শুৱালকুছি বুদৰাম মাধৱ সত্ৰাধিকাৰ মহাবিদ্যালয়,শুৱালকুছি

SUALKUCHI BUDRAM MADHAB SATRADHIKAR COLLEGE, SUALKUCHI

Affiliated to Gauhati University

Supporting Documents for
NAAC Self Study Report (SSR)
(3rd. Cycle) Period: 2018−2023)

Criterion: III	**RESEARCH, INNOVATIONS & EXTENTION**
Key Indicator: 3.3	**RESEARCH PUBLICATION AND AWARDS**
Metric Number: 3.3.1	Link to the uploaded papers, the first page/full paper(with author and affiliation details)on the institutional website

Submitted by:
SBMS College, Sualkuchi

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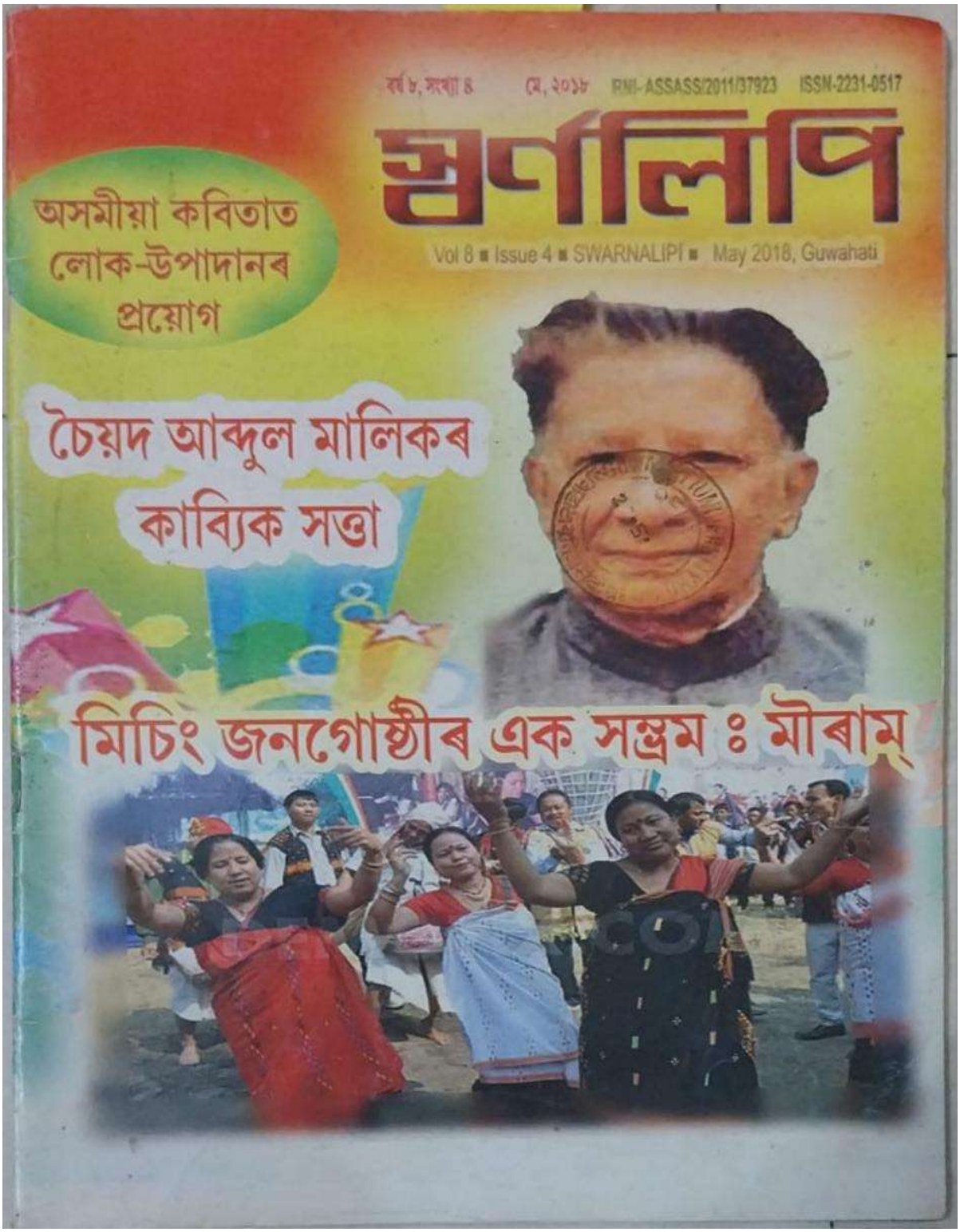


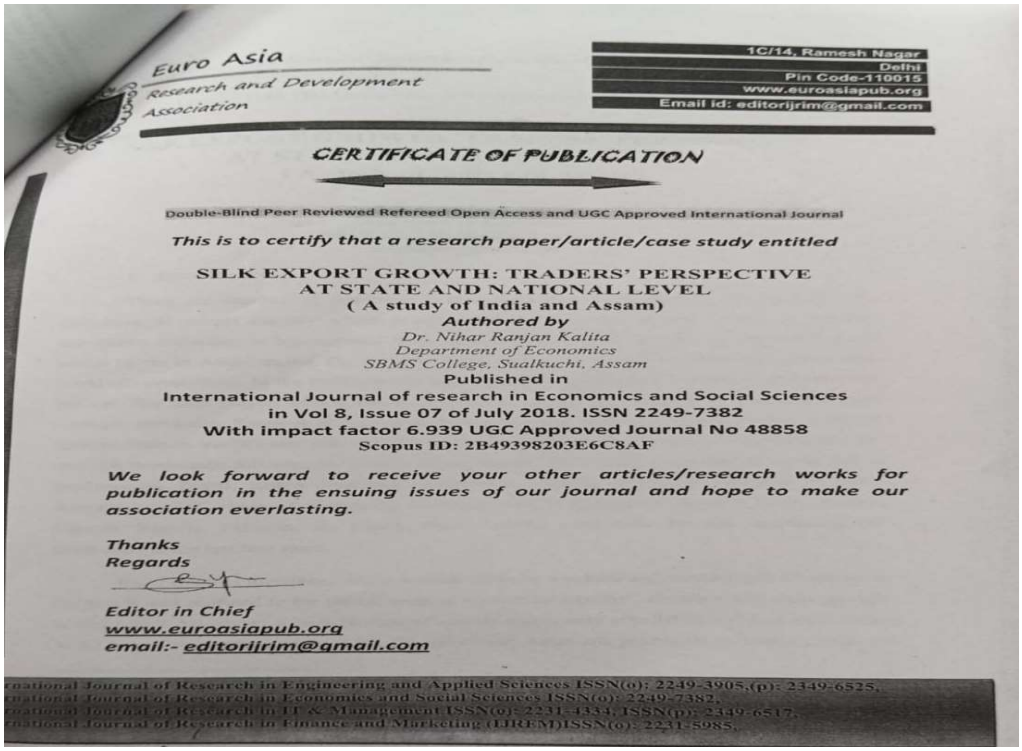
লক্ষ্মীনাথ বেজবৰুৱাৰ ভাষাত লিংগৰ স্বৰূপ

▶▶ডঃ মনালিছা ববা

বেজবৰুৱাই স্ত্রীলিংগবাচক ৰূপবোৰৰ প্রয়োগৰ ক্ষেত্রত বিশেষ গুৰুত্ব দিছিল আৰু এইক্ষেত্রত তেওঁ বিশেষ সিদ্ধহস্ততাৰো পৰিচয় দিছিল। স্ত্রীলিংগবাচক ৰূপৰ প্রয়োগৰ ক্ষেত্রত বেজবৰুৱাই সংস্কৃত আৰু হিন্দী ভাষাৰ নিচিনাকৈ ব্যাকৰণসিদ্ধ লিংগৰ নিয়ম মানি চলিছিল। ব্যাকৰণসিদ্ধ লিংগৰ বহুল ব্যৱহাৰ বেজবৰুৱাৰ ৰচনাৰ এক অন্যতম বিশেষত্ব বুলিব পাৰি। লিংগ প্রয়োগৰ ক্ষেত্রত বিশেষকৈ স্ত্রীলিংগবাচক ৰূপৰ প্রয়োগৰ ক্ষেত্রত বেজবৰুৱাই মাজে মাজে সীমা অতিক্রম কৰা যেন অনুমান হয় যদিও তাৰ মাজেৰেই বেজবৰুৱাই স্বকীয় প্রতিভাৰো পৰিচয় দিছিল।

০.০১ প্রস্তাৱনা ঃ

অসমীয়া ভাষা-সাহিত্যক বিশেষভাৱে সমৃদ্ধ কৰা, অসমীয়া ভাষা-সাহিত্যক স্বকীয় বৈশিষ্ট্যৰে মহিমামণ্ডিত কৰি তোলা সাহিত্যিকসকলৰ ভিতৰত এগৰাকী স্বনামধন্য সাহিত্যিক হ'ল লক্ষ্মীনাথ বেজবৰুৱা। অসমীয়া ভাষাক সুপ্রতিষ্ঠিত কৰি সকলো ফালেদি আগবঢ়াই নিয়াৰ ক্ষেত্রত যিসকল সাহিত্যিকে আগভাগ লৈছিল সেইসকলৰ ভিতৰত আটাইতকৈ অগ্রণী ভূমিকা পালন কৰিছিল সাহিত্যৰথী লক্ষ্মীনাথ বেজবৰুৱাই। প্রতিভাধৰ এইগৰাকী প্রথিতযশা সাহিত্যিকে অসমীয়া ভাষা-সাহিত্যক বলিষ্ঠ নেতৃত্বৰে আগবঢ়াই নিয়াৰ লগতে অসমীয়া জাতিটোক এক দুর্যোগপূর্ণ অৱস্থাত সঞ্জিৱনী শক্তি প্রদান কৰিছিল আৰু সেইবাবেই লক্ষ্মীনাথ বেজবৰুৱা সাহিত্যৰথী উপাধিৰে বিভূষিতহয়। বেজবৰুৱাই তেওঁৰ বিশাল ব্যক্তিত্ব, বিচিত্র আৰু বর্ণাঢ্য সাহিত্য সৃষ্টিৰে অসমীয়া সাহিত্যত এটা



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CERTIFICATE OF PUBLICATION

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This is to certify that a research paper/article/case study entitled

SILK EXPORT GROWTH: TRADERS' PERSPECTIVE AT STATE AND NATIONAL LEVEL
(A study of India and Assam)

Authored by

Dr. Nihar Ranjan Kalita
Department of Economics
SBMS College, Sualkuchi, Assam

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We look forward to receive your other articles/research works for publication in the ensuing issues of our journal and hope to make our association everlasting.

Thanks
Regards

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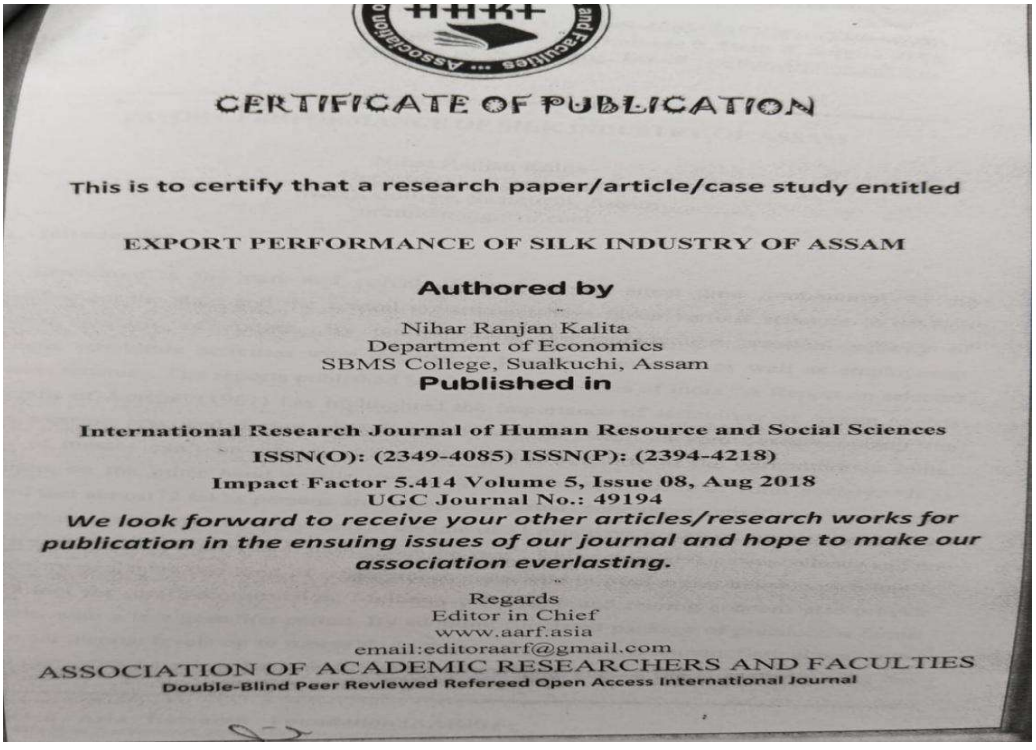

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EXPORT PERFORMANCE OF SILK INDUSTRY OF ASSAM

Authored by

Nihar Ranjan Kalita
Department of Economics
SBMS College, Sualkuchi, Assam

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We look forward to receive your other articles/research works for publication in the ensuing issues of our journal and hope to make our association everlasting.

Regards
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ASSOCIATION OF ACADEMIC RESEARCHERS AND FACULTIES
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CONFLUENCE

A Peer-Reviewed Research Journal of
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2018

Skill Based Course in Collegiate Education

----Hari Brat Saikia
Assistant Professor
Department of Animation and Graphic Design
SBMS College, Sualkuchi

-----Dr. Nihar Ranjan Kalita
Associate Professor
Department of Economics
SBMS College, Sualkuchi

INTRODUCTION:

To keep pace with the growing demand of skill based knowledge government in the last few years has given immense importance to skill education at both school and college level. Though a number of universities have vocational education as separate subjects for many years, the recent move of University Grants Commission (UGC) has given a new impetus to the whole concept in the higher education. Of late, as per notification Bachelor Degree of Vocation (B. Voc) will be regarded as a separate stream in the colleges like other conventional streams of BA, B.Sc. and B Com. Recently Assam government has also initiated steps to start degree programmes in higher educational institutes. Figure below shows the status of B. Voc. programmes currently running in Assam as funded by various sources.

J. Chem. Sci. (2018) 130:122
https://doi.org/10.1007/s12039-018-1524-2

REGULAR ARTICLE

A density functional study on synthetic polymer–amino acid interaction

BHABESH CHANDRA DEKA and PRADIP KR. BHATTACHARYYA*

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MS received 28 February 2018; revised 27 May 2018; accepted 12 June 2018

Abstract. Interaction of four synthetic polymers *viz.*, poly-ε-caprolactone (PCL), polyglycolide (PGA), polylactic acid (PLA) and Poly(lactic-co-glycolic) acid (PLGA) used as protein delivery vectors with a few amino acids have been studied by using density functional theory. Association geometries of polymer–amino acid adduct are modelled in a vacuum and in four solvents. Nature and strength of interaction have been analyzed in terms of interaction energy and thermochemical parameters of adducts as well as vibrational frequency shifts upon adduct formation. Results suggest comprehensive stability of adducts in the gas phase. Progressive destabilization of adducts with increasing polarity of solvent is observed. Redshifts in vibrational frequencies of X-H bonds (X = H donor in hydrogen bonding) upon adduct formation are noticed. The study asserts the potentiality of the considered synthetic polymers as an amino acid carrier.

Keywords. Density functional theory; hydrogen bonding; synthetic polymer; amino acid; interaction energy; solvent effect.

Article

Understanding the structure, reactivity and absorption spectra of borazine doped pillar [5] arene: A DFT study

Jul 2018 · Computational and T... 1139
DOI: 10.1016/j.comptc.2018.07.011

Himakshi Sharma · Bhabesh Chandra Deka · Bapan Saha · Pradip Kr. Bhattacharyya

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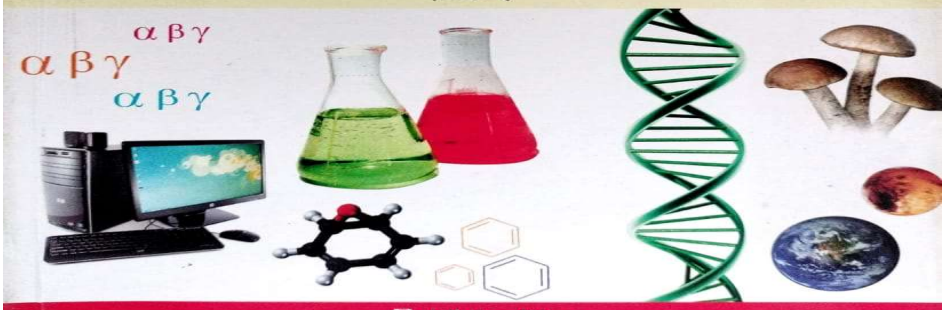

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A Comparative Study On The Biological Characteristics Of Eri Silkworm From Two Different Species (Samia Canningi And Samia Ricini)

Dr. Kakali Talukdar and Priyanka Kalita

SBMS College, Sualkuchi

Abstract:

Samia ricini and *Samia canningi* is non-mulberry silkworm with multivolitine and bivoltine nature reared in different environmental condition. Eri culture for exploitation as a Cottage Industry" analyzed the position of eri silk industry in Indian economy as a cottage industry. The present study was to design the effect on the two speiec of eri silkworm *S. canningi* and *S. ricini* of the environmental factor during the rearing period. The results revealed that the temperature fluctuation was found to be a major factor in the rearing performance of eri silkworm. The rearing of silkworm was done by standard protocol of Grekov et al. (2005), fed on castor leaves at outdoor condition throughout the experimental period and morphological characters of two different silkworms species were observed under microscope and also the length, breadth of silkworm larvae were done by using scale and weight of the cocoon was measured by using digital balance in the laboratory. An Experimental finding reveals that rearing performance of *S. ricini* has shown better rearing performances than wild type variety *S. canningi*. The size of the larvae was found to be almost similar in both the silkworm with slight variation that *S. ricini* showed slightly bigger in size compared to *S. canningi*. Also, Cocoons are brick red or white in color, exceptionally no peduncle was present in *S. ricini* whereas in *S. canningi* have found peduncle. The color of the pupa was copper brown in both the species with slight variation in the size. The study revealed that the hybrid variety *S. ricini* is better for commercial use compared to wild variety *S. canningi*.

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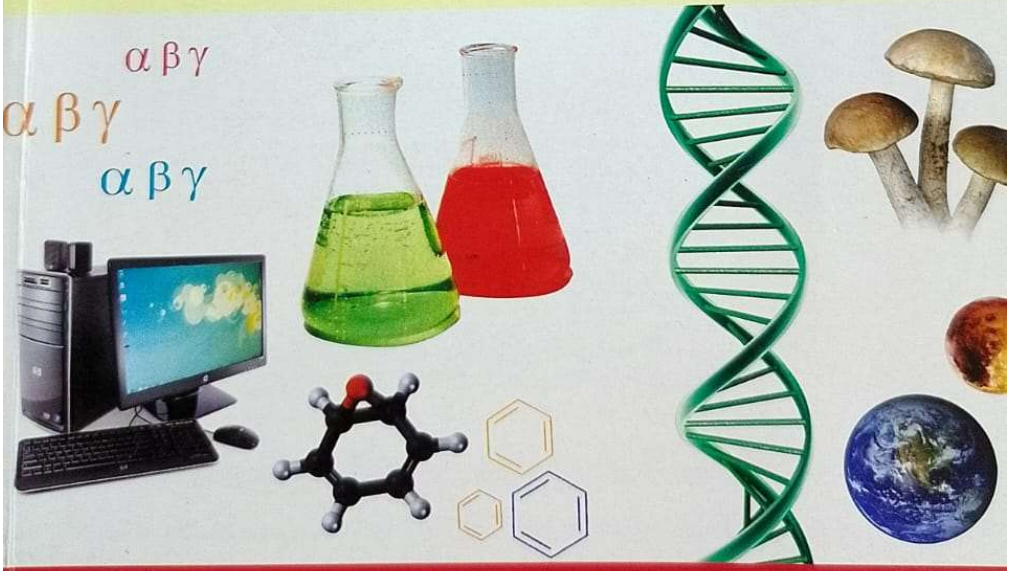

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IMPORTANCE OF MATHEMATICS ON OTHER DISCIPLINES

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Introduction:

Mathematics may be defined as the science of logical reasoning. According to New English Dictionary, "Mathematics, in a strict sense, is the abstract science which investigates deductively the conclusions implicit in the elementary conceptions of spatial and numeric relations." In Hindi or in some regional languages such as Assamese, Punjabi etc. Mathematics is also called as 'Ganita' which means the science of calculation. Mathematics is a systematized, organized and exact branch of science. According to Roger Bacon, "Mathematics is the gate and key of the sciences." Mathematics is the knowledge of truth and realities.

Mathematics has played a very important role in building up modern civilization by perfecting all sciences. It has been very properly said about Mathematics, "It is a science of all sciences and art of all the arts."

For glimpses of its relationship with our sciences, for knowing its contribution to other sciences or for understanding the dependence of other sciences on it, here I wish to throw some light on various relations of Mathematics with other subjects such as Physics, Chemistry, Biology,Engineering, Economics, Logic etc.

A. Mathematics and physics:

Perhaps no other science is as close as physics is. Only mathematical mind can take up Physics with confidence. If we observe any standard book of Physics, we will see that every rule and principle ultimately takes the mathematics form. Mathematics gives the final shape to the rule Physics. E.g.

I. The law of gravitation gives in the form of an equation,

$F=GmM/r^2$

II. Newton's second law of motion is given in the form of an equation,

$F=ma$

III. Mass energy equivalence principle is given by the relation,

$E=mc^2$

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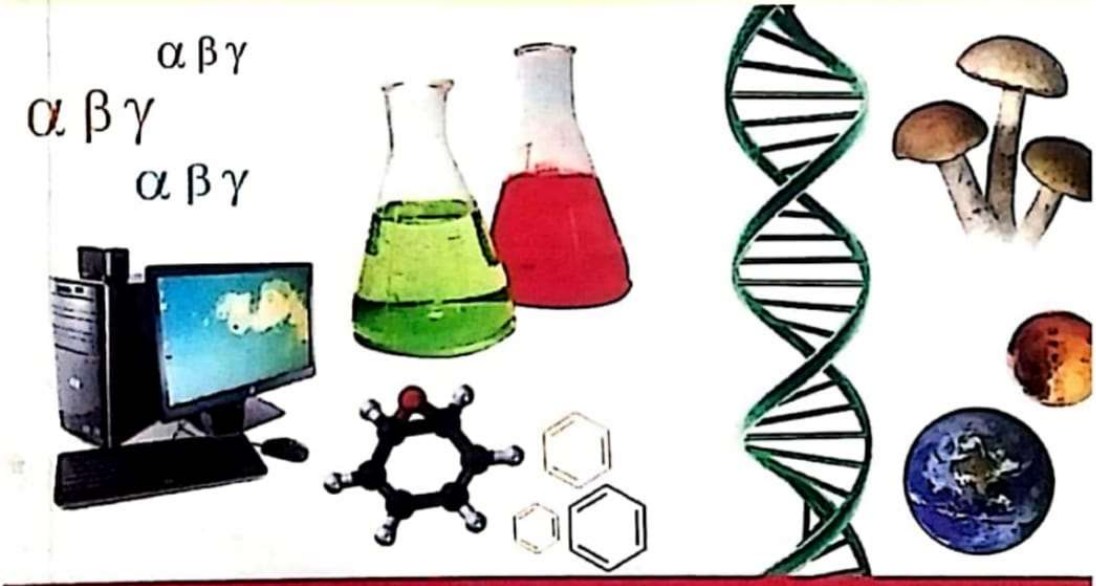

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STUDIES ON MEDICINAL PLANTS OF SUALKUCHI AREA OF KAMRUP DISTRICT, ASSAM

Kamal Choudhury and Sikha Rani Kalita[1]
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ABSTRACT:

The present study is carried out to document and analyze the medicinal plants of Sualkuchi area of Kamrup district, Assam during the year 2018 -2019. The study includes the plants which are traditionally use directly as medicine or use for preparation of various alternative medicines. During the period of survey a total 199 species of medicinal plant belonging to 163 genera and 78 families are recorded. The most dominant families are Asteraceae and Euphorbiaceae with 11 numbers of species each and Solanaceae with 9 species. Some rare medicinal plants reported from the area are *Andrographis pandiculata, Acorus calamus, Asparagus racemosus, Bacopa monnieri, Boerhaavia diffusa, Butea monosperma, Rauvolfia serpentina, Mucuna Pruiens, Corton tiglium, Piperlongum, Wdellia calendulacea.*

Key Words: - Sualkuchi area, Medicinal plants

INTRODUCTION:

The term "**medicinal plant**" includes various types of plants used in herbalism ("herbology" or "herbal medicine"). The earliest literature on Indian medical practice appeared during the Vedic period in India (Joshi and Joshi, 2013). Most of the drugs used in modern medicine and ancient Indian medicinal system are of plant origin. Among ancient civilizations, India has been known to be rich repository of medicinal plants. The forest in India is the principal repository of large number of medicinal plants, which are largely collected as raw materials for manufacture of pharmaceutical products. About 8,000 herbal remedies have been codified in AYUSH systems in India. Ayurveda, Unani, Siddha and Folk (tribal) medicines are the major systems of indigenous medicines. Indian systems of medicine 'Ayurveda', 'Sidha' and 'Unani' entirely, and homeopathy to some extent, depend on plant materials or their derivatives for treatment of human ailments (Prajapati *et al.*, 2003, Saikia and Khan, 2011).

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S-Prime Modules And Multiplicative Modules In Near-Ring Modules

BY

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Abstract:

We deal with Primeness in Near-ring modules. In this paper, we introduce the concept of s-prime modules and multiplicative modules as A subset S of a near-ring R is called an s-system if s contains a multiplicative system S* such that for every s∈S, we have $\langle s\rangle \cap S^* \neq \emptyset$. And study several features of this s-prime modules and multiplicative modules.

Introduction:

The study of s-prime and multiplicative modules is done by Van der- Walt introduced another notion of a s-prime modules and multiplicative modules. Birkenmeier ȩtalic extended the Van der Walt definition to near-ring and defined a near-ring R to right s-prime and multiplicative modules and analogously, a near-ring is defined to be left s-prime and multiplicative modules. Further, in ideal A of R an s-prime ideal if R/A is an s-system. Also in ideal A of a near-ring R nilprime if A is 0-prime and $\frac{R}{A}$ has no non zero nil ideals. If in R-ideal P of M satisfied a certain prime condition, then so did that corresponding ideal $\overline{P}$ =(P:M) of R. In this section, we generalize these ideas to any R-module M.

Preliminaries:

In this section, we recall some preliminary definitions and results to be used in the sequel.

2.1 Definition: Let P be an R-ideal of an R-module M such that RM ≠ 0. Let ν = 0,2,3. Then P is called v-s-prime if

(a) P is ν-prime.

(b) $\frac{R}{(P:M)_*}$ contains no nonzero nil ideals (ie. For every A ⊲ R such that A ⊈ (P:M), there exists an a∈A\(P:M) such that $a^nM \subseteq P$ for all n∈N)

If we transfer the above definition to the module M itself, then we have that M is ν-s-prime if M is v-prime and $\frac{R}{(0:M)_*}$ has no

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A STUDY OF ZERO DIVISOR IN RINGS

Chandra Kanta Uzir, Asstt. Prof.
Deptt. Of Mathematics
SBMS College, Sualkuchi

Abstract:

In this paper, we study the notion of zero divisor in rings. We illustrate them with examples and prove some interesting results about them.

Keyword: Zero divisor, zero as zero divisor, zero divisor on a modulas, zero product property.

Introduction: Throughout this paper, R denote a ring. Zero divisors are defined for a general ring. We also introduce about zero as zero divisor, zero divisor on a module, zero product property in this paper.

Zero divisor in ring

Definition1: Let R be a ring. An element a of R is called a left zero divisor if there exists a non zero element x s.t. ax=o or equivalently if the map from R for that sends x to ax is not injective. Similarly an element a of R is called a right zero divisor if there exists a nonzero element y s.t. ya=0. This is a partial case of divisibility in rings. An element a that is both a left and a right zero divisor is called a two sided zero divisor or Zero divisor .

Note: If the ring R is commutative than the left and right zero divisors are the same.

Definition2: An element of a ring R that is not a zero divisor is called a regular or a non-zero divisor.

Definition3: A zero divisor that is non-zero is called a non-zero zero divisor or a non-trivial zero divisor.

Remarks1: If the ring R have no non-trivial zero divisors then R is a domain.

Remarks2: Every ring has 0 as identity element and 0 absorbs all ring elements under multiplication.

Zero as a zero divisor

Definition 4: If R is a ring other than zero ring then 0 is a (two sided) zero divisor because 0.1=0 and 1.0=0.

* *Corresponding Author*

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SEASONAL VARIATION OF RELATIVE INTENSITY (CRYSTALLINE INTENSITY) OF MUGA AND ERISILKFIBRES FOUND IN ASSAM (UNDEGUMMED)

BY

Chandrama Kalita (Assistant professor dept. of physics, S.B.M.S. college, sualkuchi and research scholar of ADTU in dept. of physics, Dramaj. D. Sarma (Associate professor of ADTU, dept, of physics.)

Abstract:

There are two classes of silk mulberry and non-mulberry (Bombox mori) and no mulberry (Tasar,Eri and Muga).Anthers assamensis (A.Assama) is one of the wild verities of non-mulberrysilk worm,which produced Muga silk.Few other wild silks are Mopani silk from South Africa,saturniidae silk from Thailand and Assam silks.(Muga ,Eri and Pat) from India ,Tussah silk from china and Tasarsilk from India.

The aim of this paper is to study Relative Intensity of Muga and Eri silk in summer and winterseason in undegummed condition.

Introduction:

Muga wild silk is known for its natural shimmering colour prerogative of India and the pride of Assam state.

Different technique are used by many researcher to understand the crystal and molecular structure of domestic and wild silk fibre varieties.Eri silk comes from the caterpillar of SamiraCynthia ricin found in northeast India and some parts of china ,Japan and Thailand .The name Eri derived from theAssamese word ERA which means a" castor" as the silkworm feeds on castor plants .One of the common names the Ailanthus silk month,refers to the host plants.It is also known as Endi or errand in India.

R.I is the intensity at the highest point of the MSI peak for a peptide .Higher peak intensities mean that the mass spectrometer is registering higher reading for the peptides that is increased sensitivity.

Material and Method — The material for this study is cocoons of Muga and Eri is collected from central Research silk Board Boko.

Method— For XRD or determination of relative intensity counter diffraction method is apply .The diffractometer directly measure the intensity of x ray diffracted at any particular angle 2θ .The dependence of

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MODULE WITH FINITE SPANNING DIMENSION

Chandra Kanta Uzir
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SBMS College, Sualkuchi

Abstract:

In this paper we introduce the concept of module with finite spanning dimension and extent this concept to general submodules and obtained some important results.

Keyword:

Module, Submodule and Module with finite spanning dimension.

Introduction:

Let R be a (not necessarily commutative) ring with unity. Throughout this paper by a module we mean a left R-module. M stands for a module with finite spanning dimension and A,B stand for submodules of M.

Preliminaries:

In this paper we collect together preliminary definitions and results which are needed in this sequel.

1.Preliminaries on Modules:

Definition 1.1: Let R be a ring (not necessarily commutative). An abelian group (M,+) is called a left R-module if there is a mapping

$\lambda : R \times M \to M$ s.t. thefollowings are satisfied :

i) $a(x+y = ax + ay$ for any $a \in R, x\, y \in M$

ii) $(a+b)\,x = ax + b\times$ for any $a, b \in R, x \in M$

iii) $a(b\times) = (a\,b)\times$ for any $a, b \in R, x \in M$

iv) $1.x = x$ for any $x \in M$.

A right R-module is similarly defined.

Note: Any vector space over a field F is an F-module. Any ideal I of a ring R is an R-module.

Definition 1.2: If M is a left R-module then a non-empty subset A of M is called a left R-submodule if

i) $x, y \in A \Rightarrow x - y \in A$

ii) $x \in A, a \in R \Rightarrow ax \in A$.

Similarly we define right R-submodule.

Definition 1.3: Let A, B be two left R-modules. Then the mapping

$f : A \to B$ is called an R-module homomorphism if

i) $f(x+y) = f(x) + f(y)$

ii) $f(a\,x) = a\,f(x)\ \forall\, a \in R, x, y \in A$.

We note:

i) Hom(A, B)= The set of all R-module homomorphisms from A to B.

ii) $\text{Ker}f = \{x \in A : f(x) = 0\}$

iii) $\text{Imh} = \{y \in B : y = f(x)\}$