

# ULTRA STRUCTURAL STUDY OF CROP AND MIDGUT IN *APIS CERANA INDICA* F.(HYMENOPTERA: APIDAE)

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**Abstract:** The honey bee (*Apis cerana indica* F.) is common bee in India. The morphology of honey bee extensively studied, but less attention has been given ultramicroscopic studies on the alimentary canal i.e. crop and midgut. The aim of the current study was to describe the ultrastructure study of crop and midgut of the honey bee *Apis cerana indica*. The crop consist of nucleus of epithelial cell is prominent. Epicuticle is well defined. Between epicuticle and outfolded pleats there is a space which is continuous upto the crop. Nuclei are spherical and present in the cytosole. Interstitial out folded pleats traced to stored nectar in the lumen. Midgut consist digestive columnar epithelial cells are seen with oval nucleus, surrounded by endoplasmic reticulum and compactly arranged Golgi body into the cytoplasm. Membranous vesicles are loosely arranged. Position of mitochondria is on apical side of the cell. Columnar cell showed extensively large vacuole with apical cytoplasm. The nucleus was prominent with dense chromatin material. Rough endoplasmic reticulum were seen along the side of nuclear surface. Digestive vacuoles were seen in cytoplasm along with the nucleus. Some regions were also seen with free ribosome, short fragments of rough endoplasmic reticulum. The regenerative cells were cuboidal with large number of vacuoles. Lumen were found with packed densely dead material. The regenerative cells live close to the basal membrane of epithelium and have the function of regeneration. Regenerative cells produce mitotically and differentiation takes place. Usually they are solitary.

## I Introduction

The crop of the honey bee is a specially adapted bag in the alimentary canal that serves to carry the collected load to the hive. In this honey stomach and in the hive the floral nectar is modified with various metabolic processes enzymatic action, activity of microorganisms into the invaluable honey (Oliver, 2007; De-Grandi-Hoffman *et al.*, 2013; Morais *et al.*, 2013). Crop in insect shows stretchable epithelium and muscles for contraction to throughout the content. Crop was divided into two regions namely proventricular bulb and stomodeal valve posteriorly invaginated in midgut.


Internally midgut is lined with thin layer of peritrophic membrane which separates food from midgut epithelium. Peritrophic membrane plays a key role in mechanical action of food, physical barrier for micro-organism etc. (Terra 1988).

This study was undertaken to reveal for the first time the ultra-structural study of crop and midgut in *A. c. indica* which is one of the useful honey bees in Japan, China, India and other East Asian countries. It is widely distributed in India.

## II Materials and methods

The honey bee *A. cerana indica* were used for TEM study. The alimentary canal dissected out washed in PB and fixed in 2.5% glutaraldehyde containing 2% paraformaldehyde in 0.1M PB (pH 7.4.). Tissues were washed in PB, then post fixed in 1% osmium tetroxide for 2 hrs. at 4°C. After post-fixation, tissue washed in PB, dehydrated through ascending grades of acetone, cleared in toluene and embedded in epoxy resin.

Sections of semi thin 1µm have been stained with toluidine blue and microscopically examined by light microscope. Ultrathin sections of uranyl acetate and lead citrate have been stained and examined under Philips-10 transmission electron microscope at the All India institute of Medical Sciences (AIIMS). New Delhi.

  
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## Role of Affiliated and Constituent Colleges in the Curriculum Implementation for Quality Education

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### Abstract

*The curriculum plays a vital role in the overall development of the student of any educational institution. The driving force of any education system is student-centric education with global competence. The curriculum is a key aspect of the education process. In the affiliated and constitutional colleges, curriculum implementation is the prime engagement, then the contribution to the curriculum. Implementation of the curriculum is carried out through the various planning's in the affiliated and constituent colleges with a well-documented process. These credentials and factors are the academic calendar of Institution, academic calendar of departmental, teaching plan, and effective curriculum delivery. Other factors are designated committee, Capacity building, Participative approach, Mentor-mentee scheme, Use of ICT, continuous internal evaluation, and feedback from the stakeholders. These methods and parameters of curriculum implementation of the affiliated and constituent colleges help in the effective implementation of the curriculum for the holistic development of the student.*

### Introduction

The Curricular portions are the base of any educational institution. Affiliated and Constituent Colleges have a moderately no role in curriculum designing and development. They accept the curriculum provided by the affiliated universities (1, 2). The responsibilities of affiliated and constituent colleges are to curriculum implementation and teaching entity that depends on an affiliating university for its curriculum development. Its commitment to curricular aspects is chiefly in its implementation. Institutional participation in curriculum upgrading, development, assessment measures, and certification is insignificant. University administration has the authorization to design and develop curricula for particular programs, revise or update them periodically, and ensure that the outcomes of its programs are distinct by its bodies. The curriculum designed in the university is in tune with the emerging national and universal trends and relevant to the local requirements (1, 2, 3). Institutions implement the curriculum within the overall border work provided, depending on its resource prospective, institutional objectives, and apprehension. Institutions have process of the curriculum to be implemented. These processes make each institution distinctive and replicate the confidence of the college for quality (4, 5, 6, 7, 8, 9).

### Process and observations

The curricular implementation in the affiliated colleges and constituent colleges is carried out through an well-organized method as follows:

#### Institutional Academic Calendar

IQAC of an institution prepares an institutional academic calendar of events for the entire academic year based on the University academic calendar. Accordingly, a plan of action is prepared and its implementation executed in the institution. An institutional academic calendar provides uniform, efficient, and time-bound planning for effective curriculum delivery.

#### Departmental Academic Calendar

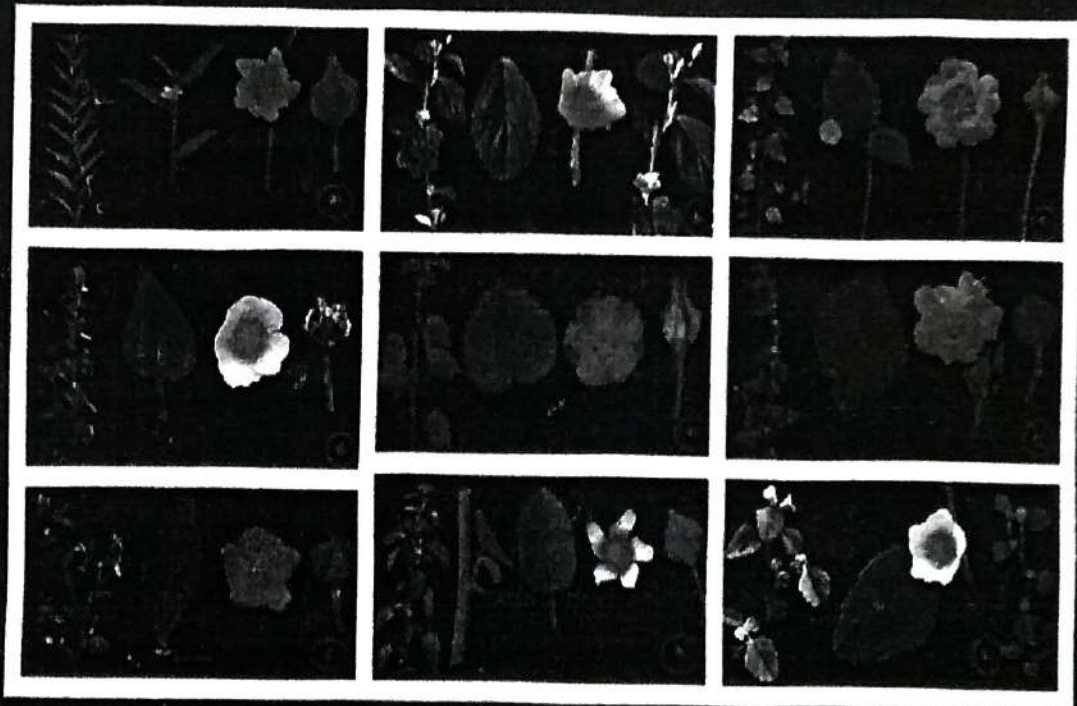
The departmental academic calendar is prepared as per the institutional academic calendar for the planning, preparation of teaching plan, and implementation at the departmental level for better curriculum delivery.

#### Teaching Plan

Affiliating university describe the curriculum, which designate the number of teaching hours. For an effective learning experience among students, the teachers ready the teaching plan with a long-term perspective. The teaching load among teachers is allocated according to the specialized field of expertise of the faculty. Teachers prepares a teaching plan for the semester aligned with the department.

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## BIOCHEMICAL AND HISTOPATHOLOGICAL STUDIES ON INDIAN MAJOR CARP *LABEO ROHITA* (HAM.)

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### ABSTRACT

Studies were undertaken to isolate and identify different bacterial species from *Labeo rohita* collected from in and around Nagpur region. During this study, *Pseudomonas sp.*, *Staphylococcus sp.* and *Escherichia coli* were isolated from fishes, which frequently infect liver and muscles of the fishes.

**Key words:** *L. rohita*, Bacteria, *Pseudomonas*, *Staphylococcus*.

### Introduction:

Bacterial pathogens cause heavy losses and severe mortality in wild and cultured fishes (Anderson *et al.*, 1988; Nash, 1990). During present investigation attempts were made to find out bacterial species from adult carp, *Labeo rohita*, collected from and around Nagpur region.

### Material and Methods

Adults of *L. rohita* were collected and those having pathological symptoms were brought to the laboratory. Fishes with pale, raised lesions were selected for isolation of pathogenic bacteria. For this purpose, samples of the tissues were collected from different organs and transferred in a sterile container with nutrient broth. Nutrient broth medium contained 3 g of beef extract and 5 g of peptone in 1,000 ml of water and nutrient agar was prepared by adding 3 g beef extract, 5 g peptone and 15 g agar in 1,000 ml of water (Pelczar *et al.*, 1986) which was incubated at 37°C for 24 hrs.

Nutrient broths with turbidity were streaked on nutrient agar plates and incubated at 37°C for 24 hrs. The isolated colonies were picked up for further studies and maintained as stock cultures on nutrient agar slants.

For differentiation of bacteria, various selective media such as Mac Conkey agar, *Pseudomonas* isolation agar, Blood agar etc. were purchased from Hi-Media laboratories, Mumbai and used, the bacterial micro-flora was identified on the basis of morphological, biochemical and cultural characteristics following (Noga, 1995; Carter, 1990).

Samples of the used for tissues were used for the estimation of protein, as described by Lowry *et al.*, (1951). Histological studies of the tissues were also undertaken as described by Tembhare, (2010).

### Results and Discussion:

Fishes suffer from various types of diseases, with symptoms like ulceration and cloudiness of skin, necrosis, pale colouration, excess mucus on gills, haemorrhages on the body and fins, reddening of the body, erosion of scales, and tail or fin rot.

The bacterial pathogens isolated from un-healthy fishes were *Pseudomonas sp.*, *Escherichia coli* and *Staphylococcus sp.* Out of these *Pseudomonas sp.* was dominant. *Pseudomonas sp.* and *E. coli* were found in infected liver and muscles, while *Staphylococcus sp.* was found in infected muscle. Bacterial infections resulted into significant decreases in protein content of muscles and liver (Table 1).

  
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## REPRODUCTIVE PATTERN IN *TAPHOZOUS LONGIMANUS* AND *TAPHOZOUS KACHHENSIS*

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### ABSTRACT

*Taphozous kachhensis* (Dobson) is an exclusive Indian bat, belonging to family Emballonuridae. It is found in caves, tunnels and temples at Chandrapur (M.S.). It is typically monoestrous species, breeding once in a year. *Taphozous longimanus*, found at Nagpur (M.S.), however, exhibits polyestrous breeding pattern which breeds round the year. Whereas at Varanasi (UP) it shows a seasonal dioestrus pattern. Thus the bat exhibits differential reproductive pattern, probably due to geographic variation.

**Keywords:** Bat, Polyestrous, Monoestrous, Diestrus, Breeding Pattern.

### Introduction

The order Chiroptera constitute second largest order of mammals, where in reproduction is of special interest due to numerous adaptive specializations exhibited by this diverse group of mammals (Bernard, 1985). However, in India the reproductive patterns have been worked out only in the genus *Taphozous*, such as in *T. melanopogon* (Khaparde, 1976; Sapkal and Khamare, 1984; Jaroli and Lall, 1987), *T. kachhensis* (Sapkal and Deshmukh, 1984), and *T. longimanus* (Gopalakrishna, 1955; Krishna and Dominic, 1982a).

*Taphozous kachhensis* (Dobson) is one of the largest Indian micro-chiropteran monoestrous bat. It breeds once in a year in a specific season (Sapkal and Deshmukh, 1984). On the other hand, *T. longimanus* follows non-seasonal polyestrous (continuous) breeding pattern (Gopalakrishna, 1955) at Nagpur, whereas, seasonally dioestrus (two successive breeding) pattern at Varanasi, U.P. (Krishna and Dominic, 1982 a). This suggests geographical variation in the reproductive pattern of *T. longimanus*.

At Varanasi *T. longimanus* breeds twice a year. The first pregnancy extends from

mid-January to early May and the second one from mid-May to early August. This bat exhibits an alteration of ovulation between the two ovaries and shows a differential rate of foetal growth and gestation periods during successive annual breeding cycles at Varanasi (Krishna and Dominic, 1982 b).

Singh and Krishna (2002) studied relationship between ovarian activity and circulating steroid concentration in *T. longimanus*. They reported high and variable progesterone concentration during pregnancy, as compared to other phases of the reproductive cycle. During reproductive cycle, two peaks of progesterone concentrations coincided with two pregnancies. Low progesterone concentration was observed during early phase of first pregnancy, probably due to slow embryonic development. During present investigation histological changes associated with pregnancy were studied.

### Material and Methods

The specimens of *Taphozous longimanus* (Hardwicke) and *T. kachhensis* (Dobson) were collected from Nagpur and Chandrapur respectively, throughout the year at different reproductive stages. After

  
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## Human Red Blood Cell Abnormalities in Fluoride Endemic Area of Warora Tehsil, Chandrapur District, Maharashtra, India

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**Abstract:** The present study aimed to evaluate the effect of fluoride toxicity on structure of RBC in the population residing in fluoride endemic area of Warora tehsil, Chandrapur district, Maharashtra, India. The concentration of fluoride in water was 1.5-5 ppm. The results revealed multiple discrete blisters on the surface of red blood cells, and formation of leptocytes, stomatocytes, spherocytes, schistocytes, keratocytes, degmacytes, and dacryocytes in patients afflicted with fluorosis. The red blood cells were irregularly shaped with multiple cytoplasmic projections. There was accumulation of erythrocytes with multiple protuberances, processes, perforations, and crypt like excavations. A regularly spaced cluster of four red cells adhering side to side in a stack were observed in rouleaux formation. Morphologic abnormalities caused by fluoride ingestion included marked echinocytosis and ovalocytosis. The red blood cells were irregularly shaped with multiple cytoplasmic projections. Morphologic abnormalities caused by fluoride ingestion included various abnormalities. The majority of red blood cells of fluorotic patients revealed presence of echinocytes and crenated erythrocytes which were characterized by numerous, short, equally spaced blunt to sharp surface projections. This study has confirmed that fluoride is one of the chemical agents responsible for inducing RBC deformities.

**Keywords:** Fluoride toxicity, RBC deformities, Fluorosis, Stomatocytes, Spherocytes, Schistocytes, Keratocytes

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### Introduction

Fluorosis caused by intake of fluoride has been recognized in India for several decades. It is wide spread in as many as 22 states of the Indian republic. In Maharashtra state 30-50% districts are facing the problem of fluoride. The worst affected districts are Nanded, Chandrapur, Solapur, Yawatmal, Bhandara, Buldhana, Jalgaon, Amravati, Akola, Wardha, and Nagpur (Madhure and Malpe, 2007; Duraiswami, 2007, 2008; Kodate *et al.*, 2016). Fluoride is known to affect the dental and skeletal systems (Dhurvey and Marganwar,

2013). Earlier findings from our laboratory demonstrated detrimental effects of fluoride on impairment of soft tissue functions in experimental animals (Shashi, 2002, 2003) and in humans (Shashi and Kumar, 2008). Adverse hematological effects of fluoride have been reported including damage to hematopoietic organs (Eren *et al.*, 2005).

In order to enrich our finding regarding fluoride concentration and its impact on human



REVIEW ARTICLE

## Aquatic Weeds Diversity in India and its Management by Composting: A Review

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### ABSTRACT

According to UNDP, about 70% of the global natural wetlands have been lost during the last decade. The continual decrease in the amount of fresh water available to humans for use is a cause of major concern today. In India also, diminishing freshwater bodies, decreasing ground water levels, increasing anthropogenic activities and pollution are posing challenges to the management of water bodies. In recent years, lot of research and efforts have been made worldwide to reclaim the depleting water resources. Continuous and increasing infestation of water bodies with aquatic weeds is one of the leading causes of its deterioration and vanishing. Within this context the present review was undertaken with the aim to understand the diversity of the aquatic weeds in India and composting as a management option to control the growth of the aquatic weeds.

**Keywords:** Aquatic weeds, Compost, Diversity, India, Vermicompost

  
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## KINETIC STUDIES OF DEGRADATION OF BENZOIC ACID AND SALICYLIC ACID THROUGH OZONATION, PEROXONE, PHOTOOZONATION AND PHOTOPEROXONE

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### ABSTRACT

In this study, benzoic acid and salicylic acid in their aqueous solutions were treated by ozonation, photo-ozonation, photoperoxone and photoperoxone processes. A batch photoreactor with 8W low pressure mercury vapour lamp was used to carry out the experiments for examining the effects of various combinations of ozone,  $H_2O_2$  and UV and their rates of degradation were compared. The concentration of the substrate was determined with an UV-visible spectrophotometer. The photodegradation processes conformed to first-order kinetics. The degradation rate of the two substrates is as follows: photoperoxone ( $UV/O_3/H_2O_2$ ) > photoozonation ( $UV/O_3$ ) > peroxone ( $O_3/H_2O_2$ ) > ozonation ( $O_3$ ).

**Keywords:** Benzoic acid, Salicylic acid, Ozonation, Photo-ozonation, Peroxone, Photoperoxone.

### 1. INTRODUCTION

Over the past several years, various studies have reported the presence of a large number of pharmaceuticals in surface waters, and also in groundwater. Surface water and groundwater are widely used as potable water resources. The widespread presence of pharmaceutical products can therefore have an adverse impact on the purity of drinking water. The complete elimination or reduction of harmful organic pollutants in wastewater to an acceptable level prescribed by environmental protection agencies is of paramount importance in wastewater treatment. Advanced oxidation processes (AOPs) are the most promising technologies for the destruction of harmful organic contaminants [1-3]. Therefore, AOPs are of great interest to the scientific and industry communities involved in water treatment and were successfully applied to the detox of water polluted by a wide variety of chemicals such as pesticides, phenols, hydrocarbons, surfactants, dyes and pharmaceutical waste [4-10].

In industries like toothpastes, preservatives, cosmetics, mouthwash, pharmaceuticals and artificial flavours; benzoic acid is produced as an industry waste. And salicylic acid is an industrial waste produced from pharmaceutical, chemical and olive oil distilleries. Ozonation is a promising technique in wastewater treatments for degradation of organic pollutants. Ozonation is used to eliminate odorants, harmful

chemicals such as pesticides and chlorinated organic compounds [11, 12].

This study aims at the degradation of benzoic acid and salicylic acid by different AOP's ( $O_3$ ,  $O_3/H_2O_2$ ,  $UV/O_3$ , and  $UV/O_3/H_2O_2$ ) and compare the rate of degradation and demonstrate that it follows a pseudo-first order kinetics.

### 2. EXPERIMENTAL

#### 2.1. Chemicals

Benzoic acid (analytical grade, Merck, India) and salicylic acid (analytical grade, Merck, India) were used to prepare stock solution of 0.01M. Initial concentration of 0.08mM was used during the experimental runs.  $H_2O_2$  stock solution was prepared by diluting 30% w/v of hydrogen peroxide (Qualigens) with distilled water. Light-tolerant amber Pyrex glass bottles were used to store the stock solutions. For ozone generation, Oxygen cylinders were used.

#### 2.2. Experimental procedure

Batch experiments were carried out under environmental conditions to determine the effect of ozone concentration with various combinations during substrate degradation. A photoreactor (Fig. 1) fitted with low pressure mercury lamp (8W, UV-C manufactured by Phillips, Holland) placed in its centre was used to carry out the experiments. To ensure homogeneous mixing of the



## MOLECULAR INTERACTIONS OF BINARY LIQUID MIXTURES OF DIOXANE BY EVALUATION OF EXCESS ACOUSTICAL PARAMETERS AT DIFFERENT TEMPERATURES

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**ABSTRACT:** Ultrasonic velocity (U), density ( $\rho$ ) and viscosity ( $\eta$ ) have been measured for binary mixtures of Dioxane with Anisole, Toluene and Ethylbenzene at 293-313 K temperatures. The experimental data have been used to evaluate acoustical parameters such as adiabatic compressibility ( $\beta$ ), free length ( $L_f$ ), acoustic impedance (Z) and molar volume ( $V_m$ ). Excess values of above parameters have been also evaluated, excess molar volume ( $V_m^E$ ), excess intermolecular free length ( $L_f^E$ ), excess adiabatic compressibility ( $\beta^E$ ) and excess acoustic impedance ( $Z^E$ ) at each temperature. These values are useful to understand molecular interactions of binary liquid mixtures.

**Key words:** - Excess acoustical Parameters, Acoustical properties, Molecular Interactions, Ultrasonic Technique

### INTRODUCTION:

Ultrasonic velocity measurements find wide applications in characterizing the physico-chemical behavior of liquid mixtures. Molecular interactions play an important role in understanding the structures and properties of liquids. The molecular interaction study from the variation of acoustical parameters and their excess values with composition gives insight into the molecular process. In recent years, the theoretical and experimental investigations of excess and deviation functions are taken as interaction parameters to improve the results. This work is concerned to the systematic study of molecular interactions in the binary mixtures, which are important in many fields of industrial and biological processes. Mixed solvents find practical applications as they provide wide range of mixtures with desired properties.

In present work acoustical parameters of binary liquid mixtures of Dioxane with Anisole,

Toluene and Ethylbenzene are calculated at 293-313 K temperatures as a function of composition. A complete knowledge of thermodynamic and transport properties of these industrially imported mixtures are often required for their industrial applications. From the practical point of view the mixtures investigated are especially important because they are widely used as solvents for dyes, coloring raw materials in plastic industry used to make synthetic fibers and for aircraft and vehicles.

Recently various theories have been using for computing ultrasonic velocity in binary liquid mixtures and the deviation in theoretical velocities are mainly due to molecular interactions in the liquid mixtures. An attempt has been made to correlate the experimental findings with those predicted theoretically. It helps to understand properties of binary liquid mixtures.





## Molecular Interactions of Binary Liquid Mixtures of Dimethylsulfoxide by Evaluation of Excess Acoustical Parameters at Different Temperatures

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### Abstract

Ultrasonic velocity ( $U$ ), density ( $\rho$ ) and viscosity ( $\eta$ ) have been measured for binary mixtures of Dimethylsulfoxide with Anisole, Toluene and Ethylbenzene at 293-313 K temperatures. The experimental data have been used to evaluate acoustical parameters such as adiabatic compressibility ( $\beta$ ), free length ( $L_f$ ), acoustic impedance ( $Z$ ) and molar volume ( $V_m$ ). Excess values of above parameters have been also evaluated, excess molar volume ( $V_m^E$ ), excess intermolecular free length ( $L_f^E$ ), excess adiabatic compressibility ( $\beta^E$ ) and excess acoustic impedance ( $Z^E$ ) at each temperature. These values are useful to understand molecular interactions of binary liquid mixtures. Positive deviations of  $L_f^E$ ,  $V_m^E$ ,  $Z^E$  and  $\beta^E$  in binary systems have been attributed to dispersive forces and negative deviation is due to dipole-dipole and induced dipole interactions. Dispersive forces are operative in all systems, but since more than one type of interactions are present between the components, the excess values is the net result of all type of contributions. The binary mixture of Dimethylsulfoxide and Anisole show the large value of deviations of excess parameters  $\beta^E$ ,  $L_f^E$ ,  $Z^E$ ,  $V_m^E$ . These results suggest that Anisole has strong molecular interactions with Dimethylsulfoxide than Ethylbenzene and Toluene. The strong molecular interaction of Dimethylsulfoxide with Anisole may attribute to strong dipole-dipole interactions between these molecules. The greater interaction of Anisole may be due to more positive Inductive effect of  $OCH_3$  group. It has been found that, molecular interactions in the binary systems of Dimethylsulfoxide with Anisole, Ethylbenzene and Toluene follow the order of Anisole > Ethylbenzene > Toluene.

**Keywords:** Acoustical properties Ultrasonic Technique, DMSO, Anisole, Toluene and Ethylbenzene.

### Introduction:

Ultrasonic velocity measurements find wide applications in characterizing the physico-chemical behavior of liquid mixtures. Molecular interactions play an important role in understanding the structures and properties of liquids. The molecular interaction study from the variation of acoustical parameters and their excess values with composition gives insight into the molecular process. In recent years, the theoretical and experimental investigations of excess and deviation functions are taken as interaction parameters to improve the results [1]. This work is concerned to the systematic study of molecular interactions in the binary mixtures, which are important in many fields of industrial and biological

Molecular Interactions of Binary Liquid Mixtures of Dimethylsulfoxide by Evaluation of Excess Acoustical Parameters at Different Temperatures

SUNIL DAHIRE

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## MOLECULAR INTERACTIONS OF DIMETHYLSULFOXIDE WITH CHLOROBENZENE, BROMOBENZENE AND NITROBENZENE BY EVALUATION OF EXCESS ACOUSTICAL PARAMETERS AT 313K TEMPERATURES

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### ABSTRACT:

Ultrasonic velocity ( $U$ ), density ( $\rho$ ) and viscosity ( $\eta$ ) have been measured for binary mixtures of Dimethylsulfoxide with Chlorobenzene, Bromobenzene and Nitrobenzene at 313 K temperatures. The experimental data have been used to evaluate acoustical parameters such as adiabatic compressibility ( $\beta$ ), free length ( $L_f$ ), acoustic impedance ( $Z$ ) and molar volume ( $V_m$ ). Excess values of above parameters have been also evaluated, excess molar volume ( $V_m^E$ ), excess intermolecular free length ( $L_f^E$ ), excess adiabatic compressibility ( $\beta^E$ ) and excess acoustic impedance ( $Z^E$ ) at each temperature. These values are useful to understand molecular interactions of binary liquid mixtures.

**Keywords:** Excess acoustical Parameters, Acoustical properties, Molecular Interactions, Ultrasonic Technique.

### INTRODUCTION:

Molecular interactions play an important role in understanding the structures and properties of liquids. The molecular interaction study from the variation of acoustical parameters and their excess values with composition gives insight into the molecular process. In recent years, the theoretical and experimental investigations of excess and deviation functions are taken as interaction parameters to improve the results. This work is concerned to the systematic study of molecular interactions in the binary mixtures, which are important in many fields of industrial and biological processes. Mixed solvents find practical applications as they provide wide range of mixtures with desired properties.

In present work acoustical parameters of binary liquid mixtures of Dimethylsulfoxide with Chlorobenzene, Bromobenzene and Nitrobenzene are calculated at 313 K

temperatures as a function of composition. A complete knowledge of thermodynamic and transport properties of these industrially imported mixtures are often required for their industrial applications. From the practical point of view the mixtures investigated are especially important because they are widely used as solvents for dyes, coloring raw materials in plastic industry used to make synthetic fibers and for aircraft and vehicles.

### Experimental

All the chemicals were AR grade; purities of these chemicals were checked by density determination at 313 K which showed an accuracy of  $0.0001 \text{ gm cm}^{-3}$  as compared to reported values. Binary liquid mixtures were prepared in measuring flask. The density, viscosity and velocity were measured as a function of composition of binary liquid mixture at 293-313 K. The density of sample was

# An Eco-Friendly Terpolymer Resin: Synthesis, Characterization and Ion - Exchange Properties

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**Abstract:** 2, 2'-Biphenol-Hexamethylenediamine-formaldehyde Terpolymers (BPHDF) were synthesized by the condensation of 2, 2'-Biphenol, Hexamethylenediamine, and formaldehyde in the presence of acid catalyst with varying molar ratios of reacting monomers. Terpolymer composition has been determined on the basis of their elemental analysis and the number-average molecular weight of these resins was determined by conductometric titration in nonaqueous medium. The viscosity measurements were carried out in N, N-dimethyl formamide which indicate normal behaviour. IR spectra were studied to elucidate the structure. The terpolymer resin has been further characterized by UV-visible and <sup>1</sup>H-NMR spectra. The surface morphology of the terpolymer resin was examined by scanning electron microscopy. One of the important applications of these terpolymers is their capability to act as chelating ion-exchangers. The newly synthesized terpolymers proved to be selective for chelating ion-exchange properties and showed a powerful adsorption towards specific metal ions like Co<sup>2+</sup>, Hg<sup>2+</sup>, Cd<sup>2+</sup>, Pb<sup>2+</sup>. A batch equilibration method was adopted to study the selectivity of the metal ion uptake involving the measurement of the distribution of the given metal ion between the polymer sample and a solution containing the metal ion over a wide range of concentrations and pHs of different electrolytes. The terpolymers showed a higher selectivity for Co<sup>2+</sup> > Hg<sup>2+</sup> > Cd<sup>2+</sup> > Pb<sup>2+</sup>. It is also observed that the amount of metal ions absorption by the BPHDF terpolymer resins increases in the order BPHDF-3 > BPHDF-2 > BPHDF-1 due to introduction of more and more phenolic groups in terpolymer resins from BPHDF-1 to BPHDF-3.

**Keywords:** 2,2'-Biphenol-Hexamethylenediamine-formaldehyde Terpolymersresins, BPHDF, Chelating properties, Batch equilibrium, Distribution ratio, Metal ion uptake

## I. INTRODUCTION

Over the past few decades, significant research work has been done on enhancing the properties of new synthesized ion-exchange terpolymers for the treatment of waste water and pollution control. Ion-exchange may be defined as the reversible exchange of ions between the substrate and surrounding medium. The removal of heavy metal ions from industrial wastewater has been given much attention in the last decade, as the heavy metals released into the environment pose potential threat, because of their tendency to accumulate in living organisms. The necessity to reduce the amount of heavy metal ions pollution in wastewater streams has led to an increasing interest in ion-exchange terpolymers [1-5]. Therefore, attempt has been made to synthesize terpolymer and to evaluate the ion-exchange properties. Copolymers of 8-hydroxyquinoline with formaldehyde have been studied extensively[6]. Synthesis, characterization, and thermal Study of terpolymeric resin derived from m-cresol, hexamine and formaldehyde have been reported[7]. Masram D. T. and Karia K. P. have been reported the terpolymer resins of hydroxy compounds with various diamines with formaldehyde and their properties such as electrical conductivity[8], thermal stability[9], and ion exchange properties[10] have also been studied. Synthesis, characterisation and thermal degradation studies of 8-hydroxyquinoline-ethylene diamine-formaldehyde have been studied by Trivedi and co-workers[11]. Extensive research work has been carried out on synthesis, characterisation, thermal degradation and ion exchange properties of terpolymers derived from 2,2'-dihydroxy biphenyl, substituted carbamide and formaldehyde [12-16]. The chelating

## Synthesis and Antibacterial Screening of Metal $\beta$ -diketonates

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### ABSTRACT

1-(2,4-dihydroxy-5-nitrophenyl)-3-(thiophen-2-yl)propane-1,3-dione (DNTPD) and its transition metal complexes were synthesized. The  $\beta$ -diketone ligand is synthesized by employing Baker-Venkataraman rearrangement on 4-hydroxy-5-nitro-2-(thiophen-2-yl)oxyacetophenone which was previously synthesized by p-nitroresacetophenone and thiophene-2-carboxylic acid. The synthesized compounds were characterized by physical properties, elemental analyses, <sup>1</sup>H-NMR, mass spectra, IR spectra and electronic spectra and the geometry of metal complexes have been concluded by magnetic spectra. The thermal stability of metal complexes has been studied by Thermogravimetric analysis. The ligand and its transition metal complexes have been studied under pathogenic bacteria like *Staphylococcus aureus*, *Bacillus subtilis*, *Proteus vulgaris*, *Escherichia coli* and *Proteus aeruginosa* by filter paper disc diffusion method.

**Keywords:**  $\beta$ -diketones, Metal complexes, Baker-Venkataraman rearrangement, Thermogravimetric analysis, Antibacterial activity.

### I. INTRODUCTION

$\beta$ -diketones are among the most widely studied compounds. They are key intermediates for the synthesis of some core heterocyclic compounds like pyrazole[1], isoxazole[2], triazole[3], flavones[4], benzodiazepine[5], pyrimidine[6], etc. Their derivatives also have wide applications in diverse areas like gas chromatography, laser technology, polymer chemistry, solvent extraction and shift reagent in NMR spectroscopy[7,8].

$\beta$ -diketones are known to have keto-enol tautomerism. As  $\beta$ -diketones exist mainly in the enolic form and that form considered as a 1-keto 3-hydroxy variant locked in the preferred double bond geometry through hydrogen bonding, having ability to inhibit bacteria and act as an excellent antibacterial agent[9]. It exhibits several other biological activities, such as antioxidant[10], antitumor[11], antiviral[12], insecticidal[13], anti-inflammatory and anticarcinogenic activities[14], antimutagenic activity[15-17] etc. It has been used as sunscreen agent because it is a good absorber in UV region. It has been shown to protect human lymphoid cells and used as UVA-filters.  $\beta$ -diketone is an important pharmacophore of HIV-1 integrase inhibitors[18].

Thiophene derivatives have been very well known for their remarkable pharmacological activities and therapeutic applications. Thiophene is a bioisostere of benzene ring thus benzene ring of a biologically active compound may often be replaced by a thiophene without loss of activity[19]. Number of thiophene derivatives

PROGRESS IN THE PATHWAYS FOR SYNTHESIS OF ISOXAZOLES SYNTHONS AND THEIR BIOLOGICAL ACTIVITIES

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ABSTRACT

Isoxazole and its derivatives are one of the very important classes of heterocyclic compounds which displaying a broad spectrum of biological activities which have made them very important structures in the field of medicinal chemistry. Isoxazoles are clinically proven to be very active as antibacterial, antifungal, anti-inflammatory, anticancer, anti-tubercular and antineoplastic agents. The different derivatives of isoxazole which exhibits differences in the structure have shown a vast diversity in their medicinal properties which have proven them as very beneficial in the progress of novel therapeutic agents which shows enhanced effectiveness and minor harmfulness. Hence, because of this widespread research on isoxazole from so many years, due to this reason, it has become necessary to analyse new progress in the synthetic routes and widespread range of biotic activity of isoxazole. With this conclusion, the present evaluation will be useful for the novel drug discovery of isoxazole molecules.

**Keywords:** Isoxazole, Antibacterial, Antifungal, Anti-inflammatory, Analgesic, Different synthetic methods.

1. INTRODUCTION

Heterocycles which having nitrogen along with them also having atoms such as oxygen and sulphur have gained considerable attention from pharmaceutical scientists as they show diversified biological activities. Such moieties having two or more active binding sites in a single molecule are used as synthons for the synthesis of a large number of heterocyclic compounds. Bioactive compounds are a worthwhile contribution to the field of heterocyclic chemistry [1]. Isoxazole shows various biological activities and similarly forms a very important part of several biodynamic agents [2]. The structure of Isoxazole (1a), its partial saturated analogues isoxazolines (1b-d) and its completely saturated analogue is known as the isoxazolidine (1e), shown in Fig. 1.

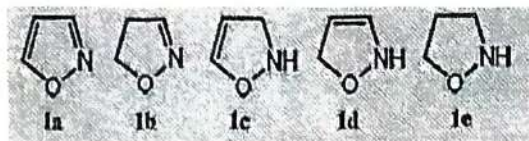


Fig. 1: Structure of Isoxazole and its Analog

The derivatives of Isoxazole playing a very important part in the organic chemistry branch. Because of their versatile biological importance, a significant amount of research effort has been focused on this molecule [3]. The isoxazole and its derivatives are also well-thought-out to be important synthons. Isoxazole and its analogues display different biological activities such as antibacterial, analgesic, antifungal, anti-inflammatory, etc. [4].

This review represents an overview of the preparation and biological activities of isoxazole and its derivatives. In the first part, we propose the outline of the general synthetic methods of isoxazole and its derivatives. The second part is about the information of different biological activities of isoxazoles and their derivatives.

2. DIFFERENT SYNTHETIC METHODS AND BIOLOGICAL ACTIVITIES OF ISOXAZOLE AND THEIR DERIVATIVES

There have been several practically important routes to synthesize isoxazoles, their derivatives and also their biological activities.



## A BRIEF REVIEW ON THIAZOLIDINONES AND AZETIDINONES: SYNTHESIS AND BIOLOGICAL ACTIVITIES

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### ABSTRACT

Heterocyclic chemistry is considered as the versatile field which studies the synthesis, properties and applications of the same. These hetero molecules are in many of the natural products and have a great potential to show various biological properties and activities. Thiazolidinone, a saturated analogue of thiazole, is a five-membered ring with sulphur, carbonyl group on the fourth carbon and the most important one i.e. nitrogen which is responsible for most of the biological properties. The molecule has active 2, 3 and 5-positions, where a large number of substitutions are possible that lead to enhance the properties of the derivatives. So this molecule has been always a big target to researchers and is known to own numerous biological activities viz. anti-HIV activity, anticonvulsant, antimicrobial, anti-cancer, anti-inflammatory etc. On the same note, the cyclic azetidinone moiety has been used as a template to build many of the heterocyclic structures fused to the four-membered rings. Azetidin-2-ones have received special attention mainly due to antibacterial properties of cephalosporins and penicillin. Azetidinones is also an exceptional class of compounds which is known to possess a number of activities such as anti-inflammatory, antibacterial, tryptase inhibitory, antihyperlipidemic, human leukocyte elastase inhibitory, CNS activity, antitubercular, antihyperglycemic, pesticidal, antitumor, anticancer activity, antimicrobial, enzyme inhibitors, cholesterol absorption, cytotoxic and elastase inhibitors etc. Through this present review article, we are making a sincere effort to compile all the goodness of these two wonder moieties concerning their synthesis along with some green synthetic steps and biological activities to ease and enhance further research on them.

**Keywords:** Thiazolidinones, Azetidinones, Synthetic Methods and Biological Activities.

### 1. INTRODUCTION

Thiazolidine is the base molecule of which thiazolidinone (Fig.a) is a derivative which belong to an important class of hetero-cyclic compounds. Thiazolidinone is a five-membered compound containing sulfur and nitrogen within the ring [1]. Number of work has been already done in the past on thiazolidinone which is of utmost importance and has provided authentic data about the same. The nucleus is well known as magic molecule or as the wonder nucleus as its different derivatives have been found to show different biological activities, in- fact almost all kinds of activities. This wonder moiety has been continuously explored and under experiment to synthesize new novel derivatives with advanced biological activities. What makes this nucleus wonderful is its 2, 3 and 5-positions where a number of group substitutions are possible that leads to

enhance properties of the their analogues. Moreover the change in the substituents which are attached to the carbon atom of the methylene group or to the nitrogen atom are also responsible to synthesize new derivatives [2-5]. The carbonyl group of most of the derivatives of thiazolidinone is considerably unreactive and carry itself as it is in the derivatives. So with these so many changes possible, this molecule is always a big target to the researchers and has been found to show number of biological activities viz. antimicrobial [6-8], anticancer [9], anti-inflammatory [10-12], antiHIV [13], antiviral [15], cytotoxicity [16]. An adequate number of drugs are already available commercially in the market such as troglitazone, rosiglitazone, lobeglitazone and pioglitazone and many others [17].

On the other hand, 2-Azetidinones (Fig.b) also named as  $\beta$ -lactams, is a four membered cyclic amide since the

## HYBRID BIOGENIC ADSORBENTS TO REMOVE HEAVY METALS FROM WASTE WATER: CAN IT BE A SUSTAINABLE GREEN PROTOCOL TO MINIMISE ENVIRONMENTAL AND OCCUPATIONAL HAZARDS ?

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### ABSTRACT

Presence of heavy metals in waste water cause biological imbalance and environmental hazards. Various conventional and aggressive chemical protocols were employed for effective removal of heavy metals from waste water. Certain disadvantages like unwanted toxic by-products, high cost, environmental and occupational hazards pave the way for using of biogenic and hybrid adsorbents. Various active organic functional groups and larger adapted surface area in biogenic and hybrid adsorbents enhance the adsorption competence remarkably. Enhanced adsorption capacity depends on appropriate preparation techniques, variation of initial metal concentration and contact time etc. We will emphasize effectiveness of using hybrid biogenic adsorbents rather than general biogenic materials.

**Keywords:** Waste water, Environmental and occupational hazards, adsorption competence, hybrid adsorbents, biogenic material.

### 1. INTRODUCTION

Water, the most essential component in ecosystem and human living organism, is polluted immensely by water pollution, industrial effluents, heavy metals and pesticides [1]. Various physio-chemical parameters are the indications of potable and usable water.

Sustainability with green approach is need of the hour for smooth manoeuvrings of pollution free environment as well as maintenance of healthy ecosystems. Random industrialisation without proper obedience of standard protocols leads to improper handling of effluents containing large number of toxic heavy metals which primarily origins pollution of water results into environmental and occupational health hazards. Orthodox processes such as reverse osmosis, Ultra-filtration etc are inept of quantitative assessments and efficient removal of heavy metal in low concentration from industrial effluents. Humans are greatly affected by various irreversible diseases caused by heavy metals viz., Hg, Cd, Cr, Pd, Co, As, Pb, Zn etc. Conventional chemical methods with aggressive protocols due to their indirect destructive impact on environment and high cost are not best appropriate techniques for effective

removal of heavy metals from waste water. Adsorption process by natural adsorbents is one of the best alternatives to remove toxic heavy metals from industrial waste water. Effective implementation of adsorption capacity by chicken feather, hair, natural seeds and plants, daily wastages stuffs etc have been reported so far. Low concentration of heavy metals in waste water can also be efficiently removed by biogenic adsorbents. Kinetics of adsorptions is also evident from various kinetic studies such as Freundlich and Langmuir Adsorption isotherm. Certain active bio molecules or inorganic mixed oxides can be functionalised with biogenic materials for enhancement in adsorption capacity. Functionalised molecules can be recovered easily from the treated water due to minimum solubility and recyclable protocols. Morphological analysis such as FTIR, SEM, TEM etc reveals their effective structural advantages and contact time, pH, and initial concentration dependent adsorption parameters supports effectiveness as hybrid adsorbent to remove toxic heavy metals from waste water. Classifications of nano-based water treatment are mentioned in various literatures [12-14].





FIELD SURVEY AND ISOLATION OF MICROFLORA FROM FISH

*Clarius batrachus*

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ABSTRACT

The beneficial and harmful microorganisms present in the gastrointestinal (GI) tract of fish. Microflora in the gastrointestinal tract of fish is vital role for healthy living of it. It is stated by many researchers that only few microorganisms spp. present in water are belongs to microflora in the gastrointestinal tract. Few of these spp. acclimatizes themselves in GI tract, whereas the remaining microorganisms are processed by digestive enzymes secreted by fish. The molecular approach provides a more complete picture about bacterial community composition than do cultured based methods. Application of Molecular identification based on 16srDNA gene by using Polymerase Chain Reaction (PCR). 16S r DNA approach has been successfully applied to determine the bacterial diversity present in GI of fish. In the present research work, the study of molecular characterization of microflora helps in some or another way for understanding the risk associated with pathogenic and non-pathogenic organisms and it will also help to study the common contaminants of water isolated from the intestine of *Clarius batrachus* for further research in aquaculture pathology.

Keywords: Fish, 16srDNA, PCR

INTRODUCTION

Microflora is not only essential but also vitally important component of the digestive tract in animals including fish. The community of microorganism in the digestive tract of fishes is analogous to that

in mammals, since the cell structure of the intestine and physiology of digestion in mammals and fish are similar in some extent [1, 2]. Gut flora have a continuous and dynamic effect on the host's gut and

# Biodegradation of Household Waste Using Micro-Organisms For Production of Important Products

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## ABSTRACT

Household waste generated in towns has emphasized on the area for research due to increasing concern about pollution ecosystem and human health. Everyday a huge quantity of waste materials generated from houses. Various type of waste causing adverse effect on living organisms and environment that giving rise to human as well as animal diseases, spoilage in air and soil ecosystem lead to total imbalance in natural ecology. Aerobic biodegradation of organic matter by microbes (aerobes) is most rapid and fast degradation process. No pungent gas produced. Large disposable waste generated. The present study showed vegetable waste was rich source of enzymes, carbohydrates, fats, moisture and phytochemicals and best substrate for Microbial Biodegradation purpose. Analysis of individual enzymatic activity of mixed microbial species on household waste and production of industrially important products.

**KEY WORDS:** BIODEGRADATION, CELLULASE, AMYLASE, MICROBIAL CONSORTIA.

## INTRODUCTION

Biodegradation is the process by which organic substances are broken down into smaller compounds by the enzymes produced by living microbial organisms. The microbial organisms transform the substance through metabolic or enzymatic processes. Biodegradation processes vary greatly, but frequently the final product of the degradation is carbon-dioxide or methane. Organic material can be degraded aerobically with oxygen or anaerobically without oxygen. The microbial population of soil possessed mainly bacteria, fungi, actinomycetes, algae protozoa. Among these groups, bacteria are most prominent and abundant group. Bacteria use waste for their own metabolism and finally they produce hazardous toxic chemicals into non-toxic or less toxic substances which are important for soil health, plant growing and over all to keep well balance of natural ecosystem.

The genera *Bacillus*, *Corynebacterium*, *Staphylococcus*, *Streptococcus*, *Shigella*, *Alcaligenes*, *Acinetobacter*,

*Escherichia*, *klebsiella* and *Enterobacter* were the best hydrocarbon degrading bacteria. Mixed microbial communities have the most powerful biodegradative potential because the genetic information of more than one organism is necessary to degrade the complex mixture of organic compounds present in contaminated areas (Bird et al., 1954; Bruckner 2016).

Fungi are an important part of degrading micro biota because like bacteria they metabolized dissolved organic matter, they are principle organisms responsible for the decomposition of carbon in the biosphere. But fungi unlike bacteria can grow in low moisture areas and low pH. Solutions which aids them in the breakdown of organic matter. Filamentous fungi participating in aliphatic hydrocarbons degradation are *Cladosporium* and *Aspergillus* whereas a fungus belongs to penicillin; *Fusarium* and *Aspergillus* can take part in aromatic hydrocarbon decomposition (Chapman et al., 1999).

## MATERIAL AND METHODS

- 1) Sterilization of All glassware's and culture media were sterilised in an autoclave for 15 minutes.
- 2) Preparation of Sieved Sample of Vegetables waste, then determine the physical parameters of sieved sample of vegetable waste such as colour, weight, pH, temperature, and moisture and water absorption capacity.

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## Production Of Pectinase By *Saccharomyces Cerevisiae* Using Sugar Beet Pulp

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### Abstract:

Industrial waste management is a great matter of concern nowadays. Industrial waste is generated in the solid, liquid and in gaseous forms and discharged in the landfills. Residual organic compounds generated from raw material of many food industries are having adverse environmental impact. Waste material in the form of peels of fruits and vegetables, seeds of some fruits and some pulp are produced by the food processing industries in large amount. These waste material like sugar beet pulp and soybean powder contain Pectins, which can be used as the substrate for production of pectinolytic enzymes by microorganisms using solid state fermentation technique. In the present study the yeast strains were isolated from active dry yeast powder and these potential yeast strains were screened for pectinolytic activity on selective media. The yeast strain *S. cerevisiae* was shown to possess polygalacturonase and pectin lyase activity in solid state fermentation.

This yeast strain was used for their ability to produce pectin's on sugar beet pulp and soybean powder medium in the ratio 1:9 and 9:1. The highest producer medium was identified as the medium containing soybean powder and sugar beet pulp in the ratio of 9:1.

The highest polygalacturonase and pectin lyase activity was observed in media containing ratio of 9:1 by growing the yeast on Soybean powder and sugar beet pulp and incubation for 10 days at 30°C. Thus integrated approach towards utilization of waste from fruits and vegetable for pectin's production by SSF. This is step toward reducing waste and pollution.

**Keywords:** polygalacturonase, lyase, pectinolytic

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### Introduction:

Enzymes are the biological catalyst, which have played an important role in many food industries for around hundreds of years. Enzymes play important role in various industries like Manufacturing of textiles, Pharmaceutical industry, Paper and pulp industry, enzymes are used as washing agents and in today's world of sustainable technology and green chemistry enzymes had attained the top most position.



## Challenges faced by working women and solutions for their issues

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### Introduction

Women are the most important human resource and an asset in accelerating economic and social growth of not only family workplace but also of whole nation. If we really want to solve women problems, then both men and women should be given equal rights and opportunities' in each and every field of life. Society should give due respect and status to women which they rightfully deserve. Jawaharlal Nehru has pointed out "To awaken the people, it is the women who must be awakened. Once she is on the move, the family moves, the village move and the Nation moves."

Key words: women, problems, opportunities, economic and social growth.

### Challenges faced by working women

#### 1. Sexual Harassment:

Sexual harassment is a widespread problem at workplace that women have to face. Sexual harassment is an unwelcome sexual behavior. Sexual harassment has a very bad impact on women. Sexual harassment not only mean touching the private parts of woman, it also mean passing offensive comments, cracking adult jokes, whistling and gender based insulting comments, showing pictures or videos of unwanted sexual favour.

Some employers try to take sexual advantage of female workers in return of promotion or salary hike.

Sexual harassment can even lead to more dangerous activities like molestation and rape in the workplace of women.

#### 2. Less security:

Security is another important concern that women have to deal with in their workplace. Those women who are working in night shifts fall victim of several crimes due to poor security management.

Now a days we all can hear incidents of driver or another male employee assaulting a woman worker .

#### 3. Pregnancy discrimination:

Employer at various workplace discriminates a female worker on the basis of conditions like pregnancy and childbirth.

Pregnancy discrimination can lead any kind of actions taken owing to an employee's pregnancy or other related medical conditions, including demoting a woman worker or firing treating a pregnant worker in a bad way.

According to the law pregnancy and various related medical conditions are considered as temporary disability.

#### 4. Lack of family support and Workplace environmental pressure :





## PRODUCTION AND CHARACTERIZATION OF CELLULASE PRODUCED BY ASPERGILLUS NIGER CULTURED ON WHEAT

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### ABSTRACT:

Cellulases are enzymes that hydrolyze cellulose and related cell-wall-polysaccharides derivatives. Wheat bran is the agricultural waste with the high cellulose content. The research was carried out to utilize wheat bran as media/substrate to produce cellulase enzyme by means of the fungal fermentation process. The crude cellulase enzyme was produced by *Aspergillus niger* through submerged fermentation process using wheat bran as carbon source. The optima fermentation conditions were determined by varying different parameters. In the research showed the cellulase enzyme activity of *Aspergillus niger* cultured on wheat bran media have optimum incubation period 6 days at pH 4.5 and temperature 40°C. The present study has shown that wheat bran can be used as a carbon source by *Aspergillus niger* for the production of cellulase.

**Key words:** Cellulases, Wheat bran, Cellulose, *Aspergillus niger* and Submerged fermentation

### INTRODUCTION:

Agricultural waste is a big problem and its handling is very difficult as it contains too much cellulose which is difficult to degrade (Sonia N M O dan Kusnadi J 2015). Cellulose is a major component of cell wall of plants and it contribute approximately 35-50% of a plant dry weight (Saha B C 2004). Cellulose generate environmental pollution, and hence it is necessary to degrade cellulose polymer to be the simple monomers as glucose

(Septiani A and Wijanarkadan Rukmi M G I 2017). Cellulase (EC 3.2.1.4) hydrolyzes cellulose to glucose.

Fermentation technology is one of strategy that could be carry out in the effort to increase economic value of agricultural waste such as rice bran and wheat bran (Nema N, Alamir L and Mohammad M 2015). Wheat bran contain cellulose compound that can be used to produce cellulase enzyme that have a high economically value. Commercially enzyme production usually use fungi or bacteria (NarasimhaG, et al,2006). Cellulase enzymes have a variety of application in industry such as textile and laundry, food,

animal feed, research and development, beer and wine, pulp and paper, agriculture, biofuel, pharmaceutical, waste management, and recombinant DNA technology (Behara B C, et al,2017)

The research is aimed to characterize a cellulase enzyme of fungal strain using wheat bran as substrate

### MATERIALS AND METHODS:

#### Isolation of fungal isolate

In view of getting efficient cellulose degrading fungal strains, soils rich in cellulose waste and fruit waste samples were scrutinized including fruit processing area, from different locations of Nagpur City. A suspension of soil sample and sterile distilled water was prepared, and plated on potato dextrose agar by (Mukunda et al,2012). A broad spectrum antibiotic chloramphenicol, was use to inhibit bacterial growth. The plates were incubated at 28°C for 2-3 days.

#### Identification of fungal isolate

The isolated fungal strain was identified as *Aspergillus niger* based its morphological and microscopic characteristics and these values



### Study of Acoustic Behaviour of Thiamin Hydrochloride with Methanol at 303K

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**Abstract:** In the present study, ultrasonic velocity ( $u$ ), density ( $\rho$ ) and viscosity ( $\eta$ ) have been measured at 2 MHz frequency in the binary mixtures of thiamin hydrochloride and methanol in the concentration range 0 to 0.1 molar concentration at 303K using ultrasonic interferometer technique. From the basic experimental data, various acoustic and thermodynamic parameters; namely, adiabatic compressibility, free length, free volume and internal pressure, were calculated, with a view to investigate the nature and strength of molecular interaction in the binary liquid mixture of thiamin hydrochloride and methanol. The obtained results support the occurrence of molecular interaction through hydrogen bonding in the binary liquid mixture.

**Keywords:** Ultrasonic velocity, Binary liquid mixture, Molecular interaction, Hydrogen bonding.

## Introduction

The field of ultrasonic technique has grown enormously in scientific studies and has become a subject of active interest during the recent years [1]. Ultrasonic technique is most important and universally accepted to study the physical and chemical properties of solutions [2-6]. Ultrasonic velocity helps to provide qualitative information about the nature of molecular interactions in pure and binary liquid mixtures [7-9]. Literature study shows that a lot of work has been performed on pure and binary liquid mixtures [10-15].

Vitamins are in general biologically active compounds which are needed by cells and organs to sustain good health; so, they are essential dietary components [16-17].

Acoustical properties are important tool to study the behaviour of solute and solvent

interaction. The study of acoustical behaviour in liquid mixtures was reported by various researchers. Thirumaran *et al.* [18] determined the acoustical properties of N, N-Dimethyl formamide, (DMF) acetophenone with 1-alkanols. Khan and Bhise [19] measured the acoustical studies of sucrose in aqueous and non-aqueous media. Vanathi, Mullainathan and Nithiyantham [20] conducted an acoustical study on 1,4-dioxane with chloroform and cyclohexane. Shinde *et al.* [21] studied the acoustical properties of aqueous manganese chloride solutions. Wasnik [22] reported the acoustic properties of prochlorperazine melate drug in 20% DMF-water solution. In literature survey, it has been found that no effort has been made to investigate the acoustical behaviour of binary liquid solution of thiamin hydrochloride with methanol at 303K.

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### Optical, Structural and Electrical Properties of CuS Thin Film on Dielectric Substrate by Spray Pyrolysis Technique

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**Abstract:** This paper deals with depositing a CuS thin film on a glass substrate at 380°C by using spray pyrolysis method. Its optical properties and electric properties are characterized after cooling the sample. Formation for compound, structure and morphology were studied using x-ray diffraction. The optical study comprised the extraction and analysis of calculated optical constants, such as absorption coefficient ( $\alpha$ ), transmittance, extinction coefficient ( $k$ ), which revealed the presence of a direct optical energy band gap of 2.0 eV. The temperature-dependent electrical resistivity with other necessary parameters was systematically studied for CuS film in the present work. Overall study confirmed the semiconducting behavior of the film which is useful for many applications, even when the film is touching the substrate at a micrometer scale with spray pyrolysis. This paper also explores the optical conductivity, dielectric constant, Urbach energy, morphology and thermal activation energy of the CuS film with explaining methodological details.

**Keywords:** Thin film, Spray pyrolysis technique, Electrical and optical properties, XRD.

## Introduction


The CuS metal thin film belongs to I – VI compound semiconductor materials. It is used in several applications, such as microwave shielding, photo thermal, photo detector, photovoltaic and solar control coating applications as well as its uses as a wide-energy gap semiconductor and as an electro conductive electrode ... etc [1-5]. Such metal thin films also have applications in diamond d films, magnetic films, superconducting films, microelectronic devices, surface modification, hard coating, photoconductors, IR detectors, optical imaging, optical mass memories and sensors [3-6]. Different types of methods are used for thin-film deposition, such as chemical bath deposition [4-6], spray pyrolysis [7], successive ionic layer

absorption and reaction [1], electrode position [8], atomic layer deposition [9-10], sol gel [11-13] and solution growth [14-15].

The optical band gap energy ( $E_g$ ) of Cu<sub>x</sub>S thin films for 3D solar cell applications has been reported to be 2.41 to 3.1 eV with crystalline phase and found to be temperature-dependent [2]. The thin film exhibited polycrystalline structure when substrate temperature reached 320°C. Direct energy band gap has been reported to be 2.07 to 2.50eV in another work. Cu<sub>x</sub>S thin films possess p-type semiconducting behavior [3]. Nascu studied at 150 to 220°C deposited, 0.01 to 0.05 $\mu$ m thickness films and found a 2.2 eV bandgap [16]. Adelifard *et al.* reported 2.4 to 2.6eV for substrate temperatures 250, 285 and

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## Solving some special classes of standard congruence of prime modulus of higher degree

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### Abstract

In this paper, some special classes of standard congruence of prime modulus of higher degree are considered for study. The main aim was to find a method of finding their solutions. After the rigorous study, it is found that each of the first two congruence have unique solution while the second two have exactly three solutions each. The formula/method for solutions obtained is tested by citing numerical examples and verified true. Now it is possible to solve the said congruence very easily in the least time.

**Keywords:** congruence of higher degree, fermat's theorem, inverse-modulo a prime, prime modulus

### Introduction

A congruence of the type:  $x^n \equiv a \pmod{p}$ ,  $p$  an odd prime, is called a standard congruence of (higher) degree  $n$ . The congruence is called solvable if  $a$  is  $n$ th power residue of  $p$  [1].

Many more congruence is solved by a number of mathematicians establishing formulae or algorithmic methods. Even then many more congruence are yet remain to formulate. The authors have successfully formulated many such congruence [5], [6], [7], [8], [9]. Here, four such congruence are considered for solutions. No method or formula is found for their solutions in the literature of mathematics. Without using any formula, such congruence become more complicated to find solutions. In [2], Problem-7, page-115, a problem is found: If  $(a, p) = 1$ , and  $p$  is prime such that  $p \equiv 2 \pmod{3}$ , then the congruence:  $x^3 \equiv a \pmod{p}$ , has the unique solution given by  $x \equiv a^{\frac{2p-1}{3}} \pmod{p}$ . Abruptly, an idea of these congruence under consideration come in the authors' mind. Such type of congruence are:

$$x^7 \equiv 3 \pmod{11}; x^{11} \equiv 11 \pmod{17}; x^{15} \equiv 7 \pmod{23}; x^{19} \equiv 2 \pmod{29};$$

$$\text{And } 4x^3 \equiv 3 \pmod{5}; x^9 \equiv 5 \pmod{13}; x^{13} \equiv 3 \pmod{19}, \text{ etc.}$$

$$\text{These are of the types: } x^{\frac{2p-1}{3}} \equiv b \pmod{p} \text{ and } ax^{\frac{2p-1}{3}} \equiv b \pmod{p};$$

$$x^{\frac{2p+1}{3}} \equiv b \pmod{p}; ax^{\frac{2p+1}{3}} \equiv b \pmod{p} \text{ etc.}$$

The authors have tried their best to find the methods of solutions of these congruence and their efforts are presented here in this paper.

### Problem-Statements

The problems are stated in the form of theorems as under

**Theorem-1:** The congruence:  $x^{\frac{2p-1}{3}} \equiv b \pmod{p}$ ,  $p$  odd prime,  $p \equiv 2 \pmod{3}$ , has a unique solution given by  $x \equiv b^3 \pmod{p}$ .

**Theorem-2:** The congruence:  $ax^{\frac{2p-1}{3}} \equiv b \pmod{p}$ ,  $p$  odd prime,  $p \equiv 2 \pmod{3}$ , has a unique solution given by  $x \equiv a^3 b^3 \pmod{p}$ .

**Theorem-3:** The congruence:  $x^{\frac{2p+1}{3}} \equiv b \pmod{p}$ ,  $p$  odd prime and  $p \equiv 1 \pmod{3}$ , can be reduced to a standard cubic congruence of prime modulus and has exactly three incongruent solutions.

**Theorem-4:** The congruence:  $ax^{\frac{2p+1}{3}} \equiv b \pmod{p}$ ,  $p$  odd prime and  $p \equiv 1 \pmod{3}$ , can be reduced to a standard cubic congruence of prime modulus and hence has exactly three incongruent solutions.

### Literature Review

#### Proof of Theorem-1

As  $p \equiv 2 \pmod{3}$ , hence  $p - 2 = 3k \Rightarrow \frac{2p-1}{3} = 2k + 1$ , odd an integer.

  
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SOLVING A SPECIAL STANDARD CUBIC CONGRUENCE OF COMPOSITE MODULUS  
MODULO A SPECIAL COMPOSITE INTEGER

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ABSTRACT

Here, the authors have studied and formulated the solutions of a special standard cubic congruence of composite modulus modulo a special composite integer in different cases. It is found that the said congruence has three types of solutions as per the case. It has exactly  $3p^2$  incongruent solutions in the first case, only 3 incongruent solutions in the second case and has exactly  $3p$  incongruent solutions in the third case,  $p$  being an odd prime integer. Formulation of solutions has provided a simple procedure of finding the required solutions easily. This is the merit of the paper.

Keywords: Cubic Congruence, Composite Modulus, Chinese Remainder Theorem.

INTRODUCTION

The congruence is part of Number Theory which is a branch of pure mathematics. The general and the standard quadratic congruence of prime modulus were studied in the college syllabus in mathematics. The standard cubic and standard bi-quadratic congruence suffer a negligence; nowhere is found any discussion of it.

Here in this paper, the authors considered a standard cubic congruence of composite modulus of very special type. It is of the type:

$$x^3 \equiv a \pmod{p^m \cdot 3^n}, p \text{ being an odd prime.}$$



### Formulation of solutions of a special standard quadratic congruence modulo an even prime integer raised to the power n

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#### Abstract

In this paper, authors have formulated solutions of special type of a standard quadratic congruence  $x^2 \equiv 0 \pmod{2^n}$  of composite modulus. This congruence was not formulated by the earlier mathematicians, so the present authors studied it rigorously and attempted to formulate the solutions of this congruence. The authors have presented the formula for the solutions of the said quadratic congruence here and obtained nonzero solutions.

**Keywords:** composite modulus, quadratic congruence, formulation

#### Introduction

In the book of Number Theory by Zuckerman<sup>[1]</sup>, the congruence:  $x^2 \equiv a \pmod{2^n}$ ;  $n \geq 3$ , is found formulated with four incongruent solutions for  $a \equiv 1 \pmod{8}$ ; the same problem is also found in the book of Thomas Koshy, similarly formulated<sup>[2]</sup> but no discussion is found about the congruence:  $x^2 \equiv 0 \pmod{2^n}$  nowhere. The authors have found that such types of congruence have many nonzero solutions. Hence, the authors considered the said congruence for formulation of its solutions. The authors already have formulated the congruence and got published in different international journals<sup>[3, 4, 5, 6, 7, 8, 9, 10, 11, 12]</sup>.

#### Problem-Statement

The problem of study is stated here in the form of two theorems:  
**Theorem-1:** The solutions of the standard quadratic congruence:  $x^2 \equiv 0 \pmod{2^n}$  has exactly  $2^{n/2}$  nonzero solutions given by  $x \equiv 2^{n/2}k \pmod{2^n}$ , if  $n$  is an even positive integer and  $k$  is some positive integer.

**Theorem-2:** The solutions of the standard quadratic congruence:  $x^2 \equiv 0 \pmod{2^n}$  has exactly  $2^{(n-1)/2}k$  nonzero solutions given by  $x \equiv 2^{(n-1)/2}k \pmod{2^n}$ , if  $n$  is an odd positive integer and  $k$  is some positive integer.

#### Analysis and Results

##### Proof of Theorem -1:

Let  $n$  be even positive integer.

The congruence under consideration is:  $x^2 \equiv 0 \pmod{2^n}$ . It is always solvable.

For its solutions, consider  $x \equiv 2^{n/2}k \pmod{2^n}$ , if  $n$  is an even positive integer.

Then,  $x^2 \equiv (2^{n/2}k)^2 \equiv 2^n k^2 \equiv 0 \pmod{2^n}$ .

Hence,  $x \equiv 2^{n/2}k \pmod{2^n}$ ;  $k = 1, 2, 3, \dots$  gives the solutions of the congruence.

$$\begin{aligned} \text{If } k = 2^{n/2} + 1, \text{ then } x &\equiv 2^{n/2} \cdot (2^{n/2} + 1) \pmod{2^n} \\ &\equiv (2^n + 2^{n/2}) \pmod{2^n} \\ &\equiv 0 + 2^{n/2} \pmod{2^n} \\ &\equiv 2^{n/2} \pmod{2^n}. \end{aligned}$$

This is the same solution as for  $k = 1$ .

Also it is seen that for  $k = 2^{n/2} + 2$ , the solution is the same for  $k = 2$ .

Therefore, all the nonzero solutions are given by

$$x \equiv 2^{n/2}k \pmod{2^n}; k = 1, 2, 3, \dots, 2^{n/2}.$$

##### Proof of Theorem-2

Let  $n$  be an odd positive integer.

The congruence under consideration is:  $x^2 \equiv 0 \pmod{2^n}$ . It is always solvable.

For the solutions, consider  $x \equiv 2^{(n-1)/2}k \pmod{2^n}$ , if  $n$  is an odd positive integer.

$$\text{Then, } x^2 \equiv (2^{(n-1)/2}k)^2 \equiv 2^{n-1}k^2 \equiv 2^n k^2 \equiv 0 \pmod{2^n}.$$

Hence,  $x \equiv 2^{(n-1)/2}k \pmod{2^n}$ ;  $k = 1, 2, 3, \dots, 2^{(n-1)/2}$  gives the solutions of the congruence.

$$\text{If } k = 2^{(n-1)/2} + 1, \text{ then } x \equiv 2^{(n-1)/2} \cdot (2^{(n-1)/2} + 1) \pmod{2^n}$$

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A. A. Qureshi | PLANE SYMMETRIC SPACE-TIME  
WITH WET DARK ENERGY IN  
BIMETRIC RELATIVITY

**Abstract:** In this paper, plane symmetric space-time is studied with the matter wet dark energy in the context of Rosen's Bimetric Theory of Relativity. Here it is shown that only vacuum model can be obtained.

**Keywords:** Plane Symmetric, Wet Dark Energy, Bimetric Relativity, General Relativity.

**Mathematical Subject Classification No.:** 83C05.

### 1. Introduction

A new theory of gravitation called the Bimetric theory of gravitation, was used by Rosen [12, 13, 9] to modify the Einstein's general theory of relativity by assuming two metric tensors, viz., a Riemannian metric tensor  $g_{ij}$  and a background metric tensor  $\gamma_{ij}$ . The metric tensor  $g_{ij}$  determines the Riemannian geometry of the curved space time which plays the same role as given in the Einstein's general relativity and it interacts with matter. The background metric tensor  $\gamma_{ij}$  refers to the geometry of the empty (free from matter and radiation) universe and describes the inertial forces. This metric tensor  $\gamma_{ij}$  has no direct physical significance but appears in the field equations. Therefore it interacts with  $g_{ij}$  but not directly with matter. One can regard  $\gamma_{ij}$  as describing the geometry that would exist if there were no matter. Moreover, the bimetric theory also satisfied the covariance and equivalence principles: the formation of general relativity. The theory agrees with the present



## THE STUDY OF THE IMPACT OF CORONA ON THE E-COMMERCE SECTOR

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**Abstract:** Changes in consumer behavior have been observed due to the coronavirus pandemic, due to which it is estimated that India's e-commerce market will grow by 84% to \$ 111 billion by 2024. Consumers are increasingly turning to online shopping to avoid exposure to disease vectors such as cash and point of sale terminals, resulting in a boom in e-commerce payments. Growth has been recorded; it was completely unimaginable a few decades ago. Since the closure of shops is mandatory due to the lockdown, digital transactions are being preferred by shopkeepers and consumers. As a symbol of globalization and in many ways its deceptive feature, e-commerce represents a cutting-edge breakthrough in this digital age.

For the past few days, e-commerce i.e. electronic commerce is in the headlines. Due to this, while the draft of the national e-commerce policy was in the news, on the other hand, online shopping company Flipkart was acquired by American company Walmart. On one hand, where the craze of online shopping is increasing in the country, on the other hand, consumers are also suffering due to this. In view of these problems of the people, the government has decided to bring a national e-commerce policy to take effective steps on this. For this, the government has constituted a task force, which has prepared a draft on e-commerce policy and submitted it to the government. Many suggestions have been given in this draft, which if the government accepts, then the way of online shopping will change completely. These include issues such as the process of giving discounts, the availability of new products, and how to get complaints redressed in a simple manner.

The global coronavirus (COVID-19) pandemic has created a challenging business environment across the nation. E-commerce businesses are being presented with many new challenges. People are requested to stay in their respective homes. The global coronavirus has forced consumer behavior to change. They cannot perform their normal routine in isolation or under lockdown. Retailers, primarily, are ordered to close their shops for security reasons. This global pandemic has also had a massive impact on e-commerce. How is the changing trend of e-commerce in the Corona era? What is the impact of Corona on e-commerce? What is the impact of Corona on the purchasing behavior of customers? This research topic has been chosen to find answers to these questions.

**Keywords:** Coronavirus, E-Commerce, Consumer Demand, Purchasing Behavior



**Cybercrime in Corona Era****Dr. Satish V. Tewani**

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**ABSTRACT**

Cybercrime is on the rise during the COVID-19 pandemic and there has been a 600 percent increase in malicious emails. The economy has become increasingly digital. More data is being shared online. The more transactions are being done on the Internet; the newer forms of data are being shared. The possibility has also been raised that the data is spread across various (often personal) devices and unsecured home networks. For this also safe planning is needed. The availability of reliable equipment in India, especially before government procurement, is also beginning to be verified amid threats of cyber breaches from China. The United Nations had cautioned about the increase in cybercrime in the Corona epidemic. Cybercrime has also increased rapidly due to the increase in online transactions during the Corona period. In the last six months, it had increased almost two-fold. With the increase in online transactions during the Corona period, the cases of cybercrime have also started increasing. Cybercriminals are taking advantage of people's fear about Corona. Cyber-attacks have increased in the midst of the Covid crisis and many vulnerabilities have been exposed. Cyber security experts caution that there are many ways through which the phone can be easily hacked. In the midst of the Covid-19 crisis, cyber-attacks have increased and many vulnerabilities have been exposed and many solutions have also come to the fore. This research paper has been written to understand the various concepts related to cybercrime, to understand the changing trend of cybercrime in the Corona pandemic, to know the current status of cybercrime, and to find ways to prevent cybercrime.

**Keywords:** Cybercrime, Cyber-attacks, Corona epidemic, Cyber security**Data Collection Method Used for Research:**

Data for the research paper has been collected from books, newspapers, magazines, reports, and websites.

**The Objective of Research:**

The main objectives of the research presented are as follows.

- 1) To understand the various concepts related to cybercrime
- 2) To understand the changing trend of cybercrime in the Corona pandemic
- 3) To know the current status of cybercrime
- 4) To suggest ways to prevent cybercrime on the basis of research findings.

**Introduction**

The coronavirus crisis is driving the world towards more technological innovation and online collaboration. There have also been worrying reports of (cyber) attacks against health organizations and medical research centers around the world. Most of the cases of financial fraud are there. A study by Delhi Police has found that 59 percent of the cases of financial fraud were registered. At the same time, 24 percent of fraud took place through social media. The rest of the fraud happened in other ways. Based on the data, more than 123 cyber fraud cases were being reported every day in the month of August itself, this trend continues in September as well.

The boom in attacks by phishing sites is part of a significant increase in cybercrime in recent months. Cybercriminals are busy trying to take advantage of the situation created by the global pandemic Covid-19. Many countries have given due attention to



## EFFECT OF RISING INFLATION ON INDIAN ECONOMY

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### ABSTRACT

*Inflation is the biggest problem in developing and populous countries. In which consumption is high and yield is low. Inflation arises due to many reasons. Like more population, less yield, less availability of land for produce, hoarding, etc. Due to which the demand for commodity increases and its price increases when its quantity decreases. Different countries of the world have different methods to measure the inflation rate. If we talk about India, then here the inflation rate is determined with the help of the Wholesale Price Index. Changes in this index are considered to be indicators of changes in inflation. But for some time, many other countries including India have been using the producer price index to measure the inflation rate. Inflation has more effect on poor people because their income is not enough to meet their needs. Due to which many other social problems like looting, theft, black marketing, adulteration, corruption start to arise due to which society and nation get corrupted. A useful national policy is needed to reduce inflation. In India, many laws have been made for the proper distribution of the consumption of necessities. Food Supplies Departments have been set up for the supply of food grains in every place. Ration shops have been opened at various places. If the system of distribution of food grains is proper then inflation can be stopped but it does not happen. In such a situation, it is important to know that what is the effect of rising inflation on India? How inflation poses a challenge to India's development? What are the reasons for rising inflation in India? The research topic has been selected to find answers to the above questions.*

**KEYWORDS:** *Inflation, Producer Price Index, Populous Countries, Indian Economy, Price Hike.*

### Introduction

Inflation has become a problem, which is increasing day by day not only in one country but in many countries. Today, the problem of inflation, taking a formidable form, is becoming a very painful problem for the people of the poor and low families. There are many reasons for inflation in India, the main reason being population explosion, population growth, and lack of consumer goods. Today, in a country like India, the population is increasing continuously. On the other hand, if the salary and dearness allowance of the employee's increases, then the budget of the government becomes in deficit. Inflation is an economic phenomenon that keeps happening in any country, whether the country is rich, progressive, or poor, inflation is seen everywhere. But it is also true that inflation rises slowly. Many such countries are facing the problem of inflation. Because here the price increase is getting quadrupled day by day, due to which the people of the middle and low families have become so afflicted that it has become very difficult for them to survive. The prices of pulses, rice, sugar is touching the sky, due to which people are not able to meet their family's problems and their needs.

Many types of side effects of rising inflation arise in front of our society, which have to be faced by the people of the upper class as well as the people of the middle class and lower class. Due to inflation, problems like unrest in the society, theft, robbing of banks, increase in crime are increasing continuously. Anti-social activities like adulteration, hoarding, smuggling, etc. are increasing day by day. In this way, the increasing steps of inflation are also increasing the danger for the democracy of our country and it seems as if the rule of our country is falling into the hands of autocratic people and our freedom is getting erased. The biggest impact of inflation on society is on the poor and middle-class people. Because their income is so much that it becomes difficult to live in an inflationary environment. Whereas poor people get upset only for two times' bread. Children do not attend good schools, they do not get good nutrition, and they suffer from many diseases and starve to death. For which inflation is solely responsible.

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## **CORPORATE AND NGO PARTNERSHIP FOR SUCCESSFUL SOCIAL RESPONSIBILITY PROGRAMME IN INDIA**

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**Abstract:**

*The concept of CSR has been associated with the principles of sustainable economic development, which require that decisions based not only on the financial aspects of an organization are taken, but also on the immediate and long-term social and environmental impacts of their activities. Accordingly, emphasizing that CSR was incorporated within the Corporate Governance of CPCL, its vision is to create value for the stakeholders and which in turn is to actively fulfill its mission i.e., social commitments including environment and safety. It is only under CSR that crores of rupees came into the government vault, with which the government is fighting against Corona. In such a situation it is necessary to know what is CSR i.e., Corporate Social Responsibility? What has been the contribution of Corporate Social Responsibility (CSR) in the development of India? How is the corporate and NGO partnership for a successful social responsibility program in India? The topic of research has been chosen to find the answers to the above questions.*

**Keywords:**

*Corporate Social Responsibility, Corporate Governance, Corporate and NGO partnership, Business Enterprise*

**Data Collection Method Used for Research:**

Data for the research paper has collected from books, newspapers, magazines, reports, and websites.

**The Objective of Research:**

- 1) To find out how is the corporate and NGO partnership for a successful social responsibility program in India.
- 2) To know what is CSR i.e., Corporate Social Responsibility.
- 3) To know what has been the contribution of Corporate Social Responsibility (CSR) in the development of India.

**Introduction:**

Every business enterprise must take responsibility and be accountable for the social and environmental impacts surrounding it. From this emerged the concept of Corporate Social Responsibility (CSR), creating a way for

businesses to return profits to society. Such initiatives taken by a company to improve the livelihood of the people and to protect the environment are also very successful in winning the adoption of the local communities. The term "CSR" or "Corporate Social Responsibility" came into common use in the late 1960s and early 1970s after the formation of stakeholders of several multinational corporations. A 1984 book by Strategic Management expert R Edward Freeman explicitly mentions CSR which states that companies should voluntarily conduct business in an economically, socially and environmentally responsible manner and Corporate Social Responsibility (CSR). Refers to business practices that involve initiatives that benefit society. Schehe examined a range of different disciplinary methods for defining CSR. Reviewed definitions include an economic definition of "sacrifice of profits", a management definition of "beyond compliance", institutional views of CSR as a "socio-political movement", and the law's own focus on the duties of directors. Furthermore, Sheehy treats Archie Carroll's description of CSR as a pyramid of responsibilities, that is, economic, legal, moral, and philanthropic responsibilities. Corporate social responsibility is defined by Shiehy as "international private business self-regulation".

CSR has been an integral part of Indian culture since ancient times. The concept of CSR is also seen in Mauryan history. Along with this philosopher like Kautilya laid emphasis on ethical practices and principles while doing business. Even in ancient times, CSR was practiced informally in the form of charity for the poor and downtrodden. Indian scriptures also mention that with the deprived section of the society, the earning class used to share their earnings. In India, religion has also played a major role in promoting the concept of responsibility of businesses and citizens towards society, animals, and disadvantaged sections. The concept of trusteeship provided by Mahatma Gandhi inculcated CSR in the DNA of the Indian business leaders of the time. India is the first country in the world to make CSR mandatory. The law of CSR in India has been fully implemented from 1<sup>st</sup> April 2014. This law

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**ABSTRACT**

Electronic business nowadays has become a home affair for each one among us. From merely being a marketing platform to one-touch buying and selling, the E-Commerce market in India has undergone remarkable growth. The target of this paper is to spot and examine the factors likely for the E-Commerce boom in India and to recommend strategies to accelerate the expansion of the E-Commerce industry. We observe new innovations in E-Commerce and supply evidence on how the Indian E-Commerce sector is positioned for exponential growth. Through the literature survey, we identify the emerging markets, trends, and new innovations in E-Commerce thanks to COVID – 19 on the industry. From this analysis, it had been found that the main target so far has only been on the demand side of the E-Commerce sector - to get the demand. With great success therein direction, we identify the necessity to shift specialize in interventions/support to the availability side of the world. Today, as major corporations continuously rethink their businesses in terms of the web, specifically its availability, wide reach

**Keywords:** E – Business, Digital India, Future of Commerce, Post – Pandemic commerce, COVID – 19

**Introduction**

Electronic commerce or E-Commerce is a term which can be used for any kind of business or commercial transaction that includes sharing information across the internet. Commerce creates the exchange of goods and services between businesses, groups and individuals and can be seen as one of the essential activities of any business. Electronic commerce focuses on the use of Information Communication Technology to enable the external activities and relationships of the business with individuals, groups and other businesses or e business refers to business with help of internet i.e. doing business with the help of internet network. The term "E-Commerce" was invented by IBM's marketing and Internet team in 1996.

**Objectives of the Study**

This is a review paper which aims to study the innovations in E – Commerce in India. Looking at the past growth is important, as it would help us formulate the strategy for the future.

- To identify and examine the factors responsible for the E-Commerce growth in India
- To examine the emerging trends in the E – Business industry of India
- To briefly study the innovations take place in e business due to COVID - 19
- To recommend strategies to accelerate the growth of E – commerce industry

**Methodology**

The methodology is use in this research paper is descriptive.

Existing literature on E – Commerce sector of India were salvaged through secondary research. The saved literature was analyzed to identify emerging trends. This knowledge used to recommend the future strategies to accelerate the growth of the industry.





# REVIEW OF RESEARCH

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## THE STUDY OF THE ROLE OF 'MAKE IN INDIA' IN THE DEVELOPMENT OF INDIA'S MANUFACTURING SECTOR

**Dr. Mahendra L. Vanjari**  
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### ABSTRACT:

After the introduction of economic liberalization, the country's economy took the path of progress and the industrial revolution came in the private sector. Multinational companies started investing in India and soon India was counted among the largest markets in the world. Today the Indian economy is growing optimistically with strong growth in the country and signs of improvement in the overall outlook of business and investment. With the help of new efforts and initiatives of the government, there has been a lot of improvement in the construction sector. To promote and promote manufacturing, the present government launched the 'Make in India' program on 25 September 2014 to transform India into a global hub of significant investment and manufacturing, infrastructure, and innovation.



After the announcement of the Make in India program by the Government of India, construction in many areas of the country has now started in India itself. Large companies from all sectors including defense, technology, electronics, automobiles have invested huge amounts in India in the last three years. According to the number of customers, India was a big market even earlier, but now India is also strengthening its role in the field of construction. This research paper has been written to find answers to the questions that what is the policy of the Government to promote industrial activities and to make India a manufacturing hub; How 'Make in India' campaign is beneficial for boosting the manufacturing sector in the country, what is the progress made so far concerning the 'Make in India' campaign; What are the other steps taken by the government to make India a manufacturing hub.

**KEYWORDS:** Make in India, Manufacturing Sector, Industrial Revolution, Foreign Direct Investment.

### DATA COLLECTION METHOD USED FOR RESEARCH:

This research depends on secondary data like newspapers, books, magazines, reports, and websites.

## 7. The Study of Role of Indian Government Policies in Rural Development

Dr. Mahendra L. Vanjari

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### Abstract

India is a country of villages and the socio-economic condition of almost half of those villages is very weak. Since independence, concerted efforts have been made to improve the standard of living of the rural people, hence poverty alleviation has been the paramount concern in all the five-year plans. The main emphasis in the rural development program has been on bread, clothes, houses, electricity, water, roads, education, and health.

India's rural development programs include the provision of basic amenities like schools, health facilities, roads, drinking water, electrification, etc. in rural areas, improving agricultural productivity in rural areas, provision of social services like health and education for socio-economic development. To implement schemes for the promotion of rural industries by increasing agricultural productivity, providing rural employment, and providing productive resources through loans and subsidies to individual families and Self-Help Groups (SHGs) living below the poverty line. Subjects like doing etc. This research paper has been written to find answers to the questions that what is the Role of Indian Government Policies in Rural Development, what is the policy of the government for rural development, what is the importance of Rural Development for the development of the country, and what are the various schemes implemented by the Indian government for Rural Development.

**Keywords:** Rural Development, Poverty Alleviation, Socio-Economic Status, Standard of Living, Rural Community

### Data Collection Method Used for Research

This research depends on secondary data like newspapers, books, magazines, reports, and websites.

### The Objective of Research

1. To study the Role of Indian Government Policies in Rural Development
2. To know the importance of Rural Development for the development of the country
3. To study the various schemes implemented by the Indian government for Rural Development.

**Role of E-Commerce in Changing Business Scenario in India in Covid-19****Dr. Amit S Nanwani**Assistant Professor, Department of Commerce  
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Email: amitsnanwani@yahoo.com**ABSTRACT**

In the year 2020 the foremost human disaster the Covid-19 pandemic has created tremendous shock to the Indian economy. The unpredicted countrywide lockdown in India was the major in the world and the four phases of frequent countrywide lockdown spanning above two months have a noteworthy impact on the various important sectors of India economy. As it forced 1.3 billion Indians to stay indoors. The global spread of the Coronavirus pandemic has severely disturbed how people purchase goods and services and how they distinguish E-Commerce. The Indian Internet economy, which was perhaps the most alluring market around the world, saw a 90% decrease in April 2020, disabled by the closures. This decline was due to vertical fall in E-Commerce business and travel, as these are the major sectors in the internet ecosystem. While E-Commerce has substantiated itself vital after the outburst of this dangerous virus, as there are still many sectors which are making a various attempt to handle and survive in this situation. In spite of a vertical fall in gross merchandise value (GMV) in the early months of the lockdown, India's Internet economy is probably going to be a net recipient in longer run, driven by multi-overlay expansion in digital collaboration and adoption of online / digital platform. This Covid-19 pandemic has constrained the customers to shift from shops, stores, shopping malls and supermarkets to online gateways for the buying of goods, going from basic necessity goods to exclusive goods. E-commerce has transformed the way of business done in India. This study aims to study the role of E-Commerce in changing business scenario in India in covid-19. The study also attempts to analysis the future prospects of E-Commerce business in India due to Covid-19. The entire research study and findings are based on the objectives.

**Keywords:** Covid-19, E-Commerce / Digital Commerce, Business Scenario, future prospects.

**Introduction**

The Covid-19 pandemic has affected severely to the various important sectors of India economy. The unpredicted countrywide lockdown in India was the major in the world and the four phases of frequent countrywide lockdown spanning above two months have a noteworthy impact on the various important sectors of India economy. As it forced 1.3 billion Indians to stay indoors. The global spread of the Coronavirus pandemic has severely disturbed how people purchase goods and services and how they distinguish e-commerce.

As Covid-19 pandemic continues, the effect on the E-Commerce business keeps on fluctuating relying on the industry. While E-Commerce has substantiated itself vital after the outburst of this dangerous virus, as there are still many sectors which are making a various attempt to handle and survive in this situation. However, it is difficult to anticipate the full effect of Covid-19 on E-Commerce business and online expansion rates, it will rely on the position and the span of future social distancing. The consistent lockdown rules & regulations across India and the rising hesitancy among customers to go outdoor and shop for essential goods have diverted the nation towards e-commerce. This Covid-19 pandemic has constrained the customers to shift from shops, stores, shopping malls and supermarkets to online gateways for the buying of goods, going from basic necessity goods to exclusive goods. The Covid-19 pandemic has brought around a drastically shift in shopping behaviors with progressively more customers and bu



## THE NATIONAL EDUCATION POLICY (NEP) 2020: DURING & POST COVID-19 SCENARIO

Dr. Amit S Nanwani\*

### ABSTRACT

At the time of submission of the Draft of National Education Policy in the year 2019, no one could have predicted the current disastrous state of the educational system in India created by the Covid-19 pandemic. The four stages of continual countrywide lockdown led to closure of all the schools, colleges, tutorials and other education institutions with immediate effect. The Covid-19 pandemic has affected severely to the traditional education system and it has been very alarming. As both students and educators may not be ready for this single accessible option, countries all over the world have no choice but to turn to go online. Online classrooms have replaced the traditional teaching methods within a very short span of time. The pandemic has left society with little time to design a systematic strategy for meeting education demands. During this period, outbreaks appear to be exacerbated and the developing country like India has miraculously responded by adopting an update to its education policy. The vision of National Education Policy (NEP) 2020 is to restructure and transmute the Indian education system. National Education Policy (NEP) 2020 has already included provisions for the use of digital pedagogy, which has become a necessity in a very short period of time. This Policy suggests the major efforts in light of the rise of digital technologies and the growing relevance of utilizing technology for teaching and learning at all levels, from school to higher education. The revival of the education system on the basis of new education policy would seek prudent deliberation by taking into consideration the present hurdles being faced during COVID era. The main aim of this paper is to assess the worth of the New Education Policy in during and Post Covid-19 scenario in India. The entire research study and findings are based on the objectives.

**Keywords:** NEP, Covid-19, Digital Platform, e-Learning, Pedagogy.

### Introduction

In 2015, a committee led by Cabinet Secretary T. S. R. Subramanian was created to frame the new National Education Policy. And the committee presented the report to the Ministry of Human Resources and Development (MHRD), which was made available to the public as a draft in 2019. At the time of submission of the Draft of New Education Policy (NEP) in the year 2019, no one could have predicted the current disastrous state of the educational system in India created by the Covid-19 pandemic. The four stages of continual countrywide lockdown led to closure of all the schools, colleges, tutorials and other education institutions with immediate effect. The Covid-19 pandemic has affected severely to the traditional education system and it has been very alarming. As both students and educators may not be ready for this single accessible option, countries all over the world have no choice but to turn to go online. Online classrooms have replaced the traditional teaching methods within a very short span of time. The pandemic has left society with little time to design a systematic strategy for meeting education demands.

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**Digital Commerce – A Promising Future Ahead in India****Dr. Richa Kalyani**

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**ABSTRACT**

Two waves of COVID-19 pandemic have deeply shaken the world and the fears of next wave have been rampant. The Government is continually appealing to follow COVID- appropriate behaviour and avoid crowding to prevent the third wave, whereas the needs and necessities bounds to contact outside frequently. Under such circumstances, Digital Commerce promises contact-less or atleast minimal contact transactions as a preventive measure to contain the spread of this deadly virus. The present paper is an illustrative paper to analyse the growth of digital commerce in India before and during COVID-19 time sessions. It also attempts to analyse its impending progress in near unexpected future where the society doesn't have any idea when this pandemic is going to end. In such situation, inclination towards digital mode is quite certain, especially when the requisite technology is easily available all over with the constant support of the Government itself. Consequently, the pandemic has shifted the spending habit paradigm from physical traditional market to electronic platform. No doubt, digitization will grow more rapidly in near future with promising progression for digital commerce.

**Keywords:** Digital Commerce, COVID pandemic, e-commerce, progress, Government initiatives**Introduction**

Proven as the most dreadful state of affair, COVID-19 pandemic has deeply shaken all over the world. It is when appalling sufferings has crossed almost 18 months, the world is still unaware how long different variants of this pandemic is going to show its malevolence face. Gradually people are bound to adopt a very changed lifestyle, different than the one they might have imagined. However, it is quite inspiring that the people are acting optimist to find new avenues to deal with the present situation.

COVID pandemic has taught the community to adopt divergent safe ways to live their life. It is during two horrifying waves of the pandemic, almost all the Governments has imposed strict restrictions for the public not to go out unless and until it is very necessary. Even in some areas, it is still not advisable to go physically out to buy any goods or services. However, considering the fact that one cannot avoid to buy goods and services for a longer period, the already available best possible resolution of adopting digital commerce has risen instantaneously.

Digital commerce enables the buying and selling of goods and services through digital channels like Internet, mobile networks and other electronic infrastructure. it has resulted in tremendous transformation in customers' behaviours and expectations as well affecting B2C and B2B also. Digital commerce surrounds predominantly by consumer and product information, online channels, analytics and order management. Digital commerce infact is not a new concept for the world. Amazon, Flipkart, Snapdeal, Shopclues, Alibaba and many others have already become very popular names in the world of e-commerce. Digital commerce has provided an emerging and fast growing way of conducting business in contactless manner through use of electronic devices like computers, laptops, smart phones etc. The World Trade Organisation (WTO) defines e-commerce as the production, distribution, marketing, sale or delivery of goods and services by electronic means. Though it has emerged years ago, its wings are still waiting to take high soars. Various modes of digital commerce have been waiting so long to be adopted whole heartedly by the Indians. It cannot



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**Dr. Richa Kalyani**

**Ph.D., M. Phil, MBA, M. Com, SET, Asstt. Professor, DRB Sindhu College, Nagpur.**

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**INSIGHTS: CONTRIBUTION OVERVIEW OF COMMERCE IN BOOSTING ECONOMY****Dr. Richa Kalyani**

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**Abstract**

Commerce is a journey which goods and services undertake to travel from its source manufacturers to ultimate consumers. Transition of traditional form of commerce into e-commerce has seen a long cultivating expedition, contributing significantly for the growth and development of civilization. Trade and commerce can be seen directly attributable to any country's economic development, India being no exception. It has been playing crucial role in maintaining the economy since years and has been tested recently during on-going pandemic also. The performance may better be appraised through economic health pointers as well as key indicators of trade & commerce. The present paper being analytical in nature attempts to conduct insights overview of contribution being made by Commerce in fulfilling the economic dreams of the country. It strives to analyse the concept in its practical implication to observe the adaptability of latest technologies and applications to lead other economies with a trustworthy approach. Various transitions in medium of exchange and forms of commerce as consequent influence of various game changer events like global financial crises, shocks of demonetisation, dreadful pandemic waves, Government policy frameworks, powerful market forces, strategies of giant players are expected to be proven as involving factors. The paper insights transitional change in commerce and its various features and evaluate its contribution in strengthening economy by analysing significant economic health pointers and key indicators of trade & commerce.

**Keywords:** Trade & commerce, e-commerce, influencing factors, economy, indicators.

Commerce is a journey which goods and services undertake to travel from its source manufacturers to consumers. The process covers all the activities which facilitate this exchange for consideration till its final consumption through one or more of its aspects. Transition of traditional form of commerce into e-commerce has seen a long cultivating expedition, contributing significantly for the growth and development of civilization. Such transformations exist as a root cause for the society to fulfil basic commercial needs necessitate it to move ahead smoothly and conveniently. At an instant, the growth of any country may be directly correlated with its economic growth and so far as its achievement is concerned, it can invariably be achieved by positive contributions made by its allied sectors. Economic growth of any country can be determined by analysing increase in the market value of goods and services produced by an economy over given time period. To determine it, the GDP is compared to total manpower of the country, also termed as the per capita income. GDP at purchaser's prices can be arrived by adding gross value of all resident producers to any product taxes and by deducting any subsidies not included in the value of the products. In India, the tertiary service sector makes up 50% of GDP giving helping hand to primary agricultural and secondary industrial sector. The nominal per capita of the country is considered over 60 times lower than the richest country and approx eight times greater than the world's poorest country. Figures of India's GDP growth rate provides steady rise from 2011 to 2016 but steady fall since 2016 with noteworthy -7.96 % in 2020. Trade and commerce can be seen directly attributable to any country's economic development, India being no exception. In real sense, commerce encompasses trade, its role in nation building should be reviewed in the light of dynamical social expectations as it is understood that modernism lies in fulfilling the current demands and future expectations. It is quite certain to observe exuberant transformations in civilization and its involving factors due to ever changing demands of the society, which sculpts role of trade & commerce to gratify livelihood in us, humans.

**Commerce: Transitional change & influencing factors**

Development in Commerce must owe gratitude towards Poseidon, Luca Pacioli, Michael Aldrich, John Biggins, Vaitheeswaran and many such contributors since yesteryears. It is infact its long-long journey

## RISING TRENDS OF E-EDUCATION: BENEFITS AND CHALLENGES

(WITH SPECIAL REFERENCE TO COVID-19 PANDEMIC PERIOD)

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***Abstract:** This paper attempts to investigate about the rising trends of e-Education, as a forced solution to the current crisis of the COVID-19 pandemic to rely on it for education. With a view to curtail the vicious spread of the deadly corona virus in the city, government resorted to imposition of strict rules for lock downs of schools and colleges. As a result of such proactive measures, all the educational institutions have adopted e-education as a tool for teaching. E-education refers to network enabled system of delivery of education and the transfer of skills and knowledge to a large number of students at the same time. This includes adoption of various electronic teaching methods either through a computer or a smartphone where the teaching material is accessed by use of the internet. Apart from the internet, CDs, DVDs, television and other similar tools can also be used for E-teaching. In spite of its wide accessibility, e-education has encountered a number of challenges in its effective implementation. So, through this paper attempt has been made to reveal both the benefits as well as the challenges faced in e-education.*

***Keywords:** E-education, Covid-19, Teaching, Benefits, Challenges.*

### Introduction:

Since its outbreak in 2019, Covid -19 pandemic has ruined almost all the crucial sectors of our economy. On February 11, 2020, the World Health Organisation (WHO) declared an official name of the virus as COVID-19, an acronym for Corona virus disease 2019. It was first identified in Wuhan, China on December 31, 2019. It compelled the entire human society to self- quarantine themselves at home and main social distancing. In order to control the spread of the deadly corona virus, government of India had to impose strict lockdowns. Education sector not being an exception, has been hit hard and significantly disrupted. This disruption has shaken the country's economic future. Schools, colleges and universities all over India were forced shut down. Millions of students and teachers have been greatly affected as they were forced to stay back at home and slowly adopt the trends of e-education. According to the United Nations Educational, Scientific and Cultural Organisation (UNESCO), over 800-million learners from around the world have been affected. Another report of UNESCO has revealed that, about 14 crores of primary and 13







## Mobile Apps: Accelerating the digitization of business procedures in India

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### ABSTRACT

Today is the time of technology. With the advent of android phones in November 2007, the face of mobile phones has transformed totally. Users today can experience all the functionalities of a computer in pocket sized small devices known as Smartphones which come along with their associated mobile software applications or "apps" that are gaining a tremendous importance in a common man's life. People have now started using smartphones in an ever-increasing manner. As a matter of fact, there are number of android applications being developed and released in play store now and then. Following the current trend, it is advisable that every business should have a mobile app reflecting its business activities as customer today is more inclined towards smartphones rather than using desktop. This is because of its 24/7 accessibility that a customer today prefers shopping on their mobile phones than walking into stores. This will in turn help the business organisation to increase the sales graph as well. To help prevent a business from being left behind, it must keep pace with the current trends of digitization. So, this paper attempts to reveal the benefits of mobile apps to both business as well as customers.

**Keywords:** Mobile phones, Mobile Apps, Smartphones, Android Applications, Business opportunities.

### Introduction:

In the current scenario, the extensive widespread of mobile phones and their varied applications with numerous cellular networks has brought about a huge economic, political and cultural revolution. A mobile application, which is also referred to as an app, is a type of application software designed to run on a mobile device, which can be a smartphone or a tablet computer. Mobile applications cater to provide its users with the services to those accessed on PCs. Apps are generally small and individual software units with a limited function. The use of such application (app) software was originally popularized by Apple Inc. and its App Store, which offers thousands of applications for the new android phones.

Due to such revolution, mobile is a tremendous and rapidly growing industry that is attracting business houses from every market sphere. The exploding popularity of smartphones and tablets has made mobile application development an increasingly popular trend among business owners all over the world. This has proved to be a global trend now as it is a fast-developing segment of the global information and Communication Technology catering small scale as well as large scale business houses. Such procedure of digitalizing an organization provides a competitive advantage by performing activities better, faster, and cheaper. In the words of Gartner defines **digitization** as "*the process of changing from analogue to digital form.*"

Using various creative digital solutions provides a competitive edge to the business world and a proper digitalization plan can help reinvent processes, improve quality, attract customers and promote consistency.

### Literature Review-

Anshu Agarwal and Dr. Pravin H. Bhatwal in their paper "M. Commerce in India: Promise and Problems" (2015) revealed that although people have started using e-commerce, still they reflect hesitation to use m-commerce (mobile commerce) due to security issues,





## BOONS AND BANES OF BLENDED LEARNING

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### ABSTRACT

*Commending the rapid growth of technology and its consistent development has now spread its wings in our daily lives. Be it shopping for groceries, travel, office or education, technology holds a significant position in the modern world. The purpose of this research is to analyse the advantages and challenges put upon by modern learning system called blended learning. It refers to a mixture of teaching and learning strategies that can be used to optimise learning experiences of students and teachings practises of teacher. Throughout the years, new methods and strategies have been introduced in teaching which started from basic smart boards and now it has become way normal to attend a complete online class in the comfort of your own house. In this paper, the advantages of having blended education with technology will be identified along with the challenges faced by educators, instructors and students due to change of learning strategies with the introduction of new technology.*

*Keywords: Modern learning system, blended learning, teaching strategies, online education, educational transformation*

### INTRODUCTION

In past years, there has been an extreme revolution in the field of education. Considering the consistent up gradation of technology, it is now part of every aspect of life and even the domain of education is no longer disaffected from it. It started with the use of computers for teaching and now it has become a major tool for any type of learning. The concept was to use technologies to help teachers make it easier for their students to learn more effectively with the help of visual and auditory aids. This combination of teacher and technology was together referred to as blended learning. This gives it students the ability to work in their best learning modality, at their own pace in interact with peers to maximize learning. Hybrid blended

**DR. BHAVNA U. CHOUDHARY**

**PARUL KAUSHIK**

1P a g e

## The Contribution of Sports Ethics to the Development of Sports

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### Abstract:

*In today's time, in addition to physical strength, sports have become a vehicle for mental development and international relations. In this situation, the importance of sportsmanship has also increased. Many states have started giving industry status to sports; in this situation the code of conduct has become very necessary for sports. Sports ethics is a combination of two words - sports and ethics. Ethics is a branch of philosophy and play can be accepted as a human activity for the all-around development of the individual. Sports ethics in this situation refers to the positive concept that determines the behavior of individuals during play.*

*In sports ethics, players perform the game by rising above the evils of race, religion, society. Thus, sport helps in physical and mental development. Sports, which are a means of all-around development of the person, giving acceptance to the immoral activities that take place there is an insult to sports and sportsmanship. Sports ethics plays an important role in the development of sports. When in a game everyone gets equal opportunities without discrimination, the outcome decisions are taken fairly, and if the winner, as well as the loser, is encouraged, then naturally people's attitude towards that game is the interest grows, which first becomes the vehicle for the development of sport-culture in that particular sport and progressively in its entirety. How is the Contribution of Sports Ethics to the Development of Sports? What is the impact of Sports Ethics on players? What is the importance of Sports Ethics in game? This research topic has been chosen to find answers to these questions.*

**Keywords:** Sports Ethics, Development of Sports,

### Data Collection Method Used For Research:

Data for the research paper has collected from newspapers, books, and websites.

### Objective of Research:

- To find out the importance of Sports Ethics in- game.
- To study how is the Contribution of Sports Ethics to the Development of Sports
- Understanding what is the impact of Sports Ethics on players
- Suggesting remedies for Development of Sports.

### Introduction :

Most of the Olympic Games are invented in India. Positive moral qualities bring the sport into the ordinary life of ordinary citizens. In addition to physical improvement and health promotion of the body, many professionals bring to life the moral values of athletes. People use the principles of sports ethics on a daily basis without even noticing it. Morality teaches to

## The Contribution of Physical Education and Sports in the Development of Children with Special Needs

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**Abstract:** Sports is an important medium of informal learning for children. The sports process provides maximum information in a minimum time. Sports are intrinsic to the development of children. This happens regularly in children. The sports method gives the child a medium in which the child adjusts and adapts to his environment. The sports method prompts creativity and esoteric thinking in children. The sports method helps in the development of desired game, social, linguistic, and cognitive behaviors of children. Additionally, prevents inappropriate behaviors. Children with mental disabilities are often unable or uninterested in continuing to participate in sports. They need to be taught to play. They need to be taught in a carefully organized and directly stimulating environment. They seek hints, instruction, encouragement, and reinforcement in play. For them, the basic requirement of sports is adequate means, space, variation, and balance between sports activities. Many programs have been run by the government to recognize helpless children. Some of which are as follows- Corrective physical education, physical therapy, corrective medicine, remedial physical education, developmental physical education, individual physical education, etc. Transformed physical education is a sub-discipline of physical education. Modified physical education is taught through physical fitness, game fitness, basic gaming skills and various swimming skills, dance skills, individual and group play. It is an individual program in which the students are developed. What is the role of physical education in the development of children with special needs? What is the role of sports in the development of children with special needs? What is the importance of sports for children with special needs? This topic of research has been chosen to find answers to these questions.

**Keywords:** Physical Education, Children with Special Needs, Sports, Disability

### Introduction:

Disability cannot hinder the development of children in today's environment. The government is organizing various programs for children with disabilities. By taking advantage of this, children can develop themselves. Disability is not a curse. Children with disabilities can get ahead of normal people if they get a chance. Parents of handicapped children should not consider handicapped children as a burden. It is easiest to introduce the child to physical education through games. The ability to walk properly, run quickly, jump easily and walk boldly is taught in the classroom with the help of physical exercises and outdoor games. The game puts the child in a state where his mind works vividly, energetically, emotions are tense, actions are organized. Sports is one of the best means of educating the personality of a child. Generally, six areas are crucial for the identification of children with special needs. These are vision, hearing, mobility, communication, socio-emotional relationships, intelligence. Apart from this, economically disadvantaged children are also special because due to poverty they are deprived of many experiences of life. They cannot go to school because they have to start work from childhood so that they can increase

the income of the family. Girls are often detained at home so that they can take care of younger siblings (children) and do household chores. A child or person who experiences difficulty in one or more of these areas is called a specific child person. Difficulty in any one of the above areas can create hurdles for the person and the person needs extra effort to deal with this inability.

Physical education refers to those processes which are helpful in the physical development of human beings and proper performance of functions. In the present era, the subjects of physical education, exercise, sports, entertainment, etc. come under the program of physical education. Along with this, personal health and public health also have a place in this. The principles of anatomy and physiology, psychology, and social science are taken maximum advantage of determining the programs. The purpose of physical education in the individual is to develop strength and increase the nervous-nerve skills and awaken the feeling of collectivity in the collective form. It is called physical education. The importance of physical education in any society depends on its anti-war tendencies, religious ideologies, economic conditions, and ideals. In ancient times, the

## 15. Digital Resources and Automation of Academic Library: An Overview

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### Abstract

The paper deals with growing demand for the Digital resources by user. It discuss about Digital Resources and its impact on present library system, operation of library system and automation of library. All types of library user looking for new technologies and use of e-resources due to its capability for cost saving in operation and easy management of collection. Many library resources are accessible electronically and can be access via internet.

**Keywords:** E-resources, Academic Library, Library Automation.

### Introduction

The library environment has change due to development of Information and communication technology all over the world. Internet is the biggest gift of 21st century. The impact of ICT the education pattern and teaching and learning process are changing from traditional to digital mode. By advent of information and communication technology library professional gives batter services to his users. Collection development is important aspect in the library profession which depends on changing needs of user. In a new scenario documents are stored in digital forms, publication, communication system and technological revaluation in the library and information science. Now a day in modern library there are printed books and Journals as well as electronic resources (E-Resources) both types of documents are stored, retrieve and delivered when required by user. That's why role of librarian also changing in this scenario. The library should have good resources for teaching staff and research students and all user of the library. For excellence of the Library service in automated library continuous training of library professional and staff is the major activity using machine readable resources. When the library user visit library to find resources for their class assignments and project which they have to submit within the time limit. It is the responsibility of the librarian to make required information available to the user within limited time period. This activity is only possible when the librarian acquires, store, locates and disseminates the information by automation of the library. The activity includes database searching for the relevant information based on users need to user e-mail or through the internet shared folder.



## **An Overview on E-Books**

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**Abstract:** With the Changes and Development in information Technological Techniques, it is Necessarily impacted the Library Material in to E-Library Material. Here, we *Discuss about e-books and e-book reader and growth and advantages of e-books in academic library.*

**Keywords:** E-books, E-books reader, expenses of them

The printing technology was invented in the 15<sup>th</sup> century. The printed book is the gift to human. The story started from the Chinese dynasty. The invention of printing is a remarkable achievement of Buddhists in East Asia. Korea takes the prime. The world's earliest known printed document is a sutra printed on a single sheet of paper in Korea in 750. The name of Gutenberg first seems, in connection with printing, in a law case in Strasbourg in 1439. He is being used by two of his business partners. Witnesses, asked about Gutenberg's stock, designate a press and a supply of metal type'. Since the time goes the quality of printed book has been rise. As the technology uses the other form of the printed documents, complimented the printed book which includes journals, periodical, patents, standards etc. The human race has been constantly enduring forever, convenient media for the communication of information. The e-books is the latest result of these constant efforts.

The electronic storage media has revolutionized the information storage and dissemination of information concept in terms of search capability, storage space, transfer of information and more important cost. The use of electronic media for storage and dissemination of information initially started with e-publishing and slowly moving to e-journals, e-periodical and now e-books. The format of e-book is further extended to text-book, reference book, fiction reading etc. So the very long existence of printed book and the convenient features offered by e-book has created a critical situation which the library has to manage. The paper discusses the overview of e-book, particularly in the context of academic libraries.

### **What is an e-book?**

The term e-Book has several definitions, but in many cases, it is an electronic version of a previously published and printed book. An e-book also known as a digital book is an e-text forms the digital media equivalent of a conventional printed books. Usually, readers can download one using one of several free programs or purchase a CD or DVD copy to be downloaded. The book can then be read on computer screen, a laptop, eBook readers, or smartphones. Some computers offer programs to make the experience more like reading a book, and they feature the ability to "turn pages," as one would with a regular book. Some internet-sides like pdfdrive.net gives free pdf format books. Some libraries, particularly college libraries, offer free access to numerous texts, but in general, contemporary popular novels or popular works of non-fiction need to be purchased. This type of book is also not necessarily in the public domain. A person may gain access to reading them, but must still use citation methods if quoting them, or may need to ask the author if the book can be cited or reproduced. Initially the printed books were digitized to make them available in the electronic format. Then new books were published simultaneously in print as well as electronic format. Now some books are published only in electronic format. The number of e-books has been growing steadily. Some publisher published their book in both formats. The directory of e-publisher shows that the number of e-books publishers is also constantly increasing. To read e-book conveniently an e-book reader is required.

## सोशल मीडिया आणि ग्रंथालय: एक सहजीवन

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### प्रस्तावना

चालू शतकातील संगणकावर आधारित साधनाचा संग्रह हे एक व्यासपीठ बनलेले आहे. यावर लोकस्वतःच्या आवडी-निवडी, क्रियाकलाप, वैयक्तिक बाबी सामायिक करणाऱ्या सहकारी सोबत ते संबंध निर्माण करू शकतात. ते त्यांची माहिती वेगवेगळ्या स्वरूपात म्हणजेच फोटो, संभाषण, व्हिडिओ, यांची एकमेकांना देवाण-घेवाण करतात. जगात सध्या 200 हून अधिक सोशल नेटवर्किंग साईट उपलब्ध आहेत. सोशल मीडियाच्या लोकप्रियतेमुळे, ग्रंथालयाला भेट देण्यास ग्रंथालय वापरकर्ते फारसे उत्सुक नसतात. सदर कारणामुळे भारतातील ग्रंथालय आणि विदेशातील ग्रंथालय सोशल मीडियाचा मोठ्या प्रमाणात वापर करतात. ज्यामुळे ग्रंथालयाचे वापर करते ग्रंथालयाकडे आकर्षित होतील. ग्रंथालय युजर्सना आकर्षित करण्याकरता ग्रंथालयाच्या वेबसाईटचा सोशल मीडियाद्वारे सुविधा देण्याच्या प्रयत्न करतात. ग्रंथालयाच्या सेवा वा त्यांचे कार्य वापरकर्त्या पर्यंत पोहोचविण्याचे अतिरिक्त काम सोशल मीडिया द्वारे केले जाते. सोशल मीडिया वरून फेरफटका मारल्यास असे आढळून आले की, फेसबुक, ट्विटर, व्हाट्सअप यांचे अब्जावधी (User) ग्राहक जगात आहे. विकिपीडियावर अब्जावधी पुस्तके आहेत. या सर्व सोशल मीडियाच्या ग्रंथपाल ग्रंथालयाच्या सामग्री निर्मितीसाठी उपयोग करू शकतो. अशाप्रकारे ग्रंथालय आणि वापरकर्ते यांच्यातील सहयोगात्मक संबंध निर्माण करण्याकरता सोशल मीडियाचा ग्रंथालय वापर करू शकतो. जगातील काही ग्रंथालये सोशल मीडियाचा मार्केटिंगच्या उद्देशाने वापर करतात.

**बीजशब्द:** Digital Libraries, Social media, Face book, Twitter, YouTube.

### सोशल मीडिया वापराची उद्दिष्टे

- ग्रंथालयांमध्ये सोशल मीडियाच्या वापराबाबत जाणून घेणे.
- विविध सोशल मीडिया बाबत जाणून घेणे.
- सोशल मीडियावरील धोके आणि आव्हाने यांच्या बदल माहिती घेणे.
- सोशल मीडिया वापराचे फायदे आणि हेतू जाणून घेणे.
- ग्रंथालयांमध्ये कशाप्रकारे सोशल मीडियाचा वापर करावा याबद्दल माहिती करून घेणे.

### सोशल मीडिया ची वैशिष्ट्ये

- वेबचा वापर करते (Library User) सरळ (direct) ब्राउझर वरून कोणतेही अप्लिकेशन ओपन करू शकते यासह सोशल मीडिया प्लॅटफॉर्म वरून त्यांच्या इच्छेनुसार डेटा निर्यातित करू शकतात.
- वापरकर्त्यांच्या क्षणात लक्षात येई अशाप्रकारे सोशल मीडियाच्या प्लॅटफॉर्मवर माहितीची उपलब्धता केलेली असते.
- सोशल मीडिया चे प्लॅटफॉर्म वापरण्यास सोपे आणि सुटसुटीत असते. त्याच्या वापर करण्यास कोणतेही प्रशिक्षण घेण्याची आवश्यकता नसते.

### ग्रंथालयांमध्ये सोशल मीडिया वापरण्याचे फायदे

- ग्रंथालयातील वापरकर्त्यांना ग्रंथालयाकडे आकर्षित करण्याकरता एक व्यासपीठ म्हणून सोशल मीडियाचा चांगल्या प्रकारे उपयोग करता येतो.
- ग्रंथालयातील संसाधने आणि सेवांच्या विपणनासाठी योग्य ठरते.
- नवीन ग्रंथालयीन सदस्यांना आकर्षित करण्याकरता व संभाव्य वापरकारणाते तयार करण्याकरता सोशल मीडियाचा उपयोग होतो.

## ग्रंथालय व्यावसायिक आणि भविष्यातील ग्रंथपाल

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### सारांश

सध्याच्या माहितीच्या युगात ग्रंथालय संस्थांच्या विकासात ग्रंथपालाच्या आव्हानात्मक भूमिचे वर्णन या शोधनिबंधात केलेले आहे. नवीन तंत्रज्ञानाच्या आगमनामुळे अचूक माहिती शोधण्याकरिता ग्रंथपालाची ची पारंपरिक भूमिका कशाप्रकारे बदललेली आहे याचे वर्णन या शोधनिबंधात केलेले आहे. माहितीच्या स्पॉट (Information Explosion) नुसार माहितीच्या गरजेतील गुंतागुंत आणि माहितीची वाढलेली किंमत, त्याचा दर्जा याच्यावर ही चर्चा करण्यात आलेली आहे. ग्रंथालयातील संसाधनाचा जास्तीत जास्त वापर कशाप्रकारे करता येईल व अचूक माहिती कशी सादर करता येईल, याबद्दल शोधनिबंधात चर्चा करण्यात आलेली आहे. सोबतच आधी ग्रंथपालाला येणाऱ्या समस्या वर प्रकाश टाकण्यात आलेला आहे. शेवटी योग्य माहिती योग्य वाचका पर्यंत पोहचविण्या करिता आवश्यक असलेल्या ग्रंथपालांच्या गुणांची चर्चा या शोधनिबंधात करण्यात आलेली आहे.

**बीजशब्द:** Digital Libraries, Social media, Information Communication technology, Networking Technology, Library Proffection, Electronic Media

### प्रस्तावना

प्राचीन काळी ग्रंथालय हे ज्ञानाचे भांडार मानले जाते होते आणि ग्रंथपाल आजकाल ग्रंथालयातील ज्ञानरूपी कागदपत्रे जतन करण्याचा मुख्य कल होता. पण सध्याच्या माहिती ज्या युगात संगणक क्रांती मुळे संप्रेषण (Communication) आणि नेटवर्किंग तंत्रज्ञान (Networking Technology) भौगोलिकसीमा समोर मोठी आव्हाने निर्माण झालेली आहे. माहिती युगातील या क्रांतीमुळे ग्रंथपाल प्रोफेशन (Library Proffection) हे जतन करण्याच्या उद्देशातून; सर्वांना माहिती पुरवणे या उद्देशाकरिता उपयोगात आणले जाते. ग्रंथपालांना नवीन होणार्या बदलाकडे त्यांनी लक्ष केंद्रित केले पाहिजे.

- ग्रंथालयाच्या वाचकांच्या माहितीच्या गरजांमध्ये होणार बदल.
- कागद-पत्र यांच्या स्वरूपावरून ई-मीडिया (Electronic Medial) यामध्ये माहितीचे संकलन.
- माहितीच्या स्फोटामुळे (Information Explosion) माहिती ची किंमत आणि प्रमाण वाढणे.

वरील विवेचनावरून असे लक्षात येते की ग्रंथपाल कृतिशील आणि आधुनिक भूमिका बजावू शकणारा आणि येणारी नवीन आव्हाने स्वीकारली पाहिजे. ग्रंथपालांनी देण्यात येणारी या सेवांमध्ये स्कॅन करणे, filter करणे, माहितीचा शोध लावणे, अर्थ लावणे, विश्लेषण करणे आणि आणि स्पेसिफिक माहिती स्पेसिफिक युजरला विविध स्तोत्रा कडून जमा करून वितरित करण्याचे आव्हान स्वीकारण्यास हवे.

### संस्था व ग्रंथालय

ठराविक उद्दिष्ट साध्य करण्याकरिता मानवी प्रयत्नाचे एकत्रीकरण करण्यासाठी संस्था मुख्यत्वेकरून अस्तित्वात आलेल्या आहे. ग्रंथालय ही सुद्धा एक प्रकारची संस्था आहे. ग्रंथालय देखील विशेष उद्देशाकरिता स्थापन करण्यात आलेली आहे. ग्रंथालय संस्थेचे ज्ञानाचे संचय करणे, ते पुढील पिढीसाठी संक्रमित, करणे मानवी ज्ञानाचा प्रभावी वापर करणे, माहितीच्या मुक्तप्रवाह निर्माण करणे याकरता मुख्यत्वेकरून होतो. ज्याप्रमाणे इतर संस्था स्थापन करण्याकरिता मुख्य उद्देश असतो, त्याच प्रमाणे ग्रंथालयाची स्थापना करण्याकरता काही उद्दिष्टे समाविष्ट करावे लागेल. ज्याच्यामुळे विशिष्ट सेवा देण्याकरिता संकलन, अनुक्रमणिका विकास आणि विशिष्ट क्षेत्रांना विशेष सेवा देणे, ग्रंथालयातील माहिती वाचकांपर्यंत पोहचविणे हीसुद्धा महत्त्वाचे





## Feminist Reading in Amulya Malladi's *A Breath In Fresh Air*

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### ABSTRACT

Whenever any movement takes place in a particular age, all those who live in that age come under its influence consciously or unconsciously, directly or indirectly. This is truer in the case of creative writers and artists who are said to be the product of that particular age. Literature is the reflection of life and creative writers, in most of the cases faithfully portray what is going on around them and incorporate them in their art as it is perceived by them. Amulya Malladi, a prolific novelist is no exception to this. Her novels portray the women characters that stand the demand of feminism and quest for identity. This paper attempts to apply the feminist yardstick to the character of Anjali in her maiden novel, *A Breath In Fresh Air*.

Key words: survival, catastrophic, feminism, revolutionary, rebellion

Though the seeds of the feminism were sown long back in western countries its roots reached India when the country was struggling from the clutches of slavery of Great Britain. India was raising its voice for Liberty from political rule of Britishers as well as fighting the patriarchal norms of the existing society of pre independent India. Literature was a medium of expression for aspirant female writers to pour their hearts into words. Many feminist writers like Tarabai Shinde, Pandita Ramabai, Sarojini Naidu, Savitribai Phule, Jasodha Bagchi, Malati Bedekar and others ruled the literary World of pre independent India trying to shatter the existing social order.

This legacy was carried forward by many other female writers after independence. Kamala Markandaya, Nayantara Shagal, Anita Desai, Kamala Das, Kiran Desai, Shashi Deshpande, Arunditi Roy, Githa Hariharan, Namita Gokhale, Manju Kapur and many other vernacular feminist writers of India have carved out a niche for themselves even at international fronts. Through

their writings they have symbolized that women and their issues all across the globe are identical irrespective of its geographical boundaries. Amulya Malladi is yet another Indian woman author who writes with feminist frame of mind.

Amulya Malladi was born in 1974 in a small town Sagar in Madhya Pradesh. She is an engineer from Osmania University, Hyderabad but as she was more interested in writing she joined journalism for a master's degree from the University of Memphis, Tennessee. Her experience as a journalist gave her a great boost as a writer. Her experience with the real world and real people has helped a lot to create her characters based on real life. She has 7 famous novels to her credit namely *A Breath In Fresh Air* (2002), *The Mango Season* (2003), *Serving Crazy With Curry* (2004), *Song of the Cuckoo Bird* (2005), *The Sound of Languages* (2007), *A House for Happy Mothers* (2016) and *The Copenhagen Affair* (2017).

Her novels pivot on themes like domestic conflicts, generation gap and the changing position

**NAAC Accreditation Process and Ground Realities in Higher Education Institutions****Dr. Leena B. Chandnani**

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**Abstract**

*In India National Assessment and Accreditation Council is the part of global movement for the promotion of quality in higher education. In the new century an essential requirement for envisaging India's future is to recognize the quality educational parameters which determine national development. Quality in education is basically a value addition process. In education, a mere good curriculum is no guarantee of an educational program. Similarly a high caliber teacher is no assurance for quality enhancement. All factors taken together like curriculum, teaching learning, research and consultancy leadership and learning resources and innovative practices together constitute total quality. Keeping this in mind NAAC has given seven different criterions to be fulfilled by every higher education institute of India. Though all these criterions are made by an institute, there is predicament and perplexity faced by the stakeholders throughout the process of submission of AQAR, SSR and even at the time of Peer Team visit. This paper is an attempt to explore the ground realities faced by educational institutions during the entire conduct, procedure and operation of higher education.*

**Key Words:** NAAC, Higher Education

**Introduction**

The National Assessment and Accreditation Council has come a long way since its inception in the year September 1994. Established as an autonomous institution under the UGC, today the NAAC has been able to earn the status and momentum of quality consciousness amongst higher educational institutions leading to continuous institutional improvement.

The Internet is flooded with hundreds of articles on NAAC. An article on Wikipedia says, 'NAAC accreditation identifies the quality of the institute in terms of its education, research, faculty, infrastructure, etc., as well as giving students' confidence that they are selecting a quality institution. It gives an institute instant credibility and increases its admissions. (<https://blog.marwadiuniversity.ac.in/ccblog/significance-of-naac/>)' NAAC's agenda of total quality viewpoint has made a profound effect on the institutional perception of quality. The past decade has witnessed colleges and universities adopting innovative methodology hence the quality assurance mechanism has become an integral part of the educational system. Quality sustenance and quality enhancement are the two keywords reverberating in most institutions of higher learning in the country today. NAAC is the lighthouse that helps the higher educational institutions function smoothly and work soundly.

**Aim of Education**

The standard of any society can be judged and assessed from the standard and quality of education that is imparted to that society. It is true that the society using its accumulated experience and taking into consideration its present and future needs creates an educational pattern to be followed to educate the members of that particular society. Education in its broader sense implies bringing about desirable positive changes in an individual in such a manner as to meet the growing needs of the society and to achieve all round progress and make the members 'culturally educated'. True education would be that which helps sustainable development of that particular society in the changing world. When we speak of a person 'culturally educated' it means we have to imbibe such cultural, national, moral, social and legal values on him that in the course of time his education acquires meaning in the social, national and global context and in the ultimate analysis of the human race. '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.'

<https://www.yourarticlelibrary.com/education/4-major-objectives-of-higher-education-in-india/45182>

Educational institutions play a very significant role in molding the character of pupils. 'Education in general and higher education, in particular, is the subject of a great deal of study. Higher education in a society. It is the quality of higher education that decides the quality of human

## **Dreams of India's Sustainability in the Roots of Past**

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### **Abstract**

The excavations and path breaking discoveries by historians and archaeologists have unveiled many wonderful theories and stories of the rich ancient Indian civilizations, sciences, traditions, cultures and heritage making Indian people of this contemporary era spellbound by its glorious past. Today as citizens of India we feel pride to be a part of this country. India's saga is the tale of its birth, its growth, its advancement through many ups and downs, rise and fall of many civilizations, establishment of Hindu religion and Vedic culture, foundation of many religions like Buddhism, Jainism, Sikhism, Parsi Islam and Christianity, attack of invaders, struggle for freedom and liberty from Britishers and then walking in the contemporary world and establishing itself in the digital era of ultra modern sciences. This paper is an attempt to explore various facets of India's rich cultural and traditional heritage of ancient times that has paved way to dream about self-reliant country in this digital era.

**Key Words:** Spellbound, Civilization, Magnificent, Patrimony, Classical, Development

### **Introduction**

Mark Twain and eminent writer from America has said

'India is the cradle of human race

The birthplace of human speech

The mother of history

The grandmother of legend

And the great grandmother of tradition

Our most valuable and most attractive materials

The history of men are treasured up in India only'

India is the symbol of one of the oldest and richest civilizations that dates back to 2500 BCE when a highly developed civilization, the Indus valley civilization flourished. From here starts India's fascinating journey of rising to prosperity, establishing itself firmly in the deep roots and then growing magnificently and dynamically into a vast geographical empire stretching from Himalayas in the north, Sindhu valley in the west, Bay of Bengal in the East and Indian Ocean in the south. As expressed by authors on Wikipedia, 'India is one of the oldest civilizations in the world with a kaleidoscopic variety and rich cultural heritage. It has achieved all round socio-economic progress since Independence. As the seventh largest country in the world, India stands apart from the rest of Asia, marked off as it is by mountains and the sea, which give the country a distinct geographical entity. Bounded by the great Himalayas in the north, it stretches southwards and at the Tropic of Cancer, tapers off into the Indian Ocean between the Bay of Bengal on the east and the Arabian sea on the west.'

India has always been glorified in the words of many poets, sages and saints and felt in spirits by Indian people who have existed on this pious soil at various eras and in diverse civilizations. Keith Bellows, Editor-in-chief, National Geographic Society shares his views about India saying, 'There are some parts of the world that, once visited, get into your heart and won't go. For me, India is such a place. When I first visited, I was stunned by the richness of the land, by its lush beauty and exotic architecture, by its ability to overload the senses with the pure, concentrated intensity of office colours, smells, tastes and sounds. It was as if all my life I had been seeing the world in black and white and, when brought face-to-face with India, experienced everything re-rendered in brilliant technicolor.'

### **Begining of the Indian Civilization**

India's rich heritage dates back to 2500 BCE when the highly developed civilization Indus Valley Civilization or Harappan civilization flourished. Just like the other civilizations of Egypt and Mesopotamia, which grew on river banks, the cradle of the Indus valley civilization was nestled on the

## Kamala Das: Embodiment of Self Identity

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### Abstract

One of the reasons that Indian women in such a large number have taken up their pen is because it has allowed them to create their own world. It has allowed them to set the conditions of existence free from the direct interference of men. Many women have taken to writing poetry because they can explore a wide range of experiences of the world and can search their inner self. Therefore, poetry written by women has occupied such a significant place in Indian literature. One most important Indian women poet who has ruled the literary field for decades is Kamala Das. The present paper is an attempt to explore various facets of the poetry of Kamala Das a poet.

**Keywords:** femininity, confessional, patriarchal, masculine, loneliness, autobiographical

Kamala Das is a confessional poet. Frank in attitude, bold in expression and controversial in life and literature Kamala Das represents a unique phenomenon in Indian literature. As a poet Kamala Das earns for herself a very good status among the women poets of the 20th century. She wrote poetry as only a woman can write. She celebrated femininity in all its forms. Her celebration of a woman's body has not been taken kindly by the conservative circles yet she has succeeded in breaking down the existing social power structures and has created a place for herself in the world of masculine hierarchies. She has dared to alter the age-old existing marginalised position of females and has made the patriarchal world accept the rightful role and position of women as a significant part of the society. Her poetry is personal in nature, autobiographical in expression, subjective in style and introspective in diction. Kamala Das's poetry is characterized by extreme sincerity and integrity. She speaks out of her love longings, frustration and disillusionment with a disarming frankness. It seems that she writes for therapeutic purposes. Her writings reflect the restlessness as a sensitive woman moving in the male dominated society and in them, she appears as a champion of women's cause. Simone de Beauvoir in *The Second Sex* wrote, 'Women do not set themselves as a subject and hence have erected to virile myth in which their projects are reflected; they had no religion or poetry of their own: they still dream through the dreams of men'. Kamala Das's

life and poetic work demystify the myth of the female and generate a new role for the women in society.

Kamala Das who still looms large over the poetic horizon of not only India but all across the globe hails from the southern part of India, the Malabar coast in Kerala. She was born on 31st March 1934 to Nayar father and Nalapat mother. She received her education for the most part at home. As her autobiography tells us Kamala Das whose maiden name was Madhavikutty first attended a European school in Calcutta, then the elementary school at Punnayurkulam and then a boarding School run by Roman Catholic nuns. Here she got ill and was removed to Calcutta where private tutors were engaged to teach her fine arts. At the age of 15, Kamala was married to Mr. Das, an official in the Reserve Bank of India, Bombay where her life became miserable in the company of her nonchalant, lustful husband. Her husband had no soothing words for her, no time to spare for her and was ever busy sorting out his files and affixing his signature on them. As a traditional wife, Kamala was expected to discharge her domestic duties well and to look to the needs and comforts of her husband. This eroded her own distinct personality and dwarfed her forever, as she makes clear in the poem...

..... You called me wife  
I was taught to break saccharine into your tea  
To offer at the right moment the vitamins.

Covering beneath your monstrous ego I ate the magic clove  
and became a dwarf. I lost my will and reason, to all your  
questions I mumbled incoherent replies.

(The Old Playhouse)

But this iconic woman poet continued to live with her  
husband and looked after her three sons.

Kamala Das is a self-conscious poet and does not pretend ignorance about the unique position as a feminist mouthpiece. Thematic concerns in her poetry range from the sad plight of women in society, the harrowing situations or feminine experiences to a longing for freedom of the inner self through experiencing consummate love in interpersonal relationships. She culminates her poetic

## Green Literature Ambassadors of Paganism

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### ABSTRACT

Very well felt and expressed by the ambassadors of paganism, namely William Wordsworth, P.B. Shelly, John Keats, Alfred Lord Tennyson, Emily Dickinson, Robert Frost, Tagore, Kalidas and many other pagans that nature is full of life. For them nature was divine and an abode of peace and happiness. These pagans had experienced the spiritual power of nature. They had tasted the sip of beautiful life and the magnificent world to the fullest. Finding solace in the lap of Mother Earth, they had acquainted themselves with the existence of the universe and its sanctity manifested into divinity. The present paper is an attempt to explore the scheme that evolved in the minds of these poets who found comfort in the cradle rocked by Mother Earth. Embraced by Mother Nature they felt the power of paganism.

**KEY WORDS:** PAGANISM HARMONIOUS DIVINITY PHILOSOPHY DISCOURSE

### INTRODUCTION

Paganism is the philosophy that teaches us to feel the presence of the divine power in all the elements of nature. History has witnessed an era where Science and Technology had started invading and conquering the globe. The two groups of people theist and atheist emerged on the worldly platform and debated about the existence of Almighty and nature. Science and technology were marching ahead blowing the trumpet of their inventions and boasting about their discoveries. The ever running globe was interrogated for its mere existence. On one hand nature with its everlasting gleaming beauty symbolised evidences to show its time abound presence and on other side science had proof to show its advancement and evolution. This battle of nature's history and science's validity had shattered the sentimental souls of poets like Jean Jacques Rousseau, William Wordsworth, John Keats, P B Shelley, Robert Frost, Alfred Tennyson and many more sentimental men of verses.

The analysis of the poetry written during Romantic period reveals mostly the love and admiration of the poets not only for reputed scientists like Newton, Franklin and

Priestley but also for the fields of knowledge such as astronomy and geometry. But it is interesting to note that in this age heart was more dominant than the head. Science exercised a positive impact on almost all the major representative poets. It was observed that while the new classical poet James Thomson explained rainbow in the Newtonian terms, the romantic poet P B Shelley used the objects of nature to explain this celestial wonder. With the storm of French Revolution all across the globe, paganism stepped into the lives of thousands of people when the pagans began to explore the wonderful wonders of nature.

Divinity, naturalism, spiritualism and meditative notes started becoming significant and their relevancy was felt by the representatives of nature. An article on Wikipedia explains, "In Philosophy naturalism is the idea of belief that only natural laws and forces operate in the universe. Adherents of naturalism assert that natural laws are the only rules that govern the structure and behaviour of the natural world and that the changing universe is at every stage of product of these laws."(www.christianity.com). The poetry of nature pagans is a step towards spreading paganism on this earth with a blend of manifestation of naturalism and embodiment in the universal sphere.

**Jean Jacques Rousseau:** Pioneer of Nature Poetry "Man is born free and he is everywhere in chains", the worldly famous lines are quoted by Jean Jacques Rousseau who is the pioneer pagan to initiate the movement of paganism. Jean Jacques Rousseau was born on 28 June 1712 in Geneva to a clockmaker. He was a philosopher, writer

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## KULBHUSHAN KUSHAL'S CONCERN FOR DECAYING HUMANITY

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### ABSTRACT

*Kulbhushan Kushal is a well known poet and has been writing for the last three decades. His first collection of poems 'Shrinking Horizons' was published in 1989. The second one was 'Rainbow on Rocks' in 2005, 'World Full of Echoes' in 2006 and 'Songs of Silence' in (2008). If we study these volumes, we find a poet who is profoundly philosophical, deeply sensitive and genuinely concerned about the worsening condition of human life with deteriorating human values and spiritual barrenness emerging through his collections. He brings out all his concerns for decaying humanity through images and metaphors. This paper is an attempt to explore various images and metaphors of Kulbhushan Kushal's poetry which manifests his concern for decaying humanity.*

**KEYWORDS:** *Sensitive, Anarchy, Hopelessness, Materialism & Superficial*

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### INTRODUCTION

Kulbhushan Kushal brings out his innermost concerns for humanity which he feels is going through a very inhuman phase and non-human attitude. The poet perceives that humanity is visionlessly going ahead without knowing where to go just like a boat left on the vast surface of the ocean having no clear idea of the direction.

Kulbhushan Kushal has captivating and alluring imagination. He is a keen and silent observer of his surroundings and very skillfully uses imagery and metaphors to express his mind and heart. His extensive knowledge and erudition of nature and society earns him the status of a sensitive poet par excellence. Supriya Bhandari, in her article 'Images and Metaphors in the poetry of Kulbhushan Kushal' says, 'Kulbhushan Kushal's poetry is an illusive enigma of a man who has drunk deep the philosophies of life. His four volumes present before the mind's eye the images which include auditory, tactile, olfactory, gustatory, kinesthetic and visual qualities. Images are the soul of poetry. They represent descriptive things, actions and abstract ideas. Images sharpen the perception and the reader undergoes the same blissful experience like as poet i.e. the ability to enjoy beyond the precincts of the concrete world'.

(<https://www.boloji.com/poem-articles/32/images-metaphors>)

### Depleting Values

Kulbhushan Kushal's poem 'Raw Deals' is full of his concern for the depleting values in human life. He says,

'The big battles and the wars  
are a quest for anarchy  
while passion for raw deals



## Mixed Sensibilities of Diasporic Writer as Reflected in Select Novels of Bapsi Sidwa

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### Abstract

Bapsi Sidhwa is a renowned diasporic writer born and brought up in Pakistan, spent years in India and later found her true home in America. All her works bring out the struggles women in the orthodox patriarchal systems they live in. Sidhwa writes about the challenges faced by women of different communities like Hindu, Muslim and Parsi as reflected in her novels *Ice-candy Man*, *Water*, *The Pakistani Bride* and *An American Brat*. Her Pakistani roots, Indian influence and American style of living shaped her sensibilities as a writer. The present paper is an attempt to study the impact of the mixed sensibilities of the writer on her works. The treatment and delineation of the women characters in the above mentioned novels prove that Sidhwa could project the plight of women of various communities because of her mixed origin and upbringing.

Key words: patriarchal, self-realization, idealism, alienation, ostracize

Bapsi Sidhwa is a diasporic writer, Pakistani-American in nationality and Parsi in descent. She was born in a Parsi-Zoroastrian family in Karachi. As mentioned in Wikipedia, later her family moved to Lahore, Punjab Province. She was two when she got infected with polio and nine at the time of Partition in 1947. She later shifted to Bombay after marriage when she was 19 years old but the marriage failed and she landed to her maternal place Lahore after 5 years. She remarried in Lahore and later shifted to United States with her family. Currently, she lives in Houston (Wikipedia). Her Pakistani roots and American living changed her outlook as a writer. She calls herself Punjabi-Pakistani-American as she is comfortable in Punjabi, Urdu, Gujarati and English. She is the perfect example of a diasporic writer who has lived in extreme corners of the world. As Dr Farzana Ali points out in the Preface of her book *Diaspora in Fiction*, "The diaspora writers interweave the Indian and the global that marks the emergence of cultural mix at a mass level in the

times impacted by globalization and unprecedented growth in the field of technology and communication. Their writings show how the developments in one part of the world have immediate and wider impact in different parts of the world. Their fictional works become more significant for giving expression to cross-cultural encounter from a different perspective (Preface)."

The mixed sensibilities of the diasporic writer Sidhwa are reflected in her versatile writings. Four of her novels *Ice-candy Man*, *Water*, *The Pakistani Bride* and *An American Brat* portray the hardships of women caught in difficult situations, in different countries, in different social setups. Sidhwa's mixed Pakistani-Indian-American origin influence has writings especially the lead characters. She is equally proficient in narrating the tale of a victimised Hindu Ayah who is subjected to inhuman and horrendous tortures during Partition violence in the novel *Ice-candy Man*; in *Water* the story of an aggrieved Indian widow Kalyani, a victim of circumstances; Zaitoon

## The Use of Code-Switching in the English Translation of Amrita Pritam's Pinjar

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### Abstract

Translation enables a work to reach out to the masses in a multitudinous manner. Indian writing in translation boasts of a bountiful of literary works. Amrita Pritam's Punjabi novel Pinjar won great accolades when it was translated into English by renowned writer Khushwant Singh. The humongous reception of the translated novel proved that translations could be well-appreciated if the target population felt a connection with the source text. Using stylistic devices like code-switching and borrowing, Singh presented the epic Punjabi tale in a flamboyant manner to the global readers. The poignant story of a Hindu abducted girl Puroo and the guilt-stricken Muslim abductor Rasluda brought tears to the eyes of the readers because of the cultural connection felt by all. The use of Punjabi words, tags and phrases highlighted the Punjabi cultural intricacies. This paper is an attempt to analyse the English translation of the Punjabi novel Pinjar through translation studies, and to understand the linguistic and stylistic technique of code-switching used in the novel.

**Keywords:** Code-switching, re-representation, stylistic, code-mixing, sentential

Indian English writers have tried their level best to depict India truthfully in the English literature. Some of these writers have resorted to translation of mammoth works from regional languages into English so as to present local, popular and path-breaking novels to the global readers. Writers like Chaman Nahal, R K Narayan, Khushwant Singh, Manju Kapur, Attia Hosain, Manohar Malgaonkar, Amitav Ghosh have depicted India with all her varied hues through their works. Those who wrote in local languages could not get a wide reach for the novels, so they began to look out for translators who could give new wings to the novels and short stories. Khushwant Singh was one such prolific short story writer, novelist, columnist as well as translator. He translated Amrita Pritam's Punjabi novel Pinjar into English keeping the title same. The word 'pinjar' means skeleton. Singh did not want to disturb the rustic charm of the Punjabi novel and he succeeded in his endeavour by integrating many Hindi-Punjabi words into the translated version. He used the device of code-switching to achieve this purpose. Code-switching is moving effortlessly between two languages

within a single conversation. This can be done by a person who speaks both the languages well, the source language (SL) and the target language (TL). According to Ana Celia Zentella in her book Growing up Bilingual, nowadays "an informal mixture of languages such as Spanglish, Taglish, or Hinglish" is seen in routine use (Zentella 1997)."

Code switching is a stylistic device first used by Nigerian novelists to aid in better comprehension of Nigerian literature. Later it was used worldwide by novelists and translators to make the readers understand the social and cultural nuances of the place which was included in the setting.

Elin Asklov in the article "Code switching the Weird and Wonderful Side of Bilingual Communication" studied the need for code-switching and elaborated that in order to express their feelings like anger, shock, frustration we resort to use of words from our mother tongue. She adds that "it's natural to be bilingual especially if we are proficient in both (www.babel.com)".

E.M Hult studied the finer aspects of code-switching and pointed out that the rationale for code-switching can vary according to the need of the situation. He commented, "It can be used to clarify certain concepts, to quote someone, to express gratitude, to show solidarity with the group, to strengthen an argument, to say something in secret, to just fit in, to explain the true meaning, to achieve the desired target (Hult 63)". Peter Auer concluded from his study that code-switching can help the analyst to create social situations, as mentioned in the book Bilingual Conversation (Auer 1984).

Translation studies is an emerging branch of English literature and is growing in popularity. Renowned translators in India are Nirupama Dutta, Devika N. Kalyan Raman, Aruni Kashyap, Jerry Pinto. Famous writers and translators have translated numerous works from various languages like Bhisham Sahni (Tamas), Sunil Gangopadhyay, Nonabi Mitra (The Fakir), T.S Pillai, Anita Nair (Chemmeen), Sachin Kundalkar, Jerry Pinto (Cobalt Blue) according to wikipedia. Mark Polizzotti mentions: "A good translation offers not a reproduction





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## INDIAN SOCIETY: A BLEND OF LANGUAGE, LITERATURE AND CULTURE

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### ABSTRACT

*Language and literature change as per the needs of any society. The language that is used in a particular society will get more and more developed with the social and cultural progress of that society. Similarly, its literature will abundantly grow and enhance. The more developed a society is, it will need more words, more phrases, more developed sentence patterns and more new words necessary to run the society. This will create a benchmark for the cultural progress of any society or tribe or region initiating and igniting the development and advancement of any nation. The purpose of this paper is to explore some of the aspects that help us to measure the social and cultural progress of Indian society by studying its language and literature.*

**Keywords:** Phenomenon, Paradigmatic Revolution, Flexible, Combination

### Introduction

In whatever way a society may change, it will certainly bring about a change in culture reflecting the overall behavior and attitude of people. Language and literature together combine to form such kinds of arts that use words as a medium to reflect social and cultural life and express the writer as well as the poet's thoughts and feelings. It is believed that what first appeared among people was oral literature. Language accommodated many words and framed them to produce literature. Hence new words and terms were introduced in Indian society and many cultural aspects were introduced.

Language, literature, culture and society are closely related to one another. It is the society that creates culture. At the same time, it is the society that creates language and literature and moulds them or reforms them to comfortably meet the needs of that particular culture. Language and literature are social and cultural phenomena and therefore we find socio-culturally modified versions of languages. Every language along with literature gets evolved and enriched with time throughout thousands of years. Thus the language and literature

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## Translation Studies: Bengali Flavour Intact in English Translation of Tagore's Chokher Bali

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Translations can be tedious as it is quite a challenge to retain the originality in the translated version. Translation studies provide ample scope for a large cross-cultural impact. Various works of Rabindranath Tagore in Bengali have been translated into English resulting in global reach and recognition. One of his colossal works Chokher Bali has been translated in English by writer Sukhendu Ray. Through multiple characters Mahendra, Ashalata, Binodini and Rajlakshmi, the writer gives a glimpse of Bengali culture without disturbing the original flavour of the novel. The use of Bengali words in the English version adds a regional charm. This paper aims to study the finer nuances of translation for greater effect. Ray succeeds in highlighting the Bengali culture by incorporating Tagore's thoughts and language. The glossary of Bengali words at the end aids in ease of understanding for the readers and retains the simplicity of the novel.

MULTICULTURAL, SANCTITY, CODE-SWITCHING, SCANDALOUS, EXHILARATION.

English literature has been enriched by numerous translations from other languages. India, a country having diverse cultures stands united by the multicultural confluence that impacts the nation. The popularity of the translated novels and short stories of Rabindranath Tagore, Munshi Premchand, Sarat Chandra Chattopadhyaya, Amrita Pritam and many other writers justify that the national and international readers are attracted to the soul-stirring regional stories. Rabindranath Tagore, an eminent figure in the creative world, became renowned worldwide when his Bengali poems, short stories, dramas and novels were translated in English.

**Tagore Great Writer And Poet:** Rabindranath Tagore (1877- 1941) wrote innumerable stories, songs, dramas which were later translated into many languages. According to the List of Works by Rabindranath Tagore mentioned in Wikipedia, some of his Bengali short stories like Bhikarini (The Beggar Girl), Ghat Katha (The Ghat's

Story), Byabodhan (The Rift) Khata (Exercise-Book), Ginni (The Housewife), Khokhababur Pratyabartan (Return of the Little Master), Postmaster (The Postmaster), Dena-Paonna (Profit and Loss), Kabuliwallah (Kabuliwala) and many other were translated in English (web). His novels Bou Thakuranir Haat (The Young Queen's Market), Ghare Baire (The Home and the World), Rajarshi (The Royal Sage), Chokher Bali (A Grain of Sand), Gora (Fair-faced), Chaturanga (Chaturanga) could be appreciated by the non-Bengali speaking book-lovers because of the English translations. Also his collections of poems Kabi-Kahani, Bana-Phul, Sandhya Sangeet, Thakurer Padabali, Karo O Komal, Manasi, Sonar Tari, Chitra, Chaitali, Kanika, Kalpana, Naivedya, Chayanika, Gitanjali, Utsarga, Balaka, Lekhon, Mahua, Banabani, Shes Saptak, Shyamali, Prantik, Akashdip, Rogshojyay, Shesh Lekha could be relished by poet lovers all over the world because they got translated in English.

Rabindranath Tagore composed a collection of poems Gitanjali in 1910 which was translated in English in 1913. He received the Nobel Prize for it. In one of the translated versions of Gitanjali by Raghukul Tilak published in 2011, Tilak commented in the Preface to the First Edition- "It was with the publication of his English Gitanjali in 1913 that Tagore shot into International fame, and all at once came to be recognised as a great world poet. Since then numerous fresh editions of The Gitanjali have been published and Tagore's song offering has been

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वर्तमान समय में स्त्री विमर्श या स्त्री अध्ययन अत्यंत चर्चा का विषय है। स्त्रियों की समस्याओं को स्त्रियों द्वारा साहित्य की अनेक विधाओं, कविता, कहानी, उपन्यास, आत्मकथा के माध्यम से देखा परखा जा रहा है। वर्तमान में स्त्री काव्य लेखन द्वारा स्त्री विमर्श व स्त्री मुक्ति पर दृष्टि डालते हैं, तो हमारा ध्यान बीसवीं सदी के दशक पर जाता है। बीसवीं सदी से इस दिशा में व्यापक बदलाव की लहरे दिखने लगी है। आज स्त्री समानता और स्त्री अधिकारों की बात स्त्री लेखन में हो रही है। स्त्रियों अपने अधिकारों के प्रति जागृत हुई हैं। पश्चिम से पूरब तक व्यवस्थित आंदोलन चल रहे हैं। एन.जी.ओ. द्वारा स्त्रियों को शिक्षित, प्रशिक्षित किया जा रहा है, उनको अर्थिक रूप से आत्मनिर्भर बनाया जा रहा है। लेकिन ऐसा नहीं है कि यह सब वर्तमान में ही हो रहा है। स्त्री मुक्ति का इतिहास नया नहीं है, बस इसके स्वर नए हैं। तेवर नए हैं तथा स्वरूप नया है।

इक्कीसवीं शती की बदलती राष्ट्रीय, सामाजिक व आर्थिक स्थितियों तथा शिक्षा के प्रचार-प्रसार ने स्त्री जीवन को अत्याधिक प्रभावित किया है। इसलिए स्त्री विमर्श, चिंतन व स्त्री लेखन ने साहित्य में विशेष स्थान प्राप्त किया है। आदिमकाल, मध्यकाल व आधुनिक काल के कवयित्रियों के कविताओं के स्त्री चिंतन से प्रेरित होकर इक्कीसवीं सदी के नवोदित महिला रचनाकार भी अपनी सशक्त लेखनी चला रही हैं। अपनी कलम से वे स्त्री संबंधी प्रश्नों, आकांक्षाओं और संघर्ष को नई परिभाषाएँ दे रही हैं।

आधुनिकता के दौर पर समाज को जो आर्थिक एवं नैतिक, विस्तृत खुलापन मिला है, उसकी सशक्त अभिव्यक्ति वर्तमान दौर की हिंदी कविताओं में प्रत्यक्ष रूप से देखा जा सकता है। वर्तमान कवयित्रियों की रचनाओं में स्त्री वंचना का बोध बड़ी निर्भयता एवं टकराहट की मुद्रा में प्रकट हुआ है। इन्होंने स्त्री विषयक सरोकारों को विस्तृत फलक पर बहुलता से अभिव्यक्त किया है। मखिता सिंह, निर्मला गर्ग, डॉ. सुशीला टाकभोरे, रजनी तिलक, श्रद्धा मधुकर पराते, अमृता भारती, मधु गुप्ता, सुधा काशिव, जैसे उल्लेखनीय नाम हैं, जिन्होंने अपने काव्य में स्त्री मन की सूक्ष्म भावनाएँ, पुरुष संबंधों की टकराहट, परंपरा, आधुनिकता में अपजं दद्वंद्व आदि का चित्रण स्वाभाविक रूप से इनकी कविताओं के कथ्य बन गए हैं। इक्कीसवीं शती के इन रचनाकारों की रचनाओं में जिस गहराई एवं बारीकी से स्त्री जीवन की व्यथा, जरूरतें, उपेक्षाओं, अधिकारों व माँगों पर विचार किया गया है, यह प्रशंसनीय है। इन्होंने स्त्री का पीडा व यातना को शब्दबद्ध करते हुए स्त्री को उसकी मर्यादित भूमिका तथा रूढ़ सामाजिक मान्यताओं से मुक्त करने का पुरजोर समर्थन किया है। क्योंकि ये स्त्री के अस्तित्वबोध एवं आत्मबोध में बाधक है।

सामाजिकता, नैतिकता, मर्यादावाद, आदर्शवाद और संस्कारिकता के नाम पर पितृसत्ता ने जो कानून व्यवस्था, जो केवल स्त्रियों पर ही लागू होती है और उसका उल्लंघन करने का दंड का विधान भी उसी के लिए निर्धारित किए गए हैं। स्त्री जीवन की त्रासदी को जितनी शिद्दत से स्त्री कलम ने अभिव्यक्ति दी है और दे रही है, उतनी आंतरिकता के साथ पुरुष लेखन में नहीं आत्मपीडा का साक्षात्कार भुक्तभोगी द्वारा ही ज्यादा गंभीर व वास्तविक हो सकता है। प्रभा खेतान ने स्त्री लेखन के संदर्भ में कहा, "आज भी महिला लेखन में स्त्री वर्ग की शिकायतों, उसके प्रकट और अप्रकट क्रोध, छिपे हुए आक्रोश तथा जीवन के प्रति उसके विशिष्ट दृष्टिकोण को ज्यादा शिद्दत से अभिव्यक्त किया जा सकता है। रोजमरग की जिदगी, निजि घटनाओं का सटीक वर्णन जितना महिला लेखन में प्रस्तुत किया जा सकता है, उतना पुरुष में नहीं।"

वर्तमान हिंदी कविता स्त्री लेखन ने नारी की दुर्दमनीय इच्छा शक्ति को क्रांतिकारी पहचान दी है। वस्तुतः स्त्री लेखन का उद्देश्य स्त्री जीवन के विभिन्न अध्यायों का सूक्ष्माति सूक्ष्म अध्ययन है। आधुनिक परिवेश की जटिलताएँ दिनोंदिन बढ़ती जा रही हैं। महानगरीय परिवेश में संयुक्त परिवार तो क्या एकल परिवार की संकल्पना भी ध्वस्त हो रही है। वर्तमान महिला रचनाकारों ने अपनी कविताओं में स्त्री जीवन के एक-एक कटु अनुभव, आक्रोश द्वंद्व मानसिक जटिलताओं, तनाव, संघर्ष क्षमता का अंकन

## वर्तमान दौर में हिन्दी शिक्षण: दशा और दिशा

डॉ. सपना तिवारी

सहायक प्राध्यापक (हिन्दी), सिंधु महाविद्यालय, पाँचपावली, नागपुर

कोटि-कोटि कंटों की भाषा,  
जनगण की मुखरित अभिलाषा।  
हिन्दी है पहचान हमारी,  
हिन्दी हम सब की परिभाषा।।

भारत के लगभग सभी राज्यों में हिन्दी पढ़ाई जाती है। विभिन्न राज्यों की सामाजिक एवं सांस्कृतिक दृष्टि से यहां के विद्यालयों, महाविद्यालयों व विश्वविद्यालयों में पढ़ने वाले विद्यार्थियों का भिन्न-भिन्न मातृभाषा भाषी होना स्वाभाविक है। अहिन्दी भाषी अधिकांश विद्यार्थी हिन्दी का अध्ययन पाठ्यक्रमानुसार द्वितीय व तृतीय भाषा के रूप में करते हैं। उनके उच्चारण और लेखन दोनों में ही मातृभाषा का प्रभाव स्पष्ट रूप से देखा जा सकता है। इस कारण हिन्दी भाषा का मूल उच्चारण विभिन्न भाषा-भाषियों के मुख से व्यवहृत होकर कभी-कभी तो अर्थ का अनर्थ कर बैठता है, कभी उन्हें उपहास का पात्र भी बना देता है तथा कभी विचाराभिव्यक्ति में पूर्ण सफल नहीं होने देता। यही दशा वर्तनी के साथ भी होती है। खेद का विषय है कि वर्तमान शिक्षा पद्धति में विद्यार्थियों के लिखित व उच्चारण पक्ष को केन्द्र में नहीं रखा जाता। अध्ययन तथा अध्यापन दोनों में ही हिन्दी उच्चारण व वर्तनी की त्रुटियों का विवेचन उपेक्षित रहता है।

हिन्दी के प्रति उदासीनता : कोई स्पष्ट भाषा नीति

न होने के कारण सरकार लाचार और उदासीन नजर आती है। हिन्दी की दुर्दशा के लिए हमारी शिक्षा पद्धति और शासन व्यवस्था दोनों ही जिम्मेदार हैं। हालांकि हिन्दी निःसंदेह बढ़ रही है, किंतु उसकी वर्तमान दशा को देखकर चिंता होती है। कारण भारतीयों में अंग्रेजी का बढ़ता हुआ वर्चस्व। आज शिक्षा ने एक उद्योग का रूप ले लिया है और अंग्रेजी माध्यम के पब्लिक स्कूलों की बढ़-सी आ गई है। केवल उच्च शिक्षा का माध्यम अंग्रेजी नहीं है, अब तो पहली कक्षा से ही अंग्रेजी अनिवार्य बनाई जा रही है। कैरियर में अंग्रेजी के सब्जवाग दिखाकर बच्चों को सरकारी स्कूलों में दाखिला लेने के बजाय अंग्रेजी माध्यम के स्कूलों में दाखिला लेने के लिए प्रेरित और आकर्षित किया जा रहा है। अंग्रेजी की तुलना में हिन्दी के प्रति जनमानस तो क्या, हिन्दी विद्वान भी उदासीन व तटस्थ हैं। हिन्दी उच्चतर शिक्षण का माध्यम ही नहीं, अपितु हमारी अस्मिता की पहचान है, परंतु हम हिन्दी को वह गरिमा प्रदान नहीं कर पा रहे हैं, जिसकी वह अधिकारणी है। क्या कारण है कि, गंभीर साहित्य के अध्येयता कम होते जा रहे हैं? हिन्दी पढ़ने वाले विद्यार्थियों में वह उत्साह दृष्टिगोचर नहीं होता जो अंग्रेजी या अन्य विषय पढ़ने वाले विद्यार्थियों में होता है। आज उच्चतर हिन्दी शिक्षण के समक्ष अनेक चुनौतियाँ तो हैं ही साथ ही वर्तमान हिन्दी शिक्षा तथा शिक्षक विद्यार्थियों

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सामाजिक सरोकार के दायरे में इक्कीसवीं सदी की हिंदी कविता

डॉ. सपना तिवारी

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सामाजिक दायित्व बोध है, केवल शब्द नहीं है कविता,

हृदय बुद्धि का परम समन्वय, जीवन का अनुभव है कविता।

काव्य और समाज का गहरा संबंध है। जिस प्रकार सांस्कृतिक समाज में पल्लवित व पुष्पित होती है उसी प्रकार कविता व कवि भी समाज में जन्म लेकर विकसित होते हैं। एक संवेदनशील कवि समाज में अपनी आँखें बंद करके नहीं रह सकता। समाज की यथार्थ और सामाजिक परिस्थितियाँ, विषमताएँ, कुरीतियाँ, सामाजिक हालात, उसके कोमल हृदय को प्रभावित करते हैं। उसके लिए कविता जीवन को निकटता और सूक्ष्मता से देखने का माध्यम है। कुँवर नारायण के शब्दों में – “कविता मेरे लिए कोई भावुकता की हाथ-हाथ न होकर यथार्थ के प्रति प्रौढ़ प्रतिक्रिया की मार्मिक अभिव्यक्ति है।” वस्तुतः सच्चा रचनाकार वही होता है जिसे अपने उत्तरदायित्व का सम्यक बोध हो। जो समाज के कोमल खुरदुरे यथार्थ धरातल से जुड़ा रहता है।

किसी समाज की सामाजिक व सांस्कृतिक चेतना उसके युगानुरूप काव्य में स्पष्ट रूप से अभिव्यक्त होती है। अतः कविता सामाजिक बोध व सांस्कृतिक बोध का एक प्रमुख स्रोत है। साहित्य ही मानव की मौलिक वृत्तियों को परिमार्जित कर उन्नति की ओर उन्मुख करने वाली साधना है। आचार्य शिवपूजन सहाय के शब्दों में “वही साहित्य स्थायी और शाश्वत होता है जिसका रचयिता सच्चा साधक, सदाचारी, गंभीर चिंतक, स्वाध्याय परायण, मननशील और लोक कल्याणकारी होता है।” श्रद्धा, निष्ठा, साधना, लगन, सुरुधि, मंगलमयी भावना सब मिलकर साहित्य को अमरत्व देते हैं।<sup>2</sup>

**कविता और समाज**

कविता व समाज का घनिष्ठ संबंध होता है और रचनाकार उन घनिष्ठ संबंधों की रीढ़ होता है। कविता समाज की सांस्कृतिक, धार्मिक, सामाजिक, राजनैतिक, आर्थिक परिस्थितियों का लेख-जोखा है। साहित्य समाज का दर्पण है। प्राचीन काल से आज तक समाज का आइना बनकर हिंदी कविता ने महत्वपूर्ण भूमिका निभाई है और आज भी निभा रही है। इक्कीसवीं सदी की बदलती राष्ट्रीय, सामाजिक, सांस्कृतिक, धार्मिक, राजनैतिक, आर्थिक परिस्थितियों ने मानव जीवन को अत्याधिक प्रभावित किया है। इक्कीसवीं सदी के नवोदित रचनाकारों ने अपने पूर्व युगों के रचनाकारों के सामाजिक चिंतन से प्रेरित होकर समाज की यथार्थ झाँकी प्रस्तुत करने में कोई कसर नहीं छोड़ी। समाज से जुड़ा शायद ही कोई विषय इनसे अछूता रहा हो। वे बिना चूके अपनी सशक्त लेखनी चला रहे हैं क्योंकि उनकी सोच यही है –

कवि तो कविता रचता है, दोनों में गहरा रिश्ता है

भाव कवि के हृदय का, उसकी कविता में रिसता है

अक्षर-अक्षर शब्द बनाकर भाव उसे पहनाता है

दिल की व्यथा-कथा को लिख वह, कविता एक बनाता है।<sup>3</sup>**सामाजिक चिंतन का दायरा**

इक्कीसवीं सदी की हिंदी कविता आम जनता के दृग्द्वय संघर्ष, आभाव एवं पीड़ा को कुछ इस तरह उजागर करती है –

## आत्मनिर्भर भारत के अस्तित्व की सशक्त आधार हिंदी और उसकी वैश्विक प्रतिष्ठा

डॉ. सपना तिवारी

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आत्मनिर्भर भारत और हिंदी भाषा ऐसी अवधारणा है, जो भारत को उसके स्वावलंबी स्वरूप को परिभाषित करती है। आत्मनिर्भरता से तात्पर्य किसी वस्तु अथवा कार्य के प्रति स्वयं पर अवलंबित होना। बात चाहे व्यक्ति की हो या देश की, कोई भी समाज या वर्ग वास्तविक रूप से उन्नतशील तभी हो सकता है, जब वह स्वतः पूर्ण रूपेण कुशल, सक्षम, कार्यमिद्ध हो, उसे किसी और पर अवलंबित होने की जरूरत न पड़े।

भारत की विविधता, उसकी कला, उसकी सभ्यता और संस्कृति पर यदि दृष्टि डाली जाए तो यह पूर्णतः स्पष्ट है कि प्राचीन काल से ही भारत आत्मनिर्भर रहा है। संपूर्ण विश्व भारत के बड़े-बड़े आविष्कारों के प्रति लोहा मानता है। यह विचारणीय है कि धर्म, दर्शन, विज्ञान, ज्योतिष, नृत्य, संगीत आदि सभी तरह के ज्ञान का उद्भव भारत में हुआ। अपनी विशाल धन संपदा, अपनी खनिज संपदा, मोना तथा प्राकृतिक संसाधनों के विशाल भंडार के कारण भारत प्राचीन काल से विदेशियों के लिए आकर्षण, ख्याति प्राप्त राष्ट्र रहा है। कला व ज्ञान के क्षेत्र में भारत इतना सक्षम व कुशाग्र रहा कि न जाने कितने देशों के विकास उनके साम्राज्य के विस्तारीकरण की आधारशिला रहा। परंतु आज की विडंबना यह कि इस महान राष्ट्र को अपने विकास की आधारशिला स्वयं बनने का प्रथम प्रामांगिक हो गया है। कोविड 19 महामारी के इस भयंकर विपदा में भारत ही नहीं मनुचे विश्व का औद्योगिक व आर्थिक विकास संकट में है। इस महामारी में उत्पन्न आर्थिक आघात ने मनुचे राष्ट्र की कमर तोड़ दी है। आज मही मायने में भारत को आत्मनिर्भर बनने की आवश्यकता है। आत्मनिर्भर भारत प्रधानमंत्री नरेन्द्र मोदी जी का भारत को एक आत्मनिर्भर राष्ट्र बनाने की मुद्दृष्टि है। इसका उद्देश्य भारत में उपलब्ध संसाधनों को भारत में यथासंभव उपयोग में लाना तथा अधिकाधिक उद्योगों को मुचारू करने हुए युवाओं को रोजगार के लिए अग्रेसित करना व आत्मनिर्भर बनाना, जो आधुनिक भारत की प्रगति की एक नई पहचान बनाने का महत्वपूर्ण कदम है।

अर्थव्यवस्था, प्रौद्योगिकी, अवसरचना, गतिशील जनसाख्यिकी, माँग जैसे पाँच स्तंभों पर सुशोभित आत्मनिर्भर भारत योजना में भाषा की भी अपनी अहम भूमिका है। भारत को आत्मनिर्भर बनाने में हिंदी भाषा की अहम भूमिका प्राचीनकाल से थी, आज भी है और भविष्य में भी रहेगी। हिंदी भाषा ही है जिसे देश की एकता और अखंडता को अक्षुण्ण रखने व आजादी हासिल करने में अपनी महत्वपूर्ण भूमिका निभाई है। भारत सरकार यह भलीभाँति जानती है कि हिंदी को मान-सम्मान दिए बिना न तो देश का विकास संभव है और न ही आत्मनिर्भर भारत का ढाँचा खड़ा किया जा सकता है। अतः भारत सरकार देश के आर्थिक विकास के लिए हिंदी को आवश्यक अंग मानती है। इस आत्मनिर्भरता हेतु सरकार ने छोटे-छोटे लघु उद्योगों, ग्रामीण क्षेत्रों के कुटीर उद्योगों को बढ़ावा दिया है। इस तरह लघु उद्योग या कुटीर उद्योग के अंतर्गत निर्मित की गई वस्तुओं को बाजारों में बेचना और उस आमदनी से परिवार का खर्च चलाने की आत्मनिर्भरता पर सरकार मतत प्रेरित कर रही है। हिंदी भाषा ऐसे छोटे लघु उद्योगों में निर्मित वस्तुओं को बेचने खरीदने में महत्वपूर्ण भूमिका निभाती है क्योंकि हिंदी भारत में सर्वाधिक प्रयुक्त होने वाली संपर्क भाषा है। कुटीर उद्योग, मत्स्य पालन जैसे उद्योग आत्मनिर्भर भारत के प्रमुख उदाहरण हैं। हिंदी भाषा इन लघु उद्योगों के माथ सप्रेषण कर



## A STUDY OF ADOPTION OF ADVANCE TECHNOLOGY FOR TEACHING EFFECTIVENESS

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### ABSTRACT

*This article examines the adoption of Advance Technology for teaching effectiveness and new job roles issues confronting the college teaching staff in this technological era. The result of the study shows that most of the process i.e. achievement, movement, successive gearshifts and teaching effectiveness needs to be improved with the advance technology. The study further highlights and shares inspiring vision, suitable staffing and training, open communication, participative management and motivation to provide efficient and effective services in the Advance technological environment.*

### INTRODUCTION

All over the world globalization has changed the work places drastically. Two new forces which have changed the way in which we work and the way work places are managed and operate are information and communication technology and work force diversity. Educational institutions are essentially service providers but they are also work places for their employees. Hence, educational institutions cannot remain unaffected by the changes that are taking place all over the world. Today education is looked at as a business world over, including India and the competition is getting stiff. In this competitive scenario blending education with advance technology for effective v teaching is just as challenging as it is in any other sectors. The adopted advance technology of educational institution influences the way in which its teaching work as well as how the institutional teaching work. The effectiveness of teaching of educational institution can contribute to the basic objective such as online teaching, effective teaching methods and student's satisfaction and become a source

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## The Analytical Study Of The Emotional And Occupational Stress Among Banking Sector In The Context Of Skill Development

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### Abstract:

The banking sector is growing at a high rate and currently has a large number of jobs. However, the development of the banking sector can remove psychological issues like stress, tension, anxiety, etc. This empirical study has shown that fear of overloading and severe workloads, strenuous time to perform duties, more than 12 hours of exercise, long journeys, or termination of employment contracts are prevalent. While employees in companies face many business issues, stress is still very prevalent among bank employees as various factors require priority answers. For this reason, EI capability is very effective in preventing pressure among employees. Thus, it tries to link EI skill and stress, especially in the banking sector of India. Organizations currently consider that their employees have sufficient technical and mental skills to perform their jobs. They emphasize personal characteristics such as adaptability, commitment, conviction, empathy, readiness for diversity, and openness to transition. In the light of the above information, the proposed study is an attempt to study emotional and occupational stress among banking sector in the context of skill development.

**Keywords:** Banking Sector, Skill Development, Emotional Intelligence, Bank Employees, Occupational Stress

### Data Collection Method Used for Research:

Data for the research paper has been collected from related literature, books and websites

### Objective of Research:

- 1) To study the factors associated with occupational stress among bank employees
- 2) To evaluate emotional intelligence among bank employees.
- 3) To study the parameters of emotional intelligence (self-awareness, self-regulation, motivation, empathy and social skills) of bank employees.
- 4) To study the factors affecting the emotional intelligence of bank employees
- 5) To explore the relationship between occupational stress and emotional intelligence among bank employees

### Introduction:

The Indian banking system is the support system in terms of improving the economy of the Indian nation and people. Banking has helped in reforming the essential sectors of the economy and has given a new aura of progress. This field has turned the goals and dreams of millions of people into reality. The banking sector in India has grown into one of the strong drivers of India's economic growth. The Indian banking industry has made extraordinary progress over the years even at a time when the rest of the world was grappling with financial catastrophe. The growth of the economy and the liberalization of the financial sector have transformed the banking segment in the last two decades.

Section 5(b) of the Banking Regulation Act, 1949 defines banking as the acceptance of deposits of money from the public for lending or investment. Such deposits may be repayable on demand or

