

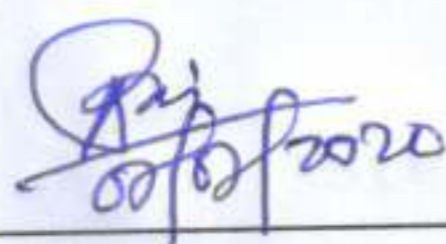
JHARGRAM RAJ COLLEGE, JHARGRAM
DEPARTMENT OF CHEMISTRY (UG & PG)
JHARGRAM 721507, PASCHIM MEDINIPUR

DR. PRADIPTA GHOSH, ASSISTANT PROFESSOR (W. B. E. S.)

Certificate from the Supervisor

I hereby forward the project report entitled "Molecular Dissociation Profiles: A Quantum Mechanical Study Using the Many-body Methods-II" by Mr. Sourav Nandi (Roll No. PG/17/CEM-IVS-007, Registration No. 061860 of 2015-2016), in partial fulfillment of the requirements for the degree of Master of Science in Chemistry (Semester-IV) of the Vidyasagar University. I certify that the project work has been carried out by Mr. Nandi under my supervision at the Department of Chemistry, Jhargram Raj College, Jhargram during the semester starting from January 2020 – July 2020.

Dated: Jhargram, July 07 2020



(ANSUMAN BEJ)
Head, Department of Chemistry
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P. O. Jhargram, 721507

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Govt. of West Bengal
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(PRADIPTA GHOSH)
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Department of Chemistry (UG & PG)
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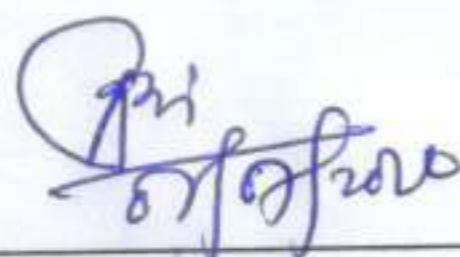
JHARGRAM RAJ COLLEGE, JHARGRAM
DEPARTMENT OF CHEMISTRY (UG & PG)
JHARGRAM 721507, PASCHIM MEDINIPUR

DR. PRADIPTA GHOSH, ASSISTANT PROFESSOR (W. B. E. S.)

Certificate from the Supervisor

I hereby forward the project report entitled "Applications of Coupled Differential Equations in Chemistry: Simple Models for Chemical and Biological Systems – II" by Mr. Gurupada Barik (Roll No. PG/17/CEM-IVS-018, Registration No. 361305 of 2014-2015), in partial fulfillment of the requirements for the degree of Master of Science in Chemistry (Semester-IV) of the Vidyasagar University. I certify that the project work has been carried out by Mr. Barik under my supervision at the Department of Chemistry, Jhargram Raj College, Jhargram during the semester starting from January 2020 – July 2020.

Dated: Jhargram, July 07 2020



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Assistant Professor (W.B.E.S.)
Department of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal



Jhargram Raj College, Jhargram
Department of Chemistry (UG & PG)

Certificate from the Supervisor

I hereby forward the project report entitled "A Review of the Wave Function Based Electronic Structure Methods" by Mr. Tarpan Maiti (Roll: PG/VUJGG21/CEM-IIIS No. 002, Registration No. 1160716 of 2016-2017), in partial fulfillment of the requirements for the degree of Master of Science in Chemistry (Semester-III) of the Vidyasagar University. I certify that the project work has been carried out by Mr. Maiti under my supervision at the Department of Chemistry (UG & PG), Jhargram Raj College, Jhargram during the semester starting from September 2020 – March 2021.

Dated: Jhargram, 27/03/2021

Pradipta Ghosh 27/03/21

Dr. Pradipta Ghosh
Assistant Professor (WBES)
Department of Chemistry (UG & PG)
Jhargram Raj College, Jhargram

Assistant Professor (W.B.E.S.)
Department of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal

Dr. Ansuman Bej

(Dr. Ansuman Bej)
Assistant Professor (WBES) & Head
Department of Chemistry (UG & PG)
Jhargram Raj College, Jhargram

Head
Deptt. of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal
Jhargram 721507



Jhargram Raj College, Jhargram
Department of Chemistry (UG & PG)

Certificate from the Supervisor

I hereby forward the project report entitled "A Review of the Density Based Electronic Structure Methods" by Mr. Soumalya Ash (Roll: PG/VUJGG21/CEM-IIIS No. 005, Registration No. 161291 of 2015-2016), in partial fulfillment of the requirements for the degree of Master of Science in Chemistry (Semester-III) of the Vidyasagar University. I certify that the project work has been carried out by Mr. Ash under my supervision at the Department of Chemistry (UG & PG), Jhargram Raj College, Jhargram during the semester starting from September 2020 - March 2021.

Dated: Jhargram, 27/03/2021

Pradipta Ghosh 27/03/21
Dr. Pradipta Ghosh

Assistant Professor (WBES)
Department of Chemistry (UG & PG)
Jhargram Raj College, Jhargram

Assistant Professor (W.B.E.S.)
Department of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal

Bej
28/03/21
(Dr. Ansuman Bej)
Assistant Professor (WBES) & Head
Department of Chemistry (UG & PG)
Jhargram Raj College, Jhargram

Head
Deptt. of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal
Jhargram 721507



Jhargram Raj College, Jhargram
Department of Chemistry (UG & PG)

Certificate from the Supervisor

I hereby forward the project report entitled "A Review on the Applications of Differential Equations to Explore Problems in Chemistry" by Mr. Sisir Ghorai (Roll: PG/VUJGG21/CEM-IIIS No. 017, Registration No. 400858 of 2015-2016), in partial fulfillment of the requirements for the degree of Master of Science in Chemistry (Semester-III) of the Vidyasagar University. I certify that the project work has been carried out by Mr. Ghorai under my supervision at the Department of Chemistry (UG & PG), Jhargram Raj College, Jhargram during the semester starting from September 2020 – March 2021.

Dated: Jhargram, 27/03/2021

Pradipta Ghosh 27/03/21
Dr. Pradipta Ghosh

Assistant Professor (WBES)
Department of Chemistry (UG & PG)
Jhargram Raj College, Jhargram

Assistant Professor (W.B.E.S.)
Department of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal

As
27/03/21

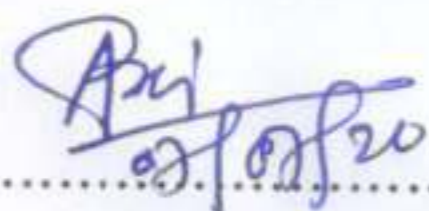
(Dr. Ansuman Bej)
Assistant Professor (WBES) & Head
Department of Chemistry (UG & PG)
Jhargram Raj College, Jhargram

Head
Deptt. of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal
Jhargram 721507

To whom it may concern

This is certify that **SOVAN DOLAI** Roll- **PG/17/CEM-IVS No-006** a student of M.Sc. Part -II Sem-IV in chemistry has completed the project work entitled "**Synthesis of Coumarin Derivative Based on 1,1'- Binaphthyl -2,2'Diol(Binol)**" under my super vision and guidance for the partial full ailment for the award of degree of Master of Science in Chemistry from Jhargram Raj College under VIDYASAGAR UNIVERSITY.

I wish his success in life



.....
HEAD

Department of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal

Head
Deptt. of Chemistry (UG & PG)
Jhargram Raj College
Govtt. of West Bengal
Jhargram 721507

Susovan Mandal 7/7/2020

.....
Dr. SUSOVAN MANDAL
Department of Chemistry
Jhargram Raj College

Assistant Professor (W.B.E.S.)
Department of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal



सत्यमेव जयते

GOVERNMENT OF WEST BENGAL

DEPARTMENT OF CHEMISTRY

JHARGRAM RAJ COLLEGE

JHARGRAM

DATE: 07/07/2020

CERTIFICATE

This is to certify that Susmita Bag of 4th sem. Chemistry (Inorganic special) of this department has carried out the project work entitled "**COUMARIN-BASED CHEMOSENSOR FOR DETECTION OF Fe(III)**" for partial fulfilment of the M. Sc. 4th sem. of Jhargram Raj College, Jhargram, under my direct supervision.

Tarun Mistri, 07/07/20.

.....
Dr. Tarun Mistri
(Project Supervisor)
Department of Chemistry
Jhargram Raj College
Jhargram
Assistant Professor (W.B.E.S.)
Department of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal

By
07/07/20
Head
Dept. of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal
Jhargram 721507

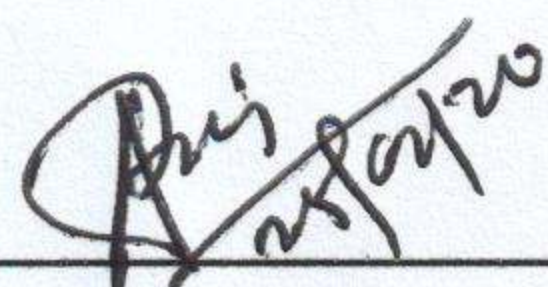
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DEPARTMENT OF CHEMISTRY (UG & PG)
JHARGRAM 721507, PASCHIM MEDINIPUR

DR. PRADIPTA GHOSH, ASSISTANT PROFESSOR (W. B. E. S.)

Certificate from the Supervisor

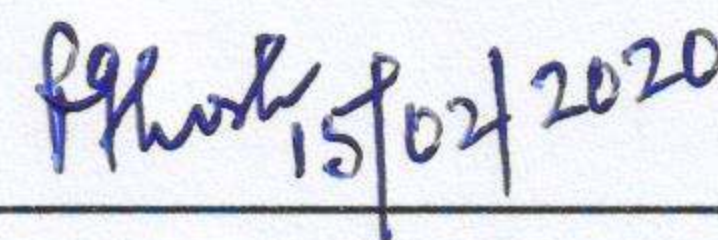
I hereby forward the project report entitled "Applications of Coupled Differential Equations in Chemistry: Simple Models for Chemical and Biological Systems – I" by Mr. Gurupada Barik (Roll No. PG/17/CEM-IIIS-018, Registration No. 361305 of 2014-2015), in partial fulfillment of the requirements for the degree of Master of Science in Chemistry (Semester-III) of the Vidyasagar University. I certify that the project work has been carried out by Mr. Barik under my supervision at the Department of Chemistry, Jhargram Raj College, Jhargram during the semester starting from June 2019 – December 2019.

Dated: Jhargram, February 15 2020



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Head, Department of Chemistry
Jhargram Raj College, Jhargram
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Jhargram 721507



(PRADIPTA GHOSH)
Assistant Professor (W.B.E.S.)
Department of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal

EXAMINED
Jhargram Raj College Centre
Deptt. of Chemistry (UG & PG)
M.Sc, Sem / II / III / IV

Date of Examination. *26/02/2020*
Signature of Examiner. *[Handwritten Signature]*

CERTIFICATE OF WORK

Certified that the project work entitled "Method of successive Approximation and its application in Chemistry" submitted by Pratima Mandal(Roll No. PG/17/CEM-IIIS-001, Registration No. 100945 of 2015-2016), in partial fulfillment of the requirements for the degree of Master of Science in Chemistry (Semester -III) of the Vidyasagar University. I certify that the project work has been carried out by Pratima Mandal under my supervision at the Department of Chemistry ,Jhargram Raj College ,Jhargram during the semester starting from June 2019-Dec 2019.

WBM
26/02/2020

(Signature and seal of the Supervisor)

Name of the supervisor :Dr.NabakumarBera

Assistant Professor (W.B.E.S.)
Department of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal

Asul
25/02/20
(Ansuman Bej)

Head of the Department of Chemistry

Jhargram Raj College,Jhargram

P.O- Jhargram ,721507

Assistant Professor (W.B.E.S.)
Department of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal

EXAMINED

Jhargram Raj College Centre
Deptt. of Chemistry (UG & PG)
M.Sc, Sem / II / III / IV

Date of Examination.. 26/02/2020

Signature of Examiner.. *[Signature]*

CERTIFICATE OF WORK

Certified that the project work entitled "Finite Size effect on classical gas with attractive nonideality : Thermodynamic properties and Thermosize effects " submitted by Sayani Pradhan (Roll No. PG/17/CEM-IIIS-003, Registration No. 100980 of 2015-2016), in partial fulfillment of the requirements for the degree of Master of Science in Chemistry (Semester -III) of the Vidyasagar University. I certify that the project work has been carried out by Sayani Pradhan under my supervision at the Department of Chemistry ,Jhargram Raj College ,Jhargram during the semester starting from June 2019-Dec 2019.

NBK
26/02/2020

(Signature and seal of the Supervisor)

Name of the supervisor :Dr.NabakumarBera

Assistant Professor (W.B.E.S.)
Department of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal

Ansuman Bej
(Ansuman Bej)

Head of the Department of Chemistry

Jhargram Raj College, Jhargram

P.O- Jhargram ,721507

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Jhargram Raj College
Govt. of West Bengal

EXAMINED

Jhargram Raj College Centre
Deptt. of Chemistry (UG & PG)
M.Sc, Sem / II / III / IV

Date of Examination... *26/02/2020*

Signature of Examiner... *[Signature]*

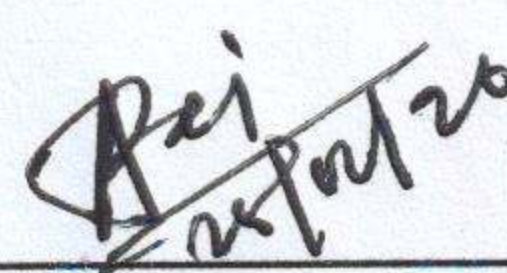
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JHARGRAM 721507, PASCHIM MEDINIPUR

DR. PRADIPTA GHOSH, ASSISTANT PROFESSOR (W. B. E. S.)

Certificate from the Supervisor

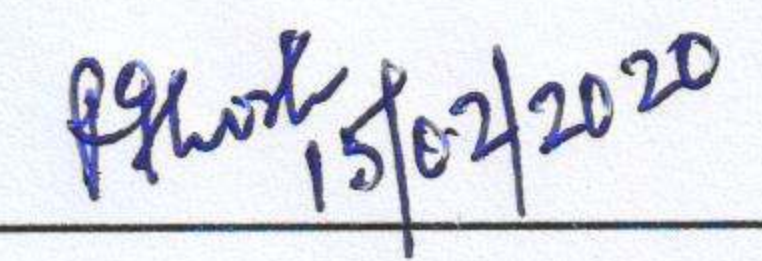
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Dated: Jhargram, February 15 2020



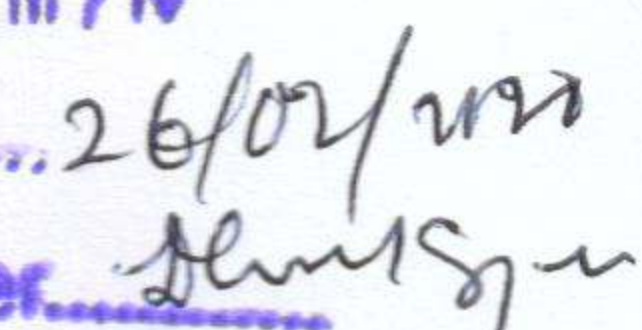
(ANSUMAN BEJ)
Head, Department of Chemistry
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P. O. Jhargram, 721507

Head
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Govt. of West Bengal
Jhargram 721507



(PRADIPTA GHOSH)
Assistant Professor (W.B.E.S.)
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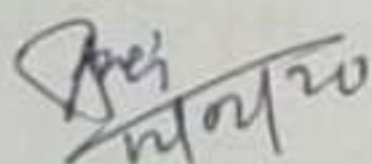
EXAMINED
Jhargram Raj College Centre
Deptt. of Chemistry (UG & PG)
M.Sc, Sem II / III / IV

Date of Examination... 26/02/2020
Signature of Examiner... 

To whom it may concern

This is certify that **SRIPARNA CHATTERJEE** Roll-**PG/17/CEM-IIIS No-013** a student of M.Sc. Part-II in chemistry has completed the project work entitled "**Synthesis of Coumarin Derivative Based on 1,1'-Binaphthyl-2,2'-Diol (BINOL) Scaffold**" under my supervision and guidance for the partial fulfillment for the award of degree of Master of Science in Chemistry from Jhargram Raj College affiliated to VIDYASAGAR UNIVERSITY.

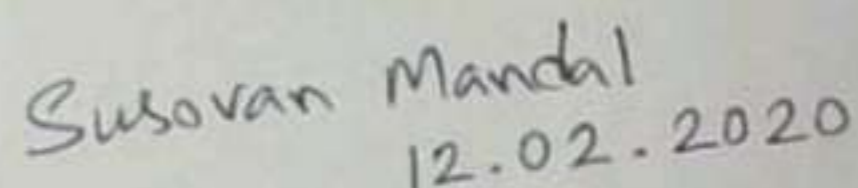
I wish all success in her life.



HEAD

Department of Chemistry(UG & PG)
Jhargram Raj College
Govt. of West Bengal

Head
Deptt. of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal
Jhargram 721507



Dr. Susovan Mandal
Department of Chemistry
Jhargram Raj College
Assistant Professor (M.B.E.S.)
Department of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal

To whom it may concern

This is certify that **SRIPARNA CHARTTERJEE** Roll-**PG/17/CEM-IVS No-013** a student of M.Sc. Part –II Sem-IV, in chemistry has completed the project work entitled “**Synthesis of Coumarin Derivative Based on 1,1'- Binaphthyl -2,2'Diol(Binol)**” under my super vision and guidance for the partial full ailment for the award of degree of Master of Science in Chemistry from Jhargram Raj College under VIDYASAGAR UNIVERSITY.

I wish his success in life

ABJ
7/7/2020

.....
HEAD

Department of Chemistry (UG & PG)
Jhargram Raj College
Govt. of West Bengal

Head
Deptt. of Chemistry (UG & PG)
Jhargram Raj College
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Jhargram 721507

Susovan Mandal 7/7/2020

.....
Dr. Susovan Mandal
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Assistant Professor (W.B.E.S.)
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Govt. of West Bengal