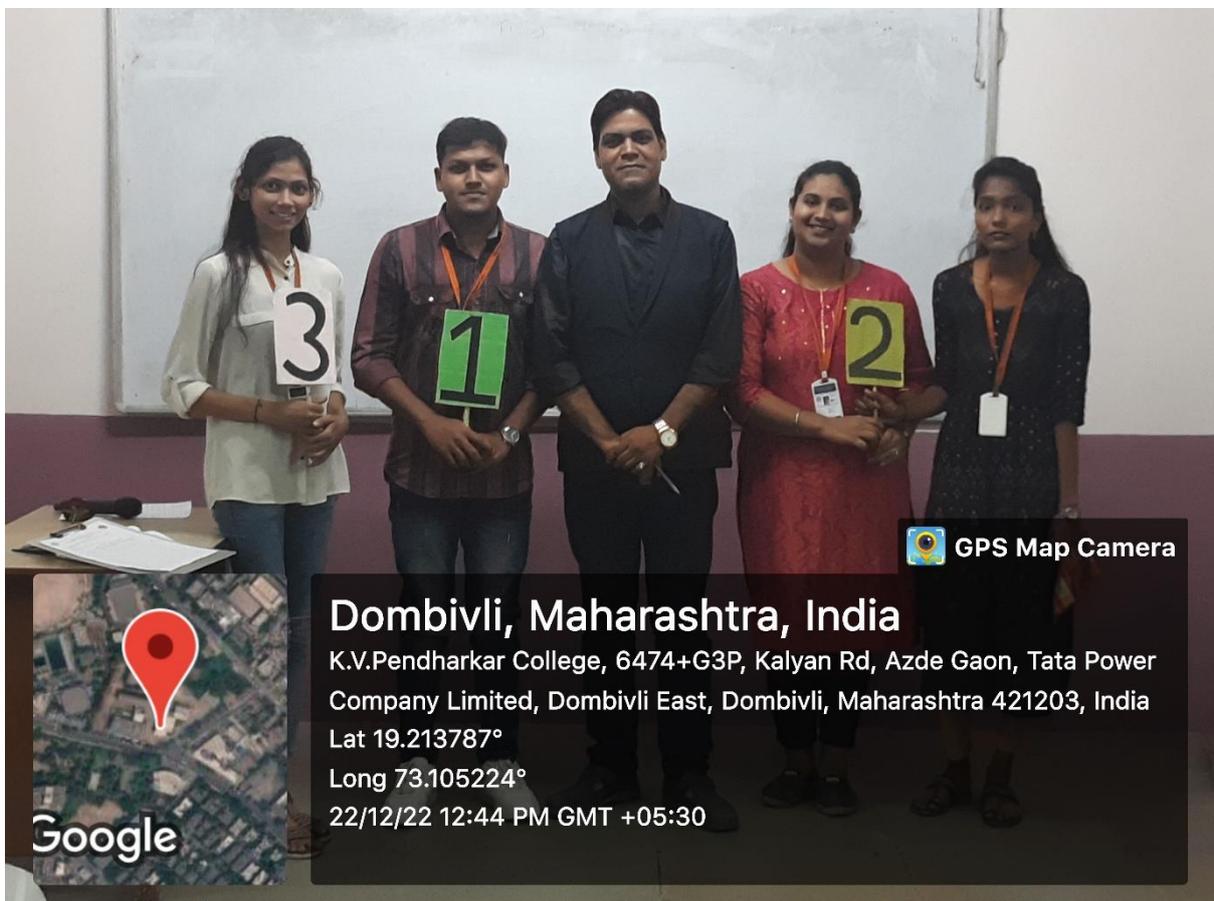
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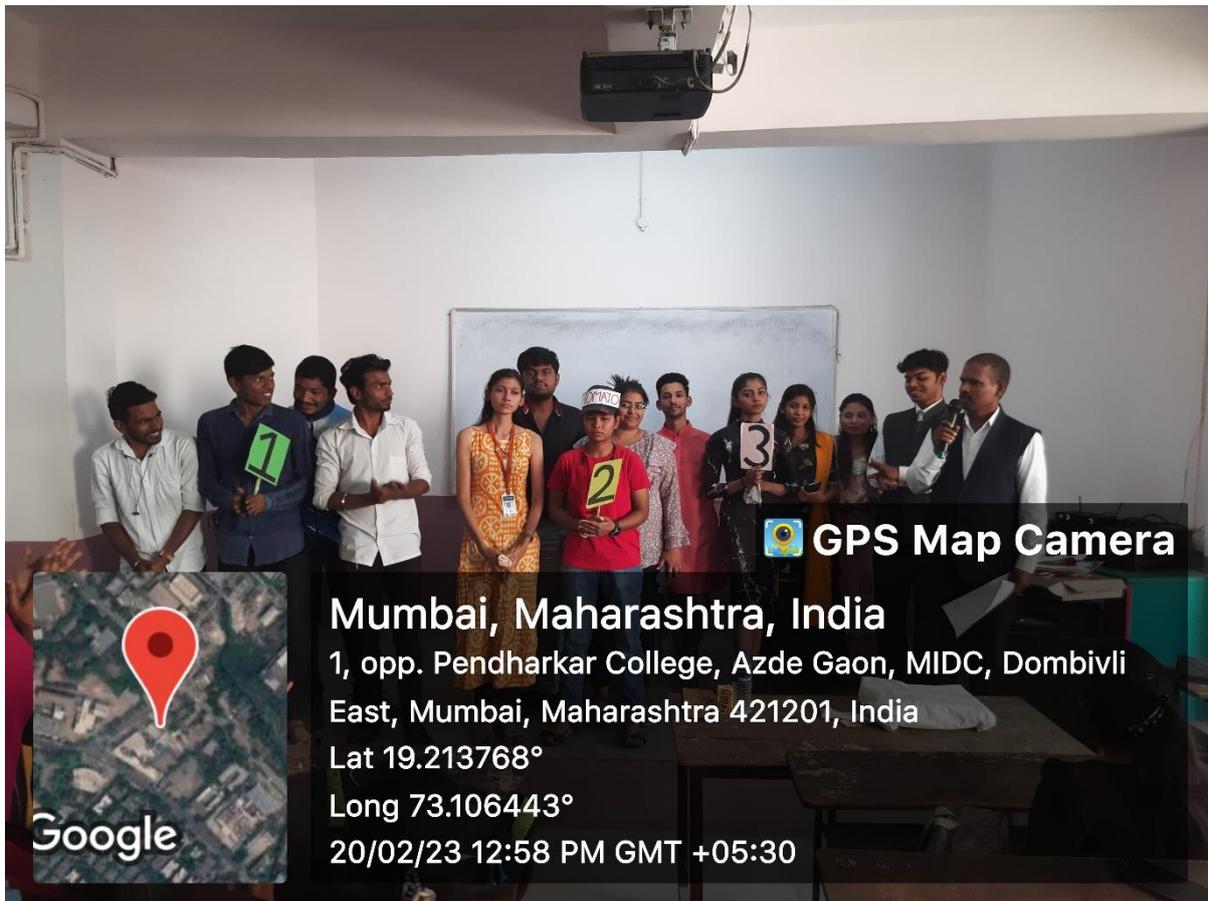
**STUDENTS FILLED WITH ENTHUSIASM SHOWCASING THEIR BUSINESS KNOWLEDGE IN BUSINESS QUIZ COMPETITION- “BIZ INTELLECT”**



***PARTICIPANTS FILLED WITH THRILL AND EXCITEMENT SHOWCASING THEIR CREATIVITY IN DIGITAL BROCHURE DESIGNING COMPETITION***



**STUDENTS PARTICIPATED WITH IMMENSE ZEAL AND ENTHUSIASM IN CONSUMER AWARENESS & REDRESSAL EDUCATION COMPETITION AND SPREAD LEGAL AWARENESS AMONG AUDIENCE**



**STUDENTS PARTICIPATED WITH EAGERNESS AND PASSION IN THE ACTIVITY ORGANIZED BY COMMERCE READERS CLUB**



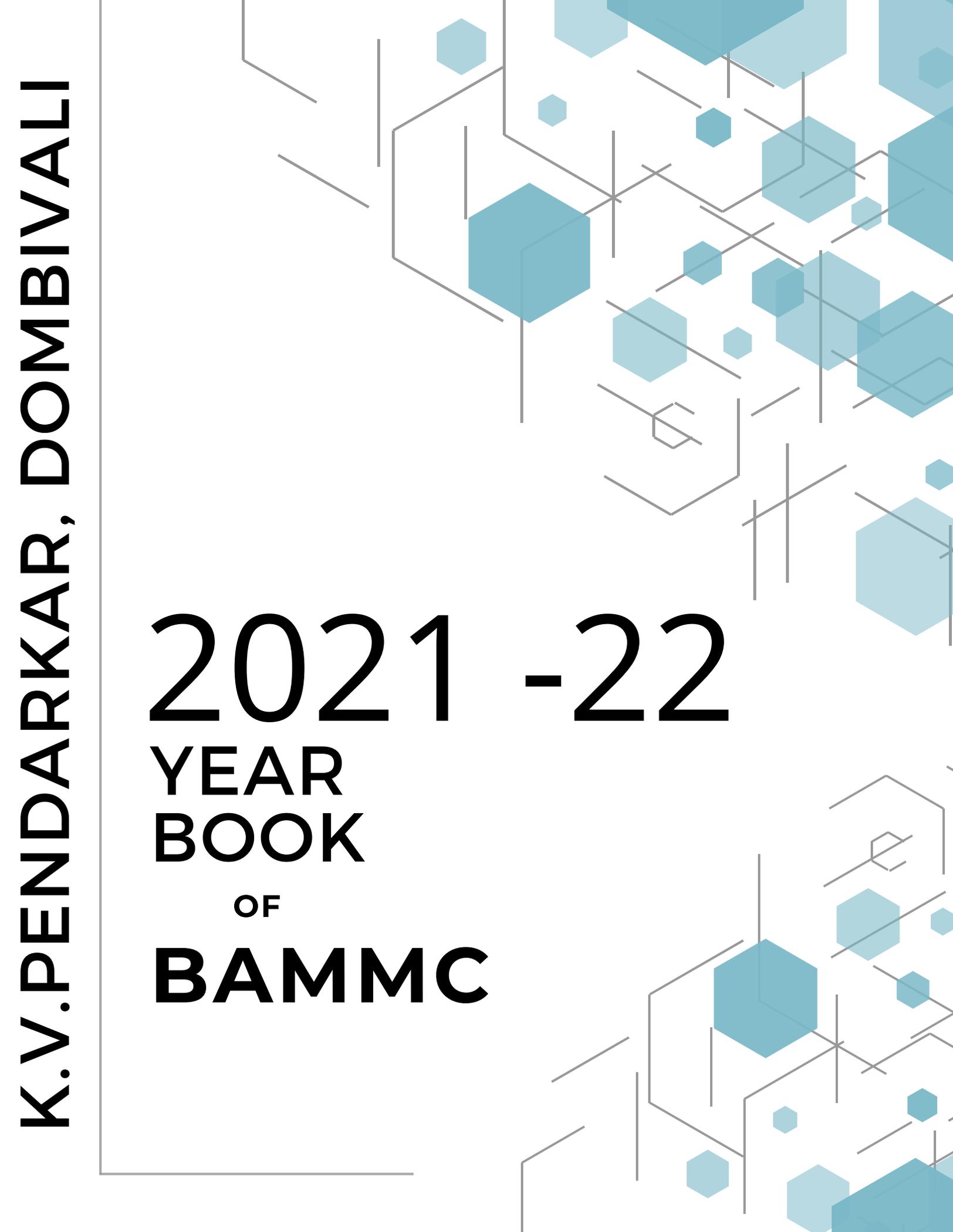
**K.V.PENDARKAR, DOMBIVALI**

**2021 - 22**

**YEAR  
BOOK**

**OF**

**BAMMC**



FOR THE FIRST TIME EVER  
**BACHELOR OF ARTS IN MULTIMEDIA AND  
MASS COMMUNICATION**  
PRESENTS

# BIFROST

## CHOOSE YOUR WAY

THIRD ACT  
(MONOLOGUE)

IRIS-  
(PHOTOGRAPHY)

GLANCES-  
(SHORT FILM)

REEL KARO FEEL KARO  
(REELS)-



- ECHOES  
(SOLO SINGING)

-TAP TALES  
(SOLO DANCING)

-TALK THE TALK  
(ELOCUTION)



### ROUND : 1

(OFFLINE)

2nd MARCH 2022:

- SOLO DANCING
- MONOLOGUE

### ROUND : 1

(OFFLINE)

3rd MARCH 2022 :

- SINGING
- ELOCUTION

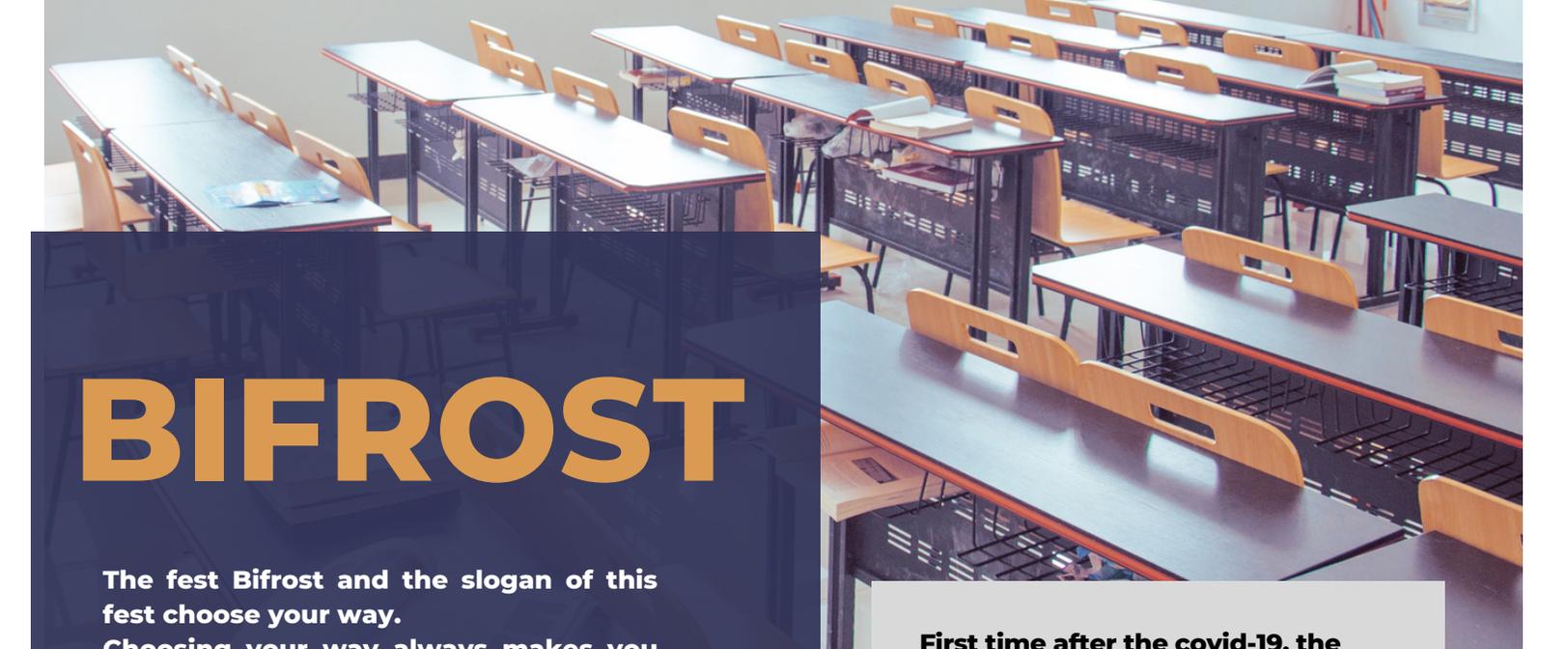
### DEADLINE FOR

(ONLINE)

3rd MARCH 2022 :

- REELS
- PHOTOGRAPHY
- SHORT FILM

## GRAND FINALE - 15 MARCH 2022



# BIFROST

**The fest Bifrost and the slogan of this fest choose your way. Choosing your way always makes you confident and helps you to learn new things with challenges.**

**The motive behind this fest is to boost every student's energy and improve towards college and for teachers to improve endurance towards college after the covid-19**

**In this event, we did 7 different kinds of intellectual, entertaining, skilful events, and career-oriented events to improve and develop each student.**

**When we announced the Bifrost we got a very cheerful and high response from every department of the college and around 250 students participated in the Bifrost fest.**

**First time after the covid-19, the tiny students' team with lots of passion with high energy in the right guidance of Dr Mrinal Kulkarni and organizer of event Tanmay matalwar with 1st and 2nd years of students with cooperation and teamwork did a successful fest in the college that's also happened because our Participants are very highly energetic, confident and motivated to their Passion.**

**I would like thank to each of our participants, classmates, teachers, judges, and audience who helped and made this event memorable and special. Thanks to our principal, Sir, Dr. Suryakant Lasune, vice principal, Ashwini Bhagkar, and Dr. Mrinal Kulkarni for their guidance and support**







# — CLICK TO CAPTURE

**This year we hosted one more event and that was "click to capture", and the slogan was "power behind the picture" in celebration of world photography day.**

**The motive behind this event is to empower every tiny photographer who loves to click pictures rather than photos being clicked by a phone camera or DSLR camera.**

**One more motive is to give a platform to every young youth to show their passion for capturing images of art they see with their eyes in this world.**

**In the 7 different categories of photography, we honoured a total number of 100+ wonderful photographs in that event.**

**We love to show every true power behind the picture, by an exhibition of photographs in this event to students and teachers of the college.**

**I would like to thank our department head Dr Mrinal Kulkarni ma'am, judges, and each classmate and participant who supported and helped in this event to become successful and inspired.**

**BMMMC 2021 2022**

An Initiative By BAMMC Department

# CLICK TO CAPTURE

*Power Behind The Picture*

A Digital Photography Competition

**23rd** **AUGUST**  
**2022**

11 am | Auditorium, First Floor

Come, join and liven up this photography competition which is going to be held this year.

Accepting Registration & photo submission: Till 17th August

Timing: 11 am to 12 noon in Room no. 102

Prajakta Thorat : 8605225533

Sakshi Kadne : 7678064512



GPS Map Camera

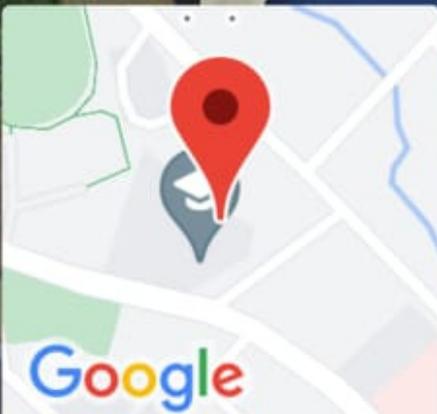
## Dombivli, Maharashtra, India

K.V.Pendharkar College, 6474+J6R, Kalyan Rd, Azde Gaon, Tata Power Company Limited, Dombivli East, Dombivli, Maharashtra 421203, India

Lat 19.214208°

Long 73.105478°

23/08/22 11:19 AM





**Dombivli, Maharashtra, India**

**K.V.Pendharkar College, Kalyan Rd, Azde Gao  
Limited, Dombivli East, Dombivli, Maharashtra**

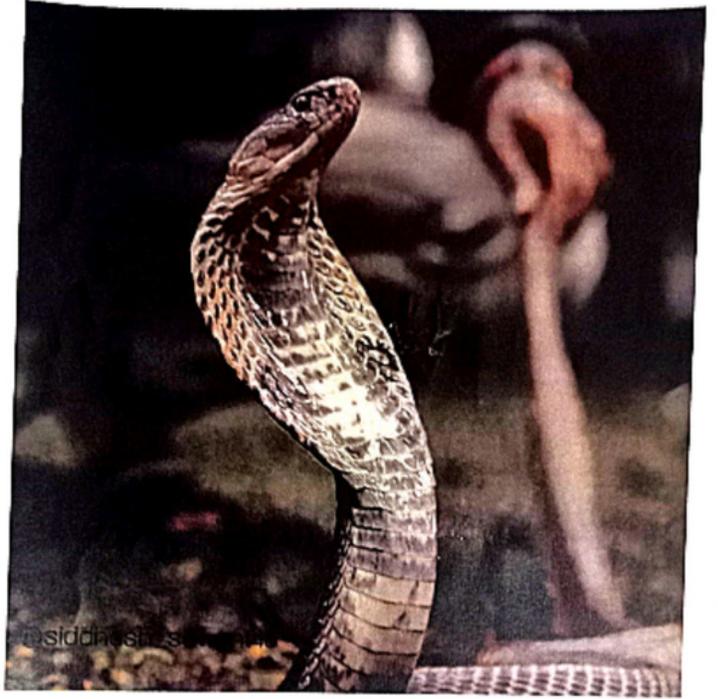
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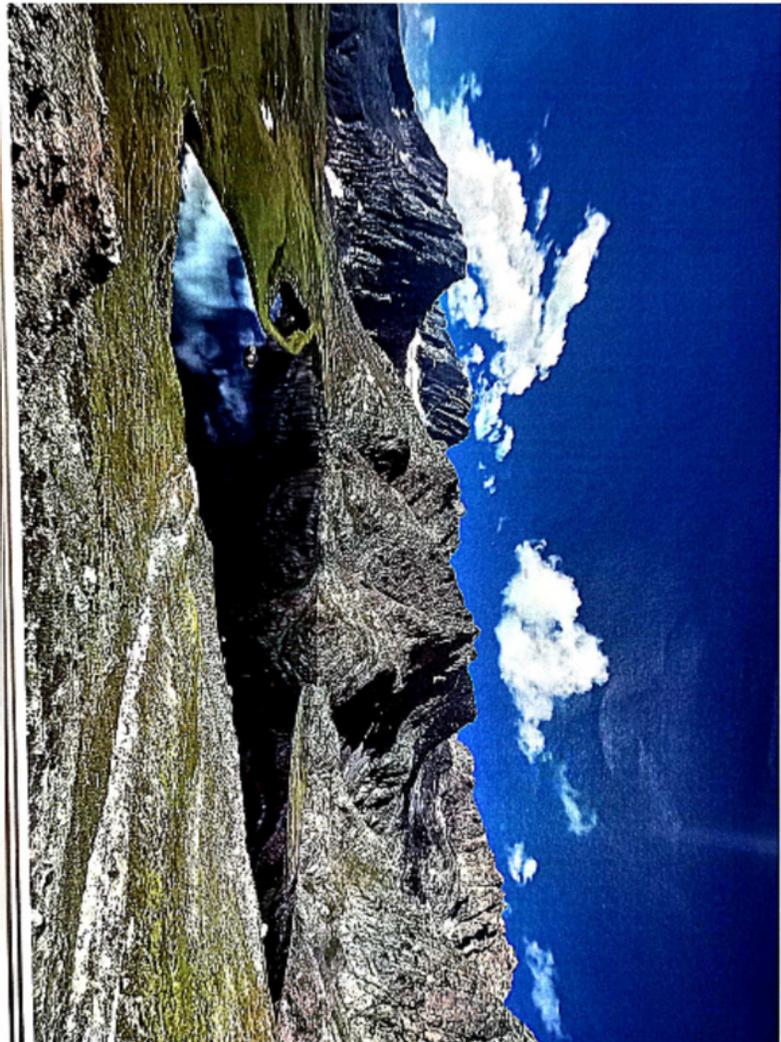
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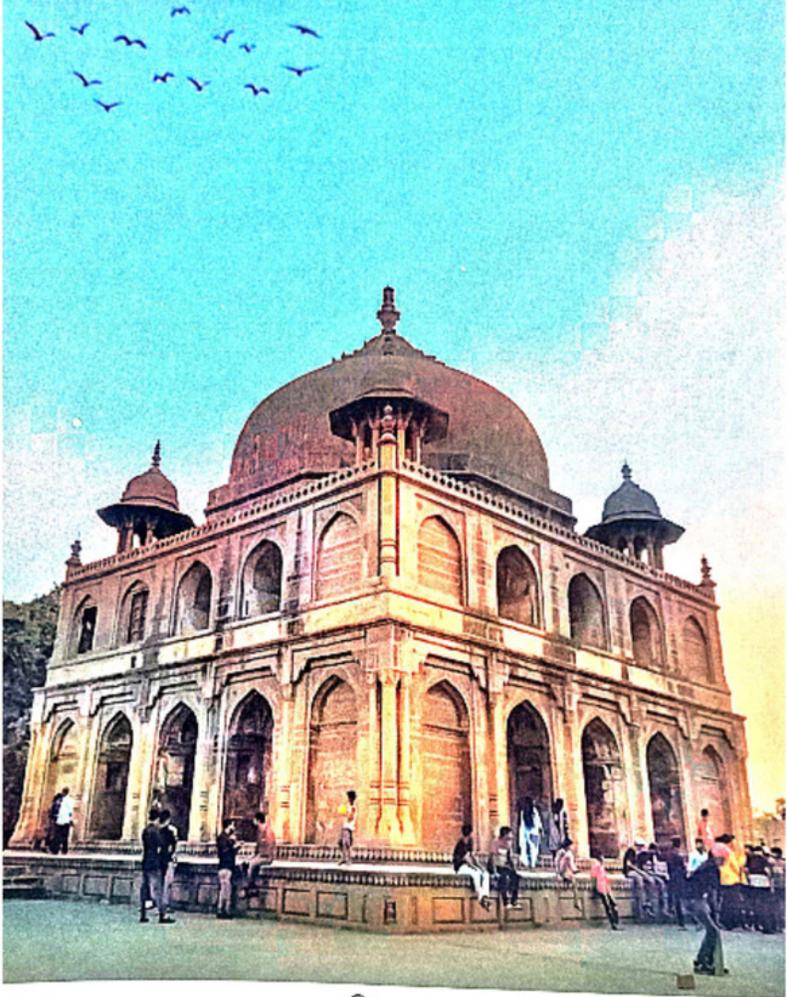


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Prathamesh bhande

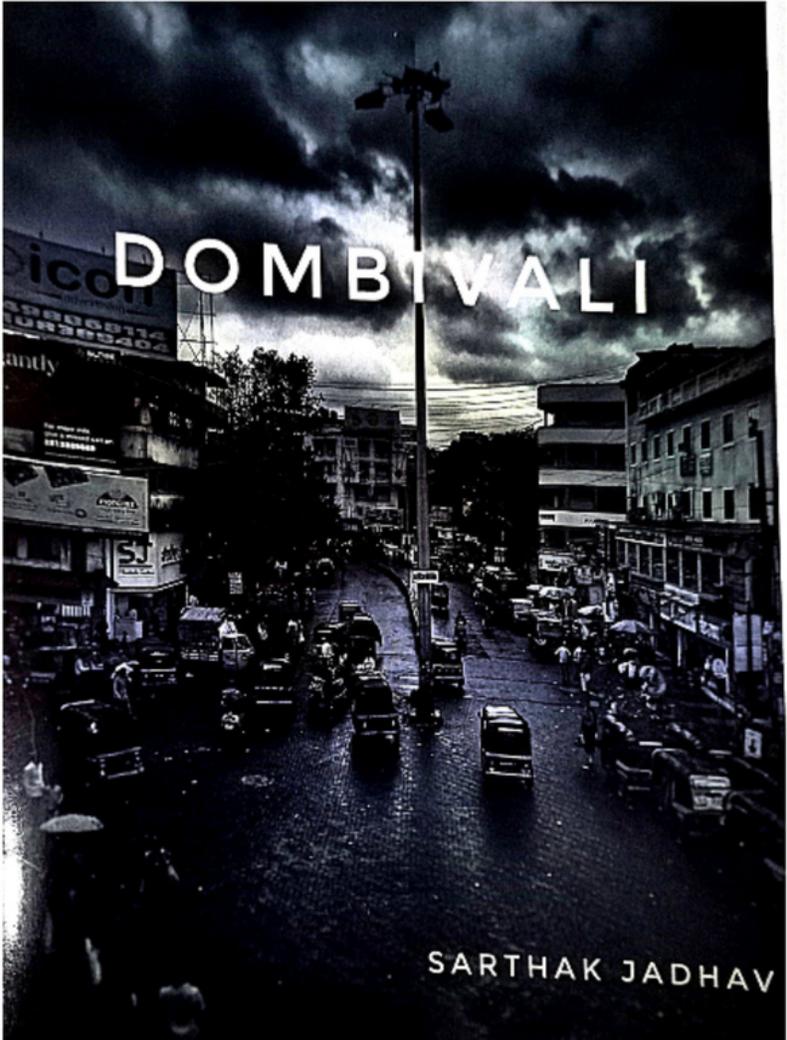
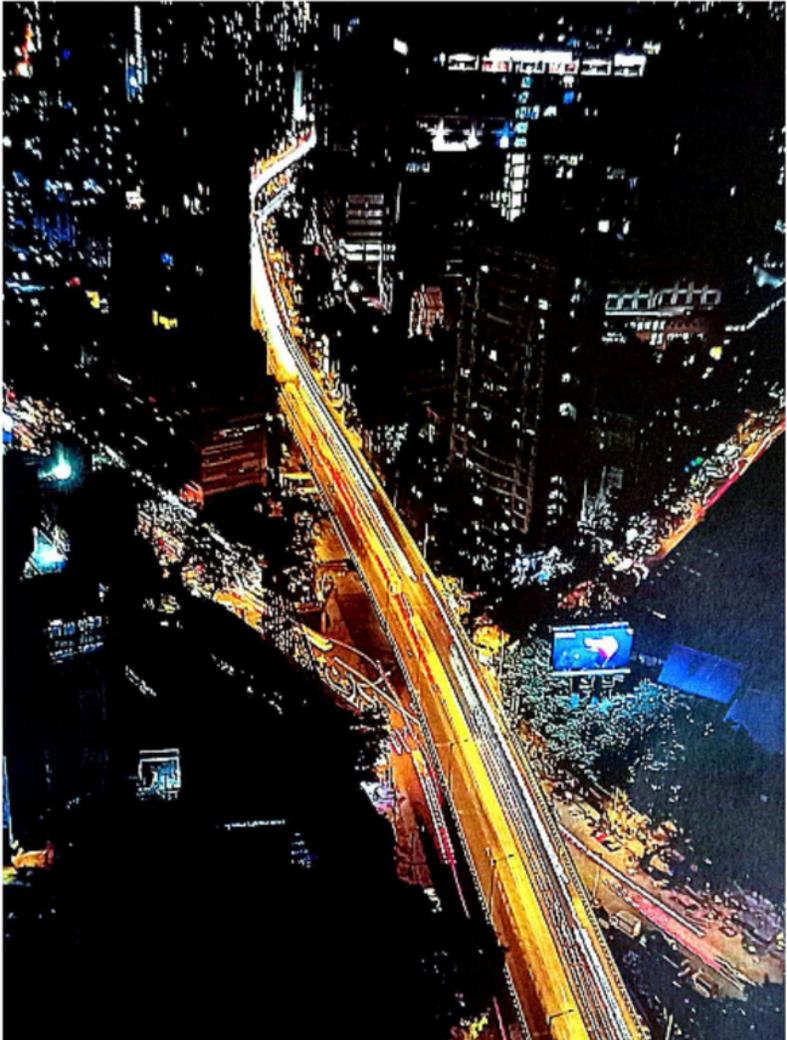




Amber Fort



Amber Fort



DOMBIVALI

SARTHAK JADHAV

**WEEKLY  
AND  
MONTHLY  
PRACTICAL  
ACTIVITY**

**THE BAMMC COURSE IS MORE ABOUT PRACTICAL KNOWLEDGE THAN THEORY. THAT'S WHY IN OUR DEPARTMENT WE DO LOTS OF PRACTICAL ACTIVITIES.**

**THE ACTIVITIES ARE: WRITING, STORYTELLING, GRAPHIC DESIGNING, DRAWING, ACTING,DIABETES, GROUP DISCUSSION, POWERPOINT PRESENTATION, AND MANY MORE.**

**THIS PRACTICAL ACTIVITY HELPS STUDENTS TO EXPLORE DIFFERENT SKILLS, HELPING TO BUILD CONFIDENCE, COMMUNICATION SKILLS, NEGOTIATION SKILLS, AND MANY MORE SOFT SKILLS THAT ARE REQUIRED IN THE CORPORATE AND ART WORLD.**

**THIS ACTIVELY HELPS IN OUR DEPARTMENT WITH SOME STUDENTS BUILDING THEIR JOB PORTFOLIO AND EVEN SOME STUDENTS WORKING PART-TIME IN MEDIA-RELATED FIELDS.**

**WE BELIEVE THIS IS BECAUSE OF THIS PRACTICAL ACTIVITY, STUDENTS ARE GROWING 2X TO 3X BETTER THAN OTHER STUDENTS.**





**Dombivli, Maharashtra, India**

**K.V.Pendharkar College, Kalyan Rd, Azde Gaon, Tata  
Dombivli East, Dombivli, Maharashtra 421203, India**

**Lat 19.213739°**

**Long 73.105211°**

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## Dombivli, Maharashtra, India

K.V.Pendharkar College, Kalyan Rd, Azde Gaon, Tata

Dombivli East, Dombivli, Maharashtra 421203, India

Lat 19.21379°

Long 73.105342°

28/07/22 09:39 AM

When you are about to give up..  
Remember that a Dry tree also  
blooms when it rains ..  
So there's still hope  
-Manasui



# Late night

*Who said staying awake late at night  
is bad*

*Sometimes it's necessary to have  
peace for yourself*

*Just watching how night sky feels like*

*So quite yet peaceful*

*Late night vibes hits so different*

*Watching how night sky changes it's  
color to welcome sun*

Q) CLICK SCREENSHOTS FROM REAR  
WINDOW AS  
EXAMPLES OF THE FOLLOWING SHOTS:  
CLOSE UP,  
MEDIUM SHOT, WIDE SHOT, PAN, TILT?

Medium shot



Pan shot



Close up shot



# BAMMC NEWSLETTER

K.V.PENDHARKAR COLLEGE



**DATE 30 NOV 2021,  
FIRST YEAR ORIENTATION**

## THE BEGINNING

You are not here to simply listen to the lecture; you are here for the understanding and gaining knowledge of BAMMC with particular and real hand experience.

Your real hand experience It is more precious than your written exam because it helps you in your academy, job, and business. as said by Tanmay (GS of BAMMC).

Tanmay began by discussing the play, such as what a play is, how to introduce yourself on stage, what is the stage, what is a sort of state, how to climb on stage, and how to act. After that, we assigned roles to some people and told them to try out the act and read the play; TANMAY

### KEY POINTS OF SPEECH

A play has two streams: story and music.

Play is a live event, where we can show a story with our acting on the stage.

We have a 360-stage, a semi-circle stage, a

## HOW VIDEOS CHANGE MY LIFE

One day I'm, Outside of my school, someone approached me and said I'm a youtuber. I'm in the middle of making a video.

Can you be a part of our video if you like to? We'll ask you some questions, and all you have to do is respond and answers those questions. Would you like to come along with us?

At first, I was afraid, but in mind i thoughts is had a chance of being on camera.

Then i say Sure sure, after that their buddy says, "Rolling camera action."

I became very nervous and I couldn't speak properly. Because of nervousness, I started looking around, and I answered badly all the questions that day.

I know what you're going through; I'm terrified of being in front of the camera After that, I saw and notice a lot of people making videos on YouTube.

I was scrolling through my YouTube videos when I came across Mumbaikar Nikhil's "youtube hone ke fayde" video thumbnail.

I began watching that video. It's a vlog inside that video. That was a lot of fun and a lot of wonderful.

I was in such a good mood that I began to watch more vlogs. I wished I could do the same after a while.

I decided to become a vlogger at that point and began practising in front of the camera at home, but I couldn't go outdoors with my phone and camera to film video anonymously.

I felt like a loser that day, but I was committed. I wanted to be a good YouTuber.

I began to practise on a regular basis, and I began to speak in front of the camera.

I go outside and explore my areas, and I make a lot of videos, but at the same time, I was a little humiliated in public with my friends and relatives laughing and

SPEED

BAR

BAR



DARK

COMPACT



**Dombivli Shikshan Prasarak Mandal's  
K.V.Pendharhar College of Arts, Science and Commerce  
(Autonomus)**

**BMS DEPARTMENT'S  
GALAXY**

**"Learn, Express, and Shine"**

**2022-23**



**D.S.P.M.'s**  
**K.V. Pendharkar College of Arts, Science &  
Commerce. (Autonomous)**

**GALAXY 2022-23**

**“Learn express and shine”**

**An Initiative taken by B.M.S Department**

**Honourable Support**

**D.S.P.M. - Chairman: Shri. Prabhakar Desai**

**Guidance and support**

**I/C Principal, Dr. K.R. Jagdeo**

**Vice Principal, Mrs. Ashwini Bagkar**

**HOD, Mr. Shailendra Mishra**

**Editor-- in Chief**

**Prof. Sushma T Jadhav**

**Editor-- in Chief student**

**Shubham Nitin Gajakas (TY BMS)**

**Students editorial team**

**Shubham J Mali (TY BMS)**

**Kirti Sadanand Dhavan (TY BMS)**

**Sukanya Tambe (TY BMS)**

**Yash Khot (TY BMS)**

The views expressed in Magazine may not be endorsed by editors.

**(For Private Circulation only)**

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*“Creativity is intelligence having fun.”*

## **Time places**

Let's take time

Let's take time to work,

It is the price of success.

Let's take time to meditate,

It is the price of power.

Let's take time to play,

It is the secret of perpetual youth.

Let's take time to read,

It is the way to knowledge.

Let's take to be friendly,

It is the road to happiness.

Let's take time to Lough,

It is the music of the soul.

& Most important,

Let's take time to love.

**Pratik Ahire FYBMS**

*“The roots of education are bitter, but the fruit is sweet.”*

## **Beauty Nature**

In thy nature is beauty

In thy nature is earth

In thy nature I find me

Worth...



In thy nature is peace

In thy nature I find myself

In thy nature every

Lasting greens...

In thy nature there is

More to be seen in thy nature beauty untold

In nature everything is worth more than gold....

**Sakshi Ram FYBMS B**

*"Education is not preparation for life; education is life itself."*

## पता ही नहीं चला

आजकल कंधोंपर किताबों का बोझ नहीं रहा.

किताबों की जगा कब फ्यूचर टेंशनने लेलि

पता ही नहीं चला।

आजकल नींदों में सपने आने कुछ बंदसे होगए हे

सपनोंकी जगा कब परेशानियोंने लेलि

पता ही नहीं चला।

आजकल चेहरो पर वह खिली हुई मुस्कुराहट नहीं आती

मुस्कुराहट की जगा कब डिप्रेसन लेलि

पता ही नहीं चला।

आजकल साथ में मां-बाप और दोस्तो का साथ नहीं रहा

मां-बाप और दोस्तों की जगह कब फोन के ऐपने लेली

पता ही नहीं चला।

वो बचपन का बचपना कब जिंदगी से छूट गया पता ही नहीं चला

अगर किसी को वो पता मिल जाए तो बस उस पत्ते का पता बता देना।

**Shrutika Sanjeevan Kamble TYBMS A**

*“Art is the elimination of the unnecessary.”*

**Kuch Baki Hai**

Aahista chal zindagi,  
Abhi kai karz, chukana baki hai,  
Kuch dard mitana baki hai,  
Kuch farz nibhana baki hai.  
Raftaar mei mere chalne se,  
Kuch rooth gaye kuch chhut gaye,  
Roothon ko manana baki hai,  
Roothon ko hasana baki hai.  
Kuch hasraatein abhi adhuri hai,  
Kuch kam or bhi zaruri hai,  
Khwahishen jo ghut gayi is dil me,  
Unko dafnana baki hai.  
Kuch rishte ban kar toot gaye,  
Kuch judte-judte chhut gaye,  
Un toote-chhute rishton ke,  
Dard ko mit ana baki hai  
Tu aage chal main aati hu,  
chhod ke tujhe me ji paungi?  
In saanson par haq hai jinka,  
Unko samjhana baki hai,  
Aahista chal zindagi,  
Abhi kai karz chukana baki hai...

**Charmi Divech SYBMS A**

*“When your signature changes to autograph this marks the life success”*

## सफर मुंबई ट्रेन का

धक धक करके मैं चलती हूं  
देख कर उनको थम जाति हूं  
कुछ पल वहा रुक्ति हु  
उनको साथ लेकर फिर चलने लग जाति हूं



कभी हमसे करते हैं वो हजारो अंतराल  
कभी बस शांति से हमें देखते हैं  
कभी हो जाती है खफा, या कर लेते है लड़ाई  
पर ज्यादातर वो जल्दबाजी है साथ मिलकर

कभी मेरा हाथ पकड़ के खड़े रहते हैं  
तो कभी साथ बैठ जाते हैं  
कभी सफर में सोजाते है  
तो कभी गाना सुन कर वक्त बिटाते है



हर नए जगह पर मैं उनको सुना दूं  
उनको सही जगह की बात बता दूं  
वो चले जाते हैं या कभी रुक जाते हैं  
पर आते-जाते ही मेरी यादें बना जाते हैं

**Charmi Divecha SYBMS-A**

*"Opportunities don't happen, you create them."*

### **The Way You Are**

In the darkness, you shine like the moon,  
But sometimes you sleep till noon.  
The problem you face is so mighty,  
But you stand tall like a tin a knight-y.  
Moon is the beauty of the sky at night,  
The darkness around you shows how much you light.

Creative, stupid, and curious you are,  
To enhance your beauty, I'll shine like a star.  
Simple, sweet, and sexy, the combination I never thought,  
Sometimes I wonder what a Miraculous person the universe  
Has brought!

Be careful, brittle my heart is,  
The true ecstasy of love is her kiss.  
I had to rate you out of 10, a solid 9.9,  
Can I call you mine?

**Pranjal Mishra SYBMS A**

*“Unchaste imagination is as bad as unchaste action.”*

## Gates of hell, Turkmenistan:



**Did you  
know about  
Darvaza gas**

The darvaza gas carter, also known as the door to hell or Gates of the Hell. It's located in Turkmenistan. It has been named the door of the hell, mostly because of all the fires. The gates of the hell were created in the 1971 when a soviet drilling accidently punched into a massive underground natural gas caven, causing the ground to collapse and the entire drilling rig to falling. Having punctured a pocket of gas, Poisonous fumes begin leaking at an alarming rate

*“Great things are done by a series of small”*

## Ram Setu

Release: Date 25 October 2022

Language: Hindi

Dubbed: Tamil, Telugu

Genre Action, Adventure, Drama, Thriller

Duration: 2h 22min

Akshay Kumar, Jacqueline Fernandez,

Nushratt Bharuccha, Satyadev Kancharana

Director: Abhishek Sharma

Writer: Abhishek Sharma

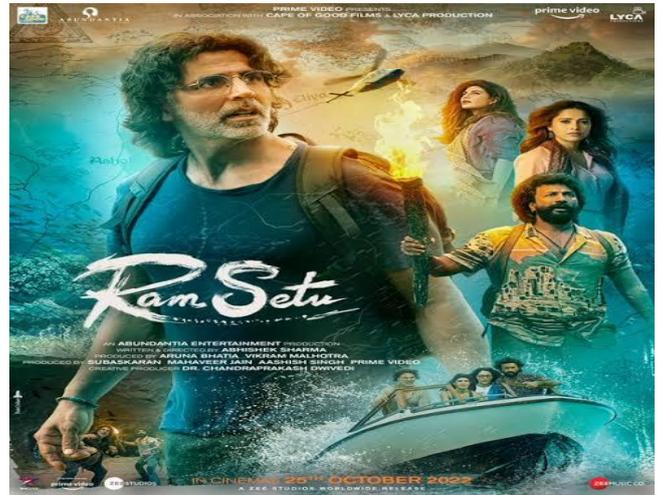
Cinematography Aseem Mishra

Producer: Aruna Bhatia, Vikram Malhotra,

Subaskaran, Mahaveer Jain, Aashish Singh

Production: Cape of Good Films, Abundantia Entertainment, Amazon Prime Video,

Local Productions



### MY REVIEW

A beautiful ramification of TRUTH supported by strong screenplay and cinematography. The main USP of this cinema is it maintains uncanniness till the end.

The plot is extremely realistic and it sheds light on the religious prejudices that occupy a big space in the heart of the present Indian populace. The human hearts are an infinite reservoir that can be that can hold an untold amount of distortion and wrong insights, which are even darker than the color black

I would like to thank the director and his whole team to let the people of India know about their history. It had done full justice in the narration of our history. It has a few technical flaws but can be ignored due to the superb story and narration. SHREE RAMA, who built a great history and gave us setu of Satya, Maryada, bhakti, Mukti, shastra, Gyan, Maya, knowledge about karma .....and built one the greatest architecture of THE RAMA SETU.

**Pratiksha Pramod Kedare TYBMS A**

*“An investment in knowledge pays the best interest.”*

## **Mysore Palace (Karnataka)**

Mysore's proud possession and one of India's most visited attractions, Mysore Palace is an incredible man-made edifice. It is a palatial structure that tells many tales of India's complex and intriguing past. This palace was once a royal residence of the mighty wonder rulers, who ruled Mysore for seven centuries. Built between 1897-1912 as per the designs of English architect- Henry Irwin, this three-storeyed building boasts a flawless combination of Hindu, Gothic, Muslim and Rajput styles of architecture. The palace is constructed using fine grey granite and features.



### **My experience**

This is one of the top most attraction in Mysore. The palace is very beautiful and the same is well preserved. The staff at the historical monument is very knowledgeable. You cannot wear shoes to the palace for obvious reasons.

If you plan by evening around 4 pm. You can both visit the palace & the light show starts at 7 pm. Or else two times you need to buy entry tickets. One of the marvelous architectural buildings and has a lot of moments to pursue Take a guide and see through so you can enjoy every detail inside the palace Entry tickets for the Light show are 120₹ and at other times it is 100₹. Students' concession is there. Parking available. Horse chariot rides are available outside the palace. Prices depend upon the day and public holidays. All 4 gates ride is 1000₹ and small round is 500₹.

There are value-added services like photography and buggy ride around the palace which is very nice. It is indeed a majestic experience

**Shravani Satyesh Shirke TYBMS A**

*“Happiness is not something readymade. It comes from your own actions.”*



# Tongue Twisters



1. How much wood would a woodchuck chuck if a woodchuck could chuck wood?

1. If two witches would watch two watches, which witch would watch ?

1. No need to light a night light on a light night like tonight.

1. Lesser leather never weathered wetter weather better.

1. Which wrist watches are Swiss wrist watches.

### **FUN FACT:**

They Strengthen and stretch the muscles involved in speech. This muscle exercise leads to clearer pronunciation, clearer speech patterns, and helps rectify some of the hardest sounds for you.

*“A good decision is based on knowledge and not on numbers”*

## **Research Review:**

### **Work-life balance of married working women**

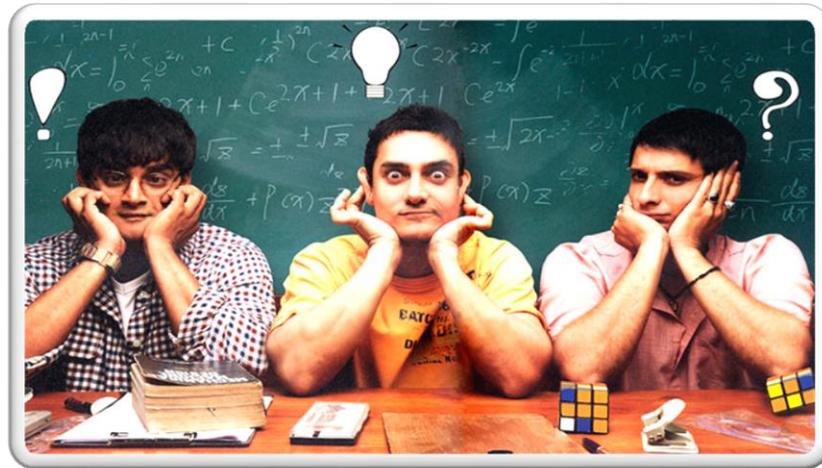
Everyone, this is a Research review on the work-life balance among married working women in the Kalyan Dombivli region. The above topic shows how married women balance their work-life balance. Today, Indian married women are exposed to significantly more educational opportunities compared to a few decades ago, especially in urban areas. Economic necessity is the primary reason for married working women's employment which impacts both positively as well as negatively in their marriage life.

As everyone knows women are increasingly encouraged to seek self-fulfilment in demanding careers. They feel or face immense pressure by sacrificing for their children by providing intensive parenting to them or developing their children.

The study aimed to investigate how married women simultaneously manage their work-life in the office and house. In this research, I got to know how they balance their work life or workload, also one of the positives I studied in this research was a productive approach from women regarding their jobs, work culture, and managing both house and office chores. Even though they are exhausted from working in the organization, they still handle the household work.



***“The highest result of education is tolerance”***



### **3IDIOTS MOVIE REVIEW**

The 3 Idiots is a 2009 Indian Comedy drama film directed by Rajkumar Hirani. It has Managed to Secure a Position in the top Bollywood movie list It is one of the best Motivational Blockbuster films in the History of Bollywood the Cast of the Film has done a Very good Job. The three essentials' roles of the & Idiots films are Aamir as Ranchoddas Shamaldas Chanchad (Ranch) or Phunsukh Wangdu, R Madhavan as Farhan Qureshi, Sharman Joshi as Raju Rastogi, apart from them, traditional stars are Kareena Kapoor as Pia, Omi Vaidya as Chatur Ramalingam (Silencer) and the Negative Character of Movie Boman Irani as Viru Sahastrabuddhe (Virus)

The Story of the Movies was Very motivational there is an Imperial College of Engineering where 3 Idiots come to study, Farhan Qureshi was forced by his father to become an engineer, Raju Rastogi comes to college for fulfilling his family fortunes (Rancho) Ranchod comes to college only for pursuing knowledge, 3 of them became very good friends.

This Movie has so many emotions fun, comedy, and emotional. Motivational. This movie teaches us how to study, we should go for knowledge not only for great marks, this movie is must watch for college and university students the very famous dialogue from the movie was “Gyaan ke Piche bhago successaalijhakk maar ke tumhare peeche bhago” this is dialogue is very motivational. Apart from this me the movie also had so many good songs such as “ALL IZZWELL” “ZOObI Doobi” Behti Hawa sat ha Woh” Give me some sunshine “

Jaane nahi denge tujhe” composed by shantanu moitra. This all songs sung by Shreya Ghoshal, Sonu Nigam, Shaan, Swanand Kirkire, Suraj Jagan, Sharman Joshi.

I Love this Movie so much because the genre of this movie was about motivation friendship, how to study, creatively not onor memorizing books I think this movie is a Masterpiece, no matter how many times you watch this movie, you will like and laugh so much every time you watch this movie.

**Yudhita Pradeep Madkholka FYBMS**

*“Creativity doesn’t wait for that perfect moment. It fashions its own perfect moments out of ordinary ones.”*

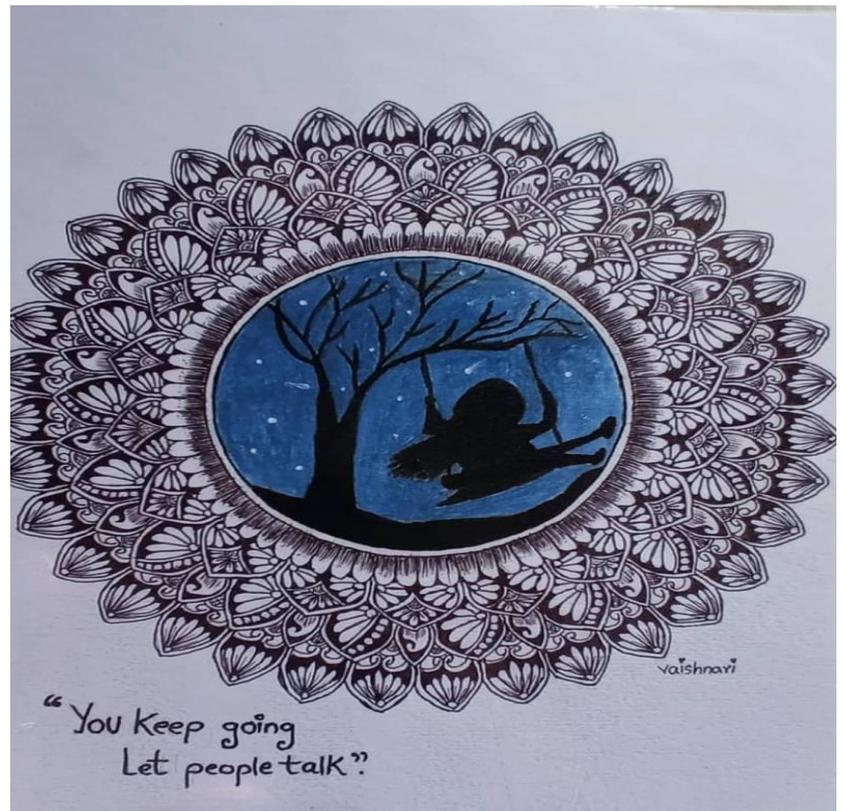


**Amit Meena bohra 227769**  
**FYBMS - B**

**DEMON SLAYER ART**

*"Don't wait for inspiration. It comes while working."*

**MANDALA ART:**

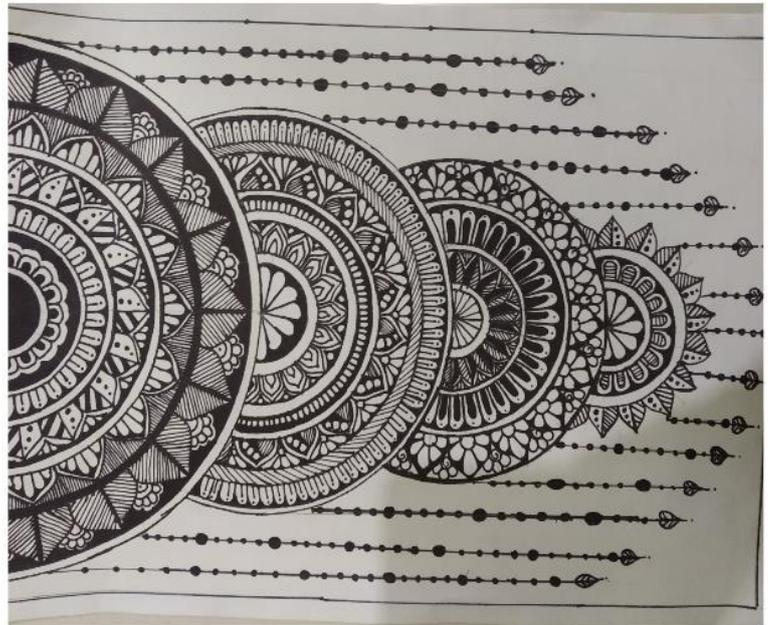
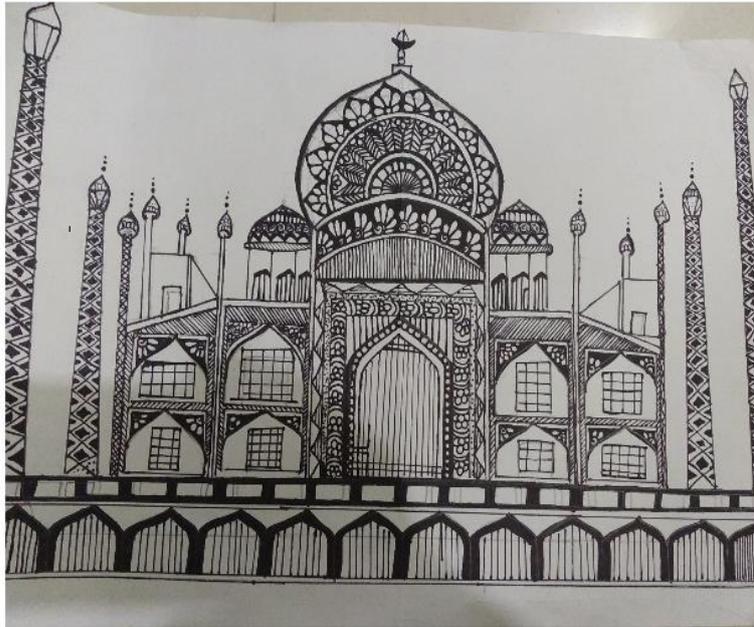


**VAISHNAVI AIWALE TYBMS A**



VAISHNAVI AIWALE TYBMS A

*“The true method of knowledge is experiment.”*



**Prachi Suryakant Ghadi FYBMS B**

*"It is never too late to be what you might have been."*



**Samruddhi Bhoite TYBMS A**

*“There are no mistakes, only opportunities.”*



**Sayali Karbele TYBMS A**

*“The time is always right to do what is right.”*





-Radha Krishna Art

**Kirti Gaikwad TYBMS A**

*"Do not let what you cannot do interfere with what you can do."*



**Bhakti Priya Singh FYBMS B**

*“The doorstep to the temple of wisdom is a knowledge of our own ignorance.”*



**Samruddhi Sachin Sonkusare**

*“The happiness of your life depends on the quality of your thoughts”*

## MONEY COMPOUNDING IS NOT ONE DAY MATCH

Have u dreamed of having a life where you don't have any financial tension? Or isn't it sound magical that your money is going to work for u!!

It is rumored that Albert Einstein once quipped that the most powerful force in the universe is the principle of compounding.<sup>1</sup> In investing and finance, this force manifests itself through the concept of compounding returns. In simple terms, compound interest means that you begin to earn interest on the interest you receive, which multiplies your money at an accelerated rate. It is rumored that Albert Einstein once quipped that the most powerful force in the universe is the principle of compounding.<sup>1</sup> In investing and finance, this force manifests itself through the concept of compounding returns. In simple terms, compound interest means that you begin to earn interest on the interest you receive, which multiplies your money at an accelerated rate.

For example, if you have 500rs and earn 10% interest per year, you will have 550rs after one year. Then, if you earn 10% interest the next year on that \$550, you end up with 605rs by the end of year two. The process continues until, eventually, your original 500rs may be eclipsed by the amount of interest you gained. This is one way many top investors find success in building their wealth. But it's not just for the top investors—you can take advantage of compound interest through savings accounts and investment portfolios. Learn how to do that below.



## What Determines How Much Compound Interest You Can Earn?

Three main factors can influence the rate at which your money compounds:

- 1.) The rate of return, or the profit, on your investment: For example, if you are investing in dividend-paying stocks, this would be your total profit from capital gains and dividends. If you were putting money in a savings account.
- 2.) Time: The more time you give your money to build upon itself, the more it compounds. For example, all things equal, your money would grow more over 10 years than it would over five years.
- 3.) The tax rate, and when you have to pay taxes on your interest: You will end up with far more money if you don't have to pay taxes at all, or at least not until the end of the compounding period rather than at the end of each year. This is why tax-deferred accounts, such as the traditional IRA.

## How Compound Interest Could Impact Teens and Their Savings

Your teenage years are a good time to start saving money for the future. Because you have time for that money to grow before you may need it to buy a house or retire, you can benefit greatly from compound interest. One easy way to start earning compound interest is to open a high-yield savings account and contribute a set amount to it every month. Over time, your money could grow a lot and allow you to build your wealth. While you may only be able to earn a small amount of interest in a savings account, the compound interest could add up over time.

For example, if you contributed 50 per month to a high-yield savings account and earned 0.5% interest per year, you could have over 12,000 after 20 years.

Once you've got the savings part down, you could try your hand at investing to potentially benefit even more compound interest. For example, let's say you opened an investment account with the help of an adult (you usually need to be 18 years or older to invest). If you contributed 100rs months to the investment account for 40 years and earned a 10% annual rate of return on investment each year, your money could grow to be more than Rs530,0

## **A Higher Rate of Return Often Comes with More Risk**

You may want to do whatever it takes to earn a higher rate of return on your savings or investments, but that can also be dangerous because higher rates usually bring higher risk. No matter how successful you are along the way, you'll always want to avoid the possibility of losing more than a budgeted amount of the money you invest.

To lower your risk, consider all your investment possibilities. You could start with a high-yield savings account, earning a decent amount of interest on that money year over year. There are also certificates of deposits (CDs) and money market accounts that offer you the chance to earn interest on your money. Stocks, bonds, exchange-traded funds (ETFs), index funds, and mutual funds are also investments to explore. Adding a variety of investments to your portfolio can help you diversify that risk and build your wealth through the power of compound interest.

### **WHERE WE CAN INVEST OUR MONEY 💰**

1. Share market. 2. Mutual funds. 3. SIPS .4. DEBENTURES. 5. GOLD. 6. REAL ESTATE 7. FIXED DEPOSIT. 8. SAVING IN BANK .9. TRADING .10. CRYPTO CURRENCY. 11. NFTS. 12. GOVERNMENT BONDS. 13. SENIOR CITIZEN PENSION SCHEME.

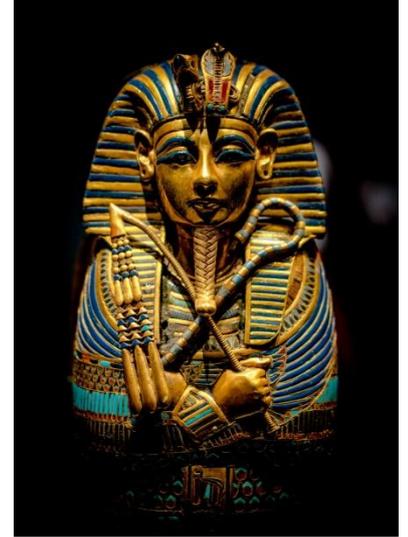
SO, THIS IS THE IMPORTANCE OF MONEY COMPOUNDING AND THIS ALL HAS A FINANCIAL RISK SO EVERY DOCUMENT AND POLICY IS TO BE READ AND UNDERSTOOD CAREFULLY.

**RAHUL SANJU BHADORIYA TYBMS A**

*“An essential aspect of creativity is not being afraid to fail.”*

## **Mummy Mystery: - The Story of King Tutankhamun.**

King Tut (1341BCE-1323BCE) Tutankhamun was an Egyptian Pharaoh who was the last of his family in the 18<sup>th</sup> dynasty. King Tut was only 18-19 years when he died and his whole life was plagued with sickness. This could have been because his parents were brother and sister Amenhotep IV /Akhenaten) and (The Younger Lady). His stepmother was the famous Egyptian Queen Nefertiti. Who was the last of his family in the 18<sup>th</sup> dynasty? King Tut was only 18-19 when he died and his whole life he was plagued with sickness.



Around 100 years ago today, British archaeologist Howard Carter opened up the burial chamber of King Tutankhamun it was and still is one of the most intact tombs of Egyptian Royalty ever discovered one that provided beautifully preserved artifacts including the famous golden coffin of the pharaoh, it considered one of the most important findings until now. He was just 9 years old when he became the king. And his reign was short, lasting only until his death as a teenager.

### **What was found in the tomb?**

In all, there were over 5000 objects in the tomb. It took Carter and his team 10 years to catalog everything. Once inside the tomb, carter found a room filled with treasures. Carter later wrote, “Details of the room emerged slowly from the mist ... strange animals, statues, and gold—everywhere, the glint of gold.” The ancient Egyptians believed they needed to fill it with all the stuff that a ruler might need in the afterlife. And since they believed the afterlife would be a lot like normal life that meant packing everyday items like clothing, food, beds, chariots, headrests, and games. The pharaoh would also need all his ceremonial stuff like thrones, statues, and jewelry.



# Create your name in the ancient Egyptian language (Hieroglyphs).

## Hieroglyphs chart

|   |  |   |  |                |  |
|---|--|---|--|----------------|--|
| A |  | N |  | Seated Man     |  |
| B |  | O |  | Seated Woman   |  |
| C |  | P |  | Seated god     |  |
| D |  | Q |  | Cartouche      |  |
| E |  | R |  | Plural Strokes |  |
| F |  | S |  |                |  |
| G |  | T |  |                |  |
| H |  | U |  |                |  |
| I |  | V |  |                |  |
| J |  | W |  |                |  |
| K |  | X |  |                |  |
| L |  | Y |  |                |  |
| M |  | Z |  |                |  |

The ancient Egyptians used pictures for writing. Each picture stands for either a sound or an idea. To write a word, Egyptians would spell out the word with the hieroglyphs that stand for sounds. Then they would add a hieroglyph that stands for an idea. These idea hieroglyphs are called *determinatives*. For example, a person named Dan could use the sound signs for D, A, and N, and follow those with the determinative for a man. Names could be put inside a cartouche. Dan's name would look like this:

If there was more than one of something, the plural hieroglyph would be added. For example the word *pen* could be written with the sound signs for P, E, and N. For more than one pen, the word could be written with the same sound signs and then the plural strokes, which would look like this:

*You may have seen other Egyptian alphabet lists that look different than this one. That is because the Egyptians did not use all the same letters we use. To have a hieroglyph for each English letter, we have to use some signs that have similar sounds.*

## **SHORT STORIES ABOUT GREEK MYTHOLOGY**

### **The 12 Labours of Hercules.**

Hercules is the most famous hero of Greek mythology and is famous for his 12 Labours. He was a demigod, the son of Zeus and Alcmena. Hera, the wife of Zeus, hated Heracles and wanted to kill him. Maddened by the goddess, Hercules had his wife Megara kill his sons. After realizing what he had done, he went to Delphi and asked Apollo how he could atone for his actions. Apollo's oracle Pythia told him to go to Tiryns and serve his cousin King Eurystheus for 12 years. His cousin, Eurystheus instructed him to complete 12 impossible tasks He ordered him to 1) kill the Nemean lion, 2) kill the nine-headed Lerne hydra, 3) capture Artemis' golden doe, 4) capture the Erymanthos boar, and 5) take Augeas's stables. scavenge in one day, 6) kill the Stymphalian bird, 7) capture the Cretan Bull, 8) steal Diomedes' mares, 9) get the belt of Hippolyta, Queen of the Amazons, 10) get the cow of the monster Geryon, 11) steal the golden apple. 12) of the Hesperides Hades' three-headed dog, Cerberus, is captured and brought back. Hercules was freed from Eurystheus' service by completing all twelve tasks and atoning for killing his son. More adventures followed until he discovered the tragic death of his wife, Megara.

### **Pandora's Box.**

After Prometheus gave fire to humans, Zeus decided to take revenge. He ordered Hephaestus to create the first human woman from earth and water. Each god gave a woman a gift. Athena gave her wisdom, Aphrodite beauty, Hermes cunning, and much more. The woman's name was Pandora (meaning "all gifts" in Greek). Zeus gave the jar to Pandora, warning her not to open it under any circumstances, and sent her to Epimetheus, brother of Prometheus. Prometheus warned his brother not to accept Zeus' gifts. But Epimetheus accepted Pandora, and though Pandora tried to resist the temptation, she opened the jar and spread all the evil in the world. Hatred, war, death, hunger, disease, and every calamity were immediately released.

## **FUN FACTS:**

1. The US has no official language
2. There are around 160 different English dialects.
3. Over 20,000 new French words are created each year.
4. Hawaiians have over 200 different words for rain.
5. Hindi didn't become the official language of India until 1965.
6. People who speak Chinese use both side of their brain, English uses only one side.
7. Chinese mandarin is considered the hardest language to learn.

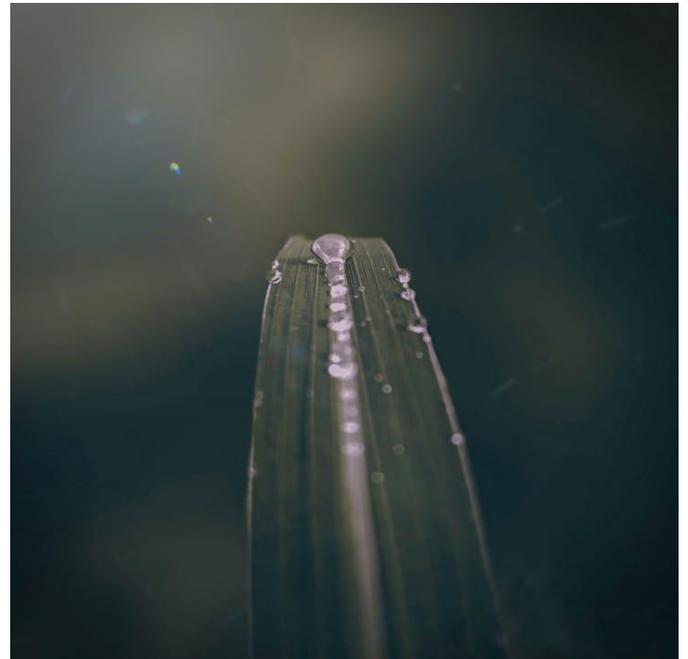
**Sukanya Tambe TYBMS A**

*“The question isn’t who is going to let me; it’s who is going to stop me.”*

## Macro photography

photography, usually of very small subjects and living organisms like insects, in which the size of the subject in the photograph is greater than life size (though macrophotography also refers to the art of making very large photographs). By the original definition, a macro photograph is one in which the size of the subject on the negative or image sensor is life-size or greater. In some senses, however, it refers to a finished photograph of a subject that is greater than life-size.

Photographing raindrops is one of the many things you can do in the field of macro photography -- shooting photos extremely close up. While the point-and-shoot digital camera can do excellent macro photography, your best bet is to use a single reflex lens (SLR, or the digital DSLR) camera with a special macro lens.



In addition to simply photographing raindrops, we can manipulate backgrounds and surrounding objects to create colours and images

reflected in the water. With the right camera settings and tools, expressive and original photos can be easy.

In this article, we'll discuss how to take photos of raindrops and learn more about ways to take incredible pictures of tiny things.



**KAUSHAL SAHADEV GAWADE TYBMS A**

***“I am not a product of my circumstances. I am a product of my decisions”***

**HAVE YOU WONDERED IF THE CLOTHES WE ARE WEARING CAN MAKE US SICK!! YES, THIS IS NOT A JOCK IT IS NOT ONLY AFFECTING US BUT ALSO AFFECTING OUR ENVIRONMENT TOO!!**

### **HOW WORRIED SHOULD YOU BE ABOUT CHEMICALS IN YOUR CLOTHES?**

Every so often, a food recall scares us into thinking about everything that can potentially go wrong before a product land on shelves Our clothing, too goes through a long complicated, and often a chemical -ridden process to get the hanger So why are there so many chemicals in our clothes in the first phase? And which one is dangerous? And how to avoid it without driving yourself crazy.

### **THE CHEMICALS YOU SHOULD TRY TO AVOID**

most clothes are treated with some type of chemicals Even natural finer like cotton and wool could have been sprayed with herbicides and pesticides, dyed, and treated with compounds that make them fire- ‘odour-stain-water-and wrinkle resistant. Petroleum-based synthetic fibers like polyester and nylon pull even more chemical compounds into the mix.

**“EVEN MANY BIG CLOTHING COMPANIES AND BRANDS ARE USING THE HARMFUL CHEMICALS AND THEY ARE NOT REQUIRED TO DISCLOSE ANY OF THE CHEMICALS USED IN THE PRODUCTION PROCESS!**

{EXAMPLE: SHEIN, ZARA ETC}

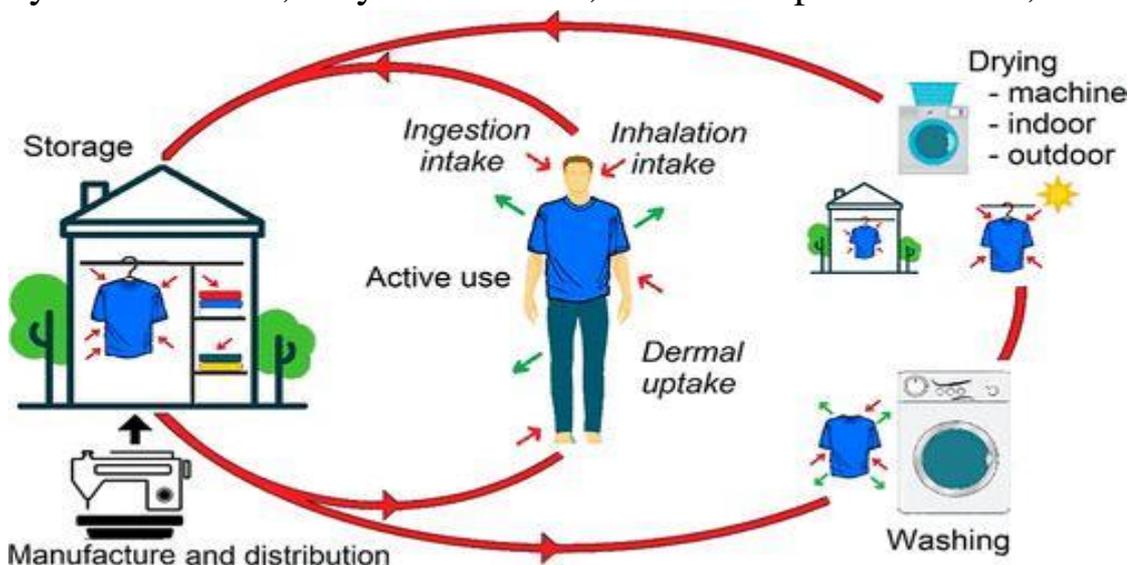
### **GO LETS THROUGH WHAT ARE THE SOME OF THE CHEMICALS USED HERE: -**

Azo Dyes, NPS, formaldehyde, and phthalates, metals, are the harmful chemicals that are used in many fabrics and by clothing brands and it’s hazardous for our health Even it’s affecting our environment too because these chemicals are very hard to get disposed of in the

environment and it's sustained for a long period causing harmful effects to nature and environment.

### **HOW TO CHOOSE A BETTER OPTION.**

Keep in mind that everyone reacts to the aforementioned chemicals differently, and low levels of them don't pose any significant health risk to the average person. But if you're prone to skin irritation or rashes, here are some easy ways to protect yourself. Prioritize natural materials, Wash before your first wear, do your research, avoid cheap fast fashion, etc.



**Kajal Bhaigade TYBMS A**

*“Life is a succession of lessons which must be lived to be understood.”*

## CHOCOLATE ICE-CREAM



### **Ingredients: -**

- Whip cream 650ml
- Dark compound 200g
- Milkmaid 380g
- Chocolate or vanilla essence 1 tbsp.
- Choco chips 100g
- Hershey's chocolate syrup 1 packet 30g

### **FUN FACT!**

**THE TALLEST ICECREAM  
CONE WAS OVER 9 FEET  
TALL IN ITALY**

## Recipe: -

- Beat the whipped cream with a beater in a bowl for 10 to 15 mins until it gets a smooth texture.
- On other hand melt the dark compound in boiling water in a bowl.
- In a bowl with whip cream add the dark compound melted, and mix it well again with the beater.
- Beat the mixture till it gets brownish color
- Next mix all the mixture with milkmaid for sweetness.
- Add Choco chips into the mixture.
- At last, put all the mixture into a freezing container or a big plastic container.
- Garnish it with some chocolate syrup and some Choco-chips.
- Freeze it for 6-8 hours.
- And enjoy your homemade ice cream.

**ENJOY!!! ENJOY!!!**

### **FUN FACT!**

**THE FIRST ICECREAM  
RECIPE WAS FOUND IN  
A 1665 RECIPE BOOK**

**Vinayak N. Alat**

***“To achieve what 1% of the world’s population has, you must be willing to do what only 1% dares to do.”***

### **Al faham chicken**

**Ingredients** – 1kg chicken, curd, ginger- garlic paste, lemon juice, pepper, cardamon, cloves, cumin powder, coriander seeds, red chilli, tomato, onion, coriander, olive oil.

#### **Steps-**

□ Take and clean 1 kg chicken whole, using a fork or knife prick the chicken so that the marination goes inside the chicken. Cut it into two pieces lengthwise, or into four pieces.

□ In a bowl add ½ cup plain curd, ginger-garlic paste  
1 lemon juice, 1 and ½ teaspoon pepper.

Mix it well then marinate the chicken coat it well.

Keep your marinated chicken in refrigerator.

#### **For dry roast -**

Take a pan put 3 cardamon, 4 cloves, 2 spoon cumin powder, Coriander seeds 5 red chillies.

Dry roast it for 2-3 mins, then blend.

In blender jar, add ½ chopped tomato ½ chopped onion, coriander leaves and step 3rds powder masala blends them together and apply on chicken

(With olive oil its optional)

Keep your marinated chicken in freezer.

Preheat the oven and set temperature of 180 C let the chicken cook for 40 minutes.

**ENJOY.....**

**SHUKRITA FYBMS B**

*“If you want to live a happy life, tie it to a goal, not to people or things.”*

## **CHILLY FUSION**

VARIOUS CHOCOLATE RECIPES ARE AVAILABLE IN THE MARKET BUT THIS ONE IS VERY UNIQUE AND DELICIOUS RECIPE YOU ALL LIKE IT.....



### **INGREDIENTS**

White chocolate, chili flakes, butter, chocolate mold (Any shape).

### **METHOD**

- #1 Take a bowl and add some white chocolate
- #2 Add 1 TB spoonful of butter.
- #3 Then mix well until smooth texture.
- #4 Sprinkle some chili flakes in the mold. And then cover up with melted chocolate. Tap very well.
- #5 Freeze it for 5-10 minutes.
- #6 Then Demold and enjoy it....

**UTKARSHA UTTAM PADELKAR SYBMS A**

# TROPICAL CHOCOLATES

VARIOUS CHOCOLATE RECIPES ARE AVAILABLE IN THE MARKET BUT  
THIS ONE IS VERY UNIQUE AND DELICIOUS RECIPE YOU ALL LIKE IT .....



## **INGREDIENTS**

Dark compound and White compound, Desiccated coconut, Butter, Vanilla essence, Milkmaid.

## **METHOD**

- #1 Take a bowl and add Dark chocolate and White chocolate in the same Proportion.
- #2 Add some butter.
- #3 Melt it down and mix well until Smooth texture.
- #4 In another bowl add some Desiccated coconut, butter 1 Tb spoon vanilla essence, and add milkmaid then make small balls.
- #5 In the mold first add some melted chocolate mixture then fills in the middle one coconut ball and again, cover with chocolate.
- #6 Tap it very well.
- #7 Freeze it for 10-15 minutes.
- #8 Then demould and enjoy it....

**UTKARSHA UTTAM PADELKAR SYBMS A**

*"A dream does not become reality through magic; it takes sweat, determination, and hard work."*

## 10 amazing facts

1 Hot water will turn into ice faster than cold water.

An observation was conducted in which a liquid (typically water) that is initially hot can freeze faster than the other liquid which is cold under similar conditions.

2 The Mona Lisa has no eyebrows.

People always wonder why Mona Lisa doesn't have any eyebrows. This mystery has been solved, all thanks to an engineer named Pascal Cotte. When Da Vinci painted Mona Lisa, he indeed painted her eyebrows but over time these eyebrows were eroded due to cleaning over time to the point where it's no longer visible today.

3 Women blink nearly twice as much as men!

This is a pure myth! Blink rates are pretty identical for both sexes. Scientists have suggested that the interval between blinks is nearly about 2-10 seconds so an average person blinks about 10 times per minute.

4 Like fingerprints, everyone's tongue print is different

Did you know that everyone has a different tongue print like fingerprints? Our tongue prints also have unique identifying marks. As reported by researcher David Zhang, the tip of the tongue has a unique physiological texture and geometric shape that can be used for verification purposes.

5 Wearing headphones for just an hour will increase the bacteria in your ear by 700 times

You cover your ears from the natural air when you wear headphones which increases the production of bacteria by 700% in 1 hour. Your eardrum cannot bear an influx of bacteria in that much quantity so it starts to react by pain or hearing loss in long term.

6 Stewardesses is the longest word typed with only the left hand.

Stewardess is a ten-letter word and is also the longest English word typed just with the left hand.

7. Butterflies taste with their feet.

This may sound strange to us humans but butterflies do rely on their feet to taste food as they have sensors on their feet that help them locate food for their caterpillars. So, they stand on a leaf to try the taste

8. A snail can sleep for three years.

Snails require moisture to survive. So, if there is extreme weather, they can sleep for up to three years. It is reported that based on geography, snails often hibernate or estivate to escape from warm climates.

8. All polar bears are left-handed.

No, this is a common misconception that polar bears are left-handed. But the research shows that both paws are used equally. You can say that they are ambidextrous.

9. A crocodile cannot stick its tongue out.

Crocodiles have a membrane that holds their tongue in place on the roof of their mouth so it does not move. According to BBC, this nearly makes it impossible for them to stick it outside of their narrow mouths.

\*Question - This is the only food that doesn't spoil. What is this?

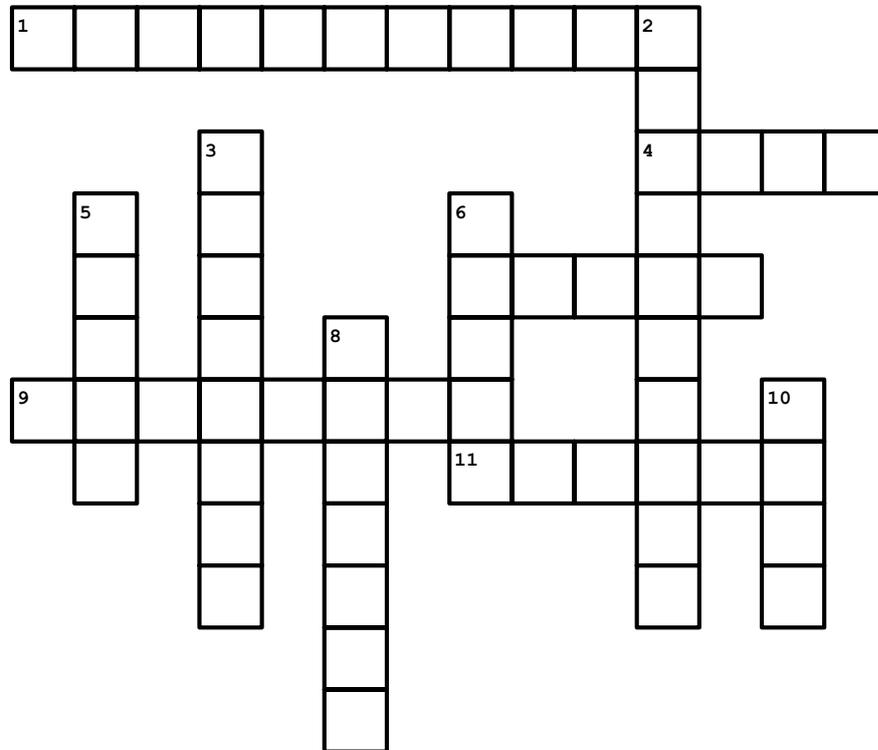
Ans. - Honey

The only food that doesn't spoil is Honey

**MAITHILI RAJESH JADHAV FYBMS A**

*“The beautiful thing about learning is nobody can take it away from you”*

## Test Your IQ



### ACROSS

2. What kind of band never plays music?
3. What can you hold in your right hand, but never in your left hand?
5. Which planet is known as Earth's twin?
6. What can travel across the world without leaving its corner
8. The largest of the apes
10. What has many teeth, but cannot bite

### DOWN

1. What two things you never eat for breakfast
4. Strong heavy furry animal
7. What gets wet while drying
9. What kind of room has no doors or windows
11. What has lots of eyes, but cannot see

## Answer key

### DOWN

1. Lunchdinner
4. Bear
7. Towel
9. Mushroom
11. Potato

### ACROSS

2. Rubberband
3. Lefthand
5. Venus
6. Stamp
8. Gorilla
10. Comb

**Rajesh Choudhary and Shubham Gajakas**

**TYBMS A**

## इवलेसे सौंदर्य



इवलेसे ते सौंदर्य, तयावर मन  
भाळले..

तप्त त्या सूर्यासह, शांत ते ही  
उमलले..

उष्माही त्या रवीचा, तया ना  
रोखू शकला..

ओढ तया फुलण्याची, ऐटीत  
तोही डोलला..

**सुषमा जाधव**

## Prize winning photography



2<sup>nd</sup> Prize in Portrait Photography

Event: 'Click To Capture' organised by Department of Mass Media and Communication, K.V. Pendharkar College (Autonomous) on 23 August 2022



2<sup>nd</sup> Prize in Landscape Photography

Event: 'Click To Capture' organised by Department of Mass Media and Communication, K.V. Pendharkar College (Autonomous) on 23 August 2022

Name: Atharv Sanjay Lokhande  
Class: SYBMS-B

# Our Researcher's

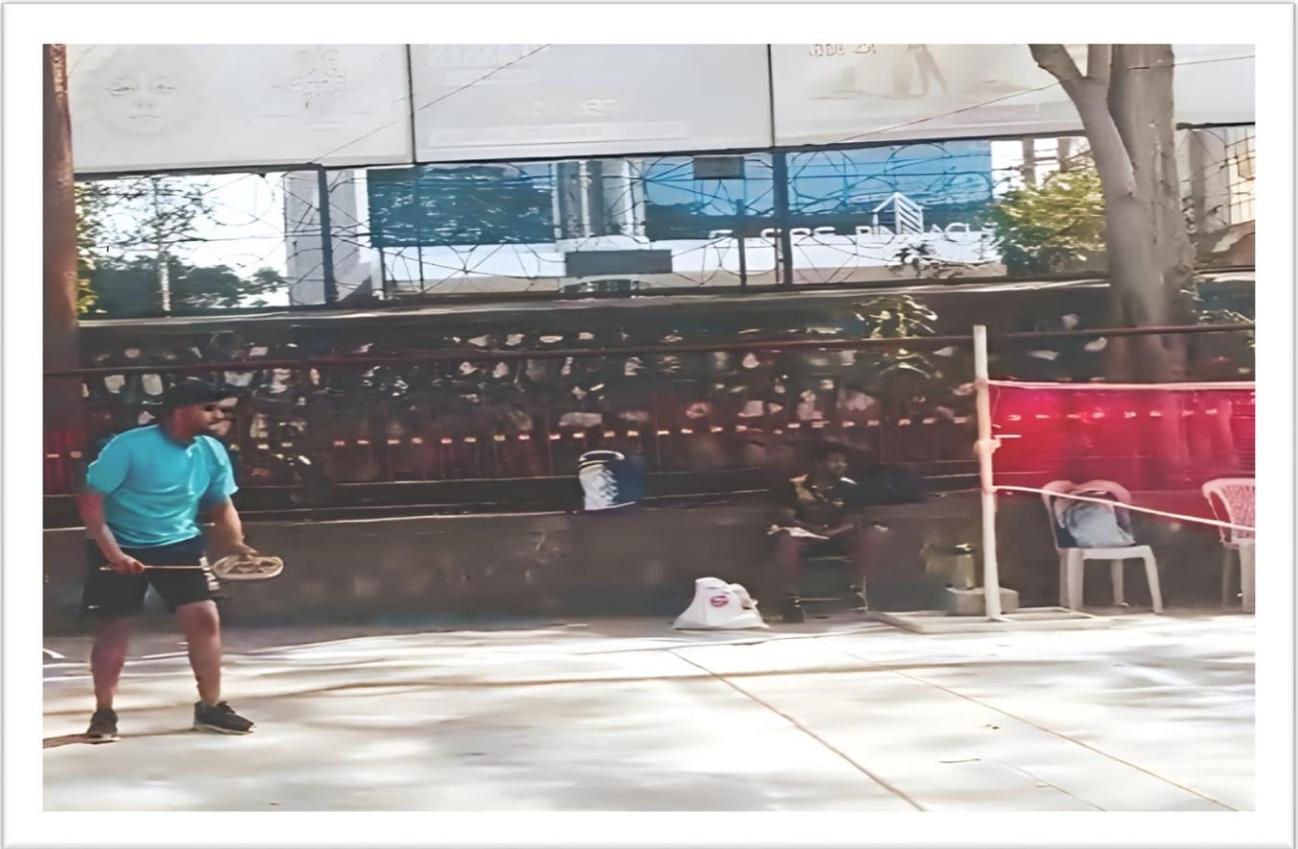
## PARTICIPANTS AND WINNERS



# NSS AND NCC STARS

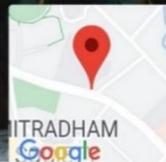


# VALAY



## DEPARTMENTAL EVENTS

### ON THE SPOT SPEECH AND DEBATE COMPETITION:



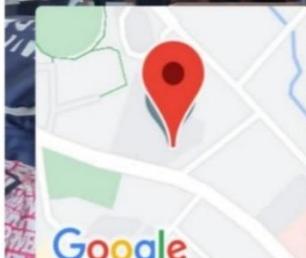
Dombivli, Maharashtra, India

Near Pendharkar College, 6474+93M, Gharda Circle, opposite to MIDC Office, Azde Gaon, Tata Power Company Limited, Dombivli East, Dombivli, Maharashtra 421203, India

Lat 19.213423°

Long 73.105284°

23/07/22 11:39 AM



Dombivli, Maharashtra, India

K.V.Pendharkar College, Kalyan Rd, Azde Gaon, Tata Power Company Limited, Dombivli East, Dombivli, Maharashtra 421203, India

Lat 19.213777°

Long 73.105284°

20/07/22 12:45 PM

**DIYA AND ARTI THALI DECORATION COMPETITION:**



**BRAND QUEST COMPETITION**



# OASIS 2021-22



*Never Stop Learning...*

*Expressing & Shining....*

