



NO.F.TU/Dean(Science)/BFS/10/16

Dated: 23<sup>rd</sup> January, 2018

**Proceedings of the 4<sup>th</sup> meeting of 2<sup>nd</sup> Board of Studies of Faculty of Science (BFS) (7<sup>th</sup> meeting of BFS of Science) held on 11<sup>th</sup> January, 2018 at 1.30 P.M. in the Council Hall, Tripura University.**

**Members Present:**

1. Professor Anjan Mukherjee, Pro-Vice Chancellor, Tripura University.
2. Professor Barin Kumar De, Department of Physics, Tripura University
3. Professor D. Bhattacharjee, Department of Physics, Tripura University
4. Dr. S. Chattopadhyaya, Department of Physics, Tripura University
5. Professor B. C. Tripathy, Department of Mathematics, Tripura University
6. Dr. N. Das (Pan), Department of Geography & Disaster Management, Tripura University
7. Ms. Mousami Debbarma, Department of Geography & Disaster Management, Tripura University
8. Dr. Sabyasachi Das Gupta, Department of Forestry & Biodiversity, Tripura University
9. Dr. Thiru Selvan, Department of Forestry & Biodiversity, Tripura University
10. Dr. Kuntal Manna, Department of Pharmacy, Tripura University
11. Dr. Souvik Bhattacharjee, Department of Mathematics, Tripura University
12. Prof. S.K. Sil, Department of Human Physiology, Tripura University
13. Dr. Debasish Maiti, Department of Human Physiology, Tripura University
14. Dr. Sudipta Pal, Department of Human Physiology, Tripura University
15. Ms. Champa Nandi, Department of Electrical Engineering, Tripura University
16. Ms. Sangita Das Biswas, Department of Electrical Engineering, Tripura University.
17. Dr. Surajit Bhattacharjee, Department of Molecular Biology & Bioinformatics, Tripura University
18. Dr. Bipin Kumar Sharma, Department of Microbiology, Tripura University
19. Professor S. Banik, Department of Zoology, Tripura University.
20. Professor B.K. Datta, Department of Botany, Tripura University.
21. Professor S. Sinha, Department of Botany, Tripura University.
22. Professor A.K. Saha, Department of Botany, Tripura University.
23. Professor R.K. Sinha, Department of Botany, Tripura University.
24. Dr. Surochita Basu, Department of Botany, Tripura University.
25. Dr. R.K. Mahapatra, Department of Library and Information Science, Tripura University.
26. Professor S.N. Karmakar, Department of ECE & CSE, Tripura University.
27. Professor Ashis Nath, Department of Economics, Tripura University.
28. Dr. Alok Satpathy, Department of Physics, BBM College, Agartala.

At the outset, Professor M.K. Singh, Dean, Faculty of Science and Chairman of the Board of Faculty of Studies of Science welcomed all the members to the 4<sup>th</sup> meeting of the 2<sup>nd</sup> BFS (7<sup>th</sup> Meeting of BFS Science) and thereafter he initiated the discussion on the agenda as follows:

**Agendum – 1/07/17: To confirm the proceedings of 3<sup>rd</sup> meeting of 2<sup>nd</sup> (BFS of Science) (6<sup>th</sup> meeting of BFS of Science) dated 16.05.2017.**

**Resolution: Proceedings of the 3<sup>rd</sup> meeting of 2<sup>nd</sup> (BFS of Science) (6<sup>th</sup> meeting of BFS of Science) dated 16.05.2017 were readout and confirmed.**

**Agendum – 2/07/17: To report the action taken on the proceedings of 6<sup>th</sup> meeting of the BFS of Science held on 16.05.2017.**

Resolution: Reported.

**Agendum – 3/07/17: To consider the names of students to be enrolled for Ph.D. registration in various science subjects under respective supervisors:**

Resolution: The names of following (05 no.) students were accepted and recommended to Academic Council for Ph.D. registration:

Sl. No	Name of the Scholar (Category)	Department (Ph.D. Mode)	Title of Ph. D. Thesis	Supervisor	Date of Registration (Ph.D. Rule)
1.	Sudip Sukla Baidya (SC)	Physics (Full time)	Investigations of Polydiacetylenes Assembled onto Langmuir and Langmuir-Blodgett Films.	Dr. S.A. Hussain, T.U.	18.10.2017 (2016)
2.	Babli Debnath (OBC)	Physics (Full time)	Sensing, Degradation and Removal of Different Toxic Chemicals from Water, Using the Optical Properties of Chemically Synthesized Silver and Gold Nanoparticles.	Dr. Ratan Das, T.U.	18.10.2017 (2016)
3.	Simi Debnath (OBC)	Physics (Full time)	Synthesis of a Few Magnetic and Non Magnetic Metal Doped Spinel Ferrite Nanocrystals by Chemical Method for the study of their Structural, Elastic, Optical Electrical and Magnetic Properties Along with their Suitable Applications.	Dr. Ratan Das, T.U.	18.10.2017 (2016)
4.	Pranab Jyoti Dowari (OBC)	Mathematics (Full time)	Lacunary Convergence of Complex Uncertain Variables.	Prof. B.C. Tripathy, T.U.	04.12.2017 (2016)
5.	Bibek Majumder (UR)	Mathematics (Full time)	A Study on Face Recognition Using Various Scale, Rotation and Shift Invariant Transformations.	Dr. S. Bhattacharya (Halder), T.U.	04.12.2017 (2016)

**Agendum – 4/07/17 (a): To report the names of outside experts involved for Pre-Ph.D. public seminar of following research candidates under the Faculty of Science, T.U :**

Resolution: The names of outside experts involved in Pre-Ph.D. Public Seminar of the following(19 no.) candidates were reported, accepted and recommended to Academic Council for necessary action.

Sl. No	Name of the Scholar	Department	Title of Ph. D. Thesis	Supervisor	Remarks
1.	Pintu Debnath	Physics	Study of Molecular Aggregates of Cyanine Dyes in Ultra- Thin Films.	Dr. S. A. Hussain, T.U.	Expert List was placed in file.
2.	Rahul Bhattacharjee	Physics	Theoretical studies of the electronic structure and different properties of some compounds and alloys employing Density Functional Theory.	Dr. S. Chattopadhyaya, T.U.	-do-
3.	Soma Banik	Physics	Adsorption of water soluble Ionic Molecules into the Template Langmuir Monolayer at the Air- water Interface and in Ultra Thin Films.	Prof. D. Bhattacharjee, T.U.	-do-



4.	Kanu Shil	Human Physiology	Alteration in Carbohydrate, Protein and Fat Metabolism in Liver, Kidney, Muscle and Brain Following Sub-Acute Chromium Exposure.	Dr. Sudipta Pal, T.U.	-do-
5.	Somprakash Dhar	Geography & D.M.	Geopolitical Scenario of Tripura: An Analytical Study on State, People and Developmental Policies.	Dr. S. Mitra, T.U.	-do-
6.	Krishna Talapatra	Botany	Study of root fungal endophytes in selected invasive plants of Tripura, Northeast India.	Dr. Panna Das, T.U.	-do-
7.	Manas Chandra Das	Molecular Biology & Bioinformatics	Exploration of the Effect of Synthetic Aminoximidofurazan Derivatives and Flavone Group of Natural Compounds on Biofilm Formation by <i>Pseudomonas aeruginosa</i> and <i>Staphylococcus aureus</i> Including Host Immune-modulation.	Dr. S. Bhattacharjee, T.U.	-do-
8.	Anta Das	Molecular Biology & Bioinformatics	Exploration of Antileishmanial Immunotherapeutic Potentiality of <i>Sterculia villosa</i> Roxb.	Dr. S. Bhattacharjee, T.U.	-do-
9.	Rajib Lal Debbarma	Geography & Disaster Management.	Evolution and Characteristics of Rural Settlements in South Tripura District, Tripura.	Dr. S. Mitra, T.U.	-do-
10.	Abhijit Santra	Geography & Disaster Management.	Changing Land Use Pattern of the Agartala City, Tripura: A Geographical Perspective.	Dr. S. Mitra, T.U.	-do-
11.	Debjani Rakshit	Mathematics	Studies on I- Statistically Convergent Sequences.	Dr. Shyamal Debnath, T.U.	-do-
12.	Joyeeta Dey	Botany	Nitrogen Fixing Efficiency of The Leguminous Weed Plants Found in Tripura: Certain Studies on Carbon and Nitrogen Metabolites of The Plants and Assessment of Soil Fertility.	Pror. R.K. Sinha, T.U (Supervisor) and Prof. Aloke Bhattacharjee, University of Burdwan (Co-Supervisor).	-do-
13.	Atithi Debnath	Botany	Mycorrhizal association and its efficacy on growth of selected ethnobotanical plants of Tripura.	Dr. Panna Das, T.U.	-do-
14.	Pritha Das	Human Physiology	Studies on Metabolic Homeostasis in mice following sub- acute lead.	Dr. Sudipta Pal, T.U.	-do-
15.	Purnajita Sen	Human Physiology	Studies on Cardiovascular and metabolic Risk Profile in Post Menopausal Ethnic Women of Tripura.	Dr. Dipayan Choudhuri, T.U.	-do-
16.	Jhinuk Basu Mullick	Human Physiology	Incidence of Sexually Transmitted Infections (STIs) in Hospital Patients of Tripura and Evaluation of Selected STI Related Antibacterial Activity of <i>Parkia javanica</i> and <i>Evolvulus nummularius</i> with Reference to their Role in Cellular Immune Responses in Vitro.	Prof. S.K. Sil, T.U.	-do-
17.	Dhirendra Nath Das	Geography & D.M.	Livelihood of Rural Poor Under the Swarnajayanti Gram Swarozgar Yojana in West Tripura District, Tripura: A Case Study.	Dr. S. Mitra, T.U.	-do-

18.	Jatan Debnath	Geography & D.M.	A Geo-Environmental Study on Land Use/ Land Cover Change in The Muhuri River Basin, Tripura, North-East India.	Dr. N. Das(Pan), T.U.	-do-
19.	Sima Majumdar	Geography & D.M.	Changes of Drainage Systems and their Impact on Landuse between Baramura and atharamura Hill Ranges, Tripura.	Dr. N. Das(Pan), T.U.	-do-

**Agendum-4/07/17(b): To consider and recommend the names of outside experts for holding Ph.D. public seminar of research candidates under the Faculty of Science, T.U. :**

Resolution: Agendum withdrawn as no any proposal from any department was received.

**Agendum – 5/07/17(a): To report the names of adjudicators who evaluated Ph.D. thesis.**

Resolution: The name of adjudicators who evaluated PhD thesis of the following (08 no.) candidates were reported, accepted and recommended to Academic Council for necessary action.

Sl. No	Name of the Scholar	Department	Title of Ph. D. Thesis	Supervisor	Remark
1.	Aparajita Roy	Botany	Studies on nutritional status, antioxidant and antimicrobial properties of some wild edible mushrooms of Tripura.	Dr. A.K. Saha, T.U.	List of adjudicators was placed in file.
2.	Subhajit Sen	Geography & Disaster Management	Geomorphic Processes Leading to the Present-Day Landform Features with Particular Reference to Tilla-Lunga Topography and their Impact on the Habitats in the west District of Tripura.	Dr. Saptarshi Mitra, T.U. (Supervisor) & Prof. S.K. De, NEHU, Co-Supervisor,	-do-
3.	Sandeep Roy Sarkar	Human Physiology	Somatotype and Nutritional Status of the Tripuri Tribal and the Bengali Adolescent Boys (Age 8-16 years) of Tripura with Reference to their Physical Growth.	Dr. S. K. Sil, T.U (Supervisor) & Dr. Parasmani Dasgupta, Biological Anthropology Unit, Indian Statistical Institute, Kolkata (Co-Supervisor)	-do-
4.	Sadhan Sarkar	Mathematics	Similarity Measure of Generalized Fuzzy Soft Sets and Their Applications.	Prof. Anjan Mukherjee, T.U.	-do-
5.	Prashanjit Laskar	Zoology	Modulatory role of melatonin in immune-endocrine regulation of thyroid function in mice.	Dr. S. S. Singh, T.U.	-do-
6.	Prasenjit Bal	Mathematics	Some Topological Properties with Selection Principles and Star Covering.	Dr. S. Bhowmik, T.U.	-do-
7.	Moumita Saha	Botany	Reproductive Biology of some <i>Solanum</i> Species.	Prof. B.K. Datta, T.U.	-do-
8.	Sushanta Deb	Molecular Biology & Bioinformatics	Evolution of codon usage bias in bacterial genomes.	Dr. Surajit Basak, T.U.	-do-



**Agendum – 5/07/17 (b): To consider and recommend the list of names of adjudicators for evaluation of Ph.D. thesis to the Academic Council for the different subjects under Science Faculty of Tripura University.**

**Resolution:** The name of adjudicators for evaluation of Ph.D. thesis of the following (13 no.) candidates were reported, accepted and recommended to Academic Council for necessary action.

Sl. No	Name of the Scholar	Department	Title of Ph. D. Thesis	Supervisor	Remarks
1.	Manas Chandra Das	Molecular Biology & Bioinformatics	Exploration of the Effect of Synthetic Aminoximidofurazan Derivatives and Flavone Group of Natural Compounds on Biofilm Formation by <i>Pseudomonas aeruginosa</i> and <i>Staphylococcus aureus</i> Including Host Immune-modulation.	Dr. S. Bhattacharjee, T.U.	List of adjudicators was placed in file.
2.	Antu Das	Molecular Biology & Bioinformatics	Exploration of Antileishmanial Immunotherapeutic Potentiality of <i>Sterculia Villosa</i> Roxb.	Dr. S. Bhattacharjee, T.U.	-do-
3.	Rajib Lal Debbarma	Geography & Disaster Management.	Evolution and Characteristics of Rural Settlements in South Tripura District, Tripura.	Dr. S. Mitra, T.U.	-do-
4.	Abhijit Santra	Geography & Disaster Management.	Changing Land Use Pattern of the Agartala City, Tripura: A Geographical Perspective.	Dr. S. Mitra, T.U.	-do-
5.	Debjani Rakshit	Mathematics	Studies on I- Statistically Convergent Sequences.	Dr. Shyamal Debnath, T.U.	-do-
6.	Joyeeta Dey	Botany	Nitrogen Fixing Efficiency of The Leguminous Weed Plants Found in Tripura: Certain Studies on Carbon and Nitrogen Metabolites of The Plants and Assessment of Soil Fertility.	Prof. R.K. Sinha, T.U (Supervisor) and Prof. Alope Bhattacharjee, University of Burdwan (Co-Supervisor).	-do-
7.	Atithi Debnath	Botany	Mycorrhizal association and its efficacy on growth of selected ethnobotanical plants of Tripura.	Dr. Panna Das, T.U.	-do-
8.	Pritha Das	Human Physiology	Studies on Metabolic Homeostasis in mice following sub- acute lead.	Dr. Sudipta Pal, T.U.	-do-
9.	Purnajita Sen	Human Physiology	Studies on Cardiovascular and metabolic Risk Profile in Post Menopausal Ethnic Women of Tripura.	Dr. Dipayan Choudhuri, T.U.	-do-
10.	Jhinuk Basu Mullick	Human Physiology	Incidence of Sexually Transmitted Infections (STIs) in Hospital Patients of Tripura and Evaluation of Selected STI Related	Prof. S.K. Sil, T.U.	-do-
			Antibacterial Activity of <i>Parkia Javanica</i> and <i>Evolvulus Nummularius</i> with Reference to their Role in Cellular Immune Responses in Vitro.		

11.	Dhirendra Nath Das	Geography & Disaster Management.	Livelihood of Rural Poor Under the Swarnajayanti Gram Swarozgar Yojana in West Tripura District, Tripura: A Case Study.	Dr. S. Mitra, T.U.	-do-
12.	Jatan Debnath	Geography & Disaster Management.	A Geo-Environmental Study on Land Use/ Land Cover Change in The Muhuri River Basin, Tripura, North-East India.	Dr. N. Das(Pan), T.U.	-do-
13.	Sima Majumdar	Geography & Disaster Management.	Changes of Drainage Systems and their Impact on Landuse between Baramura and atharamura Hill Ranges, Tripura.	Dr. N. Das(Pan), T.U.	-do-

**Agendum – 6/07/17 (a) (i): To report the names of candidates who have been provisionally awarded Ph.D. Degree.**

Resolution: Reported that the following eight candidates were awarded provisional Ph.D. Degree. It was accepted and recommended to Academic Council for approval.

Sl. No	Name of the Scholar	Department	Title of Ph. D. Thesis	Supervisor	Date of Award
1.	Aparajita Roy	Botany	Studies on nutritional status, antioxidant and antimicrobial properties of some wild edible mushrooms of Tripura.	Dr. A.K. Saha, T.U.	04.09.2017
2.	Subhajit Sen	Geography & Disaster Management	Geomorphic Processes Leading to the Present-Day Landform Features with Particular Reference to Tilla-Lunga Topography and their Impact on the Habitats in the west District of Tripura.	Dr. Saptarshi Mitra, T.U. (Supervisor) & Prof. S.K. De, NEHU, Co-Supervisor,	04.09.2017
3.	Sandeep Roy Sarkar	Human Physiology	Somatotype and Nutritional Status of the Tripuri Tribal and the Bengali Adolescent Boys (Age 8-16 years) of Tripura with Reference to their Physical Growth.	Dr. S. K. Sil, T.U (Supervisor) & Dr. Farasmani Dasgupta, Biological Anthropology Unit, Indian Statistical Institute, Kolkata (Co-Supervisor)	04.09.2017
4.	Sadhan Sarkar	Mathematics	Similarity Measure of Generalized Fuzzy Soft Sets and Their Applications.	Prof. Anjan Mukherjee, T.U.	12.10.2017
5.	Prashanjit Laskar	Zoology	Modulatory role of melatonin in immune-endocrine regulation of thyroid function in mice.	Dr. S. S. Singh, T.U.	20.10.2017
6.	Prasenjit Bal	Mathematics	Some Topological Properties with Selection Principles and Star Covering.	Dr. S. Bhowmik, T.U.	17.11.2017
7.	Moumita Saha	Botany	Reproductive Biology of some <i>Solanum</i> Species.	Prof. B.K. Datta, T.U.	26.12.2017
8.	Sushanta Deb	Molecular Biology & Bioinformatics	Evolution of codon usage bias in bacterial genomes.	Dr. Surajit Basak, T.U.	26.12.2017



**Agendum – 6/07/17 (a) (ii): To report the names of following five candidates who were provisionally awarded Ph.D. Degree and directly reported to Academic Council meeting dated 18.08.2017.**

Resolution: Reported (No any meeting of BFS was held during the period).

Sl. No.	Name of the Scholar	Department	Title of Ph. D. Thesis	Supervisor	Date of awarded
1.	Samik Acharjee	Zoology	Role of melatonin in modulation of HSP70 Expression and Immune function in thermally Stressed mice.	Dr. S. S. Singh, T.U.	09.11.2016
2.	Bhaskar Bhattacharjee	Human Physiology	Immunological Study of NK Cell and Neutrophil in Leukemic Animal Model.	Dr. D. Maiti, T.U.	09.11.2016
3.	Ajoy Kanti Das	Mathematics	Intuitionistic Fuzzy rough relations and its generalization, topological structures formed by soft multisets and interval valued intuitionistic fuzzy soft sets.	Prof. A. Mukherjee, T.U.	09.11.2016
4.	Ranjit Ghosh	Chemistry	Isoation and Structural Studies on Chemical Constituents of Mussaenda Roxburghii and some other Medicinal Plants.	Dr. U.C. De, T.U.	07.08.2017
5.	Jewel Hossain	Chemistry	Studies on synthesis of macro-heterocycles from sugar derivatives by intra-molecular 1,3-dipolar cycloaddition.	Dr. S. Majumder, T.U.	07.08.2017

**Agendum – 6/07/17 (b): To consider the reports of adjudicators of thesis with viva-voce report for the award of Ph.D. Degree and to recommend to Academic Council.**

Resolution: Reports of two research scholars were readout, accepted and recommended to Academic Council for approval. The names of research scholars are as follow:

Sl. No	Name of the Scholar	Department	Supervisor	Title of Ph. D. Thesis	Date of Viva-voce
1.	Mitu Saha	Physics	Prof. D. Bhattacharjee, T.U.	INVESTIGATIONS OF THEORGANISATIONS OF BIO-MOLECULES AT THE AIR-WATER INTERFACE AND IN THEULTRA-THIN FILMS	13.12.2017
2.	Debasree Lodh	Botany	Dr. Surochita Basu, T.U.	Chromosomal Variations in some Important Plant Species of Tripura Used in Ayurveda.	03.01.2018

**Agendum – 7/07/17: To consider and recommend the names of examiners, paper setters and moderators appointed for P.G. semester Exams.**

Resolution: List of paper setters, examiners and moderators receive from the department of Forestry & Biodiversity was accepted and recommended to Academic Council for approval (list has been kept in file).

**Agendum – 8/07/17: To consider and recommend the new syllabus/ Modified syllabus of different P.G. Courses and Ph.D. Course work.**

**Resolution:**

- (a) Proposal of change in course titles for elective papers and introduction of new Elective papers for Sem-II & Sem-IV from Department of Microbiology was received without approval of BPGS. The proposal should be approved from BPGS of Microbiology before placing in BFS for any decision.
- (b) Ph. D Course work syllabus of Research Methodology-II of Botany department approved by BPGS was accepted and recommended to Academic Council for approval.
- (c) Ph. D Course work syllabus of Forestry and Biodiversity department approved by BPGS in its 4<sup>th</sup> meeting was accepted and recommended to Academic Council for approval.
- (d) Revised Ph.D. course work syllabus from Microbiology Department was received without approval of its BPGS. The proposal should be approved from BPGS of Microbiology before placing in BFS for any decision.

**Agendum - 9/07/17: To consider and recommend the Rules and Regulations of Ph.D.-2016 in the light of New UGC notification.**

**Resolution:**

It is being reported that the Rules and Regulations of Ph.D.-2016 of Tripura University in the light of New UGC notification-2016 have been uploaded in the University website. This regulation has been accepted and approved in the last Academic Council Meeting of TU.

**Agendum –10/07/17: Miscellaneous.**

- (i) Proposal for Change of thesis title and synopsis of the following Ph.D. scholars of Department of Botany and Forestry & Biodiversity, Tripura University were accepted and recommended to Academic Council for approval.

Name	Department	Date of Registration	Name of Supervisor	Original Title	Proposed modified title
Gopal Debnath	Botany (Approved by RAC & BPGS)	04.05.2016	Prof. A.K. Saha	Production of extracellular enzymes by wild edible mushrooms of Tripura and evaluation of their antibacterial activity through synthesis of silver nanoparticles.	Production of extracellular enzymes by <u>some</u> wild edible mushrooms of Tripura and evaluation of their antibacterial activity through synthesis of silver nanoparticles.
H. Reshmi Singha	Botany (Approved by RAC & BPGS)	04.05.2016	Prof. R.K. Sinha (Supervisor) and Prof. S. Sinha (Co-Supervisor)	Genetic diversity and in vitro morphogenesis of some wild Solanum species of Tripura.	Genetic diversity and in vitro morphogenesis in <u>two</u> wild Solanum species of Tripura.



Shiranjit Paul	Forestry & Biodiversity (Approved by RAC & BPGS)	28.05.2014	Dr. Bimal Debnath	Studies on Genetic Diversity and Some Nutritional Aspects of <i>Dioscorea</i> in Tripura.	Studies on Genetic Diversity and Some Nutritional Aspects of <i>Dioscorea</i> ( <b>Dioscoreaceae</b> ) in Tripura.
----------------	---	------------	-------------------	---	--

(ii) Letter of Dr. Surajit Bhattacharjee, for replacement of BPGS member for Department of Molecular Biology & Bioinformatics, T.U. The matter was discussed and approved as follow:

Sl. No.	Name of old BPGS member	Proposed Name of BPGS member
1.	Dr. Surajit Basak, Dept.of Molecular Biology & Bioinformatics, T.U. He has left the University for new assignment	Dr. Asutosh Kumar, Assistant Professor, Department of Microbiology, T.U.

(Professor M.K. Singh)

Dean

Faculty of Science & Chairman  
Board of Faculty of Studies of Science  
Tripura University

Copy to:

1. All Members of the Board of Faculty of Studies of Science. T.U (Through email).
2. Pro Vice-Chancellor, T.U.
3. The Dean, Faculty of Arts & Commerce, T.U.
4. The Registrar, T.U.
5. The Director, IQAC, T.U.
6. The Controller of Examinations, T.U.
7. The Director, CDC, T.U.
8. All HOD/Faculty of Science, T.U.
9. Deputy Registrar (Academic), T.U.
10. P.S.to the Honourable Vice-Chancellor, T.U.
11. Ph.D. Section, T.U.

(Professor M.K. Singh)

Dean

Faculty of Science & Chairman  
Board of Faculty of Studies of Science  
Tripura University