



**SIDDHINATH MAHAVIDYALAYA**

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**Estd.- 2013**

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email - siddhinathmahavidyalaya@gmail.com

**3.2.1: Institution has created an ecosystem for innovations, Indian Knowledge System (IKS), including awareness about IPR, establishment of IPR cell, Incubation centre and other initiatives for the creation and transfer of knowledge/technology and the outcomes of the same are evident.**



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**Several Add-on courses, Extension  
Lecture and Seminars under Indian  
Knowledge System (IKS)**



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## Certificate Course on Spoken Sanskrit





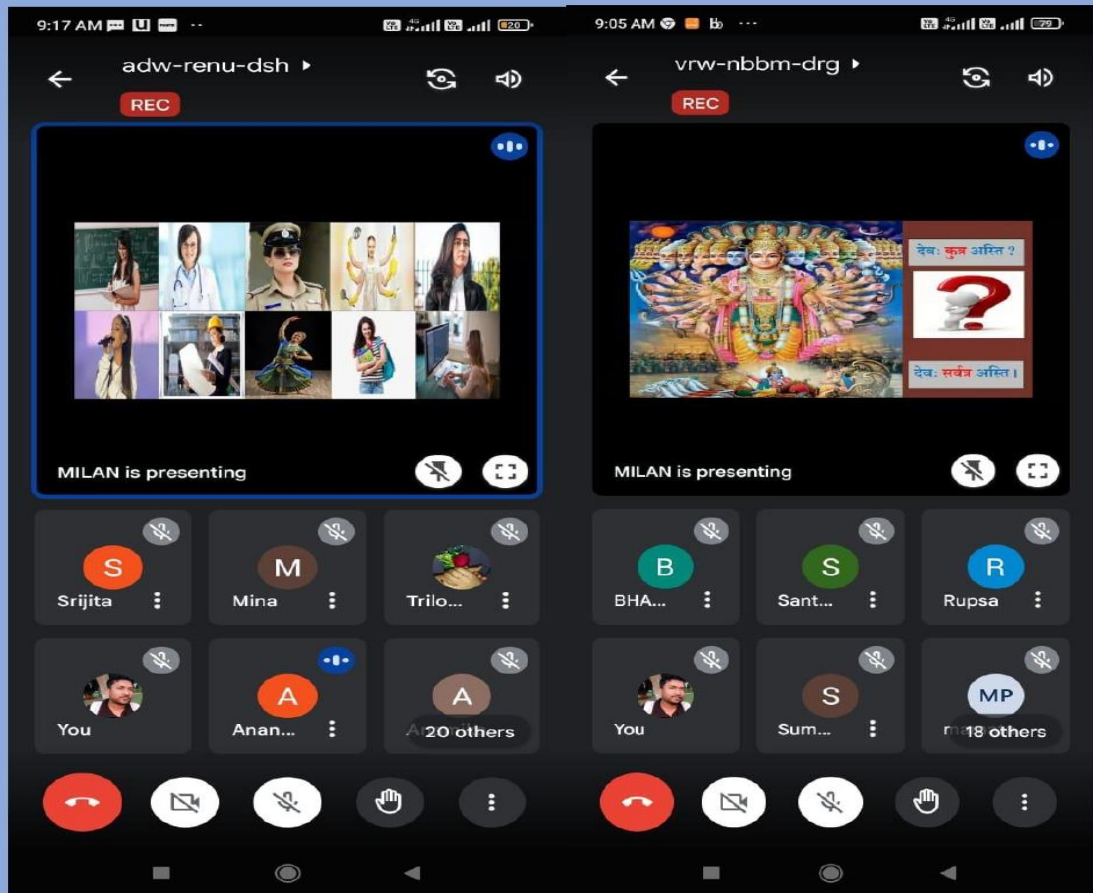


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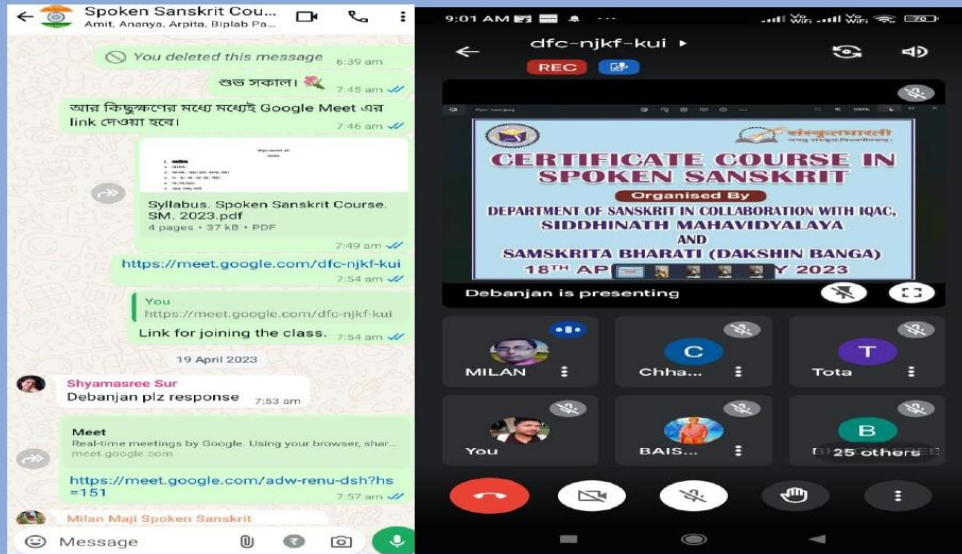
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## Photographs of the course







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## Certificate Course on Basics of Manuscriptology







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## Few Snapshots





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**Certificate Course on**  
**Scientific Tradition in Ancient India**  
Organized by Department of Sanskrit in collaboration with IQAC  
Siddhinath Mahavidyalaya  
04.05.2022 to 14.05.2022







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## Scientific Tradition in Ancient India

### Photos of the course







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## Ecological and Environmental History of India







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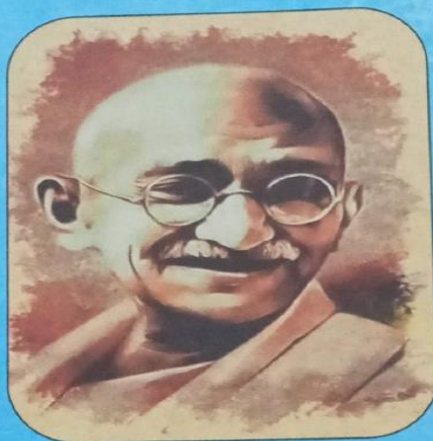
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# Certificate course on Gandhism



**Siddhinath Mahavidyalaya**  
**S.S Patna, Panskura, Purba Medinipur**



**CERTIFICATE COURSE**

**GANDHISM**

Organized by  
Department of History

Date: 05.03.2019 to 18.03.2019

**Patron**

**Dr. Uma Ghosh**  
Principal, Siddhinath  
Mahavidyalaya.

**Course Coordinator**

**Mr. Tanmoy Roy**  
Assistant Professor  
H.O.D. Department of History  
Siddhinath Mahavidyalaya





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## Status of Women Reflected in Early Indian Text



## Ethical Issues Reflected in Ancient Indian Literature







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## Vivekananda O Nari Samaj







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## Vedic Grammar and Padapatha







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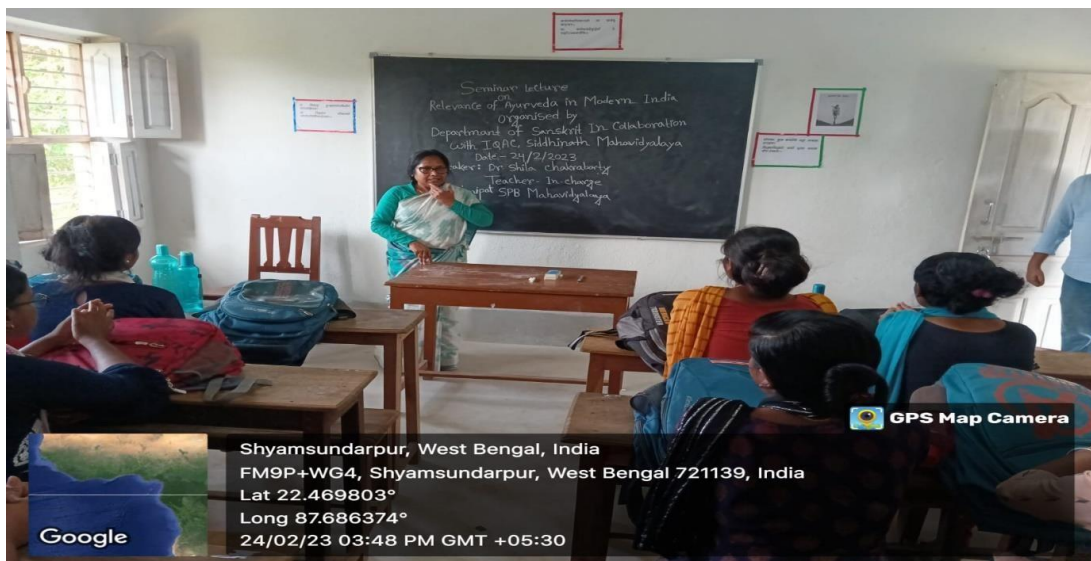
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## Relevance of Ayurveda in Modern India



Google

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Lat 22.469803°  
Long 87.686374°  
24/02/23 03:48 PM GMT +05:30



Google

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## Indian Dance







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## Intellectual Property Rights







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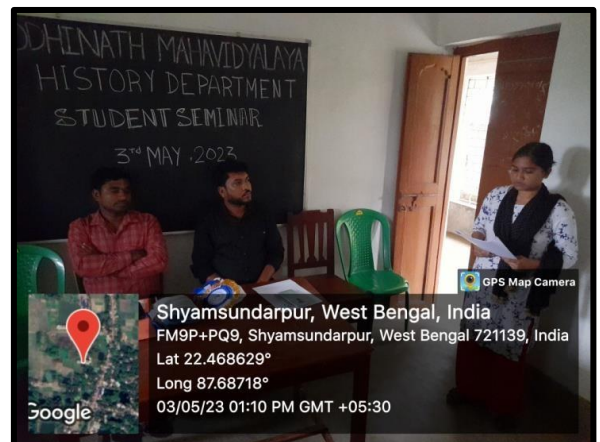
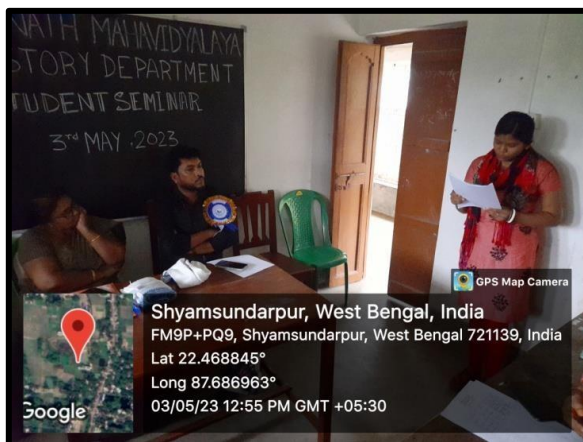
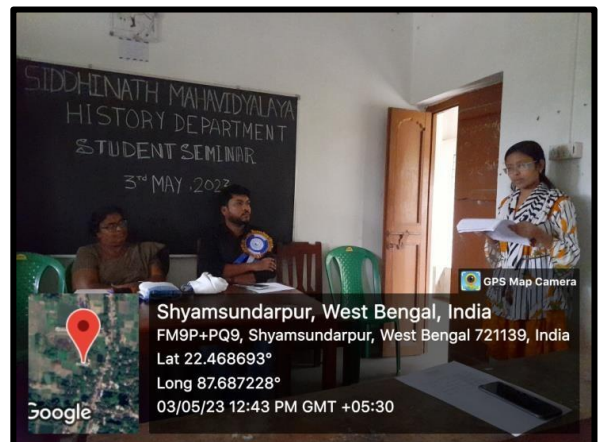
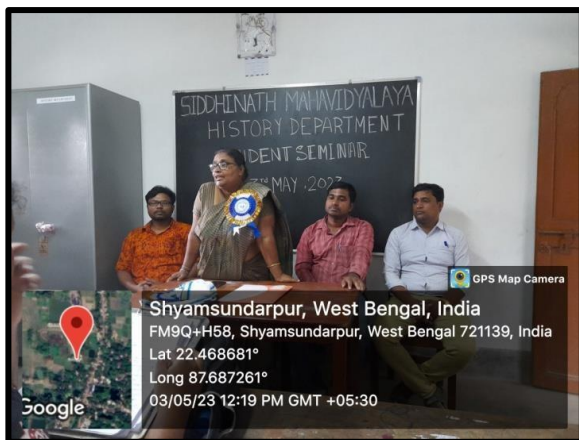
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## History of Indian Civilization and Culture







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## Webinar on Swamiji thought on Mass education



Department of Education  
**SIDDHINATH MAHAVIDYALAYA**

(Affiliated to Vidyasagar University)

Organizing

**One Day Webinar on Swamiji's Thought on Mass Education**

**ZOOM Registration Link:** Meeting ID: 837 6579 6924 Passcode: 893RS7

**Date: 12<sup>th</sup> January, 2022 & Time: 10 am**

<b>Dr. Uma Ghosh</b> Principal Siddhinath Mahavidyalaya	<b>Dr. Shyamasree Sur</b> Asst. Professor and Head(Dept.of Education) Siddhinath Mahavidyalaya Convenor	<b>Mrs. Anooradha Gangopahyay</b> Assistant Professor St.Mary's College B.Ed & Higher Education, Nadia Speaker
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# **Research and Innovation**





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## **Brief summary of Research and Development Sub-committee**

Research is an integral part of society to transform, educate, and for better survival. As a learning environment, our college has always placed a strong emphasis on research. Although there was no formal Research Committee. A formal decision has been made in the TC meeting to establish a Research and Development Sub-Committee in 2022 under the leadership of Principal Dr. Uma Ghosh, dated 26.03.2022, Siddhinath Mahavidyalaya has always demonstrated its preference for research and innovation as a higher education institution. Dr. Pratyus Kumar Jana was selected unanimously as the first convenor of the Research and Development Sub-committee.

This committee encourages academic members and students to engage in research activities for the benefit of both society and themselves. To make this happen, our college established a number of initiatives, projects, efforts, and events. This committee is responsible for the institute's research and consistent development. The sub-committee also supports any initiatives and accomplishments.



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## **Research and Development Sub-committee**

The Research and Development Sub-committee was established on March 26, 2022, to foster the joy of studying and self-learning through conducting research. The subcommittee supports and congratulates aspiring academics, researchers, and students. This subcommittee often arranges seminars, workshops, and other activities so that faculty members and students can learn new things and advance their knowledge. The members of this committee also formed an incubation cell for promoting hands-on skill development and encouraging students to entrepreneurship.

The Research and Development Sub-Committee directs students and faculties in a variety of research field and hands-on activities. Through hands-on/skill-improvement courses, the subcommittee also encourages students to participate in real-world learning experiences. To promote and improve students' abilities and employability, our college has introduced a range of certificates and add-on courses.

## **Members of the Research & Development Sub-committee and Incubation Cell**

Sl. No	Name	Portfolio
1	Dr. Pratyus Kumar Jana	Convenor
2	Dr. Debanjan Maity	Teaching Representative
3	Dr. Sudipta Pradhan	Teaching Representative
4	Dr. Shyamasree Sur	Teaching Representative
5	Dr. Prasenjit Nayek	Teaching Representative
6	Mr. Radhanath Mahapatra	Teaching Representative
7	Mr. Suman Paul	Teaching Representative

## **Book published by Research & Development Sub-committee :**

The Research & Development Sub-committee of Siddhinath Mahavidyalaya published a book entitled “Shodhajoyoti” edited by Dr. Debanjan Maity to bridge the gap between theoretical concepts and practical applications and foster critical thinking and analytical skills among readers. It aims to offer clear and concise explanations, backed by real-world examples and case studies, to enhance the learning experience. Additionally, the book strives to encourage further research and exploration in the field, promoting continuous education and professional growth. Ultimately, it seeks to be a valuable resource for students, educators, and professionals alike, contributing to their academic and career advancement.





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Siddhinath Mahavidyalaya is extremely delighted with the manifesto of the publication of Shodhajyoti, an anthology of research papers from different disciplines of academia. This volume is the very first kind of research venture taken by the institution. The title denoting the meaning 'light of the research' expresses the prime object of publication: Illuminating the light of knowledge/consciousness (jnana) warding off the unconsciousness (ajnana). The invaluable contributions of erudite as well as potential researchers have flourished the saga of Shodhajyoti. Being a multi-disciplinary podium, it has churned variegated elements of research within it. It comprises thirteen research papers from the teachers of this institution. The holistic approach of this publication will decipher the new vistas of research and create an endless quest for Truth, the eternal knowledge.



Debanjan Maity has been teaching Sanskrit in the Department of Sanskrit, Siddhinath Mahavidyalaya, Purba Medinipur as an Assistant Professor since February, 2017. Previously he served Paltagarh Radharani Sikshamandir, Singur as an Assistant Teacher in Sanskrit (H/PG) for six long years. Now-a-days he is also associated with Department of Sanskrit, Jadavpur University as guest faculty for teaching Indian epigraphy.



# Shodhajyoti

Dr. Debanjan Maity



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# *Shodhajyoti*

**An Anthology of Research Papers  
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## Evaluation of Seismicity around Barren Island Volcanic Region of Andaman and Nicobar Islands

Uma Ghosh

### Abstract:

The spatial variation of *b*-value (of frequency-magnitude relation  $\log N = a - bM$ ) of earthquakes, fractal dimension and energy release is mapped using gridding techniques in the Barren Island volcanic region, Andaman-Nicobar subduction zone. This volcanic Island stands in the midst of a volcanic belt on the edge of the Indian and Burmese tectonic plates and erupted recently on January 23, 2017. The Narcondam Island to the north is a dormant volcano; the Baratang mud volcano within the Andaman Island, on the other hand, got activated in 2003 and 2005.

In this study, some 2454 events  $M_b \geq 4$  from the International Seismological Centre (ISC) catalogue, 1964-2014 have been selected. Although the *b*-value for whole region is estimated to be 0.94, The spatial variation of *b*-value as well as fractal dimension in the Barren volcanic area are higher than normal with lower energy release. The *b*-value cross-section map shows higher value beneath the volcanic regions at a depth of 50-60 km and higher fractal values at depth 80-100 km. Radiated energy is, however, much lower below the Barren and Baratang volcanic regions indicating higher stressed zone. Seismicity maps identify variable stressed zones, active faults and the zones of higher and lower energy release. The *b*-value and fractal dimension maps are comparable with these variable stressed zones and the active faults. The energy release map identifies the zones of higher and lower energy release indicating the zones of future probable large earthquake(s).

**Keywords:** Seismicity, volcano, *b*-value, Fractal dimension, Energy release.

### Introduction:

The Andaman and Nicobar Island is one of the seismically most active subduction zone in the world and lie in zone V. The area has witnessed several large earthquakes in the past. These include  $M 6.8$  in 1967,  $M_w 6.2$  in 1982,  $M_w 6.5$  in 2002 (Dislipur), the great Sumatra – Andaman earthquake of  $M_w 9.1$  in 2004,  $M_w 7.3$  in 2005,  $M_w 6.3$  in 2006, two earthquakes of  $M_w 6.1$  in 2007 and many aftershocks (<http://asc-india.org>). The Andaman and Nicobar Islands including the only volcanoes in India - Barren Island Volcano which has erupted in recent times and the other Narcondam (which is dormant), are located near the boundary of the Indian plate and the Burmese Microplate. The Andaman Trench marks this boundary and lies in the Bay of Bengal to the west of the archipelago. Another prominent feature is the north-south West Andaman fault which is strike-slip in nature and lies in the





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## **Concept of Sustainable Development and Environmental Awareness in Early India:**

### **Reflections in the Select Prakrit and Sanskrit India**

**Debanjan Maity**

**Abstract:** With the rapid growth of technology and urban culture the earth has been experiencing many natural hazards, wars, conflicts, famines, epidemics etc. For the past few years, the policy-makers are thinking to restore the environment, economy and health system with the policies of sustainable development. The concept of sustainable development and environmental awareness becomes an indispensable part of modern socio-environmental study. The embryo of this modern concept is found hidden in literary tradition of ancient times. Inscriptional literature of early India is such a tool which minutely represents the concept of sustainable development and environmental awareness in early India. This project is an attempt to analyse the concept of sustainable development and its goals like environmental awareness, food-security, poverty, employment, infrastructure development water management in the light of select Prakrit and Sanskrit inscriptions within the time bracket of 3<sup>rd</sup> century BCE to 6<sup>th</sup> century CE.

**Keywords:** Sustainable development, environmental awareness, inscriptions, food security, infrastructure

**1.0.** From the dawn of civilization, Mother Earth with her children has been experiencing many a natural hazard like flood, excessive rain, drought, volcanic eruption, famine, epidemics and the like. Even the 21<sup>st</sup> century world, though equipped with advanced technology, is being adversely affected by natural conditions like the climate emergency, deforestation, desertification, greenhouse effect induced by the human activities etcetera and man-made ones like frequent occurrence of war, change of life style and culture etcetera. (Maity, 2020, p. 8). In 2020, the lethal virus Novel Corona Virus has literally tagged a question mark on the existence of human race. The history memorises effect of contagious diseases like Bubonic Plague, Spanish Flu, Cholera, Small Pox etcetera in past or outbreak of H5N1 influenza, SARS- CoV, Avian Influenza, Ebola etc. ("Deadly Diseases: Epidemics throughout History", 2020). Socio-economic maladies, unplanned and unchecked urbanization, misallocations of resources, problems of land tenure, high birth-rate, cultural variations, weakness in policy mechanism, lack of awareness etc. and lack of economic opportunities are causative factors for degradation of both environmental and social structure (Dasgupta, 2007, p. 7).

**1.1.** In remote past, consciously or unconsciously man became the friend and protector of nature. The symbiosis of nature and man accelerated the progress of civilization. But with the flow of time, he exploited the environment for achieving more resources as well as power. In recent years, man



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## Re-Reading Dr. Sarvapalli Radhakrishnan: The Need of the Hour

Shyamasree Sur

### Abstract

"The true teachers help us to think for ourselves in the new situations which arise. We would be unworthy disciples if we do not question and criticize them. Then try to widen our knowledge and help us to see clearly. The true teacher is like Krishna in Bhagavadgita, who advises Arjuna to think for himself and do as he chooses yatha icchasi tatha kuru" -----Dr. S. Radhakrishnan

The life, vision and actions of Dr. Sarvapalli Radhakrishnan clearly proves that he is a 'Great Teacher : The Teacher of Teachers'. Born and brought up in a country with religious atmosphere he made the unseen a visible reality. This great philosopher, thinker and knower of Eastern Philosophy, Religion and Wisdom raised the status of India in the Community of Nations. His Indian thought and wisdom not only imprinted in India but also in Europe, U.S.A., U.S.S.R., Germany and even in U.N.O. He is idol of a common man in Indian Society starting from grassroots but reaching to the highest peak in the society. He is the motivating force to every Indian citizen more particularly to the teachers at all levels. In my paper I tried to pay homage to Dr. S. Radhakrishnan by discussing his actions as teacher, as a philosopher, as a Diplomat / Politician and his awards.

**Key Words :** Philosopher, Life, Vision, Action

### Introduction :

"Among the philosophers of our time, no one achieved so much in so many fields as Sarvapalli Radhakrishnan in India... William James was influential in religion, and John Dewey has been a force in politics. One or two American philosophers have been legislators. Jacques Martain has been an ambassador. Radhakrishnan, in a little more than thirty years of work, has done all these things and more..... Never in the history of philosophy has there been quite such a world-figure with his unique appointment at Banaras and Oxford, like a weaver's shuttle, he has gone to and fro between the East and West, carrying a thread of understanding, weaving it into the fabric of civilization."

George P. Conger

Sarpapalli Radhakrishnan (5 September, 1888-17 April, 1975) was an Indian philosopher and statesman who was the first Vice-President of India (1952-1962) and the Second President of India from 1962 to 1967.  
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## Different Components of Library Catalogue and Retrieving Technique

Sudipta Pradhan

### Introduction:

A library catalogue is an essential tool for any library. This tool has been developed to facilitate the use of reading materials in a library. It is useful to both, the readers using the library and the library staff members who help the readers to use the library.

A library catalogue is a list of books and other reading materials available in a particular library. It discloses to the reader the contents of a library collection. Whereas, cataloging is a technique of describing the documents to help the reader to identify the document in which he is interested. Library catalogues originated as manuscript lists, arranged by format (folio, quarto, etc.) or in a rough alphabetical arrangement by author. Printed catalogs, sometimes called dictionary catalogs, enabled scholars outside the library to understand its contents. This would sometimes be interleaved with blank leaves on which additions could be recorded. They can be bound as guidebooks in which slips of paper are bound for new entries. Slips could also be kept loose in cardboard or tin boxes, or stored on shelves. The first card catalog appeared in the nineteenth century, enabling much more flexibility, and towards the end of the twentieth century the OPAC (Online Public Access Catalogue) was developed. With the introduction of modern technologies, users can search for information via OPAC and, more recently, through the Internet.

A library catalogue, thus, lists documents forming the total holdings or a part of the holdings of a library. The use of the resources of a library depends to a large degree on the quality of its catalogue. Therefore, it is essential that the catalogue should be prepared with care and it should be maintained up-to-date. It helps the users to use the library effectively and efficiently. In other words, a library catalogue is a record of the holdings of a library. To meet the requirements of users, it consists of various unit records. These records are called entries. Each entry is designed for satisfying a particular approach of a user.

A modern library provides several facilities to its readers for making use of its collection. One such facility is the catalogue of the library which facilitates the readers to know what documents the library has, where they are located on library shelves, and how to access them.



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## **Long to short-term Shoreline Dynamics (1992-2022) of the parts of Andhra Pradesh Coast**

**Abu Kalam Alberuni**

### **1. Introduction:**

Climate change is a global issue in the present scenario that is enormously affecting the whole world, especially in the coastal region (Bera et al., 2022a). The coastal regions faced most of the climatic hazards. The frequency of extreme climatic events in the coastal region is on the rise, like severe cyclonic storms, floods, increasing intensity of storm surges and rising sea levels (Bera et al., 2022, Gargiulo et al., 2020). The result of climate change directly increases the sea level rise, frequency and intensity of cyclones which affected land use land cover, increased coastal erosion and over wash vulnerability (Bera et al., 2022b; C. Donnelly et al., 2006a).

The shoreline changes have been short-term and long-term due to various coastal processes like a wave, currents, tidal action and sea level rise (Mondal et al., 2017). Nowadays coastal erosion major threat to the environment (Hossain et al., 2022) the erosion of the shoreline harms the livelihoods of the coastal population (Mukhopadhyay et al., 2012). In recent times due to technological advancement, the extraction and delineation of shorelines and coastal land forms have been done easily and also reduced uncertainty (Mishra et al., 2019). The study (Gopinath & Seralathan, 2005) was done in the period between 1967-1999 on Part of Andhra Pradesh Coast using toposheet and satellite-based imagery. The study reveals that a total of 29.8 km<sup>2</sup> eroded between 1967-1999 and the accreted area has been 6.03 km<sup>2</sup>. In the period 1996-1998, the eroded area was 13.64% and the accretion rate was 0.48 km<sup>2</sup> but the eroded area decreases in the period 1998-1999 that is 3.26 Km<sup>2</sup> and the erosion rate was 5.47 km<sup>2</sup>/year during the period 19996-1999. Another study by (Nandi et al., 2016) used DSAS tools and presented long-term and short-term changes in shoreline using EPR and LR in Sagar Island. It was investigated that the erosion rate was -7.91 m/y from 1975 to 2002 and -7.01 m/y during the period 2002-2011. The study found that the southern part of Part of Andhra Pradesh Coast was highly vulnerable due to the high rate of erosion in the shoreline. A similar type of study was found on Part of Andhra Pradesh Coast (Mondal et al., 2020) analysed shoreline shifting from 1975 to 2015, Landsat multispectral image and DSAs tool have been used for the detection of shoreline and shoreline change analysis. EPR and weightage LR method used for short-term and long-term analysis. It was observed that result of the LR method the highest erosion was found at -23.15 m/y in the southwestern part during the period 1975-2015 and the highest erosional rate according to the EPR method was -20.36 m/y.





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## কালিদাসের কাব্য মঙ্গলাচরণ

কৃষ্ণপদ পাল

### সারসংক্ষেপ:

জনমানসে একটি প্রথা আবহমানকাল ধরে প্রচলিত হয়ে আসছে- শুভকর্মে শুভফলপ্রাপ্তি। অর্থাৎ কোন কার্যারম্ভের পূর্বে শুভমঙ্গলানুষ্ঠান অবশ্যই কর্তব্য। সেটা গৃহনির্মানই হোক বা কোন যাত্রাপথে গমনই হোক। সেই ধারাকে অঙ্কুর রেখে সাহিত্যের নন্দনবনে মহাকবি কালিদাস তাঁর প্রতিটি কাব্যসৃষ্টির প্রারম্ভে ইষ্টদেবতাকে অরণ্যপূর্বক মঙ্গলাচরণ শ্লোক নিবন্ধ করেছেন। যার উদ্দেশ্য সুষ্ঠুভাবে কার্যের পরিসমাপ্তি ঘটানো। এই মঙ্গলাচরণ ভারতীয় সংস্কৃতির ঐতিহ্যমণ্ডিত শিষ্টাচার।

নাট্যশাস্ত্র, অষ্টাধ্যায়ী, মহাভাষ্য, কাব্যপ্রকাশ, ধ্বন্যালোক, রসগঙ্গাধর, তর্কসংগ্রহ, তর্কভাষ্য, অর্থসংগ্রহ প্রভৃতি আদি অনেক গ্রন্থে এবং আধুনিক কবিদের গ্রন্থেও মঙ্গলাচরণ প্রতিফলিত হয়েছে। মঙ্গলাচরণের এক ঐশ্বরিক শক্তি বোধ হয় কবিদের চিন্তন শক্তিকে এক অন্যমাত্রা প্রদান করে তা বলাবাহুল্য। প্রায় প্রত্যেক কবিই মঙ্গলাচরণের সান্নিধ্যে তাদের কাব্যকে সুষ্ঠুভাবে পরিসমাপ্তি করেছেন।

মহাকবি কালিদাসও তাঁর কাব্য-নাটকগুলিতে ইষ্টদেবতাকে অরণ্য করে কাব্য রচনার পরিসমাপ্তি করেছেন। এই শোধপত্রে আমি মহাকবি কালিদাস, তাঁর গ্রন্থে কোন ইষ্টদেবতাকে অরণ্য পূর্বক তাঁর মঙ্গলাচরণ করেছেন এবং সেই মঙ্গলাচরণের মাধ্যমে তিনি কাব্যবিষয়ে কি ইঙ্গিত দিয়েছেন বা তিনি কোন ধরনের মঙ্গলাচরণ বেশি ব্যবহার করেছেন; সেই বিষয়ে সংক্ষেপে আলোচনা করার চেষ্টা করব।

**শব্দসংকেত:** মঙ্গলাচরণ, ইষ্টদেবতা, অলংকার, বস্তুনির্দেশাত্মক, নৈয়াজিক, জ্ঞানপিপাসু

**ভূমিকা:-** সংস্কৃত সাহিত্যের রীতি অনুযায়ী অভিনয়ের পূর্বে যথেষ্ট বিঘ্ননাশের জন্য দেবতাদের স্তুতি পাঠের নির্দেশ আছে। এই অংশকে 'পূর্বরস' বলা হয়। পূর্বরসের মধ্যে 'নান্দী' অন্যতম। সাহিত্যদর্পণকার বিশ্বনাথের মতে-

‘ঘনাত্যবস্তনঃ পূর্বং রসবিন্মোপশান্তয়ে।

কুশীলবাঃ প্রকুবন্তি পূর্বরস স উচ্যতে।।

প্রত্যাহারাদিকান্যসান্যস্য ভুয়াংসি যদ্যপি।

তথাপ্যবশ্যং কর্তব্য নান্দী বিন্মোপশান্তয়ে।।’



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## **Santal Marriage System in India: A Sociological Analysis**

**Debabrata Kabi**

One of the most significant social institutions is marriage. It is a way of creating a family through which society can continue to exist. Trust, affection, flexibility, and sharing of tasks equally at every stage of life are prerequisites for a happy marriage. Marriage is one of the most important life-cycle ceremonies in India and is expected of Hindus by their families and society. Rituals and symbols are used to express the social process. Every community uses specific types of symbolic behaviours and physical cues to convey the ideals, standards, and ethos around matrimony and family life. As an illustration, the Santal, one of the Indian tribes that are the most colourful and brilliant, have a distinctive culture all their own. A significant component of India's cultural diversity is the Santal culture. Their lifestyle is distinctive, as seen by their traditions, rituals, language, eating and dressing preferences. This study was motivated by the unavailability of studies on Santal marriage systems. The Santal marriage system, including the bride price, laws, and limits, is the main subject of this essay. The finding shows that the majority are now following the traditional tribal marriage systems.

**Keywords:** Marriage, Society, rituals, Scheduled Tribe.

### **Introduction:**

An agreement that allows people to live together and work together in an organised social life and institutionalised connection is marriage as a social institution. Essentially, the social structure has been changed. It is a stage in a continuous social process that is governed by tradition, which is an institutionalised method of handling such an occurrence. If the husband moves in with his in-laws in a matrilineal society, the modification or partial breakup of the bride's relationships with her immediate family is least noticeable or felt. But it is most marked if the bride leaves her family and goes to live with her husband and his family in a patrilineal society. Her absence makes her own family suffer a loss. But it would be wrong to interpret the same as economic loss. It is the loss of a person in the family, and it is a breach of family solidarity.

Prof. Radcliff Brown (1960) says, "Customs of this kind are the ritual or symbolic expression of the recognition that marriage entails the breaking of the solidarity that unites a woman to the family in which she has been born and grown up". In reality, these traditions might be seen as signs of acknowledgement of the structural transformation that marriage has brought about. In some tribes, the issue of bride price prevalence is crucial to the marriage process. When the boy's party pays the

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## **A Study on Attitude of Higher Secondary School Students towards the Use of ICT in Rural and Urban areas of Purba Medinipur District (WB)**

**Debasis Sasmal**

### **Abstract:**

Information and communication technologies (ICT) is defined as a diverse set of technological tools and resources used to transmit, store, create, share or exchange information. These technological tools and resources include computers, the Internet (websites, blogs and emails), live broadcasting technologies (radio, television and webcasting), recorded broadcasting technologies (podcasting, audio and video players, and storage devices) and telephony (fixed or mobile, satellite, visio/video-conferencing, etc.). Information and communication technology (ICT) in the form of Digital Education can improve rural and urban areas school students' interest. The present study deals with the use of ICT in rural and urban schools. The study was conducted with higher secondary schools with ICT facilities in Medinipur Town and Rural areas adjacent to Medinipur city of Purba Medinipur District. The study found many opportunities for ICT access with existing resources if it is properly used and utilized.

**Keyword:** Attitude, ICT, Higher Secondary, Computer, Internet

### **Introduction:**

Today's age is technology dependent, whether we like it or not technology is so much involved in our lifestyle. Today we cannot move without technology. Technology has radically changed the quality of our daily lives. Education, health, transport, trade, industry, film etc. have all become dependent on technology. As technology is a blessing to us today, one of the most important aspects of technology is information and communication technology (ICT). With the use of information and communication technology today, education has become more interesting and enjoyable.

Attitude is a psychological construct that is a mental and emotional entity that inheres or characterizes a person, their attitude to approach to something, or their personal view on it. Attitude involves their mindset, outlook and feelings. Attitudes are complex and are an acquired state through life experience. Attitude has been defined in a variety of ways by various thinkers. According to Allport (1935), "Attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related". Fishbein and Ajzen (1980) described attitude as a, "predisposition to act towards objects in a consistently

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## Enhancing Transportation Systems with Fuzzy Logic: A Comprehensive Analysis

Jahedul Mollick

### Abstract:

Fuzzy logic has emerged as a promising tool for addressing the complexities and uncertainties inherent in transportation systems. This comprehensive analysis explores the application of fuzzy logic in enhancing various aspects of transportation, including route optimization, traffic management, vehicle control systems, and decision-making processes. By incorporating fuzzy logic techniques, transportation systems can adaptively respond to dynamic and uncertain conditions, leading to improved efficiency, safety, and sustainability. This paper reviews the theoretical foundations of fuzzy logic and examines its practical implementations in transportation, highlighting case studies and real-world applications. Furthermore, it discusses the challenges and opportunities associated with the integration of fuzzy logic into transportation systems and identifies areas for future research and development. Overall, this analysis provides valuable insights into the potential of fuzzy logic to revolutionize the way transportation systems are designed, operated, and managed in the modern era.

**Keyword:** Fuzzy logic, Transportation systems, Optimization, Traffic management, Decision-making, Uncertainty, Adaptability, Efficiency, Sustainability

### 1. Introduction:

Transportation systems play a pivotal role in modern society, facilitating the movement of people and goods and supporting economic activities. However, managing and optimizing these systems pose significant challenges due to their inherent complexities and uncertainties. Traditional approaches to transportation planning and operation often struggle to cope with dynamic conditions, leading to inefficiencies, congestion, and safety concerns. In recent years, fuzzy logic has emerged as a powerful tool for addressing these challenges by providing a flexible framework for dealing with imprecise and uncertain information.

Fuzzy logic, a branch of artificial intelligence inspired by human reasoning processes, offers a way to model and reason with vague or ambiguous data. Unlike classical logic, which operates in binary terms of true or false, fuzzy logic allows for degrees of truth, enabling more nuanced decision-making in uncertain environments. This characteristic makes fuzzy logic particularly well-suited for applications in transportation, where variables such as traffic flow, road conditions, and driver behaviour are often inherently fuzzy.





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## জড়বাদী নৈতিকতার একটি দার্শনিক মূল্যায়ন

পলাশ ভূঞা

**বীজ শব্দ :** কর্মনীতি, নৈতিক, ঋত, কর্মবাদ, কর্মযোগ, পুরুষার্থ, জড়বাদ, সুখবাদ, অসংযত সুখবাদ, সংযত সুখবাদ

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সমাজবদ্ধ জীব হিসাবে মানুষ তার সমগ্র জীবদ্দশাতে কর্মনীতির(Law of Karma) দ্বারা নিয়ন্ত্রিত। 'কর্মনীতি' বলতে সাধারণভাবে বোঝায় কর্মপন্থা, কর্মপদ্ধতি বা কর্মকৌশল। মানুষ সামাজিক জীব হওয়ার সঙ্গে বুদ্ধিবৃত্তি সম্পন্ন হওয়ায় 'কর্মনীতি' একটি অত্যন্ত গুরুত্বপূর্ণ বিষয়। কারন – "বুদ্ধিবৃত্তি সম্পন্ন মানুষের কাছে জীবন শুধু ধারণ করার জন্য নয়, জীবনকে গঠন করতে হয়। জীবনকে গঠন করার জন্য একটি আদর্শের প্রয়োজন হয় যা 'নৈতিক'।<sup>১</sup> 'নৈতিক'(Moral) শব্দটি একপ্রকার মূল্যবোধক শব্দ, যা আমাদের সমস্তপ্রকার কর্মের মূল্য নির্ধারণ করে। অর্থাৎ 'নৈতিক' (Moral) হল – মানুষের নয়-অন্যায়, ঠিক-ভুল, উচিত-অনুচিত বিষয়ক আলোচনা। বিশ্ব-ব্রহ্মান্তের একটি ক্ষুদ্রতম অংশ হিসাবে এই নিয়মপালন করতে হবে। কারন এই সৌরজগৎ ও তারও বাইরে বিস্তৃত যে মহাবিশ্ব রয়েছে তা একটি সার্বজনীন নৈতিক নিয়মের দ্বারা পরিচালিত, তার নাম হল 'ঋত'(the cosmic and moral order of universe)। প্রসঙ্গত উল্লেখ্য যে, 'বৈদিক সাহিত্যে যে নীতির দ্বারা সমগ্র বিশ্বজগৎ পরিচালিত বলে কল্পনা করা হয়েছে সেই নীতি বা নিয়মকে ঋত বলা হয়। সমগ্র বিশ্ব, তার সৌরমন্ডল, দিবা-রাত্রির পরিক্রমা, ঋতু পরিবর্তন- এই সমস্তই ঋতের দ্বারা শৃঙ্খলাবদ্ধ।<sup>২</sup> ঋকবেদে বলা হয়েছে- "ঋতেন বিশ্বম্ ভুবনম্ বিরাজতঃ"<sup>৩</sup> Classical Indian Ethical Thought গ্রন্থে এর সমর্থন বলা হয়েছে যে, "The law and order in every sphere is a manifestation of this Rta. Along with satya and tapas, it is regarded as one of the primal constituents of the Universe." (R.V,X,190.1)।<sup>৪</sup> ঋত বিশ্বের শৃঙ্খলা যেমন নিয়ন্ত্রণ করে তেমনি সামাজিক জীব হিসাবে মানুষের আচরণকেও নিয়ন্ত্রণ করে। প্রমান স্বরূপ বলা যায় যে, "Rta sets an ideal here with reference to which the distinction between 'is' and 'ought' or 'right' and 'wrong' assumes some meaning..... It is said that Rta is merely a principle of moral order which simply implies that there is no caprice or disorder in the realm of morality; good acts yield good results and bad acts the bad ones."<sup>৫</sup>

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বিশ্বপ্রকৃতি যেমন ঋত-র নিয়মের দ্বারা শৃঙ্খলাবদ্ধ হয়ে ক্রমশ বিকাশ লাভ করেছে, তেমনি মানুষ বিশ্ব-জগতের অংশ হিসাবে এই নিয়মের অধীন। একইভাবে মানুষের কর্মজীবনের শৃঙ্খলাও নৈতিক নিয়মের দ্বারা পরিচালিত হচ্ছে। এই নৈতিক নিয়মকে 'কর্মবাদ'(Theory of Karma) নামে অভিহিত করা যায়, যা ঋত-র ধারণা থেকে অনিবার্যভাবে নিঃসৃত হয়েছে। কর্মবাদ থেকে দুটি গুরুত্বপূর্ণ ধারণা আমরা লাভ করতে পারি –  
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## Amitav Ghosh's *The Calcutta Chromosome*: A Historical Novel

Chiradip Bera

### Abstract

*The Calcutta Chromosome: A Novel of Fevers, Delirium, and Discovery* (1995) represents Ghosh's first science fiction; this densely layered novel offers an alternate history of the discovery of the parasite that causes malaria. His subsequent novels include *The Glass Palace* (2000), a familial history centred on Burma (Myanmar) between its occupation by the British in 1885 through its independence after World War II and into the late 20th century, and *The Hungry Tide* (2004), set in Bengal and featuring American and Indian characters. Invasion, defined as a forcible entry into a person's domain, provides opportunities for history to be made. It occurs on a massive scale occasionally and has the potential to drastically alter the ecosystem of the nation affected. History, as a record of previous human action, serves as a road map, source of information, and source of criticism. It is unavoidable for any author to describe or depict a nation that is crucial to his or her work. It emphasizes empathy, honesty, understanding, and social conscience through a series of lessons that provide important moral instruction. Literature and history are inextricably linked. Events in history are disordered chronologies of unknown data, necessitating the creation of a paradigm and making sense of them by a historian. In this way, how Amitav Ghosh's novel *The Calcutta Chromosome* explores the history of malaria hypotheses is the main discussion of this paper.

**Key words:** History, reinvent, disease, discovery

Ghosh is a writer who recreates the history, proposes a framework, and interprets it. It has had a significant influence on his work that ultimately has a sequential circulation since the history gives information for his artistic appreciation and creative impulse. In his writings, he discusses the histories of several nations as well as the individuals who live as witnesses to their lives and experiences. His extensive study experiences, as well as his travels to multicultural countries, have provided him with sufficient opportunity to reflect on cultural and historical disparities.

Ghosh's writings show how history impacts people's lives, personalities, and fates. He wants to recreate India's history by connecting the past events. All of his works are based on his own historical study, both social and scientific. The prominent figures depicted in Ghosh's novels are authentic representatives of the nation's socio-cultural and political structure. His works are all based on historical, sociological, and political sources. In all his fiction and non-fictional works, Ghosh's writings depict historical significance. To justify this context, Latha Chathurvedi states as: Almost all Amitav Ghosh's





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## Yoga for Mental and Physical Health

Dipanwita Ghana

### Abstract

Yoga in Daily Life is a system of practice consisting of eight levels of development in the areas of physical, mental, social and spiritual health. When the body is physically healthy, the mind is clear, focused and stress is under control. Yoga, an ancient practice originating from India, has gained widespread popularity across the globe due to its numerous physical, mental, and spiritual benefits. Integrating yoga into daily life can lead to profound improvements in overall well-being and quality of life. This abstract outlines the key benefits and importance of practicing yoga regularly.

The goals of "Yoga" are physical Health, mental Health, social Health, spiritual Health, self-Realization, or realization of the Divine within us. These goals are attained by love and help for all living beings, Respect for life, protection of nature and the environment, A peaceful state of mind, Full vegetarian diet, Pure thoughts and positive lifestyle, Physical, mental and spiritual practices, Tolerance for all nations, cultures and religions. Yogic techniques are known to improve one's overall performance. Pranayama is an important, yet little known part of Yoga. Until recently, this art and science of yogic breathing was almost completely unknown to the common man like many other ancient Indian arts. Pranayama techniques act to purify the nadis including these three main energy channels.

**Keywords:** Yoga, Pranayama, Mental Health, Physical Fitness

### 1. Introduction:

Yoga originated in India several thousand years ago as a system of physical and spiritual practices. It was formalized in the second century BC in the form of the Yoga Sutras, attributed to the scholar Patanjali. The word 'yoga' means 'union' or 'yoke' or 'joining'. Originally, yoga was a method for joining a regular imperfect human being with the divine principle, or God. It is aimed to unite the mind, the body and the spirit. Through the practice of yoga, the mind can be trained to relax through deep breathing and become focused while holding the breath. This practice will lead to control of the mind. Doing yoga, not just the physical portion, but also immersing oneself on to the mental aspect of it, can help improve mental health. Yogis (those who do yoga) believe that yoga can reduce, and eventually prevent, the build-up of repressed emotions in the mind. The process is gradual but the effects, if yoga continues to be practiced, are lasting. "Yoga is a very effective stress reduction and relaxation tool. Performance of various postures requires the tensing and stretching and then relaxing of muscle groups and joints, which effectively produces relaxation in much the same way that a massage does. Yoga

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## **Incubation cell**

The Research & Development Sub-committee of Siddhinath Mahavidyalaya has formed an Incubation Cell. MoU has been signed between Siddhinath Mahavidyalaya and Mouchak Sebashram, these two institutions promote innovative and creative ideas and entrepreneurship among students. The incubation Cell started its course by performing through different training programme - Arts & Crafts, Painting and Physiochemical properties analysis of soil. Each unit was a one-day hands-on training course offered to students and members.





# MANGLOI MOUCHAK SEBASHRAM

ESTD- 6. 8. 2002 \* Reg No.- S/1L/82972

Mob : 9434242717 / 8016289454

MANGLOI • S. S. PATNA • PANSKURA • PURBA MEDINIPUR • PIN -721169 • WEST BENGAL

Ref. No. : .....

Date : .....

## Memorandum of Understanding for Incubation Center

With a vision to positively impact and take the growth curve of students to a new high, enabling them to cope with the challenges of a competitive global market, the **Mouchak Sebashram** and **Siddhinath Mahavidyalaya** are desire to work together for hands-on training on different skill development and value-added course for enhancing to promote the quality education & innovation, to work for setting up Incubation Centre for the first time. This would be a new teaching-learning approach that would help empower students with multidisciplinary skills and value-added course, as well as inculcation of scientific knowledge and creative spirit. Both organizations shall bear all the necessary payments for the service rendered for conducting the above-mentioned programme.

### Terms and conditions:

- 1) The framework of the agreement would be initially valid for a period of three year from 22.04.2022.
- 2) This agreement can be extended by means of an addendum referring to this agreement as the base agreement to set the revised period and terms if any.

Uma Ghosh 22/4/22

Signature of the Principal  
Siddhinath Mahavidyalaya

Principal  
Siddhinath Mahavidyalaya  
S. S. Patna  
Purba Medinipur

Signature of Witness

A. Debajani Maity

B. Ranjit Kumar Patra

Co-Ordinator  
IQAC  
Siddhinath Mahavidyalaya

Mrinal Sundar Patra.

Signature of the Secretary 22.4.22  
Mangloi Mouchak Sebashram

Secretary  
MOUCHAK SEBASHRAM





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## One day Hands-on training in arts and crafts





# Attendance Sheet of Hands-on training in Arts and Crafts

Date:01/03/2023

Venue: Mouchak Sebashram

SL No.	Name	Signature
1	Sudip Patra	Sudip Patra
2	Ankita Dhara	Ankita Dhara
3	Ankita Samanta	Ankita Samanta
4	Sayani Das	Sayani Das
5	Dipika Manna	Dipika Manna
6	Rimpa Rana	Rimpa Rana
7	Prity Singh	Prity Singh
8	Sayak Chakraborty	Sayak Chakraborty
9	Prantik Das	Prantik Das
10	Sayantani Mukherjee	Sayantani Mukherjee
11	Trishna Acharya	Trishna Acharya
12	Adarsha Gouri	Adarsha Gouri
13	Arpita Bera	Arpita Bera
14	Piyali Samanta	Piyali Samanta
15	Shilpa Adak	Shilpa Adak

Oma Ghosh  
Principal 1/3/23

Siddhinath Mahavidyalaya

Bindu Singh

Signature of the trainer  
Mangloi Mouchak Sebashram

Secretary  
MOUCHAK SEBASHRAM





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## One-day hands-on training on Physiochemical properties analysis of soil







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## Attendance Sheet of Hands-on training in Physiochemical Properties analysis of soil at Siddhinath Mahavidyalaya

Date: 04/05/2023

Venue: Siddhinath Mahavidyalaya

Sl no	Name	Signature
1	Ranjit Patra	Ranjit Patra
2	Mrityunjay Patra	Mrityunjay Patra
3	Pabitra Patra	Pabitra Patra
4	Debabrata Kabi	Debabrata Kabi
5	Karim Ali	Karim Ali

Uma Ghosh

Principal

SIDDHINATH MAHAVIDYALAYA  
S.S. Patna, Purba Medinipur

Mrinal Sundar Patra

Secretary

MOUCHAK SEBASHRAM



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### Physio-chemical Properties Analysis of Soil

Organized by

IQAC, Siddhinath Mahavidyalaya

S.S. Patna, Panskura, Purba Medinipur, 721139

Collaboration with

Mouchak Sebashram, Mangloi, Panskura, Purba Medinipur

### Certificate of Appreciation

This to certify that **Mr. Ranjit Patra**, Member, Mouchak Sebashram has participated in **Physio-chemical Properties Analysis of Soil at Siddhinath Mahavidyalaya** organized by IQAC, Siddhinath Mahavidyalaya on 4<sup>th</sup> May, 2023.

Our humble thanks to Mr. Patra for attendance and sharing his valuable thoughts.

*Debanjan Maitry*

Dr. Debanjan Maitry  
Co-ordinator, IQAC  
Siddhinath Mahavidyalaya

*Uma Ghosh*

Dr. Uma Ghosh  
Principal  
Siddhinath Mahavidyalaya



## SIDDHINATH MAHAVIDYALAYA

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### Hands-on Training in Arts & Crafts

Organized by

IQAC, Siddhinath Mahavidyalaya

S.S. Patna, Panskura, Purba Medinipur, 721139

Collaboration with

Mouchak Sebashram, Mangloi, Panskura, Purba Medinipur

### Certificate of Appreciation

This to certify that **Mr. Sudip Patra**, student, Department of Geography, **Siddhinath Mahavidyalaya** has participated in the **Hands-on Training in Arts & Crafts at Mouchak Sebashram** organized by IQAC, Siddhinath Mahavidyalaya on 1<sup>st</sup> March, 2023.

Our humble thanks to Mr. Patra for attendance and sharing his valuable thoughts.

*Debanjan Maitry*

Dr. Debanjan Maitry  
Co-ordinator, IQAC  
Siddhinath Mahavidyalaya

*Uma Ghosh*

Dr. Uma Ghosh  
Principal  
Siddhinath Mahavidyalaya





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## **Activity Report on Extension Lecture on Intellectual Property Rights**

1. Name of Department / Committee / Cell: Internal Quality Assurance Cell, Siddhinath Mahavidyalaya
2. Name of the Event / Activity: Seminar on Intellectual Property Rights
3. Date of the event: 11.04.2023
4. Venue of the Event: Siddhinath Mahavidyalaya
5. Nature of the Activity: Extension lecture
6. Level of the activity: State/ College
7. Objective of the event: to aware students about the concept and policies of Intellectual Property Rights
8. Names and designation of speaker: Pranoy Kanti Das, Assistant Professor, Department of Sociology, Chaipat SPB Mahavidyalaya
9. Participants' type and number: Teaching and non-teaching staff; 44
10. Outcome of the activity: Students understand the functions of different types of IPR like patents, copyrights, trademarks etc.
11. Type and number of participants: Students of 6<sup>th</sup> Sem.; 39
12. Evidence produced: Photographs



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## Evidence produced: Photographs







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## Report on Training of Mushroom Cultivation

A one-day training program on mushroom cultivation was organized by Department of Geography, Siddhinath Mahavidyalaya on 23/05/2023 at ground floor of college Science Building. Total 38 students participated in that training.

**Inaugurator:** Dr. Uma Ghosh, Principal, Siddhinath Mahavidyalaya

**Trainer:** - Mr. Tarak Sau, SACT, Department of Geography

### **The context:**

Mushrooms are the fruiting bodies of macrofungi. They include both edible/medicinal and poisonous species. Mushroom cultivation can be a labour intensive activity. Therefore, it will serve as means of generating employment, particularly for rural women and youths in order to raise their social status. It will also provide additional work for the farmers during winter months when the farming schedule is light. Mushroom cultivation is a cash crop. The harvested fruiting bodies can be sold in local markets for additional family income or exported for an important source of foreign exchange that will definitely improve the economic standards of the people. Mushroom farming is both a science and an art. The science is developed through research the art is perfected through curiosity and practical experience. However, mushroom farming is a business which requires precision. Indeed, it is not as simple as what some people often loosely stipulate. It calls for adherence to precise procedures.

### **Objectives of the Practice:**

- 1) To provide basic knowledge in the cultivation of mushrooms.
- 2) Able to grow mushrooms in a natural way.
- 3) Sustainable use of resources.
- 4) To promote self-employment.
- 5) To provide practical experience in the cultivation of mushrooms.



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## **Process Description**

The straw was chopped manually and soaked in water for 24 hours. The soaked straw was rinsed in distilled water twice and drained with a sieve. The oil palm fiber was soaked in distilled water overnight in order to melt the remaining oil in the fiber. Excess water was drained off. Five hundred grams each of the prepared sawdust and oil palm fiber were mixed up properly. One kilogram of each substrate was used. The mixture substrates were prepared in equal proportions by weight. This was done using a weighing balance. Sawdust was mildly sprinkled with sterile distilled water.

The four prepared substrates were separately packed into polythene bags and tied up for sterilization. A boiling drum containing stacks of sticks and water up to the level of the sticks was used for sterilization. The substrates were packed into the drum and covered with fresh plantain leaves in order to generate enough heat. The substrates were steam-sterilized for three hours and allowed to cool while still in the drum, they were taken to the mushroom house and poured separately on sterile polythene sheets on a table. The spawn was sprinkled on the substrates covered with a sterile polythene sheet and watered daily to maintain a high relative humidity of between 75 – 80%.

### **Learning Outcomes:**

- 1) Understanding the various aspects of cultivation.
- 2) To learn different cropping patterns.
- 3) To understand how to identify and sustainably manage pest and diseases and weed mushrooms.





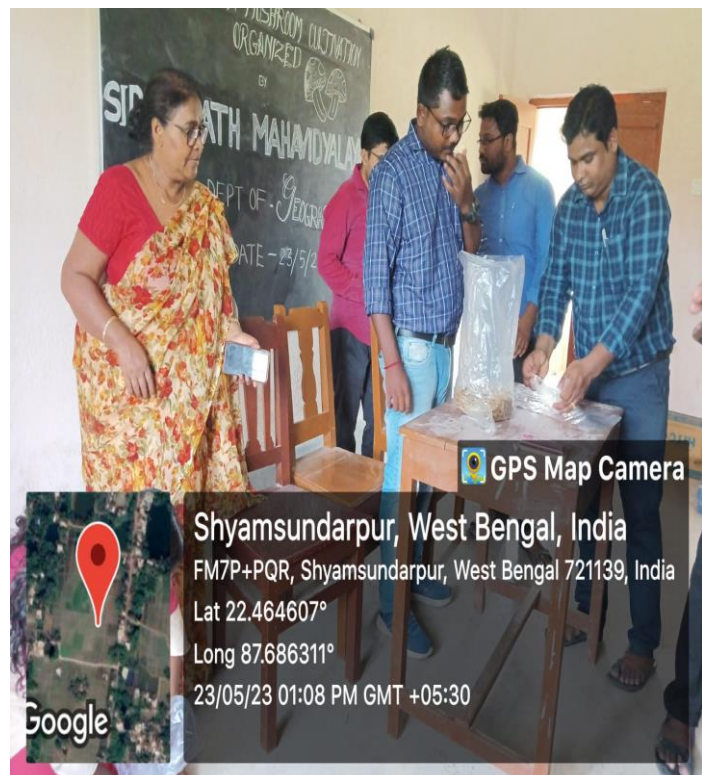
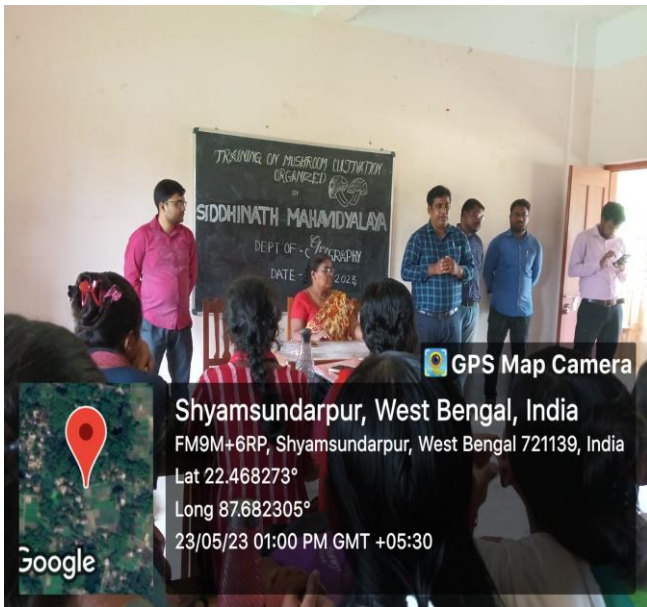
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## Photographic evidence of Mushroom cultivations







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## Photographic evidence of Mushroom cultivations







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## Report on Training on Vermicompost

A one day training program on Vermicompost was organized by Department of B.Sc General and NSS (Unit-1) of Siddhinath Mahavidyalaya on dated 26/04/2023 at ground floor of Science building. Many students of our college participated in this training.

**Inaugurator:** Dr. Uma Ghosh, Principal, Siddhinath Mahavidyalaya

**Trainer:** - Mr. Jugal Samanta, Guest of the program.

### **The Context:**

Vermicompost is nothing but the excreta of earthworms which is rich in humus. We can rear earthworms artificially in a brick tank or near the stem/trunk of trees (especially horticultural trees). By feeding these earthworms with bio-mass and watering property the food (bio-mass) of earthworms, we can produce the required quantities of Vermicompost. It is also cost-effective cost-effective and eco-friendly waste management. • Due to its innate biological, biochemical and physicochemical properties, vermicomposting can be used to promote sustainable ruminant manure management. • Vermicompost are excellent sources of biofertilizer and their addition improves the physiochemical and biological properties of agricultural soils. • In addition, earthworms from the vermicomposting can be used as a source of protein for fishes and monogastric animals.



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## Process of vermicomposting

Vermicomposting unit should be done in a cool, moist and shady site. Cow dung and chopped dried leafy materials are mixed in the proportion of 3: 1 and are kept for partial decomposition for 15 – 20 days. A layer of 15-20cm of chopped dried leaves/grasses should be kept as bedding material at the bottom of the bed. Beds of partially decomposed material of size 6x2x2 feet should be made. Each bed should contain 1.5-2.0sq of raw material. Red earthworm (1500-2000) should be released on the upper layer of bed. Water should be sprinkled with can immediately after the release of worms. Beds should be kept moist by sprinkling of water (daily) and by covering with gunny bags/polythene. Bed should be turned once after 30 days for maintaining aeration and for proper decomposition. Compost gets ready in 45-50 days. The finished product is 3/4th of the raw materials used.

## Nutrient Analysis of Vermicompost:

Parameters	Quantity
pH	6.8-7.5
OC%	9.0-17.00
OM %	15.00-22.00
C/N ration	9.5-12.0
Total Nitrogen(%)	0.5-1.5
Available N (%)	0.4-1.2
Available P (%)	0.1-0.3
Available K (%)	0.15-0.6
Ca (%)	0.17
Mg (%)	0.06





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## **The outcome of the training**

- Vermicompost helps in the improvement of soil structure, texture, porosity, water-holding capacity, drainage, and aeration, as well as the reduction of erosion.
- Vermicomposting generates nutrient-rich castings for your garden, as well as helps to divert waste from landfills.
- less space is needed for vermicomposting compared to traditional composting: A bin with a few square feet of surface area and a depth of 8-16 inches works well. Five-gallon buckets buried in the ground have the same effect.
- Less energy is needed for the vermicomposting process: You won't have to measure temperature or turn the pile because the worms will do it for you.
- Faster production of compost: Red wiggler worms eat half their weight in food waste daily.
- It enhances plant growth by allowing the development of new shoots and leaves, resulting in increased productivity.
- It helps neutralize the soil's pH.
- Vermicompost boosts microbial activity in the soil, introduces beneficial bacteria, and reduces insect and disease incidence.
- Vermicompost comprises a variety of micro and macronutrients, vitamins, enzymes, and hormones such as auxins and gibberellins, among other things.
- Vermicompost is simple to use and manage, as well as cost-effective and odorless.



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## Photographs

