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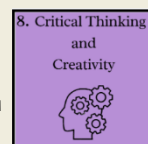
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## Shodh Sarita

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### A COMPARATIVE STUDY OF PUBLIC AND PRIVATE SECTOR LIFE INSURANCE COMPANIES IN INDIA

□ Richa Juanita Peters\*  
□ Dr. G. Vazhan Arasu\*\*

#### ABSTRACT

The life insurance market is complex and competitive since liberalisation. The life insurance industry comprises of 24 companies, among which public sector consists of one company, whereas the private sector consists of 23 companies. The public sector giant is Life Insurance Corporation of India (LIC) which was registered in 1956 and since then it was the only life insurance company till 1999. There has been competition between all the 24 life insurance companies to influence the market shared by them. The main source of income of life insurance companies is through the premium collected for the policies sold by them. The paper is an effort to analyse the performance and the position of public and private sector companies in terms of market share, in the Indian insurance sector LIC shares a larger portion of the market but their share is reducing over the years and is been taken over by public sector companies. Total premium collected and number of policies sold by both the public and private sector is increasing but the rate at which it is growing is higher for private life insurance companies as compared to public sector company. But it is also necessary to understand that the business of private sector consists of 23 companies whereas the public sector has only one company.

**Keywords :** Life Insurance, Insurance Regulatory and Development Authority of India (IRDAI), Public and Private Sector Life Insurance companies, Annual Reports and Market Share.

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**1. INTRODUCTION**

Insurance is an upcoming sector in India. Since 2000 the insurance market was liberalised and the private companies were allowed to enter the market. Initially there were only 4 private sector companies but now the private sector consists of 23 companies. The insurance market is regulated by Insurance Regulatory and Development Authority of India (IRDAI) which was constituted in 1999 and incorporated in 2000. The mission of IRDAI is "to protect the interest of the policyholders, to regulate, promote and ensure orderly growth of the insurance industry and for matters connected therewith or incidental thereto...". When speaking about the life insurance products it can be broadly classified into two categories. The first being pure risk coverage life insurance plans and secondly a combination of insurance and investment components. The different types of life insurance policies available can be classified into 7 categories are given below.

- Term plan – pure risk cover
- Unit linked insurance plan (ULIP)- Insurance + investment opportunity
- Endowment plan- Insurance + savings
- Money back- Periodic returns with insurance cover
- Whole life insurance- Life coverage to the life assured for whole life
- Child's plan- For fulfilling your child's life goals like education, marriage etc.
- Retirement plans- plan your retirement and retire gracefully.

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## Impact of COVID-19 on Small Scale Entrepreneurs in India : An Overview

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**Abstract** - Trades have faced various challenges during the global pandemic, and their response to this disruption has impacted their resilience as well as their chances of recovering from this crisis. Small and medium sized enterprises (SMEs) are changing their business models to adapt to this changing environment. Service-based industries have been particularly badly hit. This research examines how SMEs operating in service industries are coping with the disruptions caused by the COVID-19 pandemic. The objective of this research is to gain insight into which trade of economic growth rate of SMEs in India. An attempt has been made to explore these insights about SMEs according to their impact on their cost of production. The review data has been analyzed for the smart phone manufacturing industries as part of the small and medium scale industries. And in this letter, we will throw light on the government policies for small scale industries, what provisions have been made for them in India.

**Introduction** - The coronavirus pandemic is causing large-scale loss of life and severe human suffering globally. It is the largest public health crisis in living memory, which has also generated a major economic crisis, with a halt in production in affected countries, a collapse in consumption and confidence, of small scale business in M.P. There are several ways the coronavirus pandemic affects the economy, especially SMEs, on both the supply and demand sides. On the supply side, companies experience a reduction in the supply of labour, as workers are unwell or need to look after children or other dependents while schools are closed and movements of people are restricted. Measures to contain the disease by lockdowns and quarantines lead to further and more severe drops in capacity utilisation. Furthermore, supply chains are interrupted leading to shortages of parts and intermediate goods. On the demand side, a dramatic and sudden loss of demand and revenue for SMEs severely affects their ability to function, and/or causes severe liquidity shortages. Furthermore, consumers experience loss of income, fear of contagion and heightened uncertainty, which in turn reduces spending and consumption. These effects are compounded because workers are laid off and firms are not able to pay salaries. Some sectors, such as tourism and transportation, are particularly affected, also contributing to reduced business and consumer confidence. More generally, SMEs are likely to be more vulnerable to 'social distancing' than other companies.

The impact of the virus could have potential spill-overs into financial markets, with further reduced confidence and

a reduction of credit. These various impacts are affecting both larger and smaller firms. However, the effect on SMEs is especially severe, particularly because of higher levels of vulnerability and lower resilience related to their size. In all OECD countries, SMEs account for the vast majority of companies, value added and employment. However, in some regions and sectors that have particularly felt the impacts of the situation, the prevalence of SMEs is even higher. For example, in some of the most affected regions, like Northern Italy, the significance of SMEs within the economic structure is even more critically important. Likewise, SMEs are strongly represented in sectors such as tourism and transportation, which are significantly affected by the virus and the measures taken to contain it, as well as fashion and food where short delivery times are of essence.

SMEs often have a more limited number of suppliers. In some cases, this may shelter them from the shock. At the beginning of the pandemic outbreak in China, this appeared to be the case with German SMEs operating more in regional supply chains and therefore less affected by developments in Asia. In other cases, SMEs may rely on suppliers from countries and regions with more COVID-19 cases, increasing their vulnerability. Similarly, obstacles in transportation by sea, road or air affect these SMEs. Some SMEs are particularly vulnerable to the disruption of business networks and supply chains, with connections with larger operators (e.g. MNEs) and the outsourcing of many business services critical to their performance. Over the longer term, it may be difficult for many SMEs to re-build connections



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## A Critical Appraisal of Ishika Bansal's *Threads of Life & My Diary and Other Poems*

NEELANJANA PATHAK

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### FLOWERING BUDS: FRAGRANCES FROM A COLORFUL BOUQUET OF POEMS

We should not only work  
To fulfill our aspirations  
But also inspire and admire  
The coming generations

'Winners', Threads of Life

It was a joy turning through the pages of verses by a young poet – quick, kaleidoscopic images of almost every shade of life.

The collection *Threads of Life* and *My Diary and Other Poems* provide a rich feast to every sensitive reader for both subject and style. At places, the poems veil a maturity that is far beyond the teens of the budding artist, Ishika Bansal. There is a wide range from Nature poems to introspection to use of wise counsel, pertinent observations on the happenings all around – every poem is read with renewed interest and throws a pleasant surprise and most often a significant message that sediments in the mind. Thus the profoundly thought and skillfully expressed lines belong to the classification of poetry for both pleasure and purpose. The broad spectrum of experiences chosen from everyday life as it is lived, make the poems very relatable and real. As we turn pages eagerly, we journey through a world as seen by an observant adolescent who writes spontaneously: from experiences of a child in moving to a new classroom to her existential need to identify her own space, there are poems documenting so many pertinent childhood



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## Studies on impact of Covid 19 lockdown on psychological status of Students of Madhya Pradesh

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### Abstract

**Psychological** status of the students is the topic of interest through the world. The whole performance of the student depends on his mental health. Till date there is no proven treatment to manage the Novel corona virus disease. As the rate of spread is increasing day by day, lockdown is the only option available to slowdown the rate of spreading the infection. The examinations were postponed due to the lockdown effect and the actual date of exam is awaited. In this context many students were undergoing mental stress and there is a strong need to consider their mental health status. From this study we found that the effect of lockdown very high on students mental health. But there are less impact on those students who regular associated with online classes. The internet facility is very big problem in villages and few places. Students are unable to join online classes and their stress and depression level is very high.

**Key words** –Students ,psychological ,Madhya Pradesh

### Introduction

**Psychological** issues are the leading impediment to academic success. Mental illness can affect students' motivation, concentration, and social interactions—crucial factors for students to succeed in higher education [1]. The 2019 Annual Report of the Center for Collegiate Mental Health [2] reported that anxiety continues to be the most common problem (62.7% of 82,685 respondents) among students who completed the Counseling Center Assessment of Psychological Symptoms, with clinicians also reporting that anxiety continues to be the most common diagnosis of the students. In 2018, slightly over 50% of students reported anxiety as the main reason for seeking services. Despite the increasing need for mental health care services at postsecondary institutions, alarmingly, only a small portion of students committing suicide contact their

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### QUANTITATIVE ANALYSIS AND ANTIMICROBIAL ACTIVITIES OF PHYLLANTHUS EMBLICA (L) LEAF EXTRACTS AGAINST FISH PATHOGEN AEROMONAS HYDROPHILA

View Abstract

pdf

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Published Nov 10, 2020

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#### Abstract

The present study has been to assess the qualitative screening of phytochemical constituents and quantitative study of total flavonoid content, total phenol content, total tannin and in-vitro antioxidant activity; these were determined by aluminium chloride colorimetric method, Folin-ciocalteu method, and ferric reducing antioxidant power method respectively. The anti-bacterial activity of aqueous leaf extracts of different concentration of (25mg/ml, 50mg/ml, 75mg/ml and 100mg/ml) Phyllanthus emblica against Aeromonas hydrophila was done by agar well diffusion methods. Qualitative study reported the presence of tannins, saponins, flavanoids and phenols. Quantitative investigation showed variable amounts of phytochemical constituents such as tannins, flavonoid, and phenol and antioxidant activity in the leaf extract. The most efficient inhibitory activity was examined in higher concentration (100mg/ml) of aqueous extract leaf extracts of Phyllanthus emblica. From the results, the present study indicated that Phyllanthus emblica not only contains high amount of phytochemical compounds but showed higher medicinal value. Phyllanthus emblica possess powerful antimicrobial activity against Aeromonas hydrophila and can be used in various ayurvedic treatments.



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## **In vitro analysis of the effect of Go Ark on Human Peripheral Blood Lymphocytes**

Research Article

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### **Abstract**

Cow is worshiped in India as "Gomata" since ancient time. Its values have been signified in *Vedas, Puranas & Ayurveda*. Its urine/Go Ark is used in rituals & medicines traditionally in India. The Significance of Cow Urine has been studied by many workers. Now it is available in the market as distillate. Hence this study was designed to assess the potential of Fresh Go Ark (FGA) and Distillate Go Ark (DGA) on Human Peripheral blood lymphocytes (PBL) in Vitro using MTT Assay. It was found that FGA & DGA both had the potential to enhance the cell viability of Human PBL. FGA showed greater potential towards the enhancement of cell viability on Human PBL than that of DGA. However the difference between the impacts of FGA & DGA was not found to be significant when tested through Two way ANOVA.

**Key Words:** *Fresh Go Ark, Distillate Go Ark, MTT Assay, Cow urine, Cell viability, Human PBL.*

### **Introduction**

Cow in India is worshiped like mother of all living beings which provides all pleasures to them. All the products obtained from cow possess medicinal properties. Cow urine/Go Ark (GA) is used as a medicine to cure from many curable and incurable ailments. The significance of GA is mentioned in many *Ayurvedic* classical texts, such as *Sushrut Samhita, Bhanuprakash* and *Charaka Samhita* (1).

GA is supposed to have therapeutic value. It is used in many drug formulations. Essentially, GA is used for purification and also as a disinfectant. It has a shelf life of around 5 years. So it can be the most effective natural antiseptic and disinfectant as compared to the synthetic chemicals which are currently been used for the same purposes by the people. (2)

Bhadauria *et al* (3) explained that GA is not a toxic substance as it contains 2.5% urea, 95% water and 2.5% a mixture of hormones, salts, minerals and enzymes.

GA is a secretion of animal origin with an effective medicinal & therapeutic uses. Cow (*Kamadhenu*) is considered as a holy animal by Indians. In *Rigveda* (10/15), considers GA as nectar. Numerous medicinal properties of GA are mentioned in *Charak (shloka-100)* and in *Susruta* (45/221) such as reversal of certain cardiac and renal diseases, anemia, jaundice,

weight loss, indigestion, diarrhea, edema, skin diseases including vitiligo, stomach ache and hemorrhoids. It is capacity to correct all the imbalances in the body and maintains the general health of organisms. (4)

It is believed that GA is gifted by god to the people. Now a day's a number of incurable diseases are occurring in the world harming human societies. GA is solution for all diseases which is used for treating illnesses like skin disorder, blood pressure, constipation, cancer, diabetes, AIDS etc. GA has been used in the rural areas in India since ancient time as an effective antiseptic for skin diseases, wounds, bathing, etc. (5)

Eight types of animals can be used for obtaining urine, out of which GA is believed as the best. Skin-disorders (*Kushtha, Pama, Kilasa, Kandhu*), Gastro Intestinal disorders (*Kamala, Pandu, Gulma, Atisara, Krumi, Anaha, Mitraroga*), *Kasa, Shwasa* and *Visha* are treated by the use of GA. Oral administration of GA is used to treat diseases. (6)

Nitrogen, phosphate, sulphur, manganese, sodium, iron, chlorine, silicon, magnesium, tartaric and calcium salts, maleic, vitamin A, B, C, D, E, citric, enzymes, creatinine, minerals, lactose, gold acids and hormones are found in GA. GA ingredients resembles with human body. Therefore, consumption of GA is beneficial to retain the equilibrium of these substances. It cures many such diseases which are incurable. (7)

GA is considered the elixir of life in the ancient scriptures of Ayurveda. GA based drug formulations would certainly be proved to have a potential medicine that will diminish the increasing pressure on for the use of antibiotics and chemicals. It has the potential to be used for the management of many diseases. This urine therapy could have a great scope for curing wide range of diseases which are dreadful because it is

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## Thermo stable tyrosinase purified from *Pleurotus djamor* grown in biomimetic calcium carbonate: A biological strategy to industrial waste remediation

Juhi Sharma<sup>a</sup>  , Divakar Sharma<sup>b c</sup>  , Anjana Sharma<sup>d</sup>, Shikha Bansal<sup>a</sup>

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### Highlights

- Sequestration of carbon di oxide into calcium carbonate is clearly shown.
- Biomimetically precipitated calcium carbonate is first time used for mushroom production.
- Tyrosinase is purified from pre-mature phase of *Pleurotus djamor*.
- Feasibility of degradation of phenol from industrial effluents by mushroom tyrosinase is presented.
- A comprehensive mechanism for complete carbon-di-oxide utilization have been hypothesized.

### Abstract

A novel, neutral and heat-tolerant tyrosinase produced from *Pleurotus djamor* (*P. djamor*) using biomimetic calcium carbonate which was further used for the biodegradation of





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Review Paper

### Corona Virus (COVID-19) Symptoms Prevention and Treatment: A Short Review

Ranjan Singh<sup>1\*</sup>, Surendra Sarsaiya<sup>2</sup>, Tanim Arpit Singh<sup>3</sup>, Trashi Singh<sup>4</sup>, Laxmi Kant Pandey<sup>5</sup>, Prabhash Kumar Pandey<sup>6</sup>, Neeraj Khare<sup>7</sup>, Femina Sobin<sup>8</sup>, Ranjana Sikarwar<sup>9</sup>, Mahendra Kumar Gupta<sup>10</sup>

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#### Abstract

There is a new world health crisis threatening the public with spread of COVID-19 (Coronavirus Disease-2019). Since 2019 when Covid-19 emerged in Hunan seafood market at Wuhan, South China and rapidly spread throughout the world, the virus outbreak has been declared a public health emergency by the WHO. Corona virus causes respiratory infection including pneumonia, cold, sneezing and coughing while in animal it causes diarrhea and upper respiratory diseases. Corona virus transmitted human to human or human to animal via airborne droplets. Patient shows various symptoms like fever, cough, sore throat, breathlessness and fatigue. The disease is being cured through general treatment, symptomatic treatment and by other methods. This review outlines the Epidemiology, Diagnosis, Management and prevention of this fatal disease.

**Keywords:** Coronavirus disease-2019, COVID-19, Respiratory Syndrome, Symptoms, Prevention, Treatment.

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#### Introduction:

At the end of 2019, a series of pneumonia cases of unknown cause emerged in Wuhan, China<sup>1</sup>. A few weeks later, in January 2020, deep sequencing analysis from lower respiratory tract samples identified a novel virus severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) as causative agent for the observed pneumonia cluster<sup>2</sup>. Corona virus are a large family of virus which may cause disease in animals or humans. Corona virus is an RNA virus, with a typical crown-like appearance under an electron microscope due to the presence of glycoprotein spikes on its envelope<sup>3</sup>.

The virus is typically rapidly spread from one person to another via respiratory droplets produced during coughing and sneezing. It is considered most contagious when people are symptomatic. Common symptoms include fever, cough, sneezing and shortness of breath. Recommended preventive measures include washing your hands, covering the mouth maintain social distance and self-isolation for 14 days for people who are infected<sup>4</sup>.

#### Microbiology:

Corona virus is spherical or pleomorphic, single stranded, enveloped RNA and covered with club shaped glycoprotein. Corona viruses are four sub types namely alpha, beta, gamma and delta corona virus. Each of sub type corona virus has many serotypes<sup>5</sup>.

#### Epidemiology:

People can get the infection through close contact with a person who has symptoms from the virus includes cough and sneezing. Generally, corona virus spread via air-borne droplets. The virus might pass through the mucous membranes, especially nasal and larynx mucosa, then enters the lungs through the respiratory tract. Then the virus would attack the targeting organs that express angiotensin converting enzyme 2 (ACE2), such as lungs, heart, renal system and gastrointestinal tract<sup>6,7</sup>. Pneumonia appears to be the most frequent serious manifestation of infection, characterized primarily by fever, cough, dyspnea and bilateral infiltrates on chest imaging. Other less common symptoms have included headaches, sore throat and

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### Callus extracts of *Oroxylum indicum* (L.) Vent containing baicalein have in vitro antioxidant and antibacterial activities

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#### ABSTRACT

*Oroxylum indicum* (L.) Vent is used as a traditional medicine to cure many diseases. The flavonoids baicalein has been detected and extracted from in vitro culture. The aim of this research was to determine the in vitro antioxidant and antibacterial activities of *O. indicum* callus extracts. Murashige and Skoog medium supplemented with BAP 1 mg l<sup>-1</sup> and AgNO<sub>3</sub> 2 mg l<sup>-1</sup> was used to induce the formation of callus. Different explants were excised from 15 days old seedlings developed on MS medium. Metabolites were extracted from two-month-old callus. Ethanolic and aqueous extracts were prepared in cold and hot conditions. They were used for phenolic and flavonoid content determination. Extracts of callus were subjected to thin layer chromatography (TLC), UV-Vis spectrophotometry (range 200-600nm) to check the presence of flavonoid (baicalein) and FTIR. The free radical scavenging activity of the callus extracts were investigated using 1, 1-diphenyl-2-picrylhydrazyl (DPPH) radical scavenging method. The antibacterial activity was determined by well diffusion method and MTT assay viability test against *Micrococcus luteus* and *Staphylococcus aureus*. Dark brown and friable callus of *O. indicum* was developed. Presence of baicalein was detected by using UV-Visible Spectrophotometer, in purified elute, isolated from TLC of callus extracts. Baicalein was confirmed in extracts of callus on UV-Vis Spectrophotometer against the peak of standard baicalein. Functional groups of baicalein were confirmed by FTIR analysis in the oven dried callus in the range of 400-4000 cm<sup>-1</sup>. DPPH assay of ethanolic cold extract of callus revealed the best antioxidant property (6.2 ± 0.1 µg ml<sup>-1</sup>) as compared with the standard (ascorbic acid). Ethanolic extract of callus of *O. indicum* reveal inhibitory activity against the bacterial strains assayed.

Key words: baicalein, flavonoids, FTIR, TLC, UV-Vis Spectrophotometry

Extractos de callos de *Oroxylum indicum* (L.) Vent que contienen betalaína presentan actividad antioxidante y antibacteriana in vitro

#### RESUMEN

*Oroxylum indicum* (L.) Vent se usa como medicina tradicional para curar muchas enfermedades. Los flavonoides baicaleína se han detectado y extraído del cultivo in vitro. El objetivo de este trabajo fue determinar las actividades antioxidantes y antibacterianas in vitro de los extractos de callos de *O. indicum*. Se usó medio de cultivo Murashige y Skoog con BAP 1 mg l<sup>-1</sup> y AgNO<sub>3</sub> 2 mg l<sup>-1</sup> para inducir la formación de callos. Se extrajeron diferentes explantes de plántulas de 15 días desarrolladas en medio de cultivo MS. Los metabolitos se extrajeron de callos de dos meses. Se prepararon extractos etanólicos y acuosos en condiciones frías y calientes. Estos



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## Development, Optimization & Application of Corn Cobs as Cost Effective Matrix for Immobilization of Fungal Strains *Paecilomyces sinensis* and *Geotrichum pseudocandidum*

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**Abstract:** Fungal strains *Paecilomyces sinensis* and *Geotrichum pseudocandidum* were successfully immobilized on cheap yet effective support matrix, corn cobs. Immobilization was analysed by obtaining growth of the immobilized fungi from induced corn cob on solid media and further confirmed by FTIR analysis. Immobilization was successfully optimized on various temperatures and for different time duration. Activities of economic importance, performed by selected fungi were heavy metal absorption (in water and on solid medium), synthetic dye removal, enzyme production, were also performed efficiently by them in their immobilized form. Proposed work is an inclination towards immobilization of fungi via waste material appropriate for their growth and activity. Other fungi of economic importance may be immobilized using other matrices. The work suggests a cost-effective technique in order to increase industrial production.

**Index Terms:** Atomic Absorption Spectrophotometer (AAS), Bio-Remediation, Fourier-Transform Infrared (FTIR) spectroscopy, Immobilization, Synthetic dye removal.

### I. INTRODUCTION

Fungi are ubiquitous microorganisms that are continuously being researched upon and utilized for production of many commercially important products like antibiotics, enzymes and organic acids. The application of fungi has not been limited till production, rather these being applied as an agency for bio-remediation, for example, detoxification of coal wastes, sewage sludge and heavy metal contamination (Baldrian, 2003; Spina, 2012). Mere use of the fungal mycelium will never benefit the purpose of application because of the exposure to the

environmental stress. For such applicative purposes fungi need to be associated with a support matrix, since the mycelium can never be used due to obvious drawbacks (Rodriguez-Couto, 2008). This particular step of providing a support matrix is one of the most important procedure since it affects the measure of fungal activity directly. The selection of the support biomass/matrix is crucial. Studies have proposed obtaining a better performance by the microbe associated as compared with the free microorganism (Gao, 2010). Such scaffolding studies have impacted the perspective of research on utilizing the best support matrix for the purpose of immobilization. The selection of support matrix makes the process more advantageous and economic with continuous progress in the technology, which includes use of system repeatedly (Spina, 2012: 175-180). Such scopes in the field make the efforts of the researchers noteworthy.

Immobilization is the imprisonment of all types of biocatalysts including enzymes, cellular organelles, animals and plant cells in a distinct phase that allows exchange with but is separated from the bulk phase or the external environment. Immobilization has a wide range of application in many industries like biotechnology, pharmaceutical, environmental, food and biosensor industries. As stated before, Immobilization can affect the purpose directly therefore it becomes the key aspect of the process of optimization of the commercial product (Sheldon, 2007). Immobilization is a good practice but requires constant research and raw material (support matrix) which brings extra financial load.

Utilization of fungi for bioremediation has been proven significant since the contamination of water bodies with heavy

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### Hairy Root Culture Through *Agrobacterium rhizogenes* for Enhancement of Secondary Metabolites Production in Medicinal Plants: A Review

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**Abstract:** Plants are a tremendous source for the discovery of new products with medicinal importance in drug development. Several distinct chemicals derived from plants are used in various important ways. Secondary metabolites are economically important as drugs, flavor, dye, pesticides, and food additives. Plants produce the diversity of secondary metabolites which not only plays an important role in adaptation according to the environment but also represents an important source of active pharmaceuticals. The possibility of altering the production of bioactive plant metabolites through tissue culture technology is one of the emerging fields of biotechnology to investigate and enhance the production of secondary metabolites. This enhancement through field cultivation has many defects such as slow growth and low and variable yield due to the environmental and biotic factors. Therefore, hairy root culture has been developed as a more efficient alternative biotechnological tool for secondary metabolite synthesis, regardless of environmental, seasonal, and climatic variations. *In vitro* hairy roots formed by genetic transformation have been efficiently utilized for the synthesis of higher levels of flavonoids due to their biochemical and genetic stability as well as their fast growth in media without phytohormones. The focus of the present review is a detailed assessment of research on rhizogenesis in different plants using *Agrobacterium rhizogenes* for the last twelve years particularly for the enhancement of secondary metabolites. The study reveals different techniques involved for rhizogenesis in different plants, compatibility trends of the desired gene, and modifications in the techniques during these years.

**Key words:** Hairy root cultures, *Agrobacterium rhizogenes*, rhizogenesis, secondary metabolites.

#### The rationale of the study

Plant secondary metabolites are unique sources for pharmaceuticals, food additives, flavors, and industrially important biochemicals. Accumulation of such metabolites often occurs in plants subjected to stresses including various elicitors or signal molecules. Secondary metabolites play a major role in the adaptation of plants to the environment and in overcoming stress conditions. Environmental factors viz. temperature, humidity, light intensity, the supply of water, minerals,

and CO<sub>2</sub> influence the growth of a plant and secondary metabolite production.

The principle advantage of recent technology is that it may provide a continuous and reliable source of plant pharmaceuticals and could be used for the large-scale culture of plant cells from which these metabolites can be extracted. Plant cell and tissue cultures hold great promise for controlled production of useful secondary metabolites on demand. The current yield and productivity cannot fulfill the commercial goal of plant

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## JOURNAL OF CRITICAL REVIEWS

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### A HEURISTIC METHOD FOR ONE DIMENSIONAL CUTTING STOCK PROBLEM (1D-CSP) WITH VARIABLE SUSTAINABLE TRIM LOSS

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**ABSTRACT:** The fundamental of cutting stock problem is to assign cutting plan of required number  $dm_1, dm_2, \dots, dm_n$  of order lengths  $ol_1, ol_2, \dots, ol_n$  at minimum cost from given stock bars  $St_1, St_2, \dots, St_m$ . When this problem was modeled as a linear or an integer programming problem, it required large number of variables, which made the computation unviable. This chapter concerns with a heuristic model, in which we intend to cut two order lengths say  $\alpha ol_i$  and  $\beta ol_j$  at a time where  $\alpha, \beta$  are non-negative number.

The stock lengths  $St_1, St_2, \dots, St_m$  are arranged in ascending order with respect to their lengths. Corresponding to each stock length  $St_k$ , we assume that the industry may sustain  $t_k\%$  trim loss. We have considered the sequence  $\{t_k\}$  in non-increasing order, so that the trim loss corresponding to the largest stock length should not exceed the trim loss corresponding to the lower stock length. It has been perceived that this concept of the proposed method has resulted in much less trim loss in comparison to the trim loss computed by other techniques.

**KEYWORDS:** PDSTL, VPDSTL, VPDCSTL, sustainable trim loss

#### 1. INTRODUCTION

The cutting stock problem involves the cutting of materials of high cost which demands the need of minimization of waste or leftover when consumed to cut the assigned number of orders. This problem arises frequently in the industrial applications to determine how smaller shapes of different requirements can be adjusted to a large stock bar of finite lengths to minimize the leftover.

The fundamental aspects used in the problem of cutting stocks are the generation of patterns, followed by the cutting of the required number of pieces of materials from the measurement of the stock based on the patterns generated. We focus this chapter on the problem of One-Dimensional-Cutting Stock (1D-CSP) in which the type of the patterns may or may not be consistent. For years, the basic two main methodologies in CSP have been in existence, viz., heuristic and linear programming. There are several texts, mathematical simulations and methods available on Cutting stock problem, from which many restraints may arise in its application. Among the various constraints of CSP, a problem which has not fully considered yet is how to control the trim loss by determining the sustainable trim loss and planning the cutting patterns with minimum trim loss. An extensive text has been published on 1D-CSP and we here reflect on some present findings in this field-

In this chapter, we propose a mathematical model to establish the cutting plan which involves the cutting of maximum two order lengths at one instance of the required numbers  $dm_1, dm_2, \dots, dm_n$  of the corresponding order lengths  $ol_1, ol_2, \dots, ol_n$  respectively from the given  $m$  number of stock  $St_1, St_2, \dots, St_m$ . Assuming  $t\%$  trim loss, we compute a trim loss  $t_j$  corresponding to the given stock length  $St_j$ . At each stage of the cutting process, the stock utilized to cut the  $dm_i$ 's of corresponding  $ol_i$ 's is verified with its sustainable trim loss computed, to check whether the used stock is substantial with the scrape it is leaving, since the perception of sustainable trim loss that plays a vital role in monitoring the total trim [7]. In real time, the industry proposes Pre-Defined Sustainable Trim Loss (PDSTL) as a constant value ( $\leq 3\%$ ). The authors are in an opinion that, using a constant value of PDSTL, there is always a greater scrape left with large stock lengths, due to which there is always a possibility of the industry to have greater loss. Therefore, the authors enunciate variations in the PDSTL corresponding to each stock length  $St_j$ , such that the PDSTL of the largest stock length should not exceed the PDSTL computed of the shortest stock length. In particular if  $t_k\%$  is a sustainable trim loss corresponding to the stock length  $St_k$ , then following has been assumed:

$$St_1 \leq St_2 \leq \dots \leq St_m, \text{ then}$$

$$t_1 \geq t_2 \geq \dots \geq t_m$$

The use of these variations has resulted in better result. In support of our assertions, we have elaborated one example in which the data has been extracted from [8] and observed that this new technique results with less trim loss than the trim loss obtained in [8].





## Data Stream Clustering for Big Data Sets: A comparative Analysis

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**Abstract.** The world is growing rapidly with constantly increasing the data. There are innumerable people around the world who use different types of applications, whether it is for reservation, marketing, shopping or knowledge in the form of text, image, audio and video. Only data is being generated everywhere and this growing data which is large and high dimensional in nature is generally known as "big data". For the organizations, it is a big task to cluster streaming big data successfully. In this paper, we are presenting a survey of data stream clustering algorithms applied over big data and big datasets. The paper shows the comparative analysis of all the studied methods and also review the evolution and progression of data stream clustering algorithm for big datasets. The paper also analyses the proposed and implemented algorithms in recent years.

### 1. Introduction

In any organizations, automation is in almost every domain, and the departments generated number of transactions for each business process. These processes are in sequences of data objects that are continuously streaming. Dealing with this volume and amount of streaming data is a biggest challenge for researchers. The challenge here is to deal with the high dimensional, large volume of big data sets which is changing rapidly with the time. These massive, unbounded stream of data which in and out continuously and the data not available to visit and treatment for the next time, the so-called data streams. Streaming of data  $S$  as a continues sequence of data objects  $S = \{o_1, o_2, \dots, o_t, \dots\}$ , where  $t$  is the time at data object arrived. Each data object is a continuous sequence of arrival. Social networking is the principal source of knowledge in today's age of big data. Big Data is huge and rapidly growing. In short, since it can be so big and complex, none of the conventional information management tools can store and process large data effectively [1]. For many applications, such as web traffic flow, WSN, network traffic control, the study of vast datasets and extraction patterns is useful. The data classification into clusters is unsupervised and can be denoted as  $D = K_1 \cup \dots \cup K_a \cup K_c$ ;  $K_a \cap K_b = \emptyset (a \neq b)$  where  $D$  denotes original data set.  $K_a$  are set of clusters in  $D$  and  $c$  denotes the number of clusters set [2][3].

#### 1.1 Big Dataset Formats

Big Dataset refers to large growing data sets that include formats like: structured, unstructured



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## Information Security in Cloud Computing

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**Abstract-** Cloud computing provides way for storing, accessing, manipulating and management of Information based on PaaS, SaaS, IaaS, DaaS, Faas and DBaaS. Information is fact about an entity. Entity could be living object or nonliving subject. Information Security is big concern in today's world. There are dedicated hackers who hack the information and use the information for their benefit without permission. Cryptography and Steganography techniques together can be used for Information Security. This paper presents the different way of Information storage on Cloud and extraction of stored information from Cloud Computing platform. Encryption is first layer. Second layer is Split the Document and at third layer apply Steganography.

**Keywords-**Information Security, Steganography, Cryptography, Encryption, Decryption, Cloud Computing.

### I. INTRODUCTION

Cloud computing is one of the revolutions in IT Industries which stores and access the data over the Internet and Internet is allegory for Cloud. Private cloud, Public cloud, Community cloud and Hybrid cloud are types of Cloud. Information can be accessed by anyone who is authorized to access that information. There are some unauthorized entities who try to access the information over the internet for Evil Use. Cloud Computing provides services which involves money. The National Institute of Standard and Technology (NIST) [1] have defined some essential characteristics for cloud computing systems [2, 3, 4, 5, 6] and they are On-demand self-service, cost effectiveness, resource pooling, mobility, rapid elasticity, reliability, scalability, resource utilization, customization and virtualization. Therefore Cloud Computing service providers should provide reliable services. One of the major issues in Information Security is reliability.

Customers of Cloud Computing should be assured that their Information is Secure and only intended and authorized entity is able to access that Information. There are number of Cloud Computing services which can be availed on per use basis and these are Software as a Service, Platform as a Service, Infrastructure as a Service, Data as a Service, Function as a Service and Database as a Service. (The NIST Definition of Cloud Computing) Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and

services) that can be rapidly provisioned and released with minimal management effort or service provider interaction[7].

After comparing types of Cloud one can find that-1. Public Cloud is for Industries and general public and it managed by Cloud service providers and level of security is low. 2. Private Cloud is managed by single organization for single organization and security level is little high as compared to public cloud. 3. Community cloud is for organizations which follow same protocol about policies and security and security level is high as compared to public cloud. 4. Hybrid Cloud is for public and organization managed by public and organization and security level is medium as compared to Public Cloud.

Cryptography and Steganography both techniques of Information Security use Encryption and Decryption process to secure the information from unintended user. Encryption changes the form of information and decryption brings the information in its original format. Steganography is a way for hidden communication. Images can be used as cover for hiding the information. Information can be of type Text, Audio, Video or Image. Here use of RSA encryption is used at first layer. At second layer split the information and at third layer make use of Steganography technique to hide the split information behind images. And now send and store this split encrypted information on Cloud. Whenever intended user requests for data that user will get split information.



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## $\phi$ -CONTRACTION AND ITS APPLICATION TO FRACTIONAL DIFFERENTIAL EQUATION

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### Abstract

In this article we defined  $\phi$  contraction, which is more globally than previously defined  $\theta$  contraction and generalized Khan contraction [4]. More general phenomena have also been shown by giving the suitable examples. The rearmost part of this article consists of the application of this contraction to fractional differential equation.

### 1. Introduction and Preliminaries

Firstly, the idea of  $\theta$  contraction in 2014 introduced by Jleli et al. [2] and defined generalization of Banach Contraction. After that many researchers (see [1], [3], [5]) developed work on fixed point. In 2017 Piri et al. [4] defined generalized Khan contraction and they settled the existence and uniqueness of fixed point. In this work with the concept of  $\theta$  contraction and Khan contraction we defined new type of  $\phi$  contraction and furnished fixed point theorem, supporting examples for the newly defined concept and application to fractional differential equations is the important part of this article.

2010 Mathematics Subject Classification: 55M20, 46B85.

Keywords: fixed point, metric space, contraction.

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## Fixed Point Theorems Concerning Hausdorff F-PGA Contraction in Complete Metric Space

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### Abstract.


Harandi Amini-Harandi [2012], in 2012 established the existence of a fixed point by using the concept of set-valued contraction. In the present paper, authors have generalized this concept by considering Hausdorff F-PGA contraction and assured the existence of a fixed point. Hence, it is interesting to note that in a complete Hausdorff metric space, the fixed point exists with a lighter contraction map.

### 1. Introduction

Fixed point theory, has always been an important branch of Mathematics, the concepts of fixed point theory play a crucial role in solving various mathematical problems Zhao and Li [2011], Hussain et al. [2014]. Researchers consider various spaces Mishra et al., Mishra et al. [2020, 2015b], and study existence and uniqueness of the fixed points in these space by applying different contraction mappings Sanatee et al. [2020], Mishra et al. [2020, 2015a]. Nadler Nadler et al. [1969] generalized the notable work of Banach Banach [1922] by proposing the concept of multi-valued contraction mappings. The concept of multi-valued contraction mappings was further studied by Wardowski Wardowski [2012] who introduced a new concept of contraction called the F-contraction and given a benchmark theorem, which generalized the Banach contraction principle. Harandi Amini-Harandi [2012] used this F-contraction map and established some important results concerning the generalization of the Banach contraction principle in context to the F-contraction. It may be noted that we have previously defined the F-PGA contraction map Powar et al. [2018], which was found to be a generalized form of the F-contraction map. In this paper, we have taken a complete metric space, with a Hausdorff metric defined on it. Further, we define the F-PGA contraction map over this complete metric space, called the Hausdorff F-PGA contraction map. Using this Hausdorff F-PGA contraction map, we have generalized the averments of Harandi Amini-Harandi [2012] and established the existence of a fixed point for Hausdorff F-PGA contraction.

### 2. Preliminaries

In this section, we list some of the basic definitions and examples which are being used in this paper and are required, to get an insight into the concept.

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## TWO EXCEPTIONAL PYTHAGOREAN TRIANGLES: A KEY FOR ENCRYPTION

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**Abstract** - Two remarkably special Pythagorean Triangles are found with their perimeter as eleventh power. These are exceptional in the sense that with the given constraint that their perimeter should be of the eleventh power, do not comply with Euclidean formula of obtaining primitive Pythagorean Triangles. Interesting properties of these Pythagorean Triangles are observed. An application of their use in cryptography is also proposed.

**Keywords**- Euclidean formula, Mathematica, Opposite Parity, Primitive Pythagorean Triangle, Undecic.

### 1. INTRODUCTION

The search for special Pythagorean Triangles has held in fascination those who love numbers. Darbari and Darbari (2019) have found out special Pythagorean Triangles with their sum of two legs as undecic and their application, while Darbari et al. (2019) and Darbari et al. (2020) have suggested alternative methods to apply these.

In this paper, exploring the problem further, an attempt has been made to find Pythagorean Triangles with their perimeter as eleventh power of a positive integer. These exceptional triangles are also applied in cryptography in a unique way.

### 2. DEFINITIONS

**2.1 Pythagorean Equation:** A quadratic equation

$$X^2 + Y^2 = Z^2$$

is called Pythagorean equation (Robbins, 2006) after the famous mathematician and philosopher Pythagoras. It is one of the most important equations of the world in all times.

**2.2 Pythagorean Triangle** (Niven et al., 2018): A right angled triangle with sides  $X$ ,  $Y$  and  $Z$  is called Pythagorean Triangle if  $X$ ,  $Y$  and  $Z$  are positive integers.  $X$  and  $Y$  are called its legs and  $Z$  is called its hypotenuse. Pythagorean triangles satisfy Pythagorean equation  $X^2 + Y^2 = Z^2$ .

If  $X$ ,  $Y$  and  $Z$  satisfy Pythagorean equation, then  $aX$ ,  $aY$  and  $aZ$  also satisfy it, where  $a$  is positive integer. Therefore, one Pythagorean Triangle can generate infinite Pythagorean triangles.

**2.3 Primitive Pythagorean Triangle:** A Pythagorean Triangle is said to be primitive if  $X$ ,  $Y$  and  $Z$  are co-primes, i.e., their greatest common divisor is one. Or, we can say,  $\text{GCD}(X, Y, Z) = 1$ .

**2.4 Opposite Parity:** Two natural numbers  $m$  and  $n$  are called of opposite parity if one of them is even and other is odd, i.e.,  $m \not\equiv n \pmod{2}$ .

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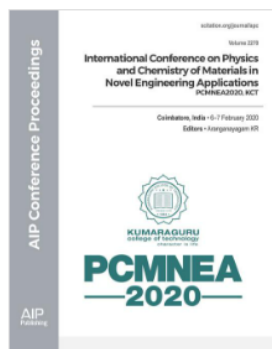


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RESEARCH ARTICLE | NOVEMBER 02 2020

### A study of the optical band gap energy and Urbach energy of fullerene (C<sub>60</sub>) doped PMMA nanocomposites

A. Dhanaraj ; K. Das; J. M. Keller



+ Author & Article Information

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Fullerene dispersion in a polymer matrix alters the values of band gap energy and Urbach energy of the nanocomposite. In the presented work, the influence of fullerene dispersion and polymer-fullerene interactions on the band gap energy and Urbach energy of poly (methyl methacrylate)-fullerene C<sub>60</sub> nanocomposite has been studied by means of UV-Vis absorption spectroscopy. Pure and different doped films of gradually increasing concentrations were fabricated using solvent casting technique. Optical properties of these films were obtained from the UV-VIS absorption spectra, at normal incidence, over 190–1100 nm spectral range. The optical absorption edge was described using the Tauc model. Band gap energy of the thin films was found using Tauc plot. The width of the band tails, known as Urbach tails, were evaluated to quantify the structural disorder. Optical characterization showed that average absorption and band gap energy decreased, while Urbach energy increased with the addition of fullerene C<sub>60</sub>.

Topics

[Doping](#), [Band gap](#), [Absorption spectroscopy](#), [Polymers](#), [Thin films](#), [Absorption band](#), [UV-visible spectroscopy](#), [Fullerenes](#), [Nanocomposites](#), [Optical absorption](#)




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 **SHANLAX**  
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## Revival and Resurgence of Our Lost GEM - The Ancient Indian Education System

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### Abstract

After witnessing the wroly and disruptive behaviour amongst college students on trivial topics, a study was conducted to find the reason behind it. The study consisted of students discussing topics like politics, situational problems etc. and it was observed that students lacked the concept of perception.

Studying this even further, it was found that the cause for this was because our modern-day education focused more on literally manufacturing people for jobs and less on value systems and critical thinking. The present education system is finding it very difficult in ensuring the required quality that every student must possess. This also gives rise to students being confused about their career paths and life in general. They don't realise their true potential and abilities and thus start developing a "follow the crowd" mentality.

To improve this situation, a radical change has to be brought into the education system and this change can only be supported by retrospection of India's ancient education system. The focus must now divert towards developing skills rather than just concentrating on academics. These ancient practices cannot be applied as it is in this modern era. Hence, their application calls for reinvention and resurgence to benefit today's students.

**Keywords:** Education, student, Reinvention, Value System, Ancient India, Skill development

### Introduction

As quoted by the great Swami Vivekanand - "Each nation like each individual has a theme in this life, which is its centre, the principle note, around which every other note comes to form the harmony. If any nation attempts to throw off its national vitality, the direction, which has become it's own through the transmission of centuries, nation dies."

India is a country famed for its diverse and rich culture as well as heritage. But it was truly celebrated for its ancient education system, which focused on the development of an individual on all levels, be it physical, emotional and psychological. Moral education was a perennial aim of Vedic education. The principles of Vedic education have been a source of inspiration to all the educational systems of the world. This was the primary reason why India produced great scholars like Chanakya, Aryabhata, Pingala, Sushurta, Charaka etc.



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## “उच्च शिक्षा क्षेत्र में कार्यरत महिलाओं की सामाजिक - आर्थिक स्थिति का विश्लेषणात्मक अध्ययन”

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### शोध सारांश

प्रस्तुत शोध पत्र में उच्च शिक्षा क्षेत्र में कार्यरत महिलाओं की आर्थिक-सामाजिक स्थिति का अध्ययन किया गया है। अध्ययन क्षेत्र मध्यप्रदेश के उच्च शिक्षा विभाग में सन् 1991 से शासकीय क्षेत्र में स्थायी शैक्षणिक व अशैक्षणिक कर्मचारियों की भर्ती नहीं हुई है। रिक्त पदों पर संविदा नियुक्ति के द्वारा शैक्षणिक कार्यों का संचालन किया जा रहा है। इस पद पर कार्यरत महिलायें भी कई समस्याओं का सामना कर रही हैं। अतः अध्ययन हेतु मध्यप्रदेश राज्य के जबलपुर व डिन्दोरी जिले के विश्वविद्यालय व महाविद्यालय के महिला सहायक प्राध्यापकों के समग्र में से 135 कार्यरत महिलाओं का चयन दैव निर्देशन विधि के द्वारा किया गया है। शोधकर्ता द्वारा संकलित प्रदत्तों के विश्लेषण के संदर्भ में माध्य, मानक विचलन व काई वर्ग परिक्षण की गणना की गई व निष्कर्ष निकाले गए हैं।

मुख्य शब्द – उच्च शिक्षा क्षेत्र, कार्यरत महिलाएं, आर्थिक स्वतंत्रता, सामाजिक स्वतंत्रता



Articles

## Water rights in India: economic good, fundamental rights or human rights?

Ashu Jain & Gary Lilienthal 

Pages 501-522 | Published online: 23 Oct 2020

 Cite this article <https://doi.org/10.1080/03050718.2020.1836500>



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### Abstract



While India battles COVID-19, hand washing is the survival strategy. The research objective is to critically examine water rights in India. The research asks whether there are rights to water in India, and if so, what kind. The thesis proposition is that India has derivative rights to water that are neither fundamental nor human rights. The research methodology is by narrative analysis. States prefer an economic good theory, from the Dublin Statement. Fundamental rights to ground water in India are unlikely to be shifted. The India Constitution now provides additional rights. Human rights for water are only derivative and undeclared.

### Disclosure statement

No potential conflict of interest was reported by the author(s).

### Notes





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## Customers Perception for Consumption of Out Food during Covid-19: Unlock Scenario

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### Abstract

The world is facing an unprecedented threat from the COVID-19 pandemic caused by the SARS-CoV-2 virus. World Health Organization (WHO) advised taking measures for physical distancing is one of the measures by which transmission of the disease can be reduced, resulting in the closure of hotels, restaurants and other social gatherings. Now the government, after more than two months of lockdown due to COVID-19, is set to unlock the country with self-Reliance. Life will hardly remain the same while moving to the other side of the Covid-19 pandemic. Therefore, this paper attempts to know the consumer perception for the consumption of out food and reveals the factors affecting it during covid-19, new normal (unlock scenario).

**Keywords:** - Covid-19, Customer perception and Out Food.

### INTRODUCTION

The world is facing an unprecedented threat from the COVID-19 pandemic caused by the SARS-CoV-2 virus. World Health Organization (WHO) introduced some physical distancing measures as one of the ways in which transmission of the disease can be reduced. The application of these measures by various countries,

including India, has resulted in the closure of many businesses, schools, and institutes of education, and restrictions on travel and social gatherings.<sup>1</sup> According to the National Restaurant Association of India, food services is one of the sectors worst affected by Covid-19 is estimated at Rs.4, 23,865 crore in India and employing more than 700,000 people. <sup>3</sup>For some people,



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*Gender Disparity: A Study of Gross Enrolment Ratio in Higher Education*

## Gender Disparity: A Study of Gross Enrolment Ratio in Higher Education

Komal Rawat\*

### Abstract

*Higher Education is a vital aspect of the economic development of a nation. An educated person has to undergo a learning process that ensures the empathetic environment and social justice in society. Higher Education empowers human beings with skills, knowledge, and awareness. Gross Enrolment Ratio (GER) in Higher Education comprises a variation in different courses. Gender disparity in diverse courses points out the discrepancies in the inclusive progress of women. The main aim of the study is to comprehend the dissimilarity in male and female GER and gender inequality in different courses. The paper concludes with suggestions to formulate various effective policies and guidelines for female empowerment in Higher Education and to bring similarity in courses.*

### 1. Introduction

The significance of Higher Education can be seen in the communal and financial progress of a nation. It brings many opportunities for the benefits of individuals and groups. Because of Higher Education people can enhance their confidence and build their personality. Overall it can be said that Higher Education improves the quality of life.

Higher Education encompasses numerous courses to enable an individual to develop self-reliance, become resourcefulness, and to be a perfect human being. There are several courses in which students can register and pursue Higher Education. India is confronting various critical issues out of which gender disparity is one. Gender disparity is a significant problem in India which affects the sex ratio, education, economic and social development.

Higher Education in India also contains gender disparity. Gender inequality in courses impacts

the intellectual level, health, economic condition, and social status. It is a multidimensional matter in India that creates a barrier for national growth and development. Women are a disadvantaged section in several ways even though the constitution of India had given equal rights to men and women after this gender disparities persist.

Gross Enrolment Ratio (GER) in Higher Education is continuously increasing but at a slower pace which needed to rise high to compete globally. Gender inequality may be an obstacle to the overall development of women.

### Gross Enrolment Ratio (GER)

It is a ratio that is calculated to identify the number of students enrolled in education at schools, college, and university level. The GER in higher education means the population between the age group of 18-23 years

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## Education loan and socio-economic growth

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### Abstract

Higher Education has a noteworthy contribution in the Indian Economy. Education contributes to social, and economic growth of a region. Higher Education increases labour productivity and individuals' income and that of the whole economy. Hence, it is necessary to develop an education system which generates human capital for achieving social and economic development. Present study is based on the socio-economic growth due to Education Loan. A set of 377 Questionnaires were distributed to Beneficiaries and 126 to Bank Employees. The main objective of study is to identify the relationship between Education Loan and socio-economic growth of people.

**Keywords:** higher education, education loan and socio-economic growth

### Introduction

Higher Education impacts the human development and economic growth and it also makes a person very responsible and a proper citizen through education. People get proper respect in the society and we can eliminate many social problems such as poverty, unemployment and illiteracy and can live a peaceful and better life. In recent times the cost of Higher Education is increasing. It is not possible for everyone to get such costly education. Public and private sector banks are playing a significant role in helping people for their financial needs for meeting their needs of Higher Education. Meanwhile Educational loan has become a necessity to ensure supply of skilled manpower for the economic progress of the country and to improve wealth distribution.

### Education Loan

A term Loan which is granted to Indian national for pursuing higher education in India and Abroad is called Education Loan or student loan. Presently the Higher Education is increasing at a new sphere which makes difficult to people to seek it when their financial background is not very sound.

### Literature Review

Sinha Sarithain her study (2005)<sup>[1]</sup> examined the importance of women education in society along with the traditional role of wife and mother. Women are now participating in career line with Men. The researcher realized that there should be also some motivational sources which can inspire women for going for Higher Education. Some special funding schemes for Higher Education should be initiated in India to enhance women education. Chattopadhyay Saumen (2007)<sup>[2]</sup> asserted on the

importance of Education associates the strength in the world economy and to ensure social mobility and social unity. For this objective, the government is trying to enhance the enrolment in Higher Education. Education is the only key to inclusive growth which provides the path to enter in knowledge world. The study emphasized on the alternatives that have been adopted in the world to raise various sources for Higher Education such as deregulation of fees, easy grant of Education Loans, Income contingent Loan and initiate Graduate Tax etc.

The findings of paper critically examine different alternative sources of finance for Education and suggest measures to raise funds for Higher Education on easy lines. It argued that the government should take initiative to observe and view constantly the growing need of finance for Higher Education and play a leading role. The paper concludes with the suggestion to increase the share of GDP on Higher Education.

Tiwari Rajesh and Anjum Dr. Vimal (2013)<sup>[3]</sup> asserted the role of educational loans for development of human capital in India. They analyzed about the move of Higher Education towards privatization and find that budgetary support is poor for this. Norms of Education Loan were described and it was found that there were many difficulties in this which were tried to remove by giving suggestions.

Adhikari Harasankar (2016)<sup>[4]</sup> presented his views about the allocation of Education Loan for SC categories. He focused on the conditions of Schedule caste for availing the finance for Higher Education in his opinion SCs are not getting Education Loan even after good academic records due to lack of collateral securities which compelled them to join traditional caste occupations and businesses. He also discussed the status of West Bengal students who depend on the parental livelihood. Author suggested to bring in



## Fixed Point Theorems Concerning Hausdorff F-PGA Contraction in Complete Metric Space

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### Abstract.


Harandi Amini-Harandi [2012], in 2012 established the existence of a fixed point by using the concept of set-valued contraction. In the present paper, authors have generalized this concept by considering Hausdorff F-PGA contraction and assured the existence of a fixed point. Hence, it is interesting to note that in a complete Hausdorff metric space, the fixed point exists with a lighter contraction map.

### 1. Introduction

Fixed point theory, has always been an important branch of Mathematics, the concepts of fixed point theory play a crucial role in solving various mathematical problems Zhao and Li [2011], Hussain et al. [2014]. Researchers consider various spaces Mishra et al., Mishra et al. [2020, 2015b], and study existence and uniqueness of the fixed points in these space by applying different contraction mappings Sanatee et al. [2020], Mishra et al. [2020, 2015a]. Nadler Nadler et al. [1969] generalized the notable work of Banach Banach [1922] by proposing the concept of multi-valued contraction mappings. The concept of multi-valued contraction mappings was further studied by Wardowski Wardowski [2012] who introduced a new concept of contraction called the F-contraction and given a benchmark theorem, which generalized the Banach contraction principle. Harandi Amini-Harandi [2012] used this F-contraction map and established some important results concerning the generalization of the Banach contraction principle in context to the F-contraction. It may be noted that we have previously defined the F-PGA contraction map Powar et al. [2018], which was found to be a generalized form of the F-contraction map. In this paper, we have taken a complete metric space, with a Hausdorff metric defined on it. Further, we define the F-PGA contraction map over this complete metric space, called the Hausdorff F-PGA contraction map. Using this Hausdorff F-PGA contraction map, we have generalized the averments of Harandi Amini-Harandi [2012] and established the existence of a fixed point for Hausdorff F-PGA contraction.

### 2. Preliminaries

In this section, we list some of the basic definitions and examples which are being used in this paper and are required, to get an insight into the concept.

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## Information Resources Uses and Satisfaction of Library Services on National Law University of India with Special Reference to the Central and the North: An Analytical Study

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*Abstract – The higher education system in India has constantly strived hard to build colleges and universities as places of culture and learning, keeping them open to everyone and, above all, strengthening the theme of lifelong learning. There are two main research methods, viz. an approach which is quantitative and qualitative. In order to collect data relevant to the research issue and to survey and evaluate the use of e-resources, the level of satisfaction and the requirements experienced by users of university libraries in the north and central regions. The study focuses on legal information resources uses and satisfaction of library services on university of India with special reference to the central and the north.*

### INTRODUCTION

Lifelong learning was a new concept and has become a part of human life. The first step was the labourers' movement, called the labor movement. It was originally routed in technical institutes and many organisations during the British period in the United Kingdom. It was observed that more attention is not provided to informal learning, online learning by institutions and companies, particularly by persons and experts from academic fields to academic community product generation, and also to knowledge management to improve the computer in learning process and activities. Law libraries can be categorized as a form of special library due to their focus on providing law-related specialized services and their broad and restricted user base.

The emergence of online legal research sources such as SCC Online, Westlaw, LexisNexis, Indian Kanoon, and Manupatra in recent years has eliminated the need for other types of printed volumes such as reporters, and legislative compilations. Consequently, a number of law libraries have limited the supply of printed works that can be readily found on the Internet, and have expanded their own internet access. Then again, many college law libraries keep large historical assortments dating down to the earliest records in English. Several law libraries also participate in the Government Library Program, which offers the public

free access to government information and archives. This is especially true for law school libraries, since the library is automatically entitled to become a depository library under the Program at any approved law school.

The changing nature of the library setting ICT applications has brought about various ICT equipment such as networks, digital library, etc. The collections of digital libraries are either stored locally in digital format, or can be accessed remotely at various locations through computer networks. The information contained in such a digital source of information may by nature be full-text or bibliographic (Aina, 2004; Akpoghme and Idiegbeyan-Ose, 2010).

Nwabueze and Urhiewhu (2015) drove a survey on the availability and utilization of digital information assets by University Undergraduates in Delta and Edo States, Nigeria. The exam found that the dominant part of digital information resources is accessible in Delta and Edo states university libraries. Furthermore, the examination found that issues such as epileptic power supply, deficient number of computers, insufficient bandwidth, organizing issues, lack of ability to access digital information resources and lack of formal internet preparation use digital information resources in all university libraries.

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## Examine on Use of Information Seeking Behaviour

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**Abstract** – The paper aims to examine the use of information resources in the medical college libraries of Madhya Pradesh related to allopathic medicine. It also describes brief overview of Medical Science Education in India with special reference to Madhya Pradesh College Libraries. Information is viewed as the fifth essential need of each human being notwithstanding air, water, food and safe house. In all social statuses it has become a significant fixing. Information is a crude material for a correct basic leadership from individual to legislative level. It is a significant element for the financial and sound advancement of a country.

**Keywords** – Information Seeking Behavior, Web Information

### INTRODUCTION

Information assumes a crucial job in hierarchical life and in everyday exercises. Information Technology, Information age and information upset are recognizable terms in everyday life. With the development of information, everybody needs it in an expanding assortment and limit with decent variety of levels, recurrence, volume and use. Subsequently, information needs of specific gathering of clients and information stream from explicit circumstance/establishment is hard to decide. The utilization of information is mind boggling to such an extent that there can't be a solitary framework to take up the errand of viable recovery without surveying their needs.

This idea offered beginning to the information looking and the technique for deciding the example of search is viewed as information looking for conduct (ISB).

### INFORMATION NEEDS AND INFORMATION SEEKING BEHAVIOUR

At the point when a need is felt for anything, more often than not individuals make a move in request to fulfil that need. The equivalent applies for the fulfillment of information needs. An individual understands that he needs information, he realize that is all likelihood the information won't come to him all alone, therefore he has go to about seeking it.

### Information Need – Definitions and Meaning

Various creators defined need in various manners. Some of them are as per the following.

It concurs that "information need is a troublesome idea to define, to detach and particularly to gauge. It involves psychological procedure, which may work on various degrees of cognizance and henceforth may not be clear even to the enquirer himself. In any case, the utilization of the terms like, want, prerequisite, demand and so forth., to explain the term need further confuses matters.

The information need as a hole in individual's information in sense making circumstance. He defined information need as an obstruction or obstacle preventing an individual from moving forward in intellectual reality. The individual is confronted with hole and that must be connected by asking questions, creating thoughts and obtaining assets. Such holes don't happen in theory however emerge out of specific basic occasions and circumstance.

The information need in information science "as evolving structure a dubious consciousness of something missing and as culminating in locating information that adds to understanding and meaning.

From the definitions the following inferences could be determined.

Premalata Sharma Swamy<sup>1\*</sup> Dr. Sunita Pamnani<sup>2</sup>

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## TWO EXCEPTIONAL PYTHAGOREAN TRIANGLES: A KEY FOR ENCRYPTION

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**Abstract** - Two remarkably special Pythagorean Triangles are found with their perimeter as eleventh power. These are exceptional in the sense that with the given constraint that their perimeter should be of the eleventh power, do not comply with Euclidean formula of obtaining primitive Pythagorean Triangles. Interesting properties of these Pythagorean Triangles are observed. An application of their use in cryptography is also proposed.

**Keywords**- Euclidean formula, Mathematica, Opposite Parity, Primitive Pythagorean Triangle, Undecic.

### 1. INTRODUCTION

The search for special Pythagorean Triangles has held in fascination those who love numbers. Darbari and Darbari (2019) have found out special Pythagorean Triangles with their sum of two legs as undecic and their application, while Darbari et al. (2019) and Darbari et al. (2020) have suggested alternative methods to apply these.

In this paper, exploring the problem further, an attempt has been made to find Pythagorean Triangles with their perimeter as eleventh power of a positive integer. These exceptional triangles are also applied in cryptography in a unique way.

### 2. DEFINITIONS

**2.1 Pythagorean Equation:** A quadratic equation

$$X^2 + Y^2 = Z^2$$

is called Pythagorean equation (Robbins, 2006) after the famous mathematician and philosopher Pythagoras. It is one of the most important equations of the world in all times.

**2.2 Pythagorean Triangle** (Niven et al., 2018): A right angled triangle with sides  $X$ ,  $Y$  and  $Z$  is called Pythagorean Triangle if  $X$ ,  $Y$  and  $Z$  are positive integers.  $X$  and  $Y$  are called its legs and  $Z$  is called its hypotenuse. Pythagorean triangles satisfy Pythagorean equation  $X^2 + Y^2 = Z^2$ .

If  $X$ ,  $Y$  and  $Z$  satisfy Pythagorean equation, then  $aX$ ,  $aY$  and  $aZ$  also satisfy it, where  $a$  is positive integer. Therefore, one Pythagorean Triangle can generate infinite Pythagorean triangles.

**2.3 Primitive Pythagorean Triangle:** A Pythagorean Triangle is said to be primitive if  $X$ ,  $Y$  and  $Z$  are co-primes, i.e., their greatest common divisor is one. Or, we can say,  $\text{GCD}(X, Y, Z) = 1$ .

**2.4 Opposite Parity:** Two natural numbers  $m$  and  $n$  are called of opposite parity if one of them is even and other is odd, i.e.,  $m \not\equiv n \pmod{2}$ .

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## चित्रा मुद्गल के उपन्यास 'एक जमीन अपनी' का संवेदनीय महत्त्व

डॉ. अभिलाषा शुक्ला

सहायक प्राध्यापक

संत एलायसियस,

महाविद्यालय, जबलपुर (म.प्र.)

### शोध-प्रपत्र

चित्रा मुद्गल जी आधुनिक युग की परिवर्तित नवचेतना की प्रतिनिधि रचनाकार हैं। विषयवस्तु की दृष्टि से उनकी सृजन-धर्मिता विस्तृत और विविधता से संयुक्त है। समकालीन जीवन के सभी सम-विषय पक्ष उनकी रचनाओं में समाविष्ट हैं। आस्था, आक्रोश, आत्मालोचन, प्रेमानुभूति, सामाजिक चिन्तन, विसंगतिबोध, सन्त्रास, तार्किक मानवीय दृष्टि, नागर बोध, आंचलिकता, शोक-सन्ताप, हर्ष-विषाद, जैसे सभी विषयों में उन्होंने श्रेष्ठ रचनाएँ प्रस्तुत की हैं। बाल-संवेदनाओं, युवा आक्रोश, दृष्ट समस्याओं, स्त्री-पुरुष मानसिकता से लेकर सामाजिक, आर्थिक परिदृश्य, फिल्मी ग्लैमर, विज्ञापन जगत और मजदूर यूनियन संघों तक की वस्तु स्थितियों को उन्होंने अपने साहित्य में बखूबी समेकित किया है।

पाश्चात्य विचारक टी.एस. इलियट ने आलोचना के मानदंडों का निर्धारण करते हुए बहुत ही सारगर्भित बात कही है कि जो आलोचक युगीन सौन्दर्य चेतना का उसकी समस्त विशेषताओं के साथ साक्षात्कार करते हुए उच्चतम आदर्शों से



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## विद्यार्थियों के चरित्र गठन के परिप्रेक्ष्य में तिरुवल्लुवर एवं कबीर के विचारों का अनुशीलन

किसी राष्ट्र को युवा पीढ़ी उस राष्ट्र की रीढ़ होती है। राष्ट्र निर्माण में युवाओं को भूमिका को अत्यंत महत्वपूर्ण माना जाता है। युवा चाहे तो अपने दुष्ट निश्चय द्वारा स्वयं में निहित अदम्य ऊर्जा एवं उत्साह का सार्थक प्रयोग कर विश्व में सुविचारों की क्रांति ला सकते हैं और राष्ट्र को सम्पूर्ण विकास की सपना विरसल प्रदान कर सकते हैं। ध्यातव्य है कि भारतीय स्वतंत्रता संग्राम में युवाओं द्वारा युगांतकारी भूमिका का निर्वाहन किया गया था किन्तु विगत कुछ वर्षों के सामाजिक विकास और स्थिति पर दृष्टिपात किया जाए तो यह तथ्य सामने आता है कि युवा पीढ़ी का एक बड़ा हिस्सा दिशाहीनता का शिकार हो रहा है। दिशाहीनता को इस स्थिति में युवाओं की ऊर्जा का नकारात्मक दिशाओं की ओर मार्गांतरण और बदलाव होता आ रहा है। तथ्य विमुक्तता को इस माहौल ने युवाओं को इतना दिग्भ्रमित करके रख दिया है कि उन्हें कुछ ही नहीं रहा है कि करना क्या है? अनुशासन विद्यार्थियों का मूल गुण है किंतु वर्तमान पीढ़ी पर न तो घर-परिवार का, न गुरुजनों का और न ही समाज का कोई अनुशासन कार्य कर रहा है। अमर्यादा के इस दौर में युवा अनुशासन की सीमाएँ लाँच कर इतने निरंकुश, स्वेच्छाचारी और उन्मुक्त हो चले हैं कि अब उन्हें मर्यादित करना समाज की प्राथमिकता हो गया है।

युवा पीढ़ी पहाड़ के बजाय नज़े में डूबने लगी है। एक ताजा सर्वे के अनुसार छात्रावासों में रहने वाले 26 वर्ष की आयु के छात्रों में से औसतन दस में से आठ शराबखोरी की लत के शिकार हो रहे हैं। लीजता से बढ़ती यह सामाजिक बुराई पश्चिमी संस्कृति के बढ़ते प्रभाव का नतीजा है। ठीक इसी प्रकार हिंसा और अपराधों का बढ़ता स्तर भी एक चिंतनीय विषय है। कुसंग, ब्यसन, सिनेमा और फैशन युवाओं को विकसित करने में बाधक बन रहे हैं। आज समाज भी नैतिकता से दूर हो रहा है, लोग विशेषकर युवा विद्यार्थी अपनी संस्कृति से विमुख हो रहे हैं। उनकी वेश-भूषा, खान-पान, रहन-सहन, आचार-व्यवहार आदि में स्वच्छंदता की प्रवृत्ति बलवती हो रही है। समाज में अपराध-जगत् फल-फूल रहा है। यही कारण है कि मनुष्य के आचरण और व्यवहार को नियंत्रित करने वाले नैतिक-मूल्य अब उसे पौंच की बेड़ी लगने लगे हैं और वह इनसे छुटकारा पाना चाहता है।

वर्तमान युग को तकनीकी युग के नाम से जाना जाता है और युवा भी संचार माध्यमों और प्रौद्योगिकी के दीवाने हैं। एक सीमा तक तो अद्यतन उपकरणों का प्रयोग उपयोगी होता है किन्तु इन पर में उनका विकास अवरुद्ध हो रहा है। वे स्वयं इन उपकरणों को भौत मशीनों व्यवहार करने लगे हैं अर्थात् समयाभाव रहता है। हद तो यह है कि वे स्वयं को पाठ्याभ्यास के लिए भी समय नहीं निकाल पा रहे हैं। अन्य विकास में वे आधुनिक मशीनों से तो पीछे चल रहे हैं, परंतु सांस्कृतिक पक्षों से अनभिज्ञ रहते हैं। अतः

प्रत्येक समाज की श्रेष्ठता वही व्यक्त उच्च आदर्शों, धार्मिक उत्कृष्टता एवम् नैतिक मूल्यों के



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## कोरोना काल : भारतीय प्रवासी श्रमिक और मानवाधिकार

डॉ. विरवास पटेल\*  
डॉ. तुषिया जीदरी\*

"कोई भी काम तुच्छ नहीं है। मानवता का उद्धान करने वाले सभी श्रम की गरिमा और महत्व है और उन्हें श्रमसाध्य उत्कृष्टता के साथ किया जाना चाहिए।"

डॉ. मार्टिन लूथर किंग

एक मजदूर देश के निर्माण में बहुमूल्य भूमिका निभाता है और उसका देश के विकास में अहम योगदान होता है। किसी भी समाज, देश, संस्था और उद्योग में काम करने वाले श्रमिकों की अहम भूमिका होती है। मजदूरों के बिना किसी भी औद्योगिक ढांचे के खड़े होने की कल्पना नहीं की जा सकती है और यही श्रमिक वर्ग किसी औद्योगिक प्रतिष्ठान को अपने श्रम से अभिवृद्धित कर गतिशील बनाता है। सामान्य तौर पर इन श्रमिकों के लिए एक और शब्द प्रचलित है जिसे प्रवासी श्रमिक कहा जाता है। श्रमिक और प्रवासी श्रमिक में महीन अंतर है, श्रमिक वे होते हैं जो अपना श्रम अपने ही राज्य में बेहतर अपना जीवनयापन करते हैं जबकि प्रवासी श्रमिक वे श्रमिक होते हैं, जो एक क्षेत्र से दूसरे क्षेत्र में परतायन करते हैं। जो अपने गृह राज्य को छोड़कर दूसरे राज्यों में काम करने जाते हैं। वे विभिन्न क्षेत्रों में मीसन के अनुसार, अस्थायी या फिर अंशकालिक काम करने के लिए राज्यों या देश के अंदर ही परतायन करते हैं। प्रवासी कामगार किसी भी ट्रेड यूनियन और श्रम मानकों के तहत संगठित नहीं होते हैं, इसलिए सरकार और किसी भी ट्रेड यूनियन के द्वारा संरक्षित नहीं हैं। वे प्रवासी श्रमिक पिछड़े समुदाय के होते हैं, इन्हें श्रमगत मजदूरी अधिनियम के तहत निर्धारित श्रमगत मजदूरी भी प्राप्त नहीं होती।

भारत में राष्ट्रीय श्रम आयोग के 1991 के आंकड़ों के अनुसार शिर्फ ग्रामीण क्षेत्रों में ही 10 मिलियन से अधिक प्रवासी श्रमिक हैं। इनमें से लगभग 4.5 मिलियन अंतरराष्ट्रीय प्रवासी और 6 मिलियन राज्यान्तर्गत प्रवासी हैं। जबकि 2011 की जनगणना के अनुसार 40 मिलियन प्रवासी श्रमिक हैं। देश के दो बड़े राज्यों का प्रतिशत प्रवासी श्रमिकों के दृष्टिकोण से सबसे ज्यादा है जिसमें उत्तर प्रदेश में 23 प्रतिशत व बिहार







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## ISSUE FACED BY THE MIGRANT WORKERS DURING PANDEMIC – COVID 19

**Dr. Meenakshi Swamy** Asst professor St. Aloysius College (Auto) Jbp  
Email Id: meenakshi.always007@gmail.com

*"... all international migrants who are currently employed or unemployed and seeking employment in their present country of residence." (ILO, 2015)*

### ABSTRACT

In today's scenario the most important issues which is faced by the nation and the effect of epidemics like Covid-19 on the migrant populace. These impacts are the most concerning for low income categories of households, which are very less well situated to cope with earning losses during a slump, have no substitute earning and have no communal safety available. Most of these workers earn little more than a existence wage and have no other means to protect their incomes if they lost their jobs. Migrant workers constitute quite a large proportion of such susceptible population. This paper signifies that how migrant workers have faced problematic situation during covid-19 times. Most of these migrant workers earn little earning more than a subsistence wage and have no other means to protect their incomes if they lose their jobs.

**KEYWORDS:** Migration, Covid -19, Labour force, Recession.

### INTRODUCTION

Millions of migrant workers are predicted to be left jobless in India due to the lockdown and ensuing fear of depression. Many of the migrant workers have reverted to their villages back, and many more are just waiting for the lockdown to be lifted soon. The risk is particularly higher for those pupils who are working in unorganized sectors, and those who not have writer contracts, or those whose contracts are at the time of completion. These lockdown and the subsequent recession are likely to first hit contract workers across many of the industries and factories.

On the other hand lockdowns and social distancing measures are desiccating up jobs and incomes, where they are likely to interrupt agricultural production, transportation system and supply chains on the other .This poses a challenge of ensuring food security and controlling already widespread starvation ,particularly among children, which is likely to result in increased infant and child humanity. There is a need to relook at the nationwide migration policies, which should accommodate the assistance and protection of migrants arriving from, or faced with the view of returning to different areas affected by health crises. Also there is a need to establish strong food systems that could reduce nutrition anxiety and the pressure to return to origin among migrants pupils.

The present status of Perent distribution of migrant workers by of migration.

Present Distribution of migrant worker	Female	Male	Other
migrated from other country	1.5	3.2	2.6
migrated from other state	12.3	29.5	24
migrated from other district within state	25.2	29.3	28
migrated within district (intra-	61	38.1	45.5

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## IMPACT OF UPSKILLING MIGRANT EMPLOYEES AND LABOURERS FOR FUTURE BUSINESS AND INDUSTRIAL OPERATIONS

**DR. MEENAKSHI SWAMY** Asst. Professor (Dpt. of commerce) St. Aloysius College  
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### INTRODUCTION:

A unusual disaster, a corona virus pandemic, has resulted in a tragically large number of human lives being lost. As countries implement necessary quarantines and social distancing practices to contain the pandemic, the world has been put in a Great Lockdown. This is a crisis like no other, and there is substantial uncertainty about its impact on people's lives and livelihoods. Along with the health issues caused by the corona virus pandemic there are many business challenges confronted by it: the collapse of customer demand, significant regulatory modifications, supply chain interruptions, unemployment, economic recession, and increased uncertainty. With the war for talent in full force and the very nature of work changing, organizations are recognizing the need to upskill their workforce. As automation grows in every part of the workplace, it becomes increasingly important to direct employees' time toward higher-value work. The attention to upskilling is happening very broadly, regardless of organizational size or industry. Amazon recently announced a major upskilling investment of more than \$700 million that aims to reskill a third of its U.S. workforce over the next six years, in response to increasing workplace automation. While not every organization can address the upskilling crisis at this scale, most have taken the initial step of introducing new employee enablement technologies.

As a result of lock down due to the pandemic, globally the industries and businesses have suffered a lot. Especially in a developing country like India many small and medium scale industries have seen a greater loss as compared to the large scale industries. The economy has witnessed many immediate migrations of the skilled and unskilled workers and their unemployment, leading to the loss of livelihoods of many. Therefore, this has raised an urgent need to settle off these challenges. For this purpose the business leaders should now adopt a new perspective to work with resilience combined with agility in order to come survive this crisis.

### REVIEW OF LITERATURE:

"it is recommended that there should be efficient regulated market and government should also lend its helping hand in the context of rural entrepreneurship. Grading and standardization should be promoted and promotional activities should be enhanced. NGOs should be provided full support by the government. So in order to convert our developing nation into developed one, Rural Entrepreneurship must be promoted." (Rural Entrepreneurship: Problems and Cure, Saurabh Grover & Kirandeep Kaur, 2011)

The COVID-19 pandemic has pushed the world into a recession. For 2020 it will be worse than the global financial crisis. The economic damage is mounting across all countries, tracking the sharp rise in new infections and containment measures put in place by governments. The economic consequences of the pandemic are already impacting the United States with unprecedented speed and severity. In the last two weeks in March almost 10 million people applied for unemployment benefits. Such a sharp and staggering increase has never been seen before, not even at the peak of the global financial crisis in 2009. (An Early View of the Economic Impact of the Pandemic in 5 Charts, IMF Blog, APRIL 6, 2020 By John Bluedorn, Gita Gopinath, and Damiano Sandri).

### OBJECTIVES:

The objective of this paper is-

- To highlight the problems and challenges faced by the immigrants due to unemployment created as a result of lockdown.
- To enlighten the concept of rural entrepreneurship and aids available to the SSI & MSMEs in reflection to the Self Reliant India concept.

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## Leader in CSR 2020: A Case Study of Infosys Ltd.

Dr. Chitranshi Verma

**Abstract:** The concept of corporate social responsibility (CSR) is gaining importance in the corporate world. Nowadays various firms, be it large size or small size companies all are involving in CSR activities to gain competitive advantage and to create a long lasting impact on its stakeholders. Although CSR is much popular in the developed nations but the potential benefits of CSR are also being clearly understood in the developing economies of the world as well. It is often described as 'performance with a purpose'. CSR is closely linked with the principles of sustainable development, according to which companies should be obliged to make decisions based not only on financial/economic factors but also on the social, environmental and other consequences of their activities. This paper has tried to examine the development of CSR activities in India by incorporating the Corporate social responsibility initiatives being taken up by Infosys limited over the past few years and how it has helped the company in strengthening its brand image. In recent years, the business cases for CSR have been gaining ground, revolving around the idea that what is good for the environment, the workers and the community is also good for the financial performance of the business. This paper has tried to explain how the IT giant Infosys through its CSR initiatives has created its niche in the global market.

**Keywords:** Corporate Social Responsibility, CSR initiatives, Infosys, Brand equity

### 1. Introduction

Customers build the brand equity of a socially responsible company by enhancing its future profits and goodwill. Therefore, CSR activities are modes for companies to increase their reputation, and thus affecting the brand equity as a result.

Corporate social responsibility (CSR) is a self-regulating business model that enables a company to be socially accountable-to itself, its stakeholders, and the public. By practicing corporate social responsibility, also called corporate citizenship, companies can be conscious of the kind of impact they are having on all aspects of society, including economic, social, and environmental.

To engage in CSR means that, in the ordinary course of business, a company is operating in ways that enhances society and the environment, instead of contributing negatively to them.

The term corporate social responsibility (CSR) refers to practices and policies undertaken by corporations that are intended to have a positive influence on the world. The key idea behind CSR is to pursue other pro-social objectives, in addition to maximizing profits. The movement toward CSR has had an impact in several domains. Examples of common CSR objectives include environmental management, eco-efficiency, responsible sourcing, stakeholder engagement, labour standards and working conditions, employee and community relations, social equity, gender balance, human rights, good governance, and anti-corruption measures.

Corporate social responsibility is a broad concept that can take many forms depending on the company and industry.

Through CSR programs, philanthropy, and volunteer efforts, businesses can benefit society while boosting their brands. As important as CSR is for the community, it is equally valuable for a company. A properly implemented CSR concept can bring along a variety of competitive advantages, such as enhanced access to capital and markets, increased sales and profits, operational cost savings, improved productivity and quality, efficient human resource base, improved brand image and reputation, enhanced customer loyalty, better decision making and risk management processes.

In 2010, the International Organization of Standardization (ISO) released a set of voluntary standards meant to help companies implement corporate social responsibility. Unlike other ISO standards, ISO 26000 provides guidance rather than requirements because the nature of CSR is more qualitative than quantitative, and its standards cannot be certified. Instead, ISO 26000 clarifies what social responsibility is and helps organizations translate CSR principles into practical actions. The standard is aimed at all types of organizations, regardless of their activity, size, or location. And, because many key stakeholders from around the world contributed to developing ISO 26000, this standard gains an international consensus.

### Why should a company implement CSR?

Many companies view CSR as an integral part of their brand image, believing that customers will be more likely to do business with brands that they perceive to be more ethical. In this sense, CSR activities can be an important component of corporate public relations. At the same time, some company founders are also motivated to engage in CSR due to their personal convictions.

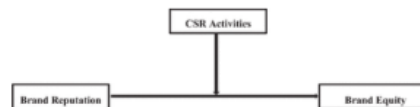


Figure 1

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Publications

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Volume 5 Issue 1

## *An Analytical Study of Effects of Covid-19 on Virtual Classroom Software*

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### **Abstract**

*Covid-19 pandemic have tainted the every aspect of human lives specially the learning process. The future of millions of learners is at stake. This is big task for Educators that how to impart the Higher Education to Learners. Virtual Classroom software has proved as a boon to such stakeholders. The present study is an effort to understand the challenges and opportunities to have it operational. The proposed study is an analytical approach towards the Virtual Classroom Software. 229 responses were collected through questionnaire. The objective of paper is to unearth the preference of educators and learners for virtual classroom software, to analyze the relation between demographic factors and awareness of virtual classroom software and to identify the variation in the level of satisfaction regarding the various aspects of virtual classroom software.*

**Keywords:** *Virtual Classroom Software, Covid-19 Pandemic and Higher Education*

### **INTRODUCTION**

E-learning, online learning, virtual learning all are the synonyms to the learning process over the internet. This is one of the trending forms of learning opted

by the major portion of the world including our country India. In the process of online learning, the students can access any kind of study material, course, etc., being in any corner of the world, in just a





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## STRATEGIC HUMAN RESOURCE MANAGEMENT THROUGH KNOWLEDGE-BASED TECHNOLOGY IN INDIAN BANKING SECTOR

Rashmi A Patras, St. Aloysius' College

*Studies in the recent years has explored that the traditional role of Human Resource is undergoing major changes which is focusing more on the growth of the organization, in global concerns. Primarily being an agrarian economy, the liberalization in India saw resurgence of services sector on the fast lane. Post liberalization and globalization of the Indian economy, Indian banking sector has undergone paradigm shift in scope, content, structure, functions and governance. The advent of information and communication technology has further brought about radical and perceptible change in the operational environment of the banks. Knowledge based technology is a viable means through which banks all over the world and in India could gainfully capitalize on their intellectual assets and market capital. The research study aims in understanding the impact of using knowledge based technology in Strategic Human Resource Management in the banks. Working in a competitive world the Indian banks are facing high extend pressure because of which the employee turnover and layoff radically increases which further demand strategic selection in the banks. This further justifies the requirement for understanding how knowledge software's are helping in providing quick high end training to its employees in cost effective manner, also in understanding how employee performance and operational excellence are affected with the implementation of knowledge technology.*

**Keywords:** Knowledge Based Technology, Strategic Management, Banks, Technology, Information.

### INTRODUCTION

Knowledge and its applications are the essences of businesses in today's advanced era for obtaining competitive advantage and are defined as a new strategic approach to innovation and a possible ingredient for expanding market share. Understanding the knowledge management process as part of the banking industry will reveal how it affects banks performance. In a growing country like India, knowledge management is also revealing evidence of competition and increased performance; however, whether the knowledge management approach is used in Indian banks has yet to be confirmed (Blackler, 1995; Cabrera & Cabrera, 2002; Shahid, 2014; Parise et al., 2006; Jain & Jeppe Jeppesen, 2013; Goswami, 2009).

For the banks, this is a decade of retirement, and those who work there are already seeing the effects of the loss of skilled hands in their day-to-day operations. While junior level recruitment would take place, there would be a virtual void at the medium and senior levels for some time. Middle management's absence might harm banks' decision-making systems, as this group of officers was responsible for translating top management's strategy into actionable plans. Some of the largest banks are also failing as a result of prolonged leadership voids. High attrition rates are being witnessed by all banks, especially those in the private sector, generating constrained resources. The problem is only going to get worse once the banks that have since been registered about to be authorized start recruiting. As a result, bridging resource gaps and

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### HUMAN RESOURCE ACCOUNTING AND PRACTICES IN PUBLIC ENTERPRISE: (A STUDY OF BHARAT HEAVY ELECTRICALS LIMITED)

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Assistant Professor

St. Aloysius College (Autonomous)  
Jabalpur (M.P)

#### ABSTRACT:

Human Resource Accounting is one of the methods to measure the cost and value of human resource of the organization, it measures the cost incurred to recruit, hire, train and develop employees and managers. In this era, a key to competitive success is skilled and knowledgeable human resource of an organization. To ensure growth and development of any organization, the efficiency of human asset must be augmented in the right perspective. Without human resources, the other resources will not operate effectively. The companies invest heavily on its human resource, but the value of HR may not be adequately reported to the stakeholders due to strict recognition criteria for intangible asset that do not allow showing human resource in the Balance Sheet as an asset.

#### INTRODUCTION:

In the 21st century where knowledge and attitude of employees assume greater significance than the physical assets and the accomplishment of objectives of these organizations is contingent on the quality of their Human Resource their knowledge, skills, competence, motivation and accepting the organizational culture. In knowledge driven economies it is imperative that the humans are recognized as an integral part of total worth of an organization. Human Resources Accounting was introduced way back in the 1960s, but not many companies in India have adopted it in their organization. There is little concord concerning the procedure of accounting for human assets. There are proponents and critics of the various approaches like cost and value approaches. Not many evidences are available that portrays the application of Human Resource Accounting in organizations in India. Hence, the growth and acceptance of HRA is quiteless. The implementation of HRA is voluntary and no official body has made it mandatory, that HRA should be put into practice. Current amendments in IFRS standards have declared the requirement of implementation of HRA in all the Indian companies by the end of 2015. Human resources have been enthroned as the canopy of all the "assets" that a nation possesses and owns at a given point of time. In order to ensure that these assets are preserved, there is a need of valuing them in correct manner. Thus, HRA would gain impetus.

The American Accounting Society Committee on Human Resource Accounting (1973) defines it as follows: "Human Resource Accounting is the process of identifying and measuring data about human resources and communicating this information to interested parties." In simple terms, it is an extension of the accounting principles of matching costs and revenues and of organizing data to communicate relevant information in financial terms

#### OBJECTIVE OF THE STUDY:

I. To make an overall analysis of HRA practices in BHEL

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## A STUDY OF FACTORS AFFECTING INTERNATIONAL TRADE – DURING PANDEMIC

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### ABSTRACT

*International trade congregates a comprehensive extraterritorial transaction of merchandise, commodities, services, or resources among nations around Globe. The United Nations Sustainable Goals 10 referenced World Trade Organisation Agreement as an Instrument to curb in-equalities among countries of the world by safeguarding the interest of parent and host countries. Outbreak of Covid -19 Pandemic has outrageously demolished the amplification of international trade with significant economic downturn. Entire world is contemplating the intricate problems of contingent pandemic and trying to augment fresh blood in the economy. The main objective is to evaluate the factors affecting the smooth selling of international trade due to Covid 19 outbreak. The study provides key statistics about tepid economic recovery from the recession and international trade after pandemic. The key unresolved questions for further study and recommendation contemplate to guide researchers consider these questions to construct a more additive body of knowledge that will have significant ramifications for both theory and practice.*

**Keywords** – International business, Globalisation, Pandemic.

### Introduction

International trade is trading of merchandise and services between nations across the world. The significance of international trade was acknowledged initially by political economists Adam Smith and David Ricardo. In 1976, Adam Smith manifested in his book "The Wealth of Nations" the benefits of dousing trade restrictions. He faced criticism and resistance by Economists and businessmen to reduce customs duties and acknowledged to negotiation of trade agreements with foreign powers (Smith, 1976). The World Trade Organization was officially established on 1 January 1995, to promote International Trade by fixation of tariffs for promoting smooth flow of trade among members. Transactions are generally conducted for the purpose of providing a nation with commodities it lacks in exchange for those that it produces in abundance; such transactions, functioning with other economic policies, tend to improve a nation's standard of living (Dadush and Osakwe, 2015). International Business has augmented cross border trade and Globalisation has increased the mutual understanding among the Nations and World has emerged as a stronger market hub. International Business started flourishing with less complicated Licencing, Franchising, Joint Ventures, Mergers and Wholly Owned Subsidiaries promoting flexible trade tariffs

and growth of Multinational and International firms paved ways for improved employment and healthy competition around the Globe.

Coronavirus disease 2019 (COVID-19) a contagious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first case was identified in Wuhan, China, in December 2019. The disease has since spread worldwide, leading to an on-going pandemic (Liu, Kuo and Shih, 2020). Causing serious dent to international trade and creating a precarious situation as the virus moves around the globe. Against this background, there is a clear need to keep trade flowing, to ensure the supply of essential goods and to send a sign of reliance for the global economy. Trade is vital to rescue growth and subsistence.

### Objective

- To understand the origin of International Trade
- To find the role of World Trade Organisation in International Trade
- Benefits of Globalisation
- Factors affecting International Trade during Pandemic
- To study the Economic Growth Pattern and Challenges ahead.

### Research Methodology

This paper is purely based on secondary data which is collected from the necessary



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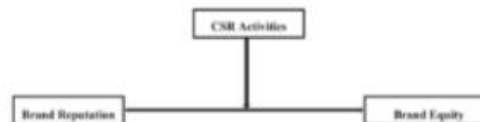


Figure 1

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## HUMAN RESOURCE MANAGEMENT PRACTICES IN INSTITUTES OF HIGHER EDUCATION

Dr. Kudshiya Raza Assistant Professor St. Aloysius College(Autonomous) Jabalpur  
Dr. Sunil Kumar Pahwa Professor G.S. College Commerce and Economics, Jabalpur

### Abstract

Many institutions have noted the some important elements of human resource management. Few have practiced the elements on frequent basis. There is a purpose behind the study to explore the integration of institutional strategies to HRM by examining the strategic. A quantitative and qualitative exploratory research design was used to study strategic human resources management best practices in higher education in India. But still some states are there those are not practicing human resource management strategies. The study indicate that the higher education institutions under study have a short level of awareness of HRM. However, Indian higher education is facing major problems surrounding the development of human capital, especially of the faculty members and needs to devote more attention to their HRM practices. The employee recruitment and selection process is largely inadequate and needs effective attention

### Introduction

The World Conference on Higher Education held in Paris 1998 UNESCO (1998) stated that a reformation and transformation of higher education is needed in order to allow the whole society to overcome the challenges of the 21st century, to develop and advance knowledge, and to provide and train capable, responsible, enlightened individuals and qualified specialists and professionals, without whom no country can advance socially, culturally, economically, or politically.

### Higher education

India's higher education system is the third largest in the world. The University Grants Commission is its main governing body and also oversees accreditation for higher learning.

The institutions include **Government Degree Colleges** and **Private Degree Colleges**, including exclusive women's colleges, functioning under these universities and institutions. Colleges may be **Autonomous**, i.e. empowered to examine their own degrees, up to the PhD level in some cases, or **Non-Autonomous**, in which case their examinations are under the supervision of the university to which they are affiliated; in either case, however, degrees are awarded in the name of the university rather than the college.

### Human Resource

Human Resource Management (HRM) is the term used to describe formal systems devised for the management of people within an organization. The responsibilities of a human resource manager fall into three major areas: staffing, employee compensation and benefits, and defining/designing work.

Essentially, the purpose of HRM is to maximize the productivity of an organization by optimizing the effectiveness of its employees. As Edward L. Gubman observed in the *Journal of Business Strategy*, "the basic mission of human resources will always be to acquire, develop, and retain talent; align the workforce with the business; and be an excellent contributor to the business. Those three challenges will never change."

**Higher education** provides people with an opportunity to reflect on the critical, social, economic, cultural, moral and spiritual issues facing humanity. It contributes to national development through dissemination of specialized knowledge and skill.

Dramatic shifts in the higher education landscape are placing considerable pressure on universities and their HR teams. Cuts in government funding, the increasing casualization of the workforce, and a competitive market for talent mean HR professionals have to work harder than ever to find and retain great people.

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## IMPACT OF UPSKILLING MIGRANT EMPLOYEES AND LABOURERS FOR FUTURE BUSINESS AND INDUSTRIAL OPERATIONS

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### INTRODUCTION:

A unusual disaster, a corona virus pandemic, has resulted in a tragically large number of human lives being lost. As countries implement necessary quarantines and social distancing practices to contain the pandemic, the world has been put in a Great Lockdown. This is a crisis like no other, and there is substantial uncertainty about its impact on people's lives and livelihoods. Along with the health issues caused by the corona virus pandemic there are many business challenges confronted by it: the collapse of customer demand, significant regulatory modifications, supply chain interruptions, unemployment, economic recession, and increased uncertainty. With the war for talent in full force and the very nature of work changing, organizations are recognizing the need to upskill their workforce. As automation grows in every part of the workplace, it becomes increasingly important to direct employees' time toward higher-value work. The attention to upskilling is happening very broadly, regardless of organizational size or industry. Amazon recently announced a major upskilling investment of more than \$700 million that aims to reskill a third of its U.S. workforce over the next six years, in response to increasing workplace automation. While not every organization can address the upskilling crisis at this scale, most have taken the initial step of introducing new employee enablement technologies. As a result of lock down due to the pandemic, globally the industries and businesses have suffered a lot. Especially in a developing country like India many small and medium scale industries have seen a greater loss as compared to the large scale industries. The economy has witnessed many immediate migrations of the skilled and unskilled workers and their unemployment, leading to the loss of livelihoods of many. Therefore, this has raised an urgent need to settle off these challenges. For this purpose the business leaders should now adopt a new perspective to work with resilience combined with agility in order to come survive this crisis.

### REVIEW OF LITERATURE:

"it is recommended that there should be efficient regulated market and government should also lend its helping hand in the context of rural entrepreneurship. Grading and standardization should be promoted and promotional activities should be enhanced. NGOs should be provided full support by the government. So in order to convert our developing nation into developed one, Rural Entrepreneurship must be promoted." (Rural Entrepreneurship: Problems and Cure, Saurabh Grover & Kirandeep Kaur, 2011)

The COVID-19 pandemic has pushed the world into a recession. For 2020 it will be worse than the global financial crisis. The economic damage is mounting across all countries, tracking the sharp rise in new infections and containment measures put in place by governments. The economic consequences of the pandemic are already impacting the United States with unprecedented speed and severity. In the last two weeks in March almost 10 million people applied for unemployment benefits. Such a sharp and staggering increase has never been seen before, not even at the peak of the global financial crisis in 2009. (An Early View of the Economic Impact of the Pandemic in 5 Charts, IMF Blog, APRIL 6, 2020 By John Bluedorn, Gita Gopinath, and Damiano Sandri).

### OBJECTIVES:

The objective of this paper is-

- To highlight the problems and challenges faced by the immigrants due to unemployment created as a result of lockdown.
- To enlighten the concept of rural entrepreneurship and aids available to the SSI & MSMEs in reflection to the Self Reliant India concept.

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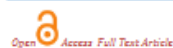


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Review Paper

### Corona Virus (COVID-19) Symptoms Prevention and Treatment: A Short Review

Ranjan Singh<sup>1\*</sup>, Surendra Sarsaiya<sup>2</sup>, Tanim Arpit Singh<sup>3</sup>, Trashi Singh<sup>4</sup>, **Laxmi Kant Pandey<sup>5</sup>**, Prabhash Kumar Pandey<sup>6</sup>, Neeraj Khare<sup>7</sup>, Femina Sobin<sup>8</sup>, Ranjana Sikarwar<sup>9</sup>, Mahendra Kumar Gupta<sup>10</sup>

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#### Abstract

There is a new world health crisis threatening the public with spread of COVID-19 (Coronavirus Disease-2019). Since 2019 when Covid-19 emerged in Human seafood market at Wuhan, South China and rapidly spread throughout the world, the virus outbreak has been declared a public health emergency by the WHO. Corona virus causes respiratory infection including pneumonia, cold, sneezing and coughing while in animal it causes diarrhoea and upper respiratory diseases. Corona virus transmitted human to human or human to animal via airborne droplets. Patient shows various symptoms like fever, cough, sore throat, breathlessness and fatigue. The disease is being cured through general treatment, symptomatic treatment and by other methods. This review outlines the Epidemiology, Diagnosis, Management and prevention of this fatal disease.

**Keywords:** Coronavirus disease-2019, COVID-19, Respiratory Syndrome, Symptoms, Prevention, Treatment.

#### Introduction:

At the end of 2019, a series of pneumonia cases of unknown cause emerged in Wuhan, China<sup>1</sup>. A few weeks later, in January 2020, deep sequencing analysis from lower respiratory tract samples identified a novel virus severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) as causative agent for the observed pneumonia cluster<sup>2</sup>. Corona virus are a large family of virus which may cause disease in animals or humans. Corona virus is an RNA virus, with a typical crown-like appearance under an electron microscope due to the presence of glycoprotein spikes on its envelope<sup>3</sup>.

The virus is typically rapidly spread from one person to another via respiratory droplets produced during coughing and sneezing. It is considered most contagious when people are symptomatic. Common symptoms include fever, cough, sneezing and shortness of breath. Recommended preventive measures include washing your hands, covering the mouth, maintain social distance and self-isolation for 14 days for people who are infected<sup>4</sup>.

#### Microbiology:

Corona virus is spherical or pleomorphic, single stranded, enveloped RNA and covered with club shaped glycoprotein. Corona viruses are four sub types namely alpha, beta, gamma and delta corona virus. Each of sub type corona virus has many serotypes<sup>5</sup>.

#### Epidemiology:

People can get the infection through close contact with a person who has symptoms from the virus includes cough and sneezing. Generally, corona virus spread via air-borne droplets. The virus might pass through the mucous membranes, especially nasal and larynx mucosa, then enters the lungs through the respiratory tract. Then the virus would attack the targeting organs that express angiotensin converting enzyme 2 (ACE2), such as lungs, heart, renal system and gastrointestinal tract<sup>6,7</sup>. Pneumonia appears to be the most frequent serious manifestation of infection, characterized primarily by fever, cough, dyspnea and bilateral infiltrates on chest imaging. Other less common symptoms have included headaches, sore throat and

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