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Institution
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Office of the Principal
PRANANATH COLLEGE (AUTONOMOUS)
KHORDHA-752057(ODISHA)
NAAC Accredited 'A' Level

Date: 27.07.2022

No.1150

MRP Approval Letter

From:

The Principal,
Prananath College (Autonomous),
Khordha

To

Dr. Jaba Varadwaj
Lecturer in Psychology, Dept. of Psychology
Prananath College (Autonomous), Khordha
Email Id-jabavaradwaj30@gmail.com
Phone No.-8117884717

Address:

Plot No.-2006(B)
Sriram Nagar,
Old Town, Bhubaneswar-751002

Sir/ Madam,

It is a pleasure to inform you that your proposal for Minor Research Project entitled "*Psychological Capital and Mental Health of College Students*" under Prananath Research Fellowship has been approved by the Research and Development Committee of the college with reference to the resolution dated-26.07.2022 and notice no 1131/Dated 25.07.2022.

It is for your information that once you acknowledge the letter in physical form, it is expected you to proceed for the execution of the project adhering to all guidelines mentioned in brochure of MRP for Teachers, 2022.(Prananath Research Fellowship)

Your project tenure starts from 27.07.2022 and expected to submit the report in time as per the guidelines.

Thanks and Congratulation.

Yours Sincerely



Handwritten signature
27.7.22
Principal
Prananath College (Autonomous),
Khordha

Copy to: O.C/H.C/Accounts Section/IQAC/Dept. of Psychology/Research and Development Committee/ Establishment.

Prof. U.S.C
To

Allowed
21.12.19

The Principal,
P.N. Autonomous College
Khurda.

Sub: Request for permission to apply Minor Research Project.

Esteemed Sir,

Most respectfully and humbly, I Smt. Sunita Tripathy, Lecturer, Department of Odia beg to put forth the following few lines for your kind consideration & favourable action. I want to take a research work by the College fund, which will be beneficial to our students. The research work is titled "ଉତ୍ତରପ୍ରଦେଶ ଓଡ଼ିଆ କ୍ଷୁଦ୍ର ଗଦ୍ୟରେ ନବଚେତନା ଓ ଅଭିଭାବନା କଥାକାର ରଚିତ ପଦ୍ୟମାନ".

Kindly, considerate above & oblige.

Thanking you.

Recommended
Sunita Tripathy 22/12

Yours faithfully

Sunita Tripathy
(Sunita Tripathy)
Lect. in Odia

SRC (COMMITTEE)

- 1. Dr Arabinda Baidya Arabinda Baidya 16.
- 2. Mrs. Poochi Prava Nayak Poochi Prava Nayak 17.
- 3. Mrs Manuja Manjari Sahoo Manojamajari Sahu
- 4. Mrs Manini Jena Manini Jena

1-7-21
Principal
Pranath College (Autonomous)
Khurda



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**“ଭରତ ପଟ୍ଟାଚାରୀ ଓ ଡ଼ିଆ ଶୁକ୍ରଗଣ୍ଠରେ ନବଚେତନା ଓ ଅସ୍ତିତ୍ୱବାଦୀ
କଥାକାର ରବି ପଟ୍ଟନାୟକ”**

ଆଧୁନିକ କଥା ସାହିତ୍ୟର ଏକ ବିଶିଷ୍ଟ ବିଭାଗ ହେଉଛି କ୍ଷୁଦ୍ରଗଳ୍ପ । ବିଶ୍ୱ ସାହିତ୍ୟରେ ଏତଦ୍ୱାରା ଏଲାନ୍ରୋ ଓ ହର୍ଥର୍ଣ୍ଣକ ତଥାକଥିତ Tale ର ପ୍ରଚଳନ ପରେ ଜନବିଂଶ ଶତାବ୍ଦୀର ଦ୍ୱିତୀୟାର୍ଦ୍ଧରେ ଏହାର ବୃଦ୍ଧି । ତଥାପି କ୍ଷୁଦ୍ରଗଳ୍ପ ସମଗ୍ର ଭାରତୀୟ ତଥା ଆନ୍ତର୍ଜାତିକ ସାହିତ୍ୟରେ ଏକ ଗୁରୁତ୍ୱପୂର୍ଣ୍ଣ ବିଭାଗ ହୋଇ ରହିଛି । ସ୍ୱାଧୀନତା ପରବର୍ତ୍ତୀ କାଳର ଜଣେ ସୃଜନଶୀଳ କଥାକାର ହେଉଛନ୍ତି ଗାନ୍ଧିକ ରବି ପଟ୍ଟନାୟକ । ୧୯୪୯ରୁ ୧୯୯୧ ପର୍ଯ୍ୟନ୍ତ ନିରନ୍ତର ସାରସ୍ୱତ ସାଧନାର ଫଳଶ୍ରୁତି ହେଉଛି ତାଙ୍କର ଅନେକ ଗୁଡ଼ିଏ ଗଳ୍ପ ସଂକଳନ । ଯାହାକି ତାଙ୍କୁ ଓଡ଼ିଆ ସାହିତ୍ୟରେ ଏକ ସ୍ୱତନ୍ତ୍ର ଆସନର ଅଧିକାରୀ କରିପାରିଛି । ତାଙ୍କର ଗଳ୍ପଗୁଡ଼ିକ ୧୬ଟି ସଂକଳନରେ ପ୍ରକାଶ ପାଇଛି । ଯଥା- ‘ଅନ୍ଧଗଳିର ଅନ୍ଧକାର’, ‘ଅସାମାଜିକର ତାଏରୀ’, ‘ରାଗତୋଡ଼ି’, ‘ବହୁରୂପୀ’ ‘ବିଷୁବରେଖା’, ‘ଗଳ୍ପ’, ‘ହିରଣ୍ୟଗର୍ଭ’, ‘ରାଜରାଣୀ’ ‘ବନ୍ଧ୍ୟାଗାନ୍ଧାରୀ’ ‘ଅମରିଲତା’ ‘ଛାୟାପୁତ୍ରରକାଳ’, ‘ବିଚିତ୍ରାବର୍ଣ୍ଣା’, ‘ପ୍ରେମ ଓ ପ୍ରତିମା’, ‘ପ୍ରଜାପତିର ଘର’ ‘ମେଘମହୁର’ ଓ ଅବିନଶ୍ୱର । ଏହି ଗଳ୍ପ ସଂକଳନ ଗୁଡ଼ିକର ବୈଶିଷ୍ଟ୍ୟ ସ୍ୱତନ୍ତ୍ର ।

ଜଣେ ଭୂତଭୂବିତ୍ ଭାବରେ ବିଭିନ୍ନସ୍ଥାନ ଗାନ୍ଧିକ ଭ୍ରମଣ କରିଛନ୍ତି । ସେଥିରୁ ସମ୍ପୃକ୍ତ ଅନୁଭୂତି ଓ ଆବେଗକୁ ନିଜଗଳ୍ପର ବିଷୟବସ୍ତୁ ସେ କରିଛନ୍ତି । ବିଭିନ୍ନ ଅଞ୍ଚଳ ତଥା ଦେଶବିଦେଶର ଚଳଣୀ, ସଭ୍ରତା, ସଂସ୍କୃତି, ତତ୍ତ୍ୱପର୍କୀୟ ବାତାବରଣ ଆଦିକୁ ଗାନ୍ଧିକ ଆଣିଛନ୍ତି ନିଜ ଗଳ୍ପ ମଧ୍ୟକୁ । ଆଜିକ ଓ ଆଜିକ ବୈଚିତ୍ର୍ୟରେ ଭରପୁର ତାଙ୍କ ଗଳ୍ପରାଜି ଏକକ ଭାବରେ ଓଡ଼ିଆ ଗଳ୍ପସାହିତ୍ୟରେ ଏକ ସ୍ୱୟଂ ସଂପୂର୍ଣ୍ଣ ତଥାନ୍ତନ । ଏତେଗୁଡ଼ିଏ ତଥା ଜଣେ ଅସ୍ତିତ୍ୱବାଦୀ ଚିନ୍ତାଧାରାର ଲେଖକ ରବିପଟ୍ଟନାୟକ ଆଜି ବି ଜଣେ ଅନାଲୋଚିତ ଓ ଅବହେଳିତ ସ୍ରଷ୍ଟା । ତେଣୁ ତାଙ୍କ କୃତି ସମୂହର ବିଭିନ୍ନ ଦିଗ ତଥା ମୁଖ୍ୟତଃ ‘ଅସ୍ତିତ୍ୱବାଦୀ’ ଚିନ୍ତାଧାରା ଥିବା ଗଳ୍ପଗୁଡ଼ିକର ସବିଶେଷ ଆଲୋଚନା ଏହି ସର୍ଯ୍ୟଭର ମୁଖ୍ୟ ଲକ୍ଷ୍ୟ ।

ଏହି ସମ୍ପର୍କିତ ଚାରୋଟି ଅଧ୍ୟାୟରେ ଭାଗ ହୋଇ ଉପସଂହାର ହେବ । ପ୍ରଥମ ଅଧ୍ୟାୟରେ ଉତ୍ତର ପଟ୍ଟାଚାରୀ ଓ ଡ଼ିଆ ଗଳ୍ପ ସାହିତ୍ୟରେ ନବଚେତନା ଓ କଥାକାର ରବିପଟ୍ଟନାୟକ ବିଷୟରେ ଆଲୋଚିତ ହେବ । ଏକ୍ରମରେ ରବି ପଟ୍ଟନାୟକ ସମସାମୟିକ ଗାନ୍ଧିକଗଣଙ୍କ ଗଳ୍ପଶୈଳୀ ଏବଂ ଓଡ଼ିଆ ଗଳ୍ପଜଗତରେ ଦେଖା ଦେଇଥିବା ନାନା ପରୀକ୍ଷା ନିରୀକ୍ଷା ତଥା ବାଦ ଆଦି ସଂପର୍କରେ ଆଲୋଚିତ ହେବ ।

ଦ୍ୱିତୀୟ ଅଧ୍ୟାୟରେ ରବିପଟ୍ଟନାୟକଙ୍କ ଗଳ୍ପର ବୈଶିଷ୍ଟ୍ୟ, କଥାବସ୍ତୁର ବଳୟ, ଅସ୍ତିତ୍ୱବାଦ, ମାର୍କ୍ସବାଦ, ମନସ୍ତାତ୍ତ୍ୱିକ ଦୃଷ୍ଟିଭଙ୍ଗା, ଯୌନଚିତ୍ର, ଜୀବନପ୍ରତି ଦୃଷ୍ଟିକୋଣ ଆଦି ପ୍ରସଙ୍ଗରେ ଆଲୋଚିତ ହେବ ।



Prin
1-7-24
**Principal
Pranath College (Autonomous)
Khurda**

ତୃତୀୟ ଅଧ୍ୟାୟରେ ଗାନ୍ଧିଜୀଙ୍କ ଗଞ୍ଜଣା, ବର୍ଣ୍ଣନାପାଟକ, ଭାଷାଚାତୁରୀ, ପ୍ରତୀକ, ଚିତ୍ରକଳା ଓ ମିଥ୍ୟା ଆଦି ପ୍ରସଙ୍ଗରେ ଆଲୋଚିତ ହେବ ।

ଚତୁର୍ଥ ଅଧ୍ୟାୟରେ ଗାନ୍ଧିଜୀଙ୍କ ଗଞ୍ଜର ଚାରିତ୍ରିକ ବୈଶିଷ୍ଟ୍ୟ ସଂପର୍କରେ ଆଲୋଚନା କରାଯାଇଛି (ତାଙ୍କ ଗଞ୍ଜର ପୁରୁଷ ଚରିତ୍ର ଓ ନାରୀଚରିତ୍ର ଉପରେ ଆଲୋଚନା ସମ୍ପାଦ କରାଯାଇଛି ।

ସମ୍ବନ୍ଧର ଅଭିମତ ପର୍ଯ୍ୟାୟ ବା ଉପସଂହାର କ୍ରମରେ ଓଡ଼ିଆ ଗଞ୍ଜ ସାହିତ୍ୟରେ ରବିପଟ୍ଟନାୟକଙ୍କ ପ୍ରାଣ ତଥା ରବି ପଟ୍ଟନାୟକଙ୍କ ଗଞ୍ଜର ବିଭିନ୍ନ ବିଶେଷତ୍ୱ ସଂପର୍କରେ ଆଲୋଚିତ ହୋଇଛି ।

୧. ପ୍ରଥମ ଅଧ୍ୟାୟ: ଉତ୍ତର ପଟାଶ ଓଡ଼ିଆଗଞ୍ଜ ସାହିତ୍ୟରେ ନବଚେତନା ଓ କଥାକାର ରବିପଟ୍ଟନାୟକ ।

୨. ଦ୍ୱିତୀୟ ଅଧ୍ୟାୟ : ରବିପଟ୍ଟନାୟକଙ୍କ ଗଞ୍ଜର ବୈଶିଷ୍ଟ୍ୟ, କଥାବସ୍ତୁର ବଳୟ, ଅଭିଭାବ, ମାର୍କବାଦ, ମନସ୍ତାତ୍ତ୍ୱିକ ଦୃଷ୍ଟିଭଙ୍ଗୀ, ଯୌନଚିତ୍ର, ଜୀବନପ୍ରତି ଦୃଷ୍ଟିକୋଣ ଆଦି ।

୩. ତୃତୀୟ ଅଧ୍ୟାୟ- ଗାନ୍ଧିଜୀଙ୍କ ଗଞ୍ଜଣା, ବର୍ଣ୍ଣନା ପାଟକ, ଭାଷାଚାତୁରୀ, ପ୍ରତୀକ, ଚିତ୍ରକଳା ଓ ମିଥ୍ୟା ଆଦି ।

୪. ଗାନ୍ଧିଜୀଙ୍କ ଗଞ୍ଜର ଚାରିତ୍ରିକ ବୈଶିଷ୍ଟ୍ୟ ଆଦି ।

- ଉପସଂହାର -

ସୁନୀତା ତ୍ରିପାଠୀ
ସୁନୀତା ତ୍ରିପାଠୀ



Pranath
1.7.24
Principal
Pranath College (Autonomous)
Khurda

OFFICE ORDER

No. 53

Date 9.1.2020

It is notified that the undersigned has been pleased to approve the MRP proposal of Dr. Sunita Tripathy, Reader in Odia & Mr. Susanta Kumar Mishra, Lecturer In Chemistry to avail Fellowship under "PRANANATH RESEARCH FELLOWSHIP" Scheme for the year 2019-20. They are requested to carry-out the research work as per the term and condition of guidelines.

[Signature]
9.1.2020

Principal
Prananath College(Autonomous),
Khordha

Dist- O.C./Prof. I/C UGC/Acct. Bur./ Acct. Sec./Persons concerned.

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9.1.2020

Principal
Prananath College (Autonomous),
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Dist- O.C./Prof. I.C UGC/Acct. Bur./ Acct. Sec. Persons concerned.

[Handwritten Signature]
1.7.24

Principal
Prananath College (Autonomous)
Khordha



Allowed

23.12.19

RECOMMENDATION OF SRC

The following members of Subject Research Committee (SRC) recommends that Sri Susanta Kumar Mishra, Lecturer In Chemistry may be allowed to avail MRP from Pranath Research Fellowship

Members Of SRC , Dept Of Chemistry

1. Dr. Mrs. Ajanta Satapathy Associate Professor & Head *Ajanta Satapathy* 9-8-19
2. Dr. Mrs. Mamata Pattanaik Associate professor *Mamata Pattanaik* 9-8-19
3. Mrs. Khyanaprava Pattanaik Reader *Khyanaprava Pattanaik* 9-8-19
4. Mrs. Manju Pattanaik Reader *Manju Pattanaik* 9-8-19

WSP
1.7.24

Principal
Pranath College (Autonomous)
Khordha



To
The Principal
P.N college(Autonomous)
Khordha

Sub- (To avail MRP from Pranath Research Fellowship)
(Through H.O.D, Chemistry)

Respected Madam

I Sri Susanta Kumar Mishra Lecturer in Chemistry want to avail the MRP fellowship from the Pranath Research grant for pursuing the research programme on "Studies on Aminoacid-Metabolism in various solvent system"

I therefore request you to consider my research proposal and allow me to avail the fellowship of research grant of the amount Rs 50,000/-(Rupees fifty thousand only) as the tentative budget is attached here with.

Thanking you madam

Yours Faithfully
Susanta Kumar Mishra
Susanta Kumar Mishra
9/8/2019
Lecturer In Chemistry

Enclosure:

- 1.Synopsis
- 2.Budget
- 3.Recommendation from H.O.D

W.S.H
1-7-24

Principal
Pranath College (Autonomous)
Khordha



SYNOPSIS

Proposed Title : Studies on Amino Acid -Metabolism
in various solvent system.

Name of the Supervisor : Prof U.N.Dash, (Former Prof. of Chemistry, Utkal University.)
Prof. of Chemistry, ITER, Bhubaneswar,
Orissa

Name of the Candidate : Mr. Susanta Kumar Mishra

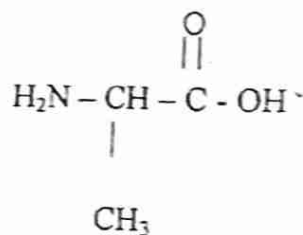
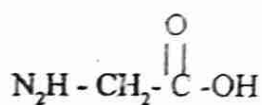
Abstract : Amino acids are of much important chemical units of the thousands of different proteins. Each of the Amino Acid belonging to the 20 standard Amino Acids of Proteins has a distinctive side chain that determines the chemical property an understanding of the physico-chemical properties of the standard Amino Acids is essential to understand the Bio-chemical reactions.

In view of this it is proposed to study the physico - chemical properties of some of the 20 standard amino acids in the present investigation.

Based on the properties of their R(i. e. side chain) groups, only three R-Groups Amino Acids have been selected namely-

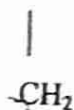
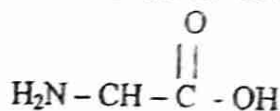
The following amino acids have been selected.

1. Aliphatic R Group :



Alanine (α - & β)

2. Aromatic R Group :

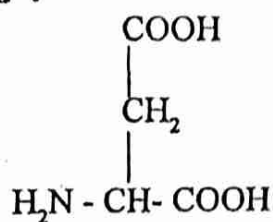


Phenylalanine

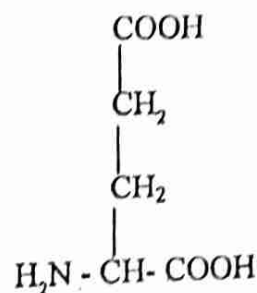


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Khurda

3. Acid :



Aspartic acid



Glutamic acid

The proposed work has been divided into five parts e.g

1. Determination of partial molar properties (from the density measurements)
2. Evaluation of Acoustic parameters. (from the Ultrasonic Velocity measurements)
3. Viscosity measurement
4. Studies on Ion - association & solvation (from the conductance measurement)
5. Spectrophotometric determination of dissociation Constant. (by UV-Visible Spectrophotometer)

Solvent Systems :

Water

Water + Methanol (5, 10, 20 & 30 Wt %)

Water + Ethanol

Water + Propanol

Temperature for measurements :

298.15K, 303.15K, 308.15K and 313.15K

1. Determination of partial molar properties :

The density measurements of the solutions of the amino acids are to be made in different solvent systems at the temperatures ranging from 298.15 K to 313.15 K using a 25 ml capacity Pyknometer. The density data are to be used to calculate the apparent molar volumes (ϕ_v) of the amino acids and the value of ϕ_v are to be analysed by Masson equation to obtain the limiting apparent molar volume (ϕ_v^0) and the slope (S_v) of the Masson eqn :

$$\phi_v = \phi_v^0 + S_v c^{1/2}$$

The partial molar volume (\bar{V}_2) and the apparent molar expansibility of the amino acids in various solvent systems and temperatures are to be determined by the standard equations.

The results are to be discussed in the light of Ion - Ion and Ion - solvent interactions. The presence of strong Ion - Ion interaction can be indicated from



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φ_v^0 indicate the presence of strong Ion - solvent interactions at Infinite dilution (as Ion - Ion interaction vanish at Infinite dilution)

2. Evaluation of Acoustic Parameters :

From the measurement of the sound velocities of the solutions of amino acids by means of ultrasonic Interferometer (Mittal Enterprises, New Delhi) in the solvent concerned at room temperature (25 °C) the Isentropic compressibility (K_s) and the apparent isentropic molar compressibility ($K_{s,\varphi}$) calculated using the equations :

$$U = [K_s d]^{-1/2}$$

and

$$K_{s,\varphi} = 1000 K_s c^{-1} - K_s^0 d^{-1} (1000 c^{-1} d - M_2)$$

Further, the values of the limiting apparent molar isentropic compressibility ($K_{s,\varphi}^0$) and the solvation number (S_n) are to be derived from the following

equations :

$$K_{s,\varphi} = K_{s,\varphi}^0 + Ac^{1/2} + Bc$$

$$\text{and } S_n = n_1 n_2^{-1} [1 - VK_s (n_1 v_1^0 K_s^0)^{-1}]$$

The structural effects on the solvents in solutions can be explained from the values of K_s , $K_{s,\varphi}$, $K_{s,\varphi}^0$ & S_n . The loss of compressibility of the surrounding solvent molecules due to strong electrostrictive forces in the vicinity of the ion causing electrostrictive solvation may be due to negative $K_{s,\varphi}$ and $K_{s,\varphi}^0$ values. The solvation number (S_n) and the limiting solvation number (S_n^0) may be interpreted in terms of hydration phenomenon that depends upon the chemical structure of the amino acid in solution.

3. Viscosity Measurements :

The Viscosity measurements are to be made by using an Ostwald viscometer (Flow time = 120s) for the solutions of the amino acids in different solvents at different temperatures. The viscosity data are to be analysed by Jones Dole equation (For weak electrolytes)

$$\eta_r = \eta_s / \eta_0 = 1 + A (ac)^{1/2} + Bac + B_{TP} c^{(1-a)}$$

Where the symbols have their usual significance.

The viscosity data are to be analysed on the basis of transition state theory by using the equation

$$\Delta \mu_2^{0*} = \Delta \mu_1^{0*} + (RT/\bar{V}^0_1) 1000B - (\bar{V}^0_1 - \bar{V}^0_2)$$

$$\text{and } \Delta \mu_1^{0*} = RT \ln (\eta_0 v_1^0 / \bar{h}N)$$

Where the symbols have their usual significance.



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The values of A (Falkenhagen co - efficient), B and B_{IP} (Jones Dole Co - efficient) and $\Delta \mu_1^{\circ}$ and $\Delta \mu_2^{\circ}$ are interpreted in terms of Ion - Ion and ion solvent interactions and the rupture and distortion of the intermolecular forces in solvent structure.

4. Studies on Ion - Association and solvation :

Conductance measurements on solutions of amino acids in different solvents and at different temperatures are to be made on a digital reading conductivity meter (syntronics make). The conductivity data after solvent correction are to be analysed using the Fuoss and shedlovsky extrapolation technique

$$1/\Lambda S(z) = 1/\Lambda_0 + (K_A / \Lambda_0^2) (c \Lambda f_{\pm}^2 S(z))$$

where $S(z) = 1 + z + z^2/2 + z^3/8 + \dots$

$$z = S(\Lambda c)^{1/2} / \Lambda_0^{3/2}$$

$$S = a \Lambda_0 + b, \quad a = 82.04 \times 10^4 / (DT)^{1/2}$$

$$b = 82.501 / \eta (DT)^{1/2}, \text{ and}$$

$$\log f_{\pm} = -A (\alpha)^{1/2} / (1 + B a^{\circ} (\alpha)^{1/2})$$

Where $\alpha = \Lambda S(z) / \Lambda_0$ and A and B are the Debye - Huckel constants and a° is the ion - size parameter

The Fuoss - Kraus extrapolation technique is .

$$F(Z) / \Lambda = 1/\Lambda_0 + (K_A / \Lambda_0^2) (C \Lambda f_{\pm}^2 / F(z))$$

where $(F(z) = (4/3) \cos^2 [(1/3) \cos^{-1} (-3)^{1/3} z/2]$

and z and $\log f_{\pm}$ are the same as given above and c = molar concentration, Λ and Λ_0 are the molar and limiting molar conductances respectively and K_A is the association constant.

For the reaction of the type, $M^{n+} + nX^- \rightleftharpoons [MX_n]$

and given by $K_A = c_{[MX_n]} f_{[MX_n]} / c_{M^{n+}} f_{M^{n+}} c_{X^-}^n f_{X^-}^n$

The values of Λ_0 are used to explain the solvodynamic radii of the amino acids for considering the ionic mobilities and also the differentiation of the conductivities of the amino acids in various solutions. The values of K_A are explained in the light of ion - association in various solvents.

Thermodynamic parameters such as ΔG° , ΔH° and ΔS° derived from the values of K_A at different temperatures are used to explain the solvation effect.

Walden products ($\Lambda_0 \eta$) estimated for the amino acids in various solvents are explained in terms of structure breaking effect of ions in the solvents, indicating the fact that the magnitudes of the Walden products depend on the identity of the amino acids.



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1-7-24
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Khurda

5. Spectrophotometric determination of dissociation constant :-

The dissociation Constant of Glutamic Acid, Aspartic Acid in the solvents Water + Methanol, Water + Ethanol (5 & 10 Wt%) are to be determined at 25⁰C.

$$PK_a = P^H + \log \frac{[\text{acid}]}{[\text{salt}]}$$

(Henderson Hasselbalch Eqⁿ)

Reference :

1. U.N. Dash and S.Supkar
Proc. Indian Acad.Sci (Chem .Sci) 107 (1995)541
2. U.N. Dash and B.K.Mohanty
Indian J.Chem.35 (1996) 188
3. U.N.Dash,J.R. Mohapatra and B.Lal
Indian J.Chem. 40A (2001)857. And other references there in.

Susanta Kumar Mishra
Signature of Candidate 9/2/2019



Prinath
1-7-21
Principal
Pranath College (Autonomous)
Khurda



Revathy Vishwanath
Deputy Director
RP Division Incharge
Tel #011-26716690
E-mail: rpsicssr@gmail.com

3.2.1

Indian Council of Social Science Research
(Ministry of Education)
JNU Institutional Area, Aruna Asaf Ali Marg
New Delhi – 110067
Website: www.icssr.org

SANCTION ORDER

Dated: 08-04-2022

F.No. 02/80/2021-22/ICSSR/MJ/RP

The Registrar
Banaras Hindu University
Varanasi – 221005, Uttar Pradesh

Subject: Sanction of Research Project (Major) entitled "Covid-19 Pandemic, Reverse Migration and Employment Potential: A regional and Sectoral Level Analysis for Odisha" To Dr Priyabrata Sahoo, Assistant Professor, Department of Economics, Faculty of Social Science, Banaras Hindu University, Varanasi – 221005, Uttar Pradesh.

Dear Sir,

1. The Indian Council of Social Science Research (ICSSR) considered the above Major Research Project submitted by Dr. Priyabrata Sahoo. Co-Project Directors of the study are: Dr. Kalandi Charan Pradhan and Dr. Tapaswini Nayak.
2. The study, as proposed by the researcher, is to be located at and financially administered by your institution as per the guidelines of this award.
3. The ICSSR has sanctioned a grant-in-aid of Rs.8,00,000 (Rupees Eight lakh only) for the above research project and the grant will be released as follows:

First instalment @40% :	Rs. 3,20,000/-
Second instalment @ 20%:	Rs. 1,60,000/-;
Third instalment @ 10% :	Rs. 80,000/-;
Fourth Instalment @10% :	Rs. 80,000/-;
Final instalment @15%:	Rs. 1,20,000/-;
Publication Grant* @ 5-6% :	Rs. 40,000/-;
Total	Rs. 8,00,000/-;
Overhead charges over and above 5% or maximum Rs.1,00,000 :	Rs. 40,000/-**

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1-7-24

Principal
Brenanath College (Autonomous)
Khordha

(* to be retained by the ICSSR. ICSSR would publish it subject to the recommendation by the expert and relevant Committees for the purpose, from the overall budget, so to be retained by the ICSSR).

**will be released on successful completion of project after evaluation.

(The break-up budget approved by the ICSSR of Rs.8,00,000/- is enclosed.)

4. The First installment of the approved grant-in-aid will be released after receiving the grant-in-aid bill duly filled in, stamped and signed by the Project Director as well as the affiliating organization. (GIB already received).
As the study involves survey research, the finalized schedules/questionnaires (2 copies) to be sent to the ICSSR as per the following schedule:



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- a) if the schedule /questionnaire for eliciting information is as per standard questionnaire, these will have to be sent to ICSSR immediately.
- b) if the schedule /questionnaire for eliciting information are to be designed afresh keeping in view the requirements of the project, these will have to be sent to the ICSSR within a period of six months in any case

6. The Second instalment will be released after receiving a satisfactory six/nine/ twelve months Progress Report (depending on the duration of the programme), simple statement of account of first instalment, published peer reviewed journal along with grant in aid bill towards the second instalment

7. The Third instalment will be released after receiving second Progress Report (depending on the duration of the programme), simple statement of accounts of the second instalment along with grant in aid bill towards the third instalment

8. The fourth instalment will be released after receiving book length Final Report in soft copy (both word and PDF format), Executive Summary of Final Report in soft copy (both word and PDF format), 500 words abstract of the Final Report in soft copy, research papers published in peer reviewed journals duly acknowledging ICSSR, similarity index score sheet, simple statement of accounts of third instalment along with grant in aid bill towards the fourth instalment. Project Director is required to submit hard copies of the Final Report only after the confirmation from the ICSSR after incorporating the suggested changes. Such data or information relating to the research project as may be asked for by the ICSSR for preservation in its Data Archives should be given by the scholar

9. The publication grant will be retained by the ICSSR & will be spent by the ICSSR Publication Division if the Final report is found publishable by an Expert Committee constituted by the ICSSR

10. The scholar shall acknowledge support of ICSSR in all publications resulting from the project output (Research Paper, Books, Articles, Reports, etc) and should submit a copy of the same to the ICSSR during its course and after completion

11. Final instalment will be issued after receipt of recommendation of the expert for acceptance of the Final Report. Audited statement of accounts (AC) in prescribed format with utilization certificate (UC) in GFR-12A form for the entire approved project amount duly signed by the Finance Officer/Registrar /Director of the affiliating Institution, verification of all documents and decision on retaining of equipment and books etc. The institutions of which the accounts are not audited by CAG/AG, their utilisation certificate will be signed by the Finance Officer and a chartered accountant

12. The Overhead Charges to the affiliating institution will be released after the Final Report has been accepted and documents verified by the ICSSR. The ICSSR reserves the right to change the affiliation if it is found that the affiliating institute is not co-operating with the scholar and it is not facilitating timely completion of the study

13. The Project Director will ensure that the expenditure incurred by him conforms to the approved budget heads and relevant rules. Audited Statement of accounts with Utilization Certificate in GFR of 12A form is for the entire project amount approved for the project.

14. The University/Institution of affiliation will provide to the scholar office accommodation including furniture, library and research facilities and messengerial services. For this, the ICSSR shall pay to the University/Institution of affiliation overhead charges @5% over and above or maximum Rs.1,00,000 of the total expenditure incurred on the project only after successful completion of the project.

15. The Contingency Grant may be utilized for research and office assistance, books, stationery, computer cost, research assistance and the field work expenses of Project Director, Co-Project Director, Research personnel connected with the research work.

16. The overhead charges to the affiliating institution over and above @ 5% or maximum Rs.1,00,000 will be released only after successful completion of the project after evaluation. The accounts and the Utilization

Certificate will be signed by the Finance Officer/Registrar/Principal/Director in the case of accounts of the institution are audited by CAG/AG. Otherwise, they need to be signed by the Finance Officer and the Chartered

17. The Director of the research project will be Dr Priyabrata Sahoo who will be responsible for its completion within 24 Months from the date of commencement of the project, which is 24.03 2022, as intimated by the scholar

Dr. P. Sahoo
1-7-24
Principal
Pranathi College (Autonomous)
Khorata



18. In case, the Project Director does not submit the periodic / final project report as per schedule with adequate justification, the scholar may be debarred from availing all future financial assistance from ICSSR.

19. All grants from ICSSR are subject to the general provision of GFR 2017.


20. The Project Director will ensure that the expenditure incurred by him conforms to the approved budget heads. The grant-in-aid is subject to all the conditions laid down in the Indian Council of Social Science Research (ICSSR) Research Projects available in the ICSSR website www.icssr.org

21. The expenditure on this account is debatable to the Budget Head-ICSSR (Scheme Code 0877); OH 31.09 Research Projects.

22. All project instalments will be transferred through Public Finance Management System (PFMS) and ICSSR shall implement the EAT module for ensuring transparency of expenditure at all levels and to ensure that there is no parking of funds.

23. As per MoE (Ministry of Education) instruction, the amount of grant sanctioned herein is to be utilized by the end of the project duration. Any amount of the grant remaining unspent shall be refunded to the ICSSR immediately after the expiry of the duration of the project. If the grantee fails to utilize the grant for the purpose for which the same has been sanctioned/or fails to submit the audited statement of expenditure within the stipulated period, the grantee will be required to refund the amount of the grant with interest thereon @ 10% per annum.

24. Any instalment release is subject to availability of grant, and satisfactory progress report of the scholar. Mere award of the study does not entitle the scholar for the release of any of the instalments.


Yours faithfully,


(Revathy Vishwanath)
For MEMBER-SECRETARY

Encl: as above.

Copy to:

1. Dr Priyabrata Sahoo
Assistant Professor
Department of Economics
Faculty of Social Science
Banaras Hindu University
Varanasi – 221005, Uttar Pradesh
2. Dr. Kalandi Charan Pradhan
Assistant Professor (Economics)
School of Humanities & Social Sciences
Indian Institute of Technology Indore
Simrol, Madhya Pradesh -453552
3. Dr. Tapaswini Nayak
Lecturer of Economics
Department of Economics
Pranantha Autonomics College
Utkal University, Odisha – 751004
4. Finance Branch, ICSSR, New Delhi
5. Record file


1-7-24

Principal
Prananath College (Autonomous)
Khordha




(Revathy Vishwanath)
For MEMBER-SECRETARY



KIIT UNIVERSITY

[Declared U/S 3 of UGC Act 1956]

Bhubaneswar Odisha India

47

O/SAS/chem/12/17

Date 08 5 17

CERTIFICATE

This is to certify that Mr. Priyabrata Mohanty, Lecturer in Chemistry of Pranath College, Khurda is pursuing his research work pertaining to Ph.D. degree under my supervision and guidance.

He has already completed his course work and his present research is based on the work entitled "Vinyl Ester Based Hybrid Composite laminates: A material for structural application".

Dr. Dibakar Behera / 08 05 17

Dr. Dibakar Behera,
Asst. Professor and Asst. CoE,
Dept. of Chemistry,
School of Applied Sciences
KIIT University

True Copy Attested

Satish

Pranath College
Khurda

12/5/17

Principals
1-7-24

Principals
Pranath College (Autonomous)
Khurda

'A' Category University
as per notification of Ministry of HRD, Govt. of India

'Tier 1' Accreditation
(Washington Accord) by NBA of AICTE for Engineering Streams

Accredited by
NAAC of UGC in 'A' Grade

KIIT University, Bhubaneswar-751024, Odisha, INDIA

Phone: +91-674-2725481, 2741389, 2725113, 2725272, Fax: 91-674-2725481, 2/25453, 2725721

E-mail: kilit@kilit.ac.in, Website: www.kilit.ac.in



Sl. No.

KIIT UNIVERSITY

Bhubaneswar 24, Orissa, INDIA.



REGISTRATION CERTIFICATE

Ms./Mr. : **PRIYABRATA MOHANTY**
 Father's Name : **MR. BHAGABATA PRASAD MOHANTY**
 Mother's Name : **MRS. ANASUYA MOHANTY**
 Programme : **Ph.D.**
 Branch : **CHEMISTRY**
 Year of Admission : **2012**
 Registration Number : **12405726200**
 Date of Issue :

[Handwritten Signature]

Registrar

[Handwritten Signature]
1.7.24

True & Correctly Certified

Principal
Prenanath College (Autonomous)
Khordha

[Handwritten Signature]
12/5/12





Office of the Principal
PRANANATH COLLEGE AUTONOMOUS
 KHORDHA-752057 (ORISSA)
 NAAC Accredited 'A' Level

LS9

Date.....

No.....

- ef. No. 01. D.H.E. (O) Letter No. 36772 Dtd. 21.10.2017
 02. Approval of President G.B. Dtd-11.05.2017

Mr. Priyabrata Mohanty, Lecturer in Chemistry of this college is relieved of his duty w.e.f. 31.10.2017
 A.S. to enable him to avail study leave for 01 year 06 months i.e. from 31.10.2017 to 30.04.2019.

SDK
 Principal
 Pran Nath College (Autonomous), Khordha

Memo No. _____ /Dt. _____ /

Copy to the Deputy Director (N.G.C. -II), Bhubaneswar for favour of information and necessary action.

SDK
 Principal
 Pran Nath College (Autonomous), Khordha

Memo No. _____ /Dt. _____ /

Copy to Dr. Dibakar Behera, Asst. Prof. Dept. of Chemistry, KIIT, University, Bhubaneswar, for information & necessary action.

SDK
 Principal
 Pran Nath College (Autonomous), Khordha

Memo No. _____ Dt. _____ /

Copy to the Controller of Exams, Utkal University/CHSE, Orissa, Bhubaneswar for favour of information and necessary action.

SDK
 Principal
 Pran Nath College (Autonomous), Khordha

Memo No. _____ Dt. _____ /

Copy to Mr. Priyabrata Mohanty, Lecturer in Chemistry P.N. College, (Autonomous), Khordha for information. No substitute will be appointed in his vacancy and the existing staff will manage the work during his absence.

SDK
 Principal
 Pran Nath College (Autonomous), Khordha

Memo No. 2471 Dt. 31-10-17 /

Copy to: Acct. Bursar/H.C./Library/H.O.D. Chemistry is instructed to allot classes of Mr. Mohanty, for his absence. / Exam. Section/Personal File/O.C. /Exam. Section/Personal File/O.C.

H. P. S. G.
 Principal
 Pran Nath College (Autonomous), Khordha

SDK
 1-7-24

Principal
 Pran Nath College (Autonomous),
 Khordha



61

OFFICE OF THE DIRECTOR, HIGHER EDUCATION, ODISHA, BHUBANESWAR
OFFICE ORDER NO. 7M 01 17-V

In pursuance of Govt. letter No. 24739/HE dt. 21.09.17, Sri Pradyumn Mohanty, Lect. in Chemistry, P.N. Auto. College, Khordha is granted study leave for a period of one year and six months with effect from the date he actually presents on leave for pursuing Ph.D. Degree subject to fulfilment of required conditions in terms of guidelines communicated in G.O. No. 72917/HE dt. 30.12.1996 and Directorate Memo No. 35415 dt. 7.12.1996.

Director, Higher Education,
Odisha, Bhubaneswar.

Memo No. 26775 /Dt. 21.10.17

Copy forwarded to the Principal, P.N. Auto. College, Khordha for information and necessary action. The Principal is requested to relieve Sri Pradyumn Mohanty Lect. in Chemistry within one Month from date of sanction failing which the leave sanctioned will stand automatically cancelled. At the time of relieve Sri Mohanty should be asked to execute a bond to the effect that he will serve in the post of Lect. in Chemistry for a period of five years in aided Colleges after completion of study leave in his favour. The bond shall be executed in the appropriate form prescribed in Finance Department Circular No. 6974(45)/F dt. 20.2.1996 and submitted to the Principal at the time of relieve for proceeding on study leave. No substitute will be appointed in his vacancy and the existing work shall be done by the work during his absence. Copy of relieving date, joining report and bond executed of the teacher concerned may be furnished along with specific proposal to the undersigned for clearance for payment of salary during study leave period. No annual increment will be sanctioned in favour of the teacher till continuity certificate is issued on this Dte. in his favour.

Deputy Director

Memo No. 26776 /Dt. 21.10.17

Copy forwarded to the Asst. Director (D.P)/ Section Officer, Bhubaneswar person concerned for information and necessary action.

Deputy Director

Memo No. 26778 /Dt. 21.10.17

Copy forwarded to the Joint Secretary to Govt., Department of Higher Education, Odisha, BBSR for information and necessary action with reference to Govt. letter No. 24739/HE dt. 21.09.17.

Deputy Director

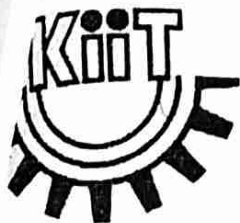
Typed by - C Jena/dt. 21.10.17

21/10/17

Dr. B. M. 1-7-24



Principal
Pranath College (Autonomous),
Khurda



28.2.19

KIIT UNIVERSITY

(Declared U/S 3 of UGC Act, 1956)
Bhubaneswar, Odisha, India

School of Applied Sciences

KIIT DEEMED TO BE UNIVERSITY
Bhubaneswar - 24

Continuation Certificate

This is to certify that Sri **Priyabrata Mohanty** bearing Roll no.1281102 and Regd. no. 12405726200 of this school is continuously working in the Department of Chemistry under the supervision of Dr. Tapan Kumar Bastia for the session from 1st Nov 2017 to 30 th April 2018

DM 30.1.18
SUPERVISOR

20.4.18
CO-ORDINATOR

Co-ordinator Chemistry
School of Applied Sciences
Kalinga Institute of Industrial Technology (KIIT)
Deemed to be University, Bhubaneswar-24

1.7.24
Principal
Prananath College (Autonomous)
Khordha



Engineering in Industry, vol. 7, no. 1, 2011

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SCHOOL OF APPLIED SCIENCES

RELIEVE ORDER

Ref: KIIT DOTSAC/Chem-08/2019

Date: 30/4/19

To
The Principal
P.N.College (A), Khordha

This is to certify that **Sri Priyabrata Mohanty** an employee of your institute and research scholar in the rolls of Department of Chemistry of School Of Applied sciences, bearing **Roll no. 1281102** and **Registration no. 12405726200** has completed his research programme duration at our institute i.e from 1st Nov 2017 to April 30, 2019. Hence he is relieved with immediate effect from **30th April 2019 AN**.

This certificate is issued to the research scholar to enable him to resume his duties at the parent institute.

[Signature]
30/4/19
(Dr. T. K. Bastia)
Supervisor
Dr. T. K. Bastia
Asso. Professor
KIIT, Deemed to be University

[Signature]
30/4/19
Coordinator
Dr. P. Raha
Co-ordinator Chemistry
School of Applied Sciences
Kalinga Institute of Industrial Technology, Bhubaneswar
Deemed to be University, Bhubaneswar-751024

[Signature]
1-7-2019
Principal
Prananath College (Autonomous)
Khordha





Office of the Principal
PRANANATH COLLEGE (AUTONOMOUS)

KHORDHA - 752057 (ODISHA)

NAAC Accredited 'A' Level

Email: pranathcollege@yahoo.in / pranathautonomouscollege@gmail.com

No. 671(1)

Date: 01.05.2019

In pursuance of the Letter No. KIIT DU SAS/CHEM-08/2019 dt. 30.04.2019 of K.I.I.T., Deemed to be University, Bhubaneswar, Mr. Priyabrata Mohanty, Lecturer in Chemistry is allowed to join in his duty on 01.05.2019 (F.N) after completion of his study leave (state) duration i.e. from 1st Nov 2017 to April 30, 2019.

[Signature]
Principal
Pranath College (Autonomous), Khordha
Pr

Memo No. 671(2) Date 01.05.2019

Copy forwarded to:-

1. The Director of Higher Education, Odisha, Bhubaneswar. Dy Director, NDC-II, Directorate of Higher Education, Odisha, Bhubaneswar. Asst. Director (DP), Directorate of Higher Education, Odisha, Bhubaneswar for information and necessary action.
2. The Regional Director Education, Bhubaneswar for information and necessary action.
3. The Treasury Officer, Khordha for information and necessary action.
4. The Sub-Collector, Khordha for information and necessary action.
5. The Co-ordinator, Chemistry School of Applied Sciences, KIIT, HBSE for information and necessary action.
6. The H.O.D., Chemistry for information.
7. The A.B(Gen) A.B(Estt) Acct Burs Controller of Examinations -2 Exam Sec. H.C. Library for information.
8. Mr. Priyabrata Mohanty, Lecturer in Chemistry for information.
9. Personal File for record.

[Signature]
1.7.21
Principal
Pranath College (Autonomous)
Khordha
Pr

[Signature]
Principal
Pranath College (Autonomous), Khordha
Pr



GOVERNMENT OF ODISHA
HIGHER EDUCATION DEPARTMENT

File NO. HE-NCET 1-MISC-0285-2022/

10337

/HE., dated: 09/3/23

From

Dilip Kumar Sahoo,
Deputy Secretary to Government

To

The Principal,
P.N. (Auto) College, Khurda

Sub: Grant of Study Leave in favour of Sri Santosh Kumar Behera,
Lecturer in Chemistry of P.N. (Auto) College, Khurda for Pre-Ph.D. Course
in Chemistry at Ravenshaw University, Odisha

Madam/Sir,

In inviting a reference to the above noted subject, I am directed to request that the authenticated copy of the following documents may be furnished to this Department within 7days for consideration of the case of Sri Santosh Kumar Behera, Lecturer in Chemistry for grant of study leave in his favour to pursue Ph.D. course in Chemistry at Ravenshaw University, Odisha.

1. First page of Service Book of Sri Santosh Kumar Behera, Lecturer in Chemistry.
2. Copy of the resolution of G.B. towards grant of study leave.
3. Proforma for grant of study leave.
4. Execution of a bond in the form prescribed as per the Finance Department's Circular No. 6874(45)/F., dated: 20.02.1996
5. Sanctioned Strength, Man-in-Position and vacancy position in the Chemistry Department of the College.

Yours faithfully

Memo No. 10338
Copy forwarded to the President, G.B., P.N. (Auto) College, Khurda /
Sri Santosh Kumar Behera, Lecturer in Chemistry of P.N. (Auto) College,
Khurda for information and necessary action.



Deputy Secretary to Government

GOVERNMENT OF ODISHA
HIGHER EDUCATION DEPARTMENT

File No. HE-NCET 1-MISC-0285-2022/ 10335 /HE., dated : 09/3/2023
From

Dilip Kumar Sahoo,
Deputy Secretary to Government

To

**The President, Governing Body,
P.N. (Auto) College, Khurda**

Sub: No Objection Certificate in favour of Sri Santosh Kumar Behera, Lecturer in Chemistry of P.N. (Auto) College, Khurda for Pre-Ph.D. Course in Chemistry at Ravenshaw University, Odisha

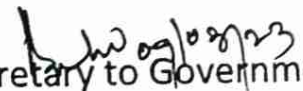
Sir,

In inviting a reference to the above noted subject, I am directed to say that Sri Santosh Kumar Behera, Lecturer in Chemistry of P.N. (Auto) College, Khurda is hereby allowed for Pre-Ph.D. Course in Chemistry at Ravenshaw University, Odisha for the period of Six Months i.e. from 07.12.2022 to 06.05.2023 on the following conditions.


1. No substitute teacher will be provided by the Department.
2. The academic session of the college shall not be hampered by any means.

The Governing Body of the college, being the competent appointing authority of the employee concerned is requested to consider NOC in favour of Sri Santosh Kumar Behera in order to enable him to pursue Pre-Ph.D. Course in Chemistry at Ravenshaw University, Odisha.

Yours faithfully



Deputy Secretary to Government

Memo No. 10336


1.7.24
Principal
Pranath College (Autonomous)
Khurda

Date 09/3/2023

Copy forwarded to the Principal, P.N. (Auto) College, Khurda / Sri Santosh Kumar Behera, Lecturer in Chemistry of P.N. (Auto) College, Khurda for information and necessary action.


Deputy Secretary to Government





Office of the Principal

PRANANATH COLLEGE AUTONOMOUS

KHORDHA - 752 057 (ODISHA)

NAAC Accredited 'A' Level

Email: pranathcollege@yahoo/Pranathautonomouscollege@gmail.com

Ref. No- 618

Date- 24/03/2023

To

The Deputy Secretary to Government,
Department of Higher Education,
The Lok Seva Bhawan, Sachivalaya Marg, Unit-2
Odisha, Bhubaneswar-751001.

Sub-

Approval of Study Leave in favour of Mr. Santosh Kumar Behera, Lecturer in Chemistry, Pranath College Autonomous, Khordha.

Ref-

Your Office Letter No-HE-NCET 1-MISC-0285-2022/ 10337/HE dated 09.03.2023.

Sir,

With reference to your office Letter No. & date mentioned above, I am to submit herewith the authenticated copy of the following documents for consideration of the case of Sri Santosh Kumar Behera, Lecturer in Chemistry for grant of study leave for six months to pursue Ph.D. Course in Chemistry at Ravenshaw University, Cuttack.

This is for your kind information and necessary action.

With regards,

Yours faithfully,

[Signature]
24/03/2023

Principal

Pranath College (Autonomous), Khordha

(Autonomous)
KHORDHA

[Handwritten]
24/3/23

Principal
Pranath College (Autonomous)
Khordha

1. Attached photos copy of First page of S.B. of Sri Santosh Ku. Behera
2. Attached Photo Copy of the approval of the President, O.S dated 09.12.2022.
3. Proforma for grant of Study Leave.
4. Execution of a Bond.
5. Govt. order as per P.D. Modification No-38448/P, dated 29.07.1980 in item No-4 (a) & 4 (C)
6. Sanctional strength, Man-in-charge & vacancy Position of Chem. Deptt.
7. No objection Certificate.

