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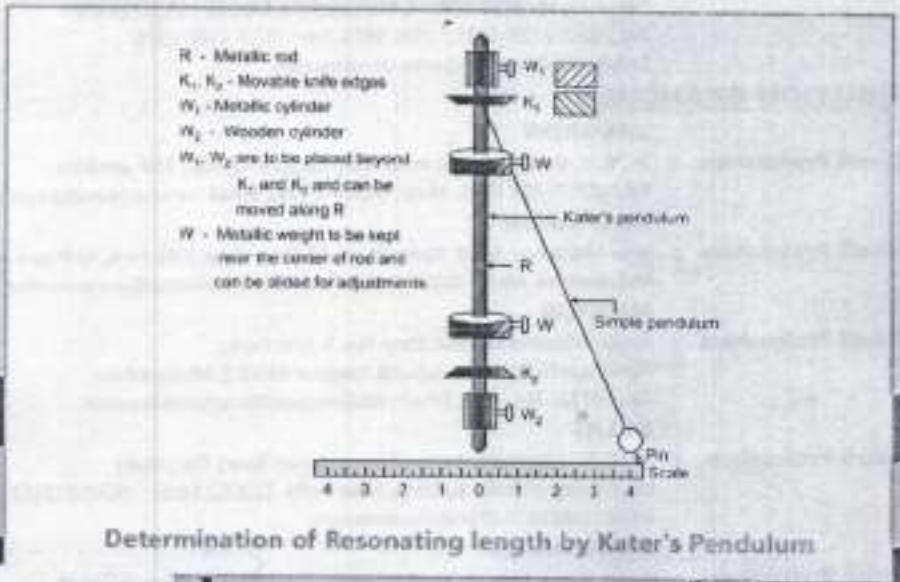

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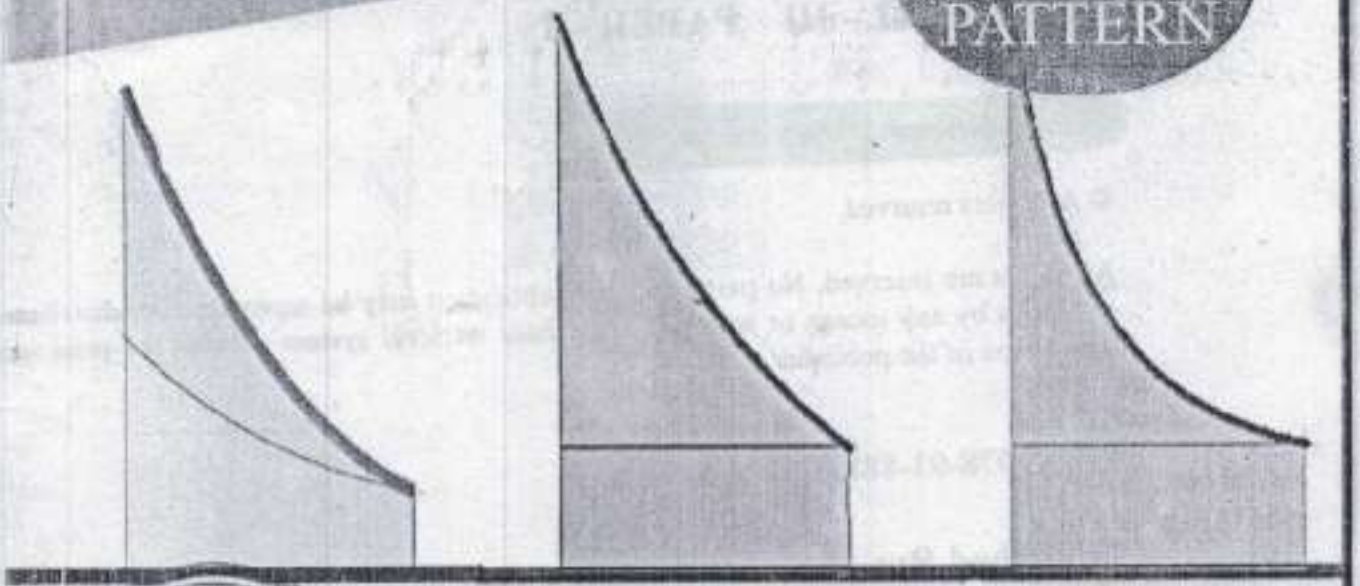

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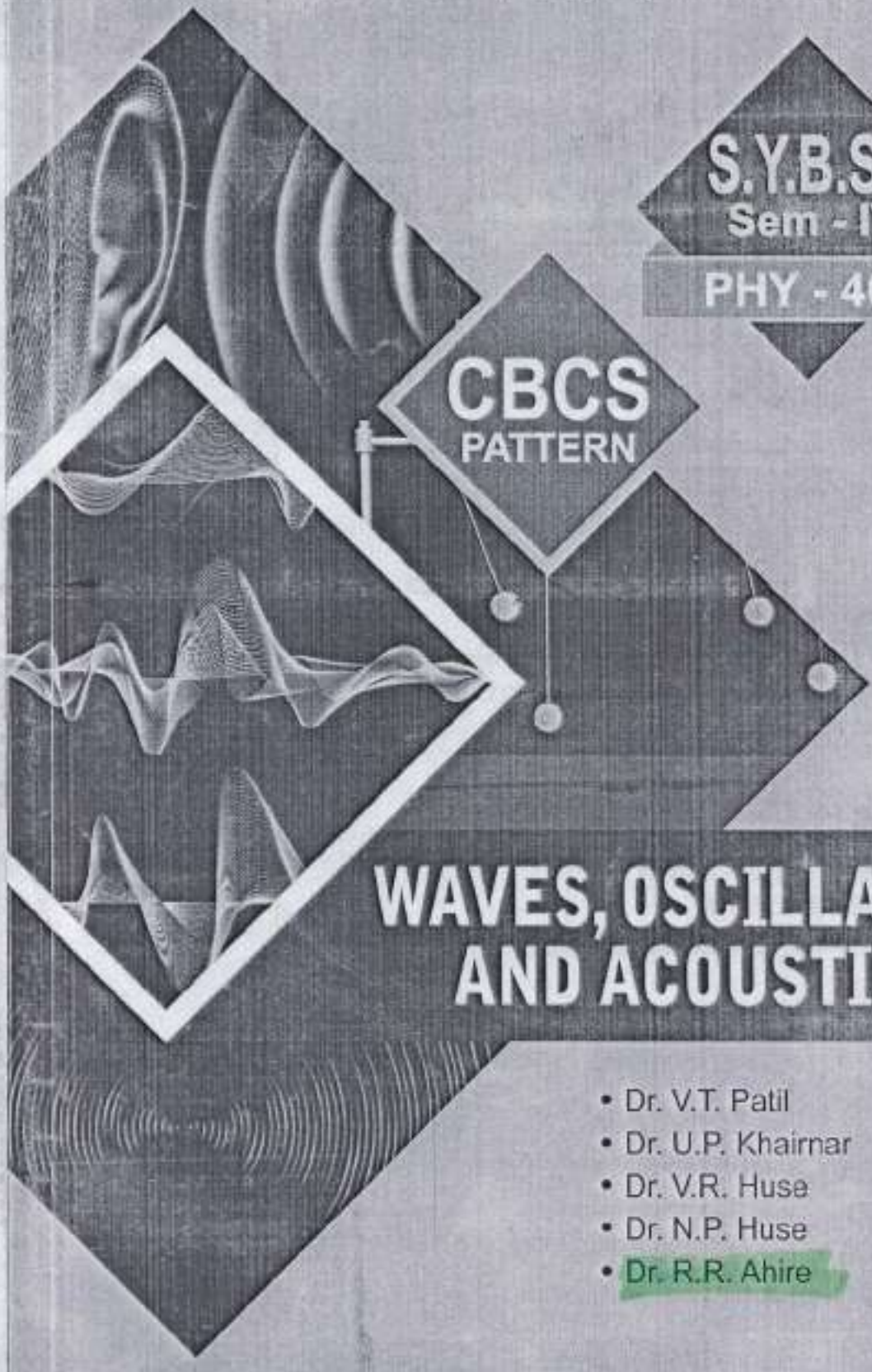

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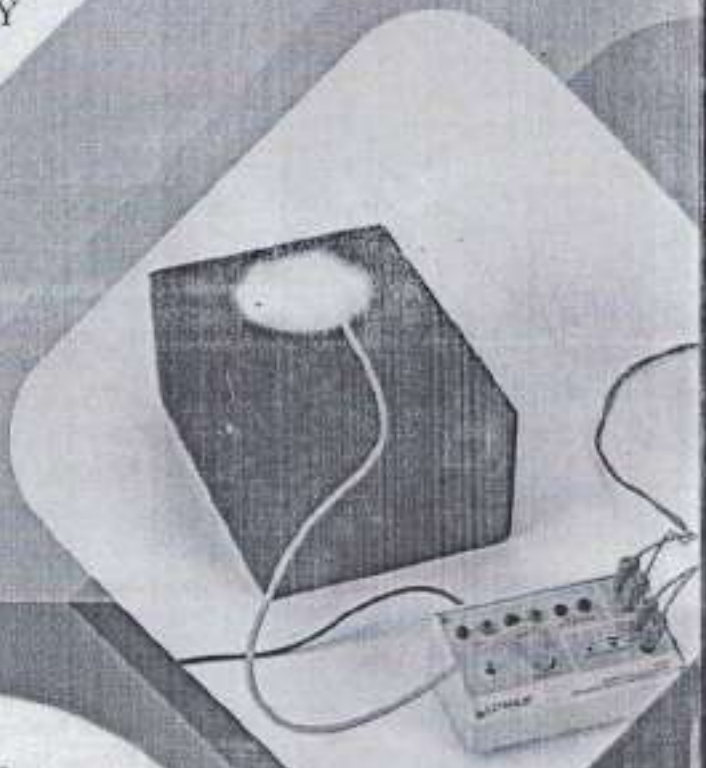

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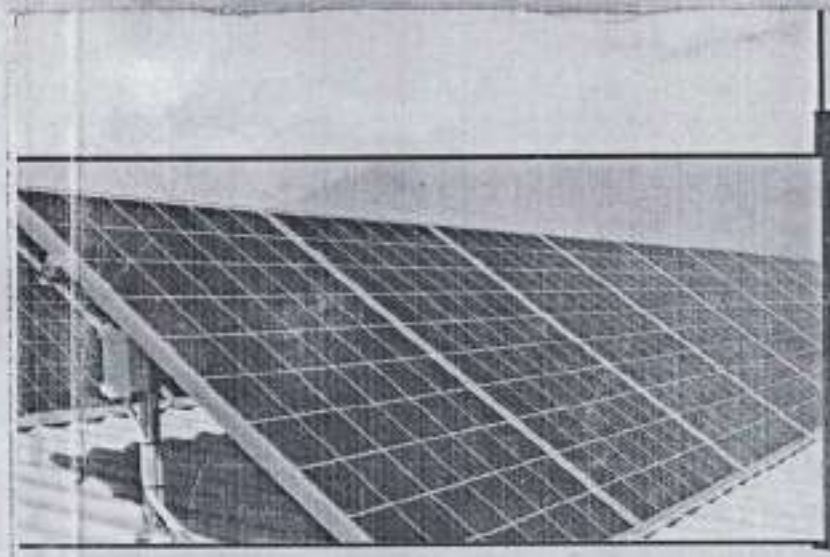

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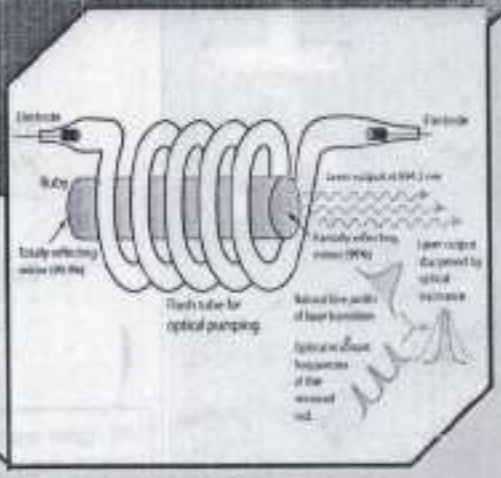

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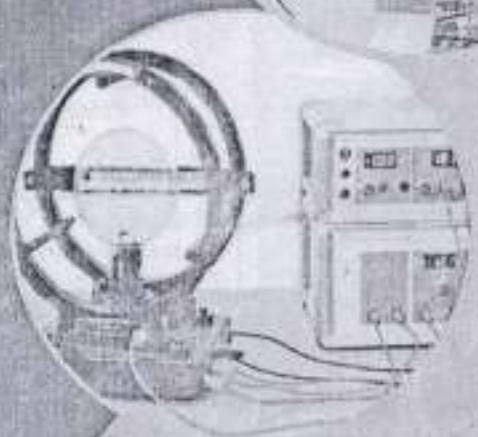

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upset about that.It should be noted that no fortune teller, astrologer or architect has predicted the corona at the Indian or international level. I say this internationally because the so-called world astrologer Nostradamus or Vedokta astrologer is likely to publish something in the future, so I make it clear at the outset. Evidence of Shlokas, Vedas, Puranas is also likely to be given for this prophecy. A corona is a natural disaster that has hit the entire world. Although it originated in China, it is not officially recognized as a Chinese product. It is irresponsible to make any statement without evidence, so China has not yet been officially reprimanded.

Signs and symptoms –

Fever is the most common symptom, although some older people and those with other health problems experience fever later in the disease. In one study, 44% of people had fever when they presented to the hospital, while 89% went on to develop fever at some point during their hospitalization. Other common symptoms include cough, loss of appetite, fatigue, shortness of breath, sputum production, and muscle and joint pains. Symptoms such as nausea, vomiting, and diarrhea have been observed in varying percentages. Less common symptoms include sneezing, runny nose, or sore throat. Some cases in China initially presented with only chest tightness and palpitations. A decreased sense of smell or disturbances in taste may occur. Loss was a presenting symptom in 30% of confirmed cases in South Korea. As is common with infections, there is a delay between the moment a person is first infected and the time he or she develops symptoms. This is called the incubation period. The incubation period for COVID 19 is typically five to six days but may range from two to 14 days, although 97.5% of people who develop symptoms will do so within 11.5 days of infection.

Prevention -

Preventive measures to reduce the chances of infection include staying at home, avoiding crowded places, keeping distance from others, washing hands with soap and water often and for at least 20 seconds, practicing good respiratory hygiene, and avoiding touching the eyes, nose, or mouth with unwashed hands. The CDC recommends covering the mouth and nose with a tissue when coughing or sneezing and recommends using the inside of the elbow if no tissue is available. Proper hand hygiene after any cough or sneeze is encouraged.The CDC has recommended the use of cloth face coverings in public settings where other social distancing measures are difficult to maintain, in part to limit transmission by asymptomatic individuals. The U.S. National Institutes of Health guidelines do not recommend any medication for prevention of COVID 19, before or after exposure to the SARS-CoV-2 virus, outside of the setting of a clinical trial. Social distancing strategies aim to reduce contact of infected persons with large groups by closing schools and workplaces, restricting travel, and cancelling large public gatherings. Distancing guidelines also include that people stay at least 6 feet (1.8 m) apart. There is no medication known to be effective at preventing COVID 19. After the implementation of social distancing and stay-at-home orders, many regions have been able to sustain an effective transmission rate ("Rt") of less than one, meaning the disease is in remission in those areas.

As a vaccine is not expected until 2021 at the earliest, a key part of managing COVID 19 is trying to decrease and delay the epidemic peak, known as "flattening the curve". This is done by slowing the infection rate to decrease the risk of health services being overwhelmed, allowing for better treatment of current cases, and delaying additional cases until effective treatments or a vaccine become available. According to the WHO, the use of masks is recommended only if a person is coughing or sneezing or when one is taking care of someone with a suspected infection. For the European Centre for Disease Prevention and Control (ECDC) face masks could be considered especially when visiting busy closed spaces but only as a complementary measure. Several countries have recommended that healthy individuals wear face masks or cloth face coverings (like scarves or bandanas) at least in certain public settings, including China, Hong Kong, Spain, Italy (Lombardy region), Russia, and the United States.

Those diagnosed with COVID 19 or who believe they may be infected are advised by the CDC to stay home except to get medical care, call ahead before visiting a healthcare provider, wear a face mask before entering the healthcare provider's

CH - 12

E-Waste Management in India: A Scenario

S. J. Nandre[1], N. B. Sonawnae[2], R. R. Ahire[3]

[1]Department of Physics, Uttamrao Patil Arts and Science College, Dahiwel, (Dhule) M.S

[2]Department of Physics, Karm A.M.Patil Arts, Commerce and Science College, Pimplner (Dhule)

[3]Department of Physics S.G.Patil Art's, Commerce and Science College, Sakri(Dhule) M.S

Abstract

Growth in the IT and communication sectors has enhanced the usage of the electronic equipment exponentially. Faster up gradation of electronic product is forcing consumers to discard old electronic products very quickly, which, in turn, add to e-waste to the solid waste stream. The growing problem of e-waste calls for greater emphasis on recycling e-waste and better e-waste management.

Introduction

Electronic waste or e-waste is generated when electronic and electrical equipment become unfit for their originally intended use or have crossed the expiry date. Computers, servers, mainframes, monitors, compact discs (CDs), printers, scanners, copiers, calculators, fax machines, battery cells, cellular phones, transceivers, TVs, iPods, medical apparatus, washing machines, refrigerators, and air conditioners are examples of e-waste (when unfit for use). These electronic equipments get fast replaced with newer models due to the rapid technology advancements and production of newer electronic equipment. This has led to an exponential increase in e-waste generation. People tend to switch over to the newer models and the life of products has also decreased-waste typically consists of metals, plastics, cathode ray tubes (CRTs), printed circuit boards, cables, and so on. Valuable metals such as copper, silver, gold, and platinum could be recovered from e-wastes, if they are scientifically processed. The presence of toxic substances such as liquid crystal, lithium, mercury, nickel, polychlorinated biphenyls (PCBs), selenium, arsenic, barium, brominated flame retardants, cadmium, chrome, cobalt, copper, and lead, makes it very hazardous, if e-waste is dismantled and processed in a crude manner with rudimentary techniques. E-waste poses a huge risk to humans, animals, and the environment. The presence of heavy metals and highly toxic substances such as mercury, lead, beryllium, and cadmium pose a significant threat to the environment even in minute quantities. Increasing information campaigns, capacity building, and awareness is critical to promote environment friendly e-waste management programmes. Increasing efforts are urgently required on improvement of the current practices such as collection schemes and management practices to reduce the illegal trade of e-waste. Reducing the amount of hazardous substances in e-products will also have a positive effect in dealing with the specific e-waste streams since it will support the prevention process.

E-Waste Problem in India

India ranks 177 amongst 180 countries and is amongst the bottom five countries on the Environmental Performance Index 2018, as per a report released at the World Economic Forum 2018. This was linked to poor performance in the environment health policy and deaths due to air pollution categories. Also, India is ranked fifth in the world amongst top e-waste producing countries after the USA, China, Japan, and Germany and recycles less than 2 per cent of the total e-waste it produces annually formally. Since 2018, India generates more than two million tonnes of e-waste annually, and also imports huge amounts of e-waste from other countries around the world. Dumping in open dumpsites is a common sight which gives rise to issues such as groundwater contamination, poor

be handed over to the organized sector to be processed in an environment-friendly way. In this kind of scenario, the government can play a crucial role between the two sectors for successful processing of the e-waste. It is high time that the government takes a proactive initiative to recycle and dispose of e-waste safely to protect the environment and ensure the well-being of the general public and other living organisms.

The citizens have a very important role to play in e-waste management. We casually throw many small gadgets along with dumped waste and many people openly burn those accumulated waste. A number of hazardous substances such as dioxins and furans are released in the process which we breathe. This is a very unhealthy practice, which we should immediately stop. Some of the very progressive Resident Welfare Associations (RWAs) have separate bins clearly marked for collecting e-wastes. All the other residential societies should follow this practice. Students and Women SHGs can be mobilized for this activity in their respective RWAs.

Conclusion

E-waste management is a great challenge for governments of many developing countries such as India. This is becoming a huge public health issue and is exponentially increasing by the day. In order to separately collect, effectively treat, and dispose of e-waste, as well as divert it from conventional landfills and open burning, it is essential to integrate the informal sector with the formal sector. The competent authorities in developing and transition countries need to establish mechanisms for handling and treatment of e-waste in a safe and sustainable manner.

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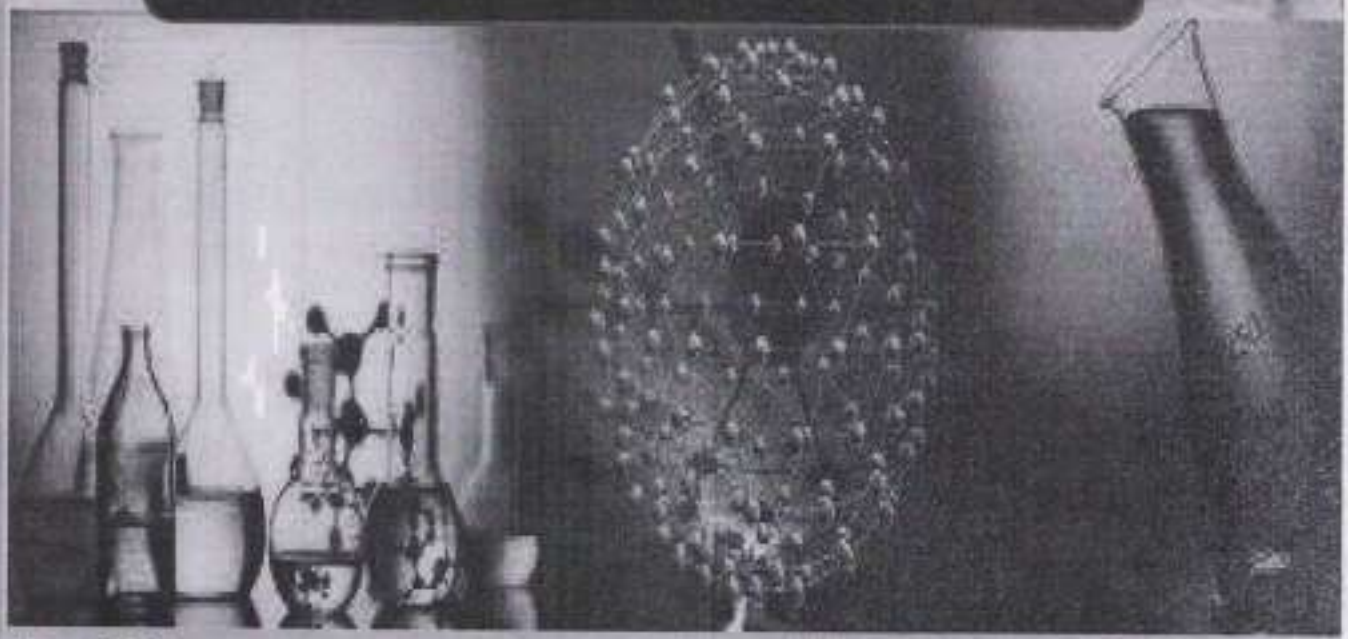

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office and when in any room or vehicle with another person, cover coughs and sneezes with a tissue, regularly wash hands with soap and water and avoid sharing personal household items. The CDC also recommends that individuals wash hands often with soap and water for at least 20 seconds, especially after going to the toilet or when hands are visibly dirty, before eating and after blowing one's nose, coughing or sneezing. It further recommends using an alcohol-based hand sanitizer with at least 60% alcohol, but only when soap and water are not readily available.

Here are the measures you need to take to keep the virus at time:

1. Avoid close contact with people who are sick. Maintain at least three feet distance between yourself and anyone who is coughing or sneezing.
2. Avoid touching your eyes, nose, and mouth.
3. Stay home when you are sick.
4. Cover your cough or sneeze with a tissue, then dispose of the tissue safely.
5. Clean and disinfect frequently-touched objects and surfaces using a regular household cleaning spray or wipe.
6. Wearing a mask is not necessary unless you are taking care of an infected person. The Centers for Disease Control (CDC) does recommend that only infected people wear masks to prevent the spread of the virus.
7. Wash your hands often with soap and water for at least 20 seconds, especially after going to the bathroom, before eating, and after blowing your nose, coughing, or sneezing.
8. If soap and water are not readily available, use an alcohol-based hand sanitiser with at least 60% alcohol. Always wash hands with soap and water when hands are visibly dirty.
9. If you have a fever, cough and difficulty breathing, seek medical attention immediately.
10. Keep in mind the travel advisory set out by the Ministry of Health and Welfare.

Result -

I) Corona in our country. In the new world a virus that will linger in our minds for a long time Two things that are very important for it are good health and safe perfume. Now your fight is with Corona for at least a year. 'LOCKDOWN' Whether or not you want to go to the critical stage of corona disease, then the following suggestions are very important because if you do not want the infection to be critical, then two things are important immunity and viral load.

2) Corona spreads through the respiratory tract, just as the surface is spread through body clothes, hand objects, mobiles, watches. There is seeing this, I felt it was my responsibility to write this article as a doctor.

3) The first point is better health Eating on time for good health, like eight hours of good sleep, one hour of light exercise at home Keep yourself happy with yoga, rope jumping, spot jogging, pranayama, kapalbhati, anulom-vilom (there are many videos available for this on YouTube). Don't let the stress of studying put pressure on the children at home.

4) Second issue 'Social Distance'. Today we will understand the meaning of this word which is not new to anyone. There should be at least one meter distance between two persons. Afterwards, when I went to a grocery store to buy groceries, there was a very disturbing picture. The shopkeeper and his three colleagues wore masks around their necks for the show without putting a mask on their faces. There was a bottle of sterlium .Some people didn't even bother to wear a mask .Some even took a packet of chips and started eating. At that moment, the shop seemed to be a hot spot for me. What did I have to do in such a situation??? Get out only if the first thing is necessary.

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passing a beam of light through a sample and measuring the intensity of light reaching a detector. The beam of light consists of a stream of photons. When a photon encounters an analytic molecule (the analytic is the molecule being studied), there is a chance the analytic will absorb the photon. This absorption reduces the number of photons in the beam of light, thereby reducing the intensity of the light beam. The equilibrium situation in semiconductor can be disturbed by generation of carriers due to optical absorption. Optical photon incident on any material may be reflected, transmitted or absorbed. The phenomena of radiation absorption in a material is considered to be due to (1) inner shell electron, (2) valance band electron, (3) free carriers including holes as well as electrons, and (4) electron bound to localized impurity centers or defects of some type.

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Role in Prevention of Corona Virus Infection

S.J. Nandre
Dept. of Physics,Uttamrao Patil Arts and Science College,Dahiwel,(Dhule)

N.B. Sonawane
Dept. of Physics, Karm. A.M.Patil Arts, Comm. and N.K.Patil Science College, Pimpalner (Dhule)

R.R. Ahire
Dept. of Physics, S.G.Patil Arts, Comm. and Science College, Sakri,(Dhule)

Abstract -

Corona virus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome corona virus 2 (SARS-CoV-2). It was first identified in December 2019 in Wuhan, China, and has since spread globally, resulting in an ongoing pandemic. As of 10 May 2020, more than 4.02 million cases have been reported across 187 countries and territories, resulting in more than 279,000 deaths. More than 1.37 million people have recovered. Common symptoms include fever, cough, fatigue, shortness of breath, and loss of smell and taste. While the majority of cases result in mild symptoms, some progress to acute respiratory distress syndrome (ARDS), multi-organ failure, septic shock, and blood clots. The time from exposure to onset of symptoms is typically around five days but may range from two to fourteen days.

Introduction -

The virus is primarily spread between people during close contact, most often via small droplets produced by coughing, sneezing, and talking. The droplets usually fall to the ground or onto surfaces rather than travelling through air over long distances. Less commonly, people may also become infected by touching a contaminated surface and then touching their face. It is most contagious during the first three days after the onset of symptoms, although spread may be possible before symptoms appear and in later stages of the disease. The standard method of diagnosis is by real-time reverse transcription polymerase chain reaction (rRT-PCR) from a nasopharyngeal swab. Chest CT imaging may also be helpful for diagnosis in individuals where there is a high suspicion of infection based on symptoms and risk factors; however, guidelines do not recommend using it for routine screening.

Recommended measures to prevent infection include frequent hand washing, maintaining physical distance from others (especially from those with symptoms), quarantine, covering coughs, and keeping unwashed hands away from the face. In addition, the use of a face covering is recommended for those who suspect they have the virus and their caregivers. Recommendations for face covering use by the general public vary, with some authorities recommending, some recommending against, and others requiring their use. There is limited evidence for or against the use of masks (medical or other) in healthy individuals in the wider community.

According to the World Health Organization, there are no available vaccines nor specific antiviral treatments for COVID-19. On 1 May 2020, the United States gave Emergency Use Authorization to the antiviral remdesivir for people hospitalized with severe COVID-19. Management involves the treatment of symptoms, supportive care, isolation, and measures. The World Health Organization (WHO) declared the COVID-19 outbreak a Public Health Emergency of International Concern (PHEIC) on 30 January 2020 and a pandemic on 11 March 2020. Local transmission of the disease has occurred in most countries across all six WHO regions. It is important to note that no fortune teller, astrologer or architect has predicted the corona at the Indian or international level. The important task in the future is to rid the masses of those who propagate and spread unscientific things. Corona urges us to take a positive view of science and research. The name 'Corona' is now well known. Certainly not in a good sense. Today, the whole world is shocked by the disease 'Covid-19' caused by the corona virus. He has never crossed the boundaries of caste, religion, gender, country. I also put 'direction' in it. In all directions, the Corona has penetrated villages and homes. The architect and the person who built the house on his advice are no exception. I don't think anyone would be

often HR-TEM works close to the resolution limit and gives 3-D image. At this smaller magnification, crystal defects, structure, exact shape, size of the individual atom can be studied.

Energy Dispersive X- ray Analysis (EDAX)

Energy dispersive X-ray analysis is a powerful technique for the compositional analysis of the thin film samples. As the electron beam scans the surface, the emerging X-rays are fed into the X-ray analyzer, which has been set for the element of interest. Whenever X-ray of that energy is detected, a dot is brightened at the corresponding point in the display tube of the SEM. By positioning the SEM electron beam on a spot of interest, a simultaneous semi quantitative analysis of all elements can be performed by plotting counts versus energy (keV). The heights of the peaks are not an exact measure of concentration because not all elements are excited with the same efficiency. For a more quantitative measurement, known elemental standards must be employed. However, the modern equipment's having computer interfacing is capable of determining the sample composition very accurately using the software with stored element standards.

Fourier Transform Infrared (FTIR) Spectroscope:

Fourier Transform Infrared (FTIR) spectroscopy has wide applications in industries, especially in chemical factories. Infrared spectra give information about the presence of specific functional group; absorbs specific frequency radiations, due to which amplitude of vibrations is increased and there by absorption band at different frequencies are recorded. Therefore, the presence of functional groups, water molecules, nature of bonding and forces working between atoms can be predicted, and hence infrared spectra gives information about the structural formula. Infrared radiation refers broadly to that part of the electromagnetic spectrum between the visible and microwave regions of greatest practical use to the organic chemist is the limited portion between 4000 cm^{-1} and 666 cm^{-1}(2.5-15.0 μm). Recently there has been increasing interest in the near infrared region, 14,290-4000 cm^{-1} (0.7-2.5 μm) and the far infrared region, 700-200 cm^{-1}(14.3 μm). Although the infrared spectrum is characteristic of the entire molecule, it turns out that certain groups of atoms give rise to bands at or near the same frequency regardless of the structure of the rest of the molecule. It is the persistence of these characteristic bands that permits the chemist to obtain useful structural information by simple inspection and reference to generalized charts of characteristic group frequencies.

Stretching: In which the distances between the two atoms increases or decreases, but the atoms remain in the same bond axis. Stretching vibrations are found to occur in the order of bond strength.

Bending: In which the position of the atoms changes relative to the original bond axis. Bending vibrations generally requires less energy and occur at longer wavelength. Band intensities in IR spectrum may be expressed either as Transmittance (T) or Absorbance (A).

Transmittance: It is defined as the ratio of radiant power transmitted by a sample to the radiant power incident on the sample.

UV-Visible spectrophotometer

UV-Vis spectrophotometer is used to determine the absorption or transmission of UV/Vis light (200 to 700 nm) by a sample. It can also be used to measure concentrations of absorbing materials based on developed calibration curves of the material. A spectrophotometer is employed to measure the amount of light that a sample absorbs. The instrument operates by

health, and more. The Associated Chambers of Commerce and Industry of India (ASSOCHAM) and KPMG study, Electronic Waste Management in India identified that computer equipment account for almost 70 per cent of e-waste, followed by telecommunication equipment phones (12 per cent), electrical equipment (8 per cent), and medical equipment (7 per cent) with remaining from household e-waste.

Seelampur in Delhi is the largest e-waste dismantling centre of India. Adults as well as children spend 8–10 hours daily extracting reusable components and precious metals like copper, gold and various functional parts from the devices. E-waste recyclers use processes such as open incineration and acid-leeching. This situation could be improved by creating awareness and improving the infrastructure of recycling units along with the prevalent policies. The majority of the e-waste collected in India is managed by an unorganized sector. E-waste collection, transportation, processing, and recycling is dominated by the informal sector. The sector is well networked and unregulated. Often, all the materials and value that could be potentially recovered is not recovered. In addition, there are serious issues regarding leakages of toxins into the environment and workers' safety and health.

Also, informal channels of recycling/reuse of electronics such as repair shops, used product dealers, e-commerce portal vendors collect a significant proportion of the discarded electronics for reuse and cannibalization of parts and components.

Opportunities of E-Waste Management in India

The Ministry of Environment, Forest and Climate Change rolled out the E-Waste (Management) Rules in 2016 to reduce e-waste production and increase recycling. Under these rules, the government introduced EPR which makes producers liable to collect 30 per cent to 70 per cent (over seven years) of the e-waste they produce, said the study.

The integration of the informal sector into a transparent recycling system is crucial for a better control on environmental and human health impacts. There have been some attempts towards integrating the existing informal sector in the emerging scenario. Organizations such as GIZ have developed alternative business models in guiding the informal sector association towards authorization. These business models promote a city-wide collection system feeding the manual dismantling facility and a strategy towards best available technology facilities to yield higher revenue from printed circuit boards. By replacing the traditional wet chemical leaching process for the recovery of gold with the export to integrated smelters and refineries, safer practices and higher revenue per unit of e-waste collected are generated.

E-waste is a rich source of metals such as gold, silver, and copper, which can be recovered and brought back into the production cycle. There is significant economic potential in the efficient recovery of valuable materials in e-waste and can provide income-generating opportunities for both individuals and enterprises. The E-Waste Management Rules, 2016 were amended by the government in March 2018 to facilitate and effectively implement the environmentally sound management of e-waste in India. The amended Rules revise the collection targets under the provision of EPR with effect from October 1, 2017. By way of revised targets and monitoring under the Central Pollution Control Board (CPCB), effective and improved management of e-waste would be ensured.

How Can Governments, City Administration, and Citizens Help?

Considering the adverse impacts caused by untreated e-waste on land, water, and air; the government should encourage the new entrepreneurs by providing the necessary financial support and technological guidance. Establishment of start-ups connected with e-waste recycling and disposal should be encouraged by giving special concessions. The unorganized sector has a well-established collection network. But it is capital-intensive in case of organized sector. Therefore, if both the sectors coordinate and work in a harmonious manner, the materials collected by the unorganized sector may

by a set of line position 2θ and a set of relative line intensities. But the angular positions of the lines depend on the wavelength used, and a more fundamental quantity is the spacing d of the lattice planes forming each line.

Scanning Electron Microscope (SEM)

Scanning electron microscope is an indispensable tool for research and development, which uses a beam of electrons to examine specimens to explain the phenomena occurring on micrometer (μm) or sub-micrometer scales. The types of signals produced when the electron beam impinges a specimen surface include secondary electrons, back-scattered electrons, auger electrons, characteristic X-rays and photons of various energies. These signals are obtained from specific emission volumes within the samples and are used to examine many characteristics of the sample composition, surface morphology, and surface topography.

The sharpness and contrast of SEM micrograph and depth of field in images are dependent upon three major electron beam parameters. (1) electron probe size (2) electron probe current and (3) electron probe convergence angle. For the highest resolution image, electron probe size must be as small as possible. For the best depth where a large range of heights on the specimen appear in focus at the same time, convergence angle must be made as small as possible. However, probe current will be inescapably reduced when probe size and angle of convergence are made very small. Small beam angle can be achieved by using a small objective lens aperture, a long working distance or both. Therefore, these parameters must be selected intelligently to obtain appropriate imaging conditions in each situation. Since the image is formed by secondary emission of electrons, the samples should be conducting. However, the surface of non-conducting can also be studied after coating the samples with a gold film. The thickness of the gold coating is usually 500 to 1000 Å.

Transmission Electron Microscope (TEM)

The ability of a transmission electron microscope (TEM) is to provide high resolution images and crystallographic information from a selected area of a specimen and its lateral spatial resolution of the order of nanometer are valuable from the view point of the material characterization applications. TEM has become an essential instrument for the microstructural studies of metals, alloys, ceramics, composites and organic materials. Now a days, transmission electron microscopy (TEM) is used as characterization technique to study the material characteristics such as, structure, texture, shape, and size as smaller as single column of atomic. TEM catch thousand time smaller image than the smallest resolution object in light microscopy . While, TEM operates on the similar principle as the light microscope and detect image using transmitted beam.

In TEM, a sample of a thin foil is irradiated by electron having high energy instead of light source. TEM forms two dimensional black and white images, from the interaction of the electrons transmitted through the specimen; the image is magnified and focused onto an imaging device, such as a fluorescent screen, on a layer of photographic film, or to be detected by a sensor such as a CCD camera. The typical TEM instrument consists of, electron source, thermionic gun, electron beam, electromagnetic lenses, vacuum chamber, two condensers, sample stage, phosphor or fluorescent screen and linked computer.

In TEM, the image is carried by only one beam (transmitted) and high-resolution electron microscopy (HR-TEM) uses phase contrast resulting from an interference of several beams. Very

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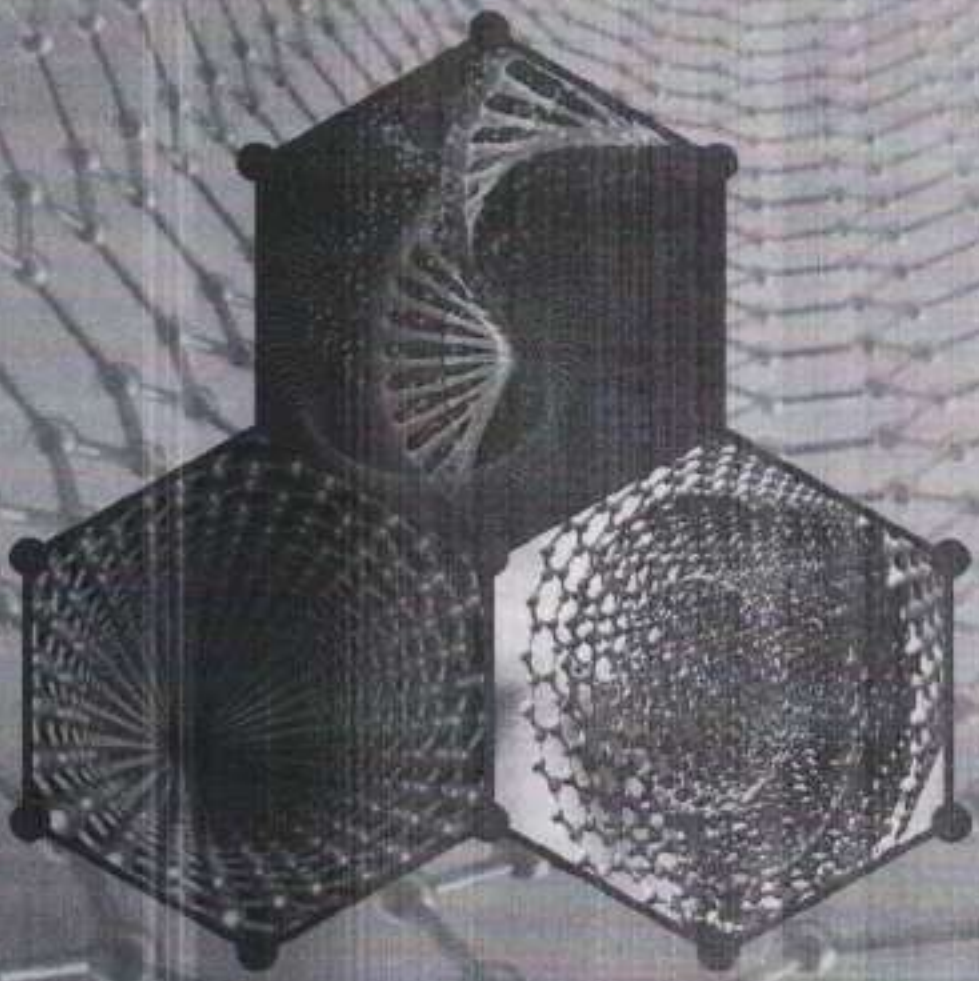

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Thin Film Characterization Techniques --------A Theoretical Background

N. B. Sonawane[1], S. J. Nandre[2] and R. R. Ahire[3]
[1]Department of Physics, Karm A.M.Patil Arts,Commerce and Science College,Pimplner (Dhule)
[2]Department of Physics,Uttamrao Patil Arts and Science College,Dahiwel,(Dhule) M.S
[3]Department of Physics S.G.Patil Art's, Commerce and Science College,Sakri(Dhule) M.S

Abstract:

The advancement of science and technology in the recent years has replaced the traditional and laborious experimental techniques of analysis by sophisticated instrumental techniques of analysis, which give more accurate and reproducible results. This paper describes various experimental techniques used for the characterization of thin films.

Introduction:

The experimental details pertains to the evaluation of various properties using analytical techniques viz. X-ray diffraction (XRD), energy dispersive analysis by X-rays (EDAX), scanning electron microscopy (SEM), transmission electron microscope (TEM), optical absorption, Fourier transform infrared spectrophotometer (FTIR) and various aspects concerning with new devices formation.

Discussions:

Structural Studies (XRD): X-ray diffraction (XRD) is an important technique for material characterization. XRD enables information to be obtained on atomic scale from both crystalline and non crystalline materials. This technique was also used to determine crystal structure of metals and alloys, minerals, ceramics, semiconductors, inorganic compounds, polymers and organic materials. X-ray diffraction (XRD) technique is used for the realization of structural property and can be employed exclusively to categorize the crystalline phase in the sample. This technique is suitable for both form of samples i.e. thin film as well as bulk and can yield the information regarding the crystallinity of the material, nature of the phase present, lattice parameter, grain size out of plane orientation. In case of thin film, the change in lattice parameter with respect to the bulk gives the idea of nature of strain present in the film.

X-ray diffraction method is specially used for the investigation of the internal structures. It is now known that this internal structure consists of a regular arrangement of atoms, which follow certain laws of symmetry. Bragg's explains the fundamental of XRD equation, which places the condition for the constructive interference for the scattered X-ray from the successive atomic planes, formed by the crystal lattice of the material. The Bragg's condition is formulated by

$$2d\sin\theta = n\lambda$$

where, λ is the wavelength of the incident X-ray, d is the interplaner distance, θ is the scattering angle and n is an integer for the order of diffraction.

The full width at half maximum (FWHM) of the plot estimates the size of the grains in the film with respect to the sample normal. A given substance always produces a characteristic diffraction pattern, whether that substance is present in the pure state or as one constituent of a mixture of substances. The powder pattern of a substance is characteristic of that substance and form a sort of fingerprint by which the substance may be identified. Any one powder pattern is characterized

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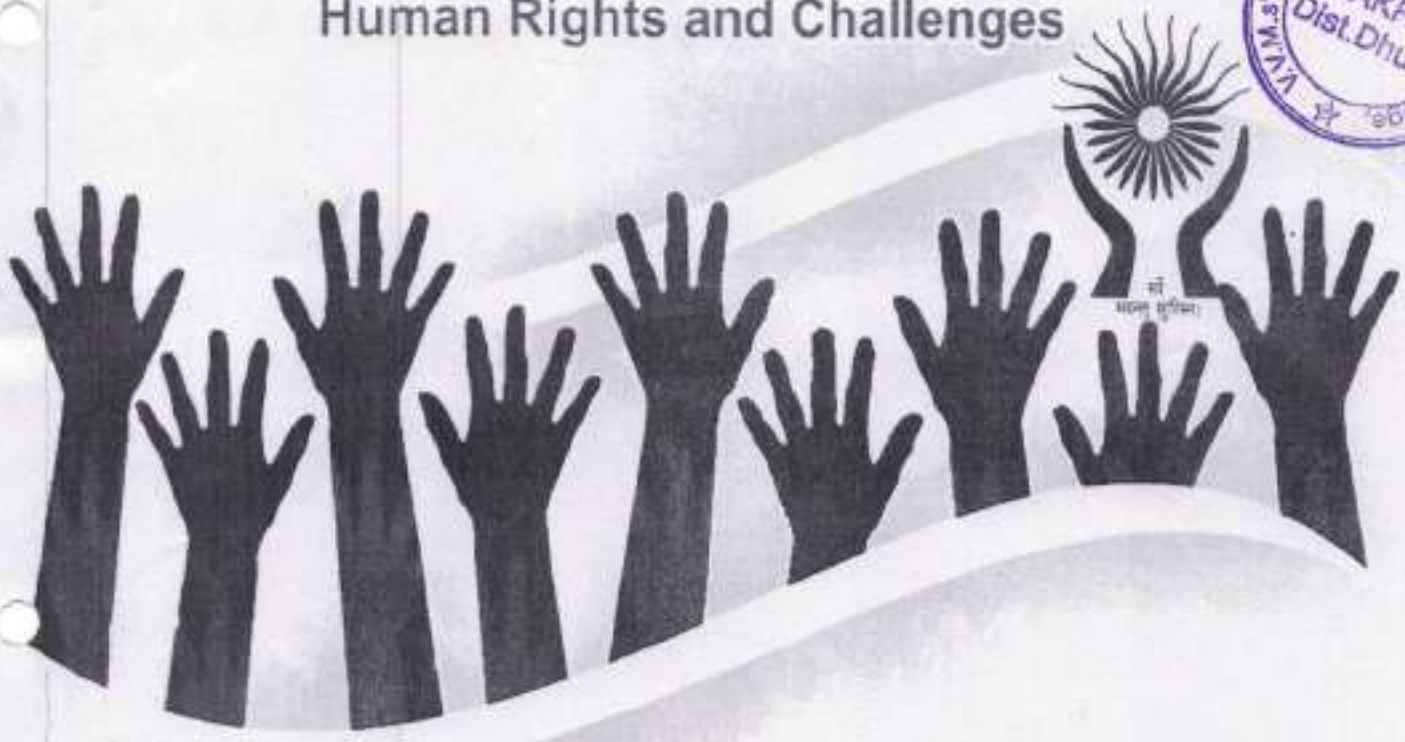

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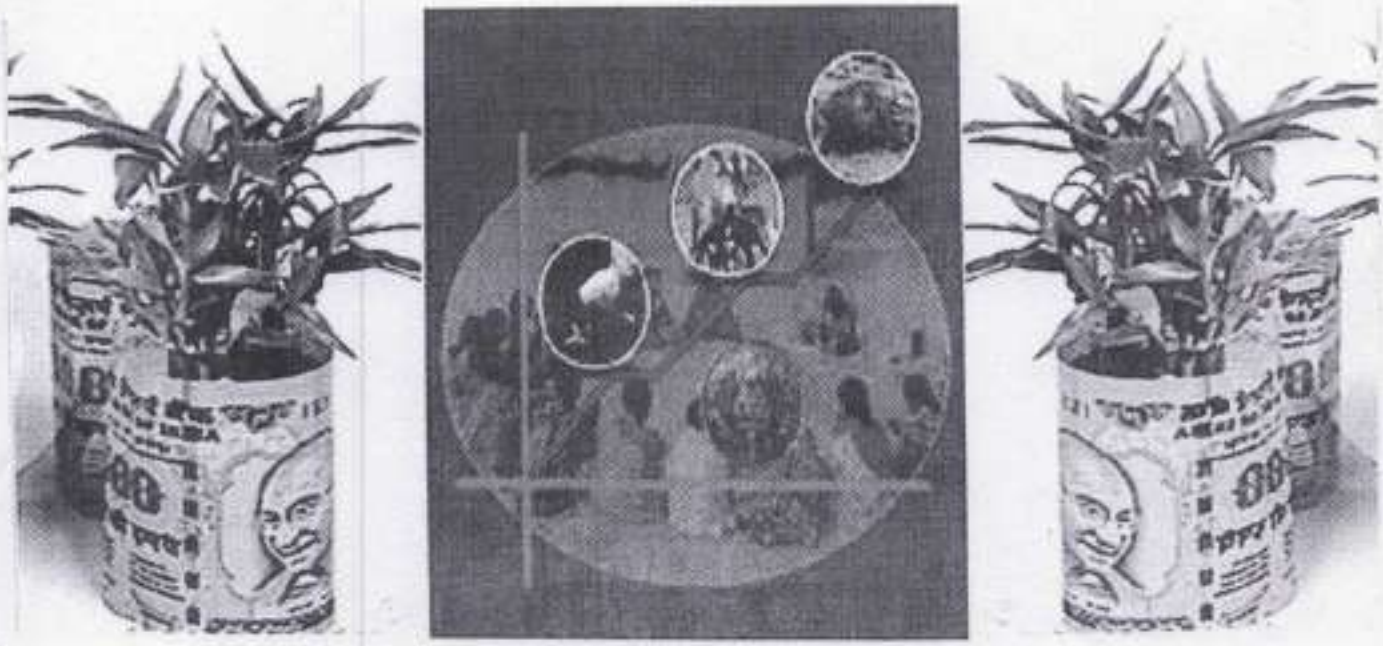

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ROLE OF BUSINESS FOR DEVELOPMENT OF TRIBLES

Nandre, S. J [1], Sonawnae, N.B[2]., Sonawane, S.S.[3] and Ahire, R.R.[4]

1. Dept of Physics,Uttamrao Patil Arts and Science College,Dahiwel
2. Dept. of Physics, Karm. A.M.Patil Arts, Comm. and N.K.Patil Science College, pimpalner (Dhule)
3. Dept. of Physics,S.G.Patil College,Sakri

ABSTRACT:

It is the part of India for development in business, tribles are include in the business,
The business will start in tribles region, because of lot of man power will be available in tribles region and also educated person is available. its development is sustainable, India is popular in the world if business is start in tribles region including tribles.Most tribes with significant gaming initiatives and related businesses can find themselves bombarded with myriad offers, opportunities and potential scams.

INTRODUCTION:

The late 20th century brought a new era of federal-tribal relationships and a policy of self-determination to Indian country. Indian Tribes are increasingly asserting control over their land, resources, and governance of their communities. Tribes are involved in a wide range of economic activities from tourism, gaming, energy, agriculture, forestry, manufacturing, federal contracting, and telecommunications. In many parts of the country, Tribes are becoming regional economic and political power houses. They are the largest employer in many counties. Tribal governments and tribal businesses engage in a wide range of business and financial transactions. The unique legal status of tribes is only now beginning to be used by Tribal governments to contribute to their business and economic development efforts. This century marks a new era for tribes using their sovereign status and governmental authority to achieve economic self-sufficiency and cultural preservation. There are still high levels of poverty and unemployment in Indian country and a lack of the basic infrastructure crucial to the building blocks of economic success. There are, however, increasingly more examples of tribes breaking their dependence on federal programs and creating the necessary legal infrastructure to build the foundations for successful economic development. As tribal business transactions become increasingly more sophisticated and involve non-Indian partners, investors, and lenders, there is a need to understand the basic methods for doing business in Indian country. In particular, in the energy industry, Indian tribes are shifting from being passive owners of their energy resources by evaluating ways in which they can own, develop, and produce their resources. Tribes are increasingly looking at ways to develop their resources in a manner that gives them an active ownership interest in the development of the project, often with a non-Indian business partner.

1. Why Choosing a Business Structure is Important

The choice of business structure will have long-term and far-reaching consequences for a tribal government and tribal business. The business structure you choose will have a major impact on how tribal assets are protected, how tribal sovereignty is preserved, and how potential liability is minimized. Critical decisions regarding the tax status of the business entity and whether or how sovereign immunity is waived must be made early in the decision making process. The choice of business structure may also be determined by the requirements a lender imposes as a financing condition or be determined by a business partner seeking certainty and predictability in the legal framework chosen to organize for economic development. This Handbook will help you to

beings; major and undesirable disturbances to the ecological balance of the biosphere; destruction and depletion of irreplaceable resources; and gross deficiencies harmful to the physical, mental and social health of man, in the man-made environment, particularly in the living and working environment.

The Rights-Based Approaches to Health and Environmental Protection

Nearly all global and regional human rights bodies have considered the link between environmental degradation and internationally-guaranteed human rights, including the right to health. In nearly every instance, the complaints brought have not been based upon a specific right to a safe and environmentally-sound environment, but rather upon rights to life, property, health, information, family and home life. Underlying the complaints, however, are instances of pollution, deforestation, water pollution, and other types of environmental harm. These cases demonstrate several benefits of using one or more of the rights-based approaches to environmental and health problems. First, the emphasis on rights of information, participation, and access to justice encourages an integration of democratic values and promotion of the rule of law in broad-based structures of governance. Experience shows better environmental decision-making and implementation when those affected are informed and participate in the process: the legitimacy of the decisions exercises a pull towards compliance with the measures adopted. Another benefit of a rights-based approach is the existence of international petition procedures that allow those harmed to bring international pressure to bear when governments lack the will to prevent or halt severe pollution that threaten human health and well-being. In many instances, petitioners have been afforded redress and governments have taken measures to remedy the violation. In other instances, however, the problem appears to be the result of a combination of governmental lack of capacity and lack of political will. The pollution may be caused by powerful enterprises whose business and investment are important to the state or the state may have inadequate monitoring systems to ensure air or water quality. Even in these instances, however, petition procedures can help to identify problems and encourage a dialogue to resolve them, including by the provision of technical assistance. Given the extensive treaty provisions and case law that use existing human rights, it may be asked whether or not a recognized and explicit right to a health, safe and environmentally-sound environment would add to the existing protections and further the international values represented by environmental law and human rights. At the national level more than eighty constitutions now contain provisions establishing the right to a safe and healthy environment and/or the duty of the state to protect the environment and health of its inhabitants. The primary argument in favor of such a right is that it elevates the entire spectrum of environmental issues to a place as a fundamental value of society, to a level equal to other rights and superior to ordinary legislation. In the absence of guaranteed environmental rights, constitutionally-protected property rights may be given automatic priority instead of balanced against health and environmental concerns. Other rights may similarly be invoked to strike down environmental and health measures that are not themselves rights-based.

Even where there is a guaranteed right to environment, it still must be balanced against other rights should there be a conflict. In a few instances a specific priority may be established by law. The Constitution of Ecuador, article 19, provides for example the right to live in an environment free from contamination. The Constitution invests the state with responsibility for ensuring the enjoyment of this right and for establishing by law such restrictions on other rights and freedoms as are necessary to protect the environment. Other states may reconcile conflicts through other balances, but including the right makes it possible to do so. In sum, the links between human rights, health, and environmental protection are today well-established in international law, accepted by states in agreements and implemented in practice. Further attention to the links and to the potential conflicts between the goals of the three subject areas will be of benefit to all concerned.

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Principal
V.V.M.s S. G. Patil
Arts, Science & Commerce College
SAKRI, Dist. Dhule.

* अनुक्रमणिका *

In these context, the gel technique is found to be promising one, for getting good quality single crystals which has an advanced technological application in the fields of optics, acousto-optics, optoelectronics and electronics, etc. The crystals which cannot be satisfactorily grown from melt and vapour are grown successfully by this method A complete survey made by Henisch in this field gave a fantastic idea to the crystal growers to grow crystals using gel technique. The art and science of growing crystals in gel is historically an old phenomenon. In the early days the gel was not chosen as a medium of crystal growth, but only used to study the Liesegang ring phenomenon which is in no other way separable from the process of crystallization.

Experimental Details

Test tubes were used as crystallizing vessels, for single diffusion, the test tubes were filled by the first reactant (cobalt chloride) of desired volume and morality. Hot agar agar gel was poured in the test tubes and was kept for setting. The second reactant oxalic acid (0.5 M to 1.0M) of desired volume and morality was gently poured along the walls of test tube on the set gel and allowed to diffuse into the gel medium. The open end of tube was closed with cotton plugs and kept undisturbed at room temperature. The ions of supernatant solution reacted with ions of first reactant through capillaries formed in gel medium. After 6 to 7 day some nucleation was observed near the gel solution interface then some opaque crystal some diamond shape crystals were observed in test tube. The crystals were harvested by washing them carefully with acetone. As grown crystals were collected and observed.

In single diffusion test tubes were filled by first reactant oxalic acid, then poured hot agar agar gel in the test tube, after setting the gel then insert the cobalt chloride (0.5M to 1.0M) solution in test, after 7 to 8 day some nucleation is seen on the interface of test tube, then after few days some shiny crystal are observed.

The chemical reactions inside the gel can be expressed as-

$$CoCl_2 + H_2C_2O_4 \longrightarrow CoC_2O_4 + 2HCL$$

The various optimum conditions for growing crystals were found and are given in table 1.Different parameters such as concentration of reactants, gel concentration, etc have considerable effect on the growth rate. In the steady state of concentration gradient, growth rate also becomes steady which favors growth of well-developed crystals, however, very slow rate of growth along one direction results in the platy crystals. Fast growth rate in one

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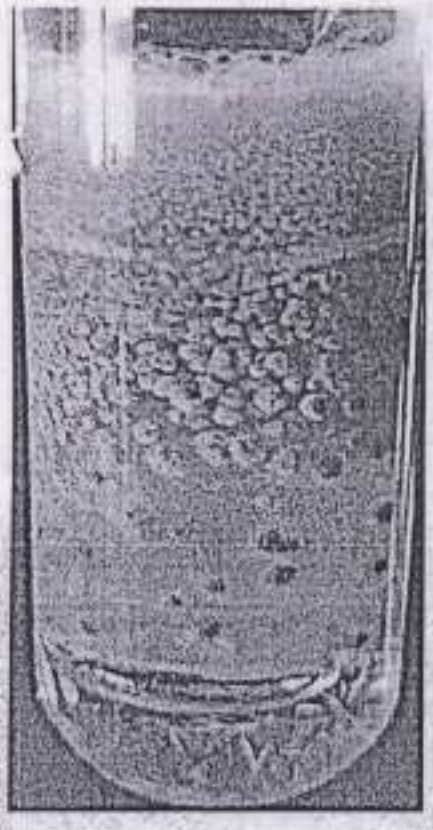

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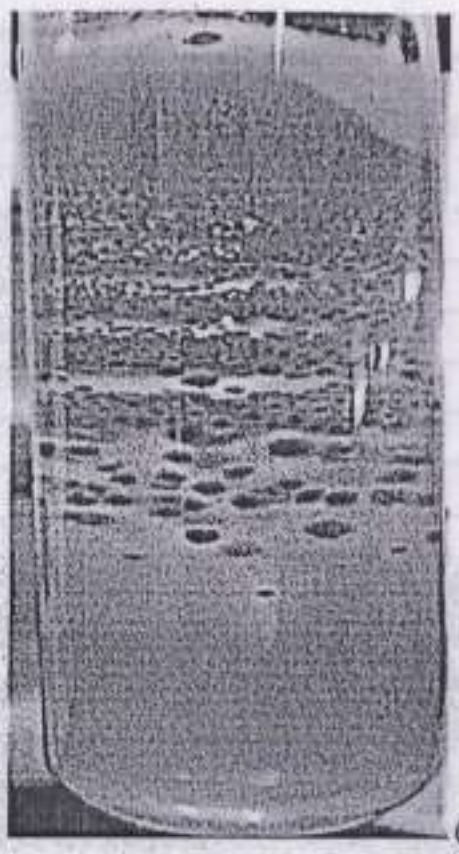

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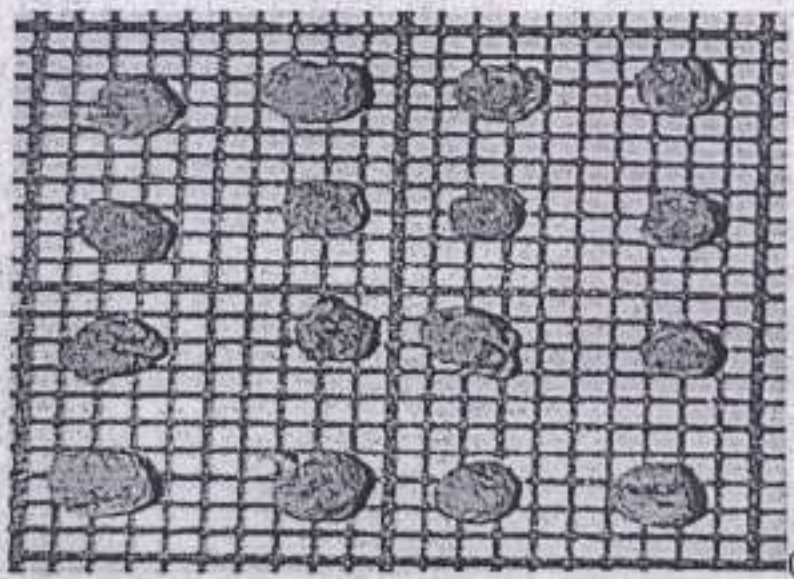

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