



# 2019 ANNUAL REPORT

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POSTGRADUATE INSTITUTE OF SCIENCE, UNIVERSITY OF PERADENIYA

PERADENIYA, SRI LANKA

# **Vision**

To be an internationally renowned centre of excellence in Asia for postgraduate education and research in Science.

# **Mission**

To contribute to the development of a knowledge – based society with social sensitivity, ethical rectitude and economic prosperity through postgraduate level education and research in science and dissemination of knowledge in an intellectually stimulating, efficiently managed and harmonious academic environment.

## DIRECTOR'S REVIEW



The Postgraduate Institute of Science (PGIS), University of Peradeniya, established in 1996 by an ordinance from the Ministry of Higher Education, is an institution for postgraduate education and research in scientific disciplines in Sri Lanka. It has successfully expanded over the years to conduct several M.Sc., M.Phil. and Ph.D. programs as well as postgraduate diploma and certificate courses under 11 Boards of Study with the participation of a large number of postgraduate students from different universities in Sri Lanka and abroad. The principal objective of the Postgraduate Institute of Science is to promote and provide postgraduate instruction, training and research in various scientific specialties, enhancing the graduate academic experience.

Being situated in the premises of University of Peradeniya, it provides an ideal environment for intellectual activities particularly in interdisciplinary areas. PGIS has the opportunity of obtaining services from academic staff members with postgraduate qualifications from some of the best universities in the world. The members of the teaching panels are drawn from nine faculties of the University of Peradeniya, as well as from other universities and institutes. The excellent research facilities available at the Faculty of Science and other Faculties of the University of Peradeniya and research institutions in the country are used to provide research training to students. PGIS conduct in-service training programmes, short courses and workshops. The Institute also offers consultancy services to local industry and public/private sector institutions. The PGIS indeed plays a unique and leading role among the other institutes of Sri Lanka. The institute continues to develop leaders in the fields of science and provides for the betterment of society through its research, focusing on solutions to national and international issues. The long-term goal of the Institute is to become a leading science and technology university.

The PGIS caters to the growing demand for trained Science and Technology manpower facilitating through appropriately resourceful, university-wide activities and strategic collaborations with professional bodies, commercial organizations, research organizations, government bodies, other universities and public and private sector organizations in Sri Lanka. The quality of the postgraduate degree programmes has been maintained at a high standard in order to attract a large number of postgraduate students locally as well from other countries in the region, during the past decade. Over this

period, student enrollment increased at a greater rate at PGIS. A significant number of postgraduates are providing their expertise to the national development while being associated in both private and public sectors. The PGIS has become the leading degree awarding institute in Sri Lanka for postgraduate research and education in scientific disciplines. During the past 23 years the PGIS has awarded, through the University of Peradeniya, more than 2500 postgraduate degrees (Ph.D., M.Phil. and M.Sc.) in different disciplines of science and more than 17,000 have participated in workshops, conferences and short-term training courses/programmes.

In keeping with the vision and mission of the PGIS, activities have been planned in the corporate plan for the next 3 years. During this period, we will focus on building education with Asian countries, strengthening long-term connections and relationships with other research institutes of Sri Lanka and creating international opportunities and connections for our students. By providing modern learning prospects, we will prepare our students for multiple future careers, while teaching them to think critically, excel in their chosen disciplines and grasp the importance of continuing to learn over the course of their lives. We need our students to be responsible citizens and leaders who value knowledge, creativity and national awareness. Our strengths in developing future postgraduate programmes, increasing student intake and promoting innovative research have been taken into account in preparing the corporate plan. A student database for efficient administration and for future planning was initiated recently at the PGIS. The PGIS is planning to expand its activities with the opening of the new building and looking forward for a productive future ahead.

Prof. H.M.T.G.A. Pitawala  
Director/Postgraduate Institute of Science

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## BRIEF INTRODUCTION



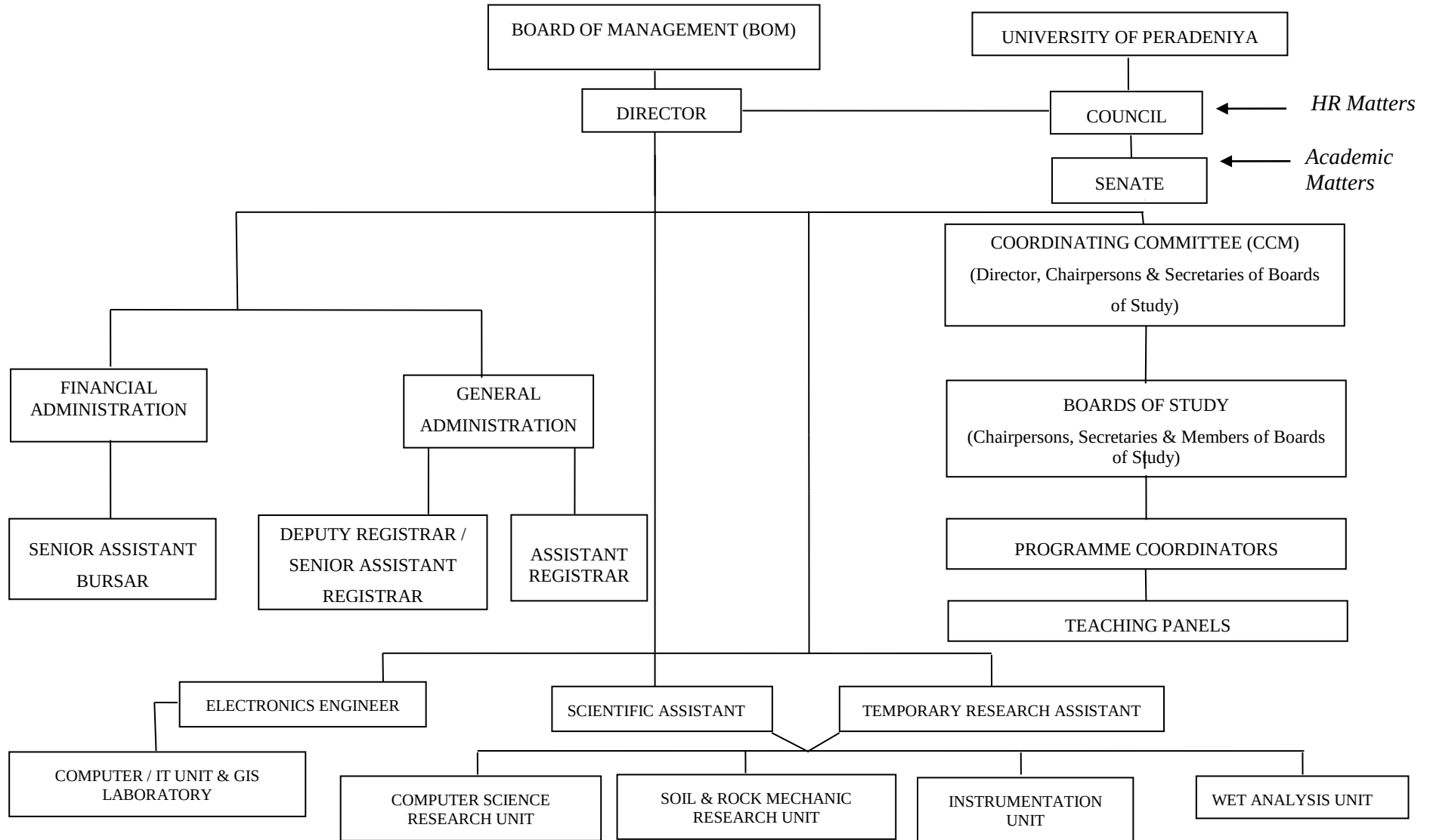
The Postgraduate Institute of Science (PGIS) is a National Institute attached to the University of Peradeniya, Sri Lanka. Presently, approximately 2400 students are registered at the PGIS. It was established in 1996 by an ordinance from the Ministry of Higher Education in order to promote science education and research & development (R&D) in scientific disciplines in Sri Lanka. The principal objective of the Postgraduate Institute of Science is to promote and provide postgraduate instruction, training and research in various scientific specialties thus enhancing the graduate academic experience.

The PGIS offers Masters, M.Sc., M.Phil. and Ph.D. degree programmes as well as postgraduate diploma and certificate courses to cater to the demand in both the public and private sectors in the nation. The M.Sc., M.Phil. and Ph.D. programmes require completion of a research project while the other programmes require completion of course work only. Provisions are available to conduct research work at either in the University System or at a relevant research institution in Sri Lanka. Many research programmes of the PGIS are conducted with the collaboration of the Faculty of Science, University of Peradeniya and other institutes of the country. The student population includes local and foreign graduates from different disciplines of science. In addition, structured and tailor-made training programmes, such as short courses and workshops, are also conducted frequently. GIS and Applications and Scientific Writing are two popular short-term programmes conducted by the PGIS. The programmes of the PGIS are conducted through 11 Boards of Study, covering all science disciplines including Science Education. The members of teaching panels are drawn from the nine Faculties of the University of Peradeniya, as well as from other universities, institutes and industries. The institute also offers consultancy services to local industry and

public/private sector institutions. Sandwich programmes and collaborative research projects have also been launched with international institutions and state organizations. Under the ERASMUS scholarship programme, PGIS students have received scholarships to continue their studies abroad. The PGIS conduct research conferences and symposia including the annual PGIS Research Congress, with the academic collaboration of both local and foreign participants.

The PGIS provides efficient services to its stakeholders through its dedicated and well-trained staff, and as a result, its efforts towards internationalization have become stronger during the last few years. The PGIS hopes to achieve its vision in the future by becoming one of the best postgraduate institutes in scientific disciplines and research in Asia.

# ORGANIZATIONAL & OPERATIVE STRUCTURE





## **BOARD OF MANAGEMENT**

### **Ex-Officio Members**

1. Prof. HMTGA Pitawala, Director, Postgraduate Institute of Science
2. Mr. GMRD Aponsu, Director (Planning), Ministry of Higher Education, 18, Ward Place, Colombo 7
3. Mr. P. Algama, Director General, Department of Public and Finance, Ministry of Finance, Colombo
4. Mr. HMBC Herath, Additional Secretary, Ministry of Science, Technology and Research, 3<sup>rd</sup> Floor, Sethsiripaya (Stage I), Battaramulla
5. Prof. Ananda Jayawardana, Director General, National Science Foundation, 47/5 Maitland Place, Colombo 07
6. Dr. SW Gamage, Secretary/Chamber of Commerce and Industry of Central Province, No.5, Mulgampala Road, Kandy
7. Prof. SR Kodituwakku, Dean/Faculty of Science, University of Peradeniya
8. Prof. KRR Mahanama, Dean, Faculty of Science, University of Colombo
9. Prof. RGSC Rajapakse, Chairman/BoS in Biochemistry & Molecular Biology, Department of Molecular Biology & Biotechnology
10. Prof. MMAN Navaratne, Chairperson/BoS in Biomedical Sciences, Department of Chemistry
11. Prof. ADLC Perera, Chairperson BoS in Chemical Sciences, Department of Chemistry
12. Prof. GVAR Fernando, Chairman/BoS in Environmental Science, The Open University of Sri Lanka
13. Prof. AAI Perera, Chairman/BoS in Mathematics, Department of Mathematics
14. Dr. PWSK Bandaranayake, Chairman/BoS in Physics, Department of Physics
15. Prof. DMD Yakandawala, Chairperson/ BoS in Plant Sciences, Department of Botany
16. Prof. HMSP Madawala, Chairperson/BoS in Science Education, Department of Botany
17. Prof. P Wijekoon, Chairperson/BoS in Statistics & Computer Science, Dept of Statistics and Computer Science
18. Prof. SK Yatigammana, Chairperson/BoS in Zoological Sciences, Department of Zoology

### **UGC Nominees**

19. Prof. SA Kulasooriya, 45/6, University Square, Dangolla, Kandy
20. Mr. Lal Wijenayake, Attorney at-Law, 36/21, Sangaraja Mw., Kandy

## **COORDINATING COMMITTEE (as at 01.11.2019)**

- Prof. H M T G A Pitawala, Director, PGIS (Chairman)
- Prof. S R Kodituwakku, Dean, Faculty of Science, University of Peradeniya

### ***Chairpersons and Secretaries of Boards of Study:***

- Prof. R G S C Rajapakse, Chairperson, Board of Study in Biochemistry & Molecular Biology
- Dr. S D S S Sooriyapathirana, Secretary, Board of Study in Biochemistry & Molecular Biology
- Prof. M M A N Navaratne, Chairperson, Board of Study in Biomedical Sciences
- Dr. P Wijesinghe, Secretary, Board of Study in Biomedical Sciences
- Prof. A D L C Perera, Chairperson, Board of Study in Chemical Sciences
- Dr. J M S Jayasinghe, Secretary, Board of Study in Chemical Sciences
- Prof. H M T G A Pitawala, Chairman, Board of Study in Earth Sciences
- Dr. N W B Balasooriya, Secretary, Board of Study in Earth Sciences
- Prof. G W A R Fernando, Chairman, Board of Study in Environmental Science
- Dr. G A N Suranjith, Secretary, Board of Study in Environmental Science
- Prof. A A I Perera, Chairman, Board of Study in Mathematics
- Dr. T H K R De Silva, Secretary, Board of Study in Mathematics
- Dr. P W S K Bandaranayake, Chairman, Board of Study in Physics
- Dr. J P Liyanage, Secretary, Board of Study in Physics
- Prof. D M D Yakandawala, Chairperson, Board of Study in Plant Sciences
- Dr. S C K Rubasinghe, Secretary, Board of Study in Plant Sciences
- Dr. H M S P Madawala, Chairperson, Board of Study in Science Education
- Dr. W A Priyanka de Silva, Secretary, Board of Study in Science Education
- Prof. P Wijekoon, Chairperson, Board of Study in Statistics & Computer Science
- Dr. R D Nawarathna, Secretary, Board of Study in Statistics & Computer Science
- Prof. S K Yatigammana, Chairperson, Board of Study in Zoological Sciences
- Mr. Chaminda Wijesundera, Secretary, Board of Study in Zoological Sciences
- Dr. Menaka Hindagolla, Senior Assistant Librarian, Science Library

### ***Programme Coordinators of the ongoing M.Sc. programmes (by invitation):***

- Prof. H K I Perera, Coordinator, M.Sc. in Clinical Biochemistry
- Dr. W I T Fernando, Coordinator, M.Sc. in Clinical Biochemistry
- Prof. R G S C Rajapakse, Coordinator, M.Sc. in Experimental Biotechnology
- Prof. J G S Ranasinghe, Coordinator, M.Sc. in Experimental Biotechnology
- Prof. M M A N Navaratne, Coordinator, M.Sc. in Analytical Chemistry

- Dr. T Ariyasena, Coordinator, M.Sc. in Analytical Chemistry
- Dr. J M S Jayasinghe, Coordinator, M.Sc. in Analytical Chemistry
- Dr. M Danthure Bandara, Coordinator, M.Sc. in Industrial Chemistry
- Prof. R G S C Rajapakse, Coordinator, M.Sc. in Nanoscience and Nanotechnology
- Prof. R M G Rajapakse, Coordinator, M.Sc. in Nanoscience and Nanotechnology
- Dr. A C A Jayasundara, Coordinator, M.Sc. in Nanoscience and Nanotechnology
- Dr. B M K Pemasiri, Coordinator, M.Sc. in Nanoscience and Nanotechnology
- Prof. H A Dharmagunawardhana, Coordinator, M.Sc. in Water Resources Management  
Coordinator, M.Sc. in Engineering Geology & Hydrogeology
- Prof. B S B Karunaratne, Coordinator, M.Sc. in Disaster Management
- Prof. M A S P K Malaviarachchi, Coordinator, M.Sc. in Disaster Management
- Dr. A A J K Gunatilake, Coordinator, M.Sc. in GIS & Water Resource Management  
Coordinator, M.Sc. in Engineering Geology & Hydrogeology
- Dr. S W Nawaratne, Coordinator, M.Sc. in Gemmology & Industrial Minerals
- Prof. G W A R Fernando, Coordinator, M.Sc. in Environmental Science
- Dr. G A N Suranjith, Coordinator, M.Sc. in Environmental Science
- Prof. S K Yatigammana, Coordinator, M.Sc. in Biodiversity, Ecotourism & Environment Management
- Mr. C Wijesundara, Coordinator, M.Sc. in Biodiversity, Ecotourism & Environment Management
- Prof. S K Yatigammana, Coordinator, M.Sc. in Applied Epidemiology
- Dr. Shalika Kumburegama, Coordinator, M.Sc. in Applied Epidemiology
- Dr. M I M Ishak, Coordinator, M.Sc. in Industrial Mathematics
- Dr. V Sivakumar, Coordinator, M.Sc. in Medical Physics
- Dr. V A Seneviratne, Coordinator, M.Sc. in Physics of Material
- Prof. G A D Perera, Coordinator, M.Sc. in Pharmaceutical Botany
- Dr. W D Chandrasena, Coordinator, M.Sc. in Science Education
- Dr. A R G A M Abeykoon Menike, Coordinator, Diploma in Science Education
- Prof. A A I Perera, Coordinator, M.Sc. in Computer Science
- Dr. R D Nawarathne, Coordinator, M.Sc. in Computer Science
- Prof. P Wijekoon, Coordinator, M.Sc. in Applied Statistics
- Prof. Y P R D Yapa, Coordinator, M.Sc. in Applied Statistics
- Dr. S P Abeyesundara, Coordinator, M.Sc. in Applied Statistics
- Dr. E Rajapaksha, Coordinator, M.Sc. in Fish & Wildlife Management
- Dr. U A J Pinidiyaarachchi, Coordinator, M.Sc. in Information Technology
- Dr. M Dehideniya, Coordinator, M.Sc. in Information Technology
- Dr. F Noordeen, Coordinator, M.Sc. in Medical Microbiology

- Dr. S. Athukorala, Coordinator, M.Sc. in Medical Microbiology  
Coordinator, M.Sc. in Science Education (Biology)
- Dr. A K Amarasinghe, Coordinator, M.Sc. in Science Education (Mathematics Education)
- Dr. G W R M R Palamakumbura, Coordinator, M.Sc. in Science Education (Mathematics Education)
- Dr. T P Ranawaka, Coordinator, M.Sc. in Science Education (Physics Education)
- Prof. C V Hettiarachchi, Coordinator, M.Sc. in Science Education (Chemistry Education)

# 1. ACHIEVEMENTS

## 1.1 AWARDS AND RESEARCH PUBLICATIONS

Fifty two Research publications have resulted from the work carried out by academics/scientists affiliated to PGIS, out of which 38 publications have appeared in refereed indexed journals including e-journals. In addition, more than 100 abstracts have been published based on the presentations made by the scientists at conferences. Two book chapters have also been published by PGIS affiliated academics. Several scientists have won awards for outstanding research, including National Science Foundation awards and National Research Council awards.

**Table 1: Research Publications**

| No | Names of authors according to order                                                                                                                                              | Name of corresponding author | Title of paper                                                                                                                                                                      | Journal                    |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| 1  | M. M. M. G. P. G. Mantilaka, T. S. E. F. Karunarathne, R. M. G. Rajapakse                                                                                                        | W. P. S. L. Wijesinghe       | Synthesis of Hydroxyapatite/poly(methyl methacrylate) Nanocomposite using Dolomite                                                                                                  | Nanoscale Advances         |
| 2  | K. Raagulan, M. M. M. G. P. G. Mantilaka, G. T. D. Chandrakumara, U. G. M. Ekanayake, W. P. S. L. Wijesinghe, S. Ehanathan, R. M. G. Rajapakse, R. Braveenth, K. Y. Chai         | M. M. M. G. P. G. Mantilaka  | Sunlight active $U_3O_8@ZnO$ nanocomposite superfast photocatalyst: Synthesis, characterization and application                                                                     | Nanoscale Advances         |
| 3  | A. Senthilnathan, D. M. S. N. Dissanayake, G. T. D. Chandrakumara, M. M. M. G. P. G. Mantilaka, R. M. G. Rajapakse, H. M. T. G. A. Pitawala                                      | K. M. N. de Silva            | Akaganeite nanorices deposited muscovite mica surfaces as sunlight active green photocatalyst                                                                                       | Royal Society Open Science |
| 4  | D. M. S. N. Dissanayake, M. M. M. G. P. G. Mantilaka, T. C. Paliawadana, G. T. D. Chandrakumara, R. T. De Silva, H. M. T. G. A. Pitawala, K. M. N. de Silva, G. A. J. Amaratunga | M. M. M. G. P. G. Mantilaka  | Facile and low-cost synthesis of pure hematite ( $\alpha$ - $Fe_2O_3$ ) nanoparticles from naturally occurring laterites and their superior adsorption capability towards acid-dyes | RSC Advances               |
| 5  | D. M. S. N. Dissanayake, R. T. De Silva, H. M. T. G. A. Pitawala, K. M. N. de Silva and G. A. J. Amaratunga                                                                      | M. M. M. G. P. G. Mantilaka  | Cost effective, industrially viable production of $Fe_2O_3$ nanoparticles from laterites and its adsorption capability                                                              | Materials Research Express |
| 6  | M. R. Abeywardena, R. K. W. H. M. K. Elkaduwe, D. G. G. P. Karunarathne, H. M. T. G. A. Pitawala, R. M. G. Rajapakse, A. Manipura                                                | M. M. M. G. P. G. Mantilaka  | Surfactant Assisted Synthesis of Precipitated Calcium Carbonate Nanoparticles using Dolomite: Effect of pH on Morphology and Particle Size                                          | Advanced Powder Technology |
| 7  | G. T. D. Chandrakumara, D. M. S. N. Dissanayake, R. T. De Silva, H. M. T. G. A.                                                                                                  | M. M. M. G. P. G. Mantilaka  | Eco-Friendly, Green Packaging Materials from Akaganeite and                                                                                                                         | Journal of Nanomaterials   |

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|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
|    | Pitawala, and K. M. Nalin de Silva                                                                                                                                                   |                             | Hematite Nanoparticle-Reinforced Chitosan Nanocomposite Films                                                                                                             |                                                  |
| 8  | W.G.D.Chathuranga, S.H.P.P.Karunaratne, W.A.Priyanka P. De Silva                                                                                                                     | W.A. Priyanka P. De Silva   | Predator–prey interactions and the cannibalism of larvae of <i>Armigeres subalbatus</i> (Diptera: Culicidae)                                                              | Journal of Asia-Pacific Entomology               |
| 9  | Savidya Jayawardena, Hirulak D. Siriwardena, R.M.G. Rajapakse, Atsushi Kubono, Masaru Shimomura                                                                                      | Masaru Shimomura            | Fabrication of a quartz crystal microbalance sensor based on graphene oxide/TiO <sub>2</sub> composite for the detection of chemical vapors at room temperature           | Applied Surface Science                          |
| 10 | Udara Amarathunga, Saranga Diyabalanage, U.G.C. Bandara, Rohana Chandrajith                                                                                                          | Rohana Chandrajith          | Environmental factors controlling arsenic mobilization from sandy shallow coastal aquifer sediments in the Mannar Island, Sri Lanka                                       | Applied Geochemistry                             |
| 11 | K.D.M.S.P.K. Kumarasinghe, G.R.A.Kumara, R.M.G.Rajapakse, D.N.Liyanage, K.Tennakone                                                                                                  | R. M.G. Rajapakse           | Activated coconut shell charcoal based counter electrode for dye-sensitized solar cells                                                                                   | Organic Electronics                              |
| 12 | W.A. Panchala Weerakoon, Neha Aggarwal, Neerja Jha, H.A.H. Jayasena, Harinam Joshic, Deepthi Yakandawala, Rohana Chandrajith, K.V. Gayantha Sashika Perera, Nalin Prasanna Ratnayake | Neha Aggarwal               | Reconstruction of the Upper Gondwana palaeoclimates based on palynostratigraphy, palynofacies and sedimentology of the Jurassic sequences in the Tabbowa Basin, Sri Lanka | Journal of Asian Earth Sciences                  |
| 13 | Madhusa Mihirani Subasinghe, Bedigama Kankanamge Kolitha Kamal Jinadas, Ayanthi N.Navarathne, Sevvandi Jayakody                                                                      | Madhusa Mihirani Subasinghe | Seasonal variations in the total lipid content and fatty acid composition of cultured and wild <i>Crassostrea madrasensis</i> in Sri Lanka                                | Heliyon                                          |
| 14 | Rizliya Visvanathan, Chathuni Jayathilake, Ruvini Liyanage, Ramiah Sivakanesan                                                                                                       | Ramiah Sivakanesan          | Applicability and reliability of the glucose oxidase method in assessing $\alpha$ -amylase activity                                                                       | Food chemistry                                   |
| 15 | H.N.M. Sarangika, M.A.K.L. Dissanayake, G.K.R. Senadeera, W.G.M.D. Karunarathne                                                                                                      | M.A.K.L. Dissanayake        | Low cost quasi solid state electrochromic devices based on F-doped tin oxide and TiO <sub>2</sub>                                                                         | Materials Today                                  |
| 16 | K.S.D. Premarathna, Anushka Upamali Rajapaksha, Nadeesh Adassoriya, Binoy Sarkar, Narayana M.S. Sirimuthue, Asitha Cooraye, Yong Sik Ok, Meththika Vithanage                         | Meththika Vithanage         | Clay-biochar composites for sorptive removal of tetracycline antibiotic in aqueous media                                                                                  | Journal of Environmental Management              |
| 17 | A.M. Aslam Saja, Ashantha Goonetilleke, Melissa Teo, Abdul M. Ziyath                                                                                                                 | Abdul M. Ziyath             | A critical review of social resilience assessment frameworks in disaster management                                                                                       | International Journal of Disaster Risk Reduction |
| 18 | G. Naveendrakumara, Meththika Vithanage, Hyun-Han Kwone, S.S.K. Chandrasekara, M.C.M. Iqbal, S.Pathmarajah, W.C.D.K. Fernando,                                                       | Meththika Vithanage         | South Asian perspective on temperature and rainfall extremes: A review                                                                                                    | Atmospheric Research                             |

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|----|---------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 19 | T. M. W. J. Bandara, M. Furlani, I. Albinsson, Angela Wulff and B.-E. Mellander | T. M. W. J. Bandara | Diatom frustules enhancing the efficiency of gel polymer electrolyte based dye-sensitized solar cells with multilayer photoelectrodes | Nanoscale Advances |
|----|---------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------|

## 1.2 PH.D., M.PHIL. AND M.SC. DEGREES AWARDED & TITLES OF THESES IN 2019

**Table 2: Ph.D. Degrees Awarded in 2019**

| No.                                       | Degree Awardees            | Titles of Theses                                                                                                                                  | Supervisors                                                       |
|-------------------------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| <b>Biochemistry and Molecular Biology</b> |                            |                                                                                                                                                   |                                                                   |
| 01.                                       | Saravanabavan Sayanthooran | <i>GENE EXPRESSION ANALYSIS FOR THE IDENTIFICATION OF CANDIDATE BIOMARKERS FOR CHRONIC KIDNEY DISEASE OF UNKNOWN ETIOLOGY (CKDU) IN SRI LANKA</i> | Prof. D N Magana Arachchi<br>Prof. S S Sooriyapathirana           |
| <b>Chemical Sciences</b>                  |                            |                                                                                                                                                   |                                                                   |
| 01.                                       | Arumukham Manjeevan        | <i>FABRICATION AND CHARACTERIZATION OF HIGH EFFICIENCY QUANTUM DOT-BASED SOLAR CELLS TO HARVEST SOLAR ENERGY IN A WIDE SPECTRUM</i>               | Prof. J M S Bandara<br>Prof. R M G Rajapakse                      |
| 02.                                       | Mohomed Qader Mallique     | <i>CHEMISTRY OF SECONDARY METABOLITES PRODUCED BY PLANT AND MARINE ENDOPHYTIC FUNGI AND BIOACTIVITY STUDIES</i>                                   | Prof. U L B Jayasinghe<br>Prof. N S Kumar                         |
| 03.                                       | ADM Damayanthi             | <i>STUDY OF 2D MATERIALS USING ADVANCED ELECTRON MICROSCOPY</i>                                                                                   | Prof. Veranja Karunaratne<br>Prof. Gehan Amaratunga               |
| 04.                                       | RBSD Rajapaksha            | <i>SCALING UP THE PROCESS OF DEVELOPING SELF-CLEANING AND ANTIBACTERIAL TEXTILE MATERIALS</i>                                                     | Prof. R M G Rajapaksha<br>Prof. R G S C Rajapakse                 |
| 05.                                       | DMREA Dissanayake          | <i>DEVELOPMENT OF ABSORBENTS FOR HEAVY METAL AND DYE CONTAMINATED WASTEWATER TREATMENT</i>                                                        | Dr. M C M Iqbal<br>Prof. H M D Namal Priyantha<br>Prof. S S Iqbal |

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### Environmental Science

- |     |                 |                                                                                                                                           |                                                                           |
|-----|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| 01. | RS Diyabalanage | <i>CHEMICO-GEOGRAPHY OF SELENIUM AND ITS IMPACT ON FOOD CHAIN QUALITY AND ANIMAL HEALTH IN SRI LANKA</i>                                  | Prof. R L R Chandrajith<br>Prof. R G S C Rajapakse<br>Dr. Ashoka Dangolla |
| 02. | MGM Prasanna    | <i>COMMUNITY STRUCTURE AND FUNCTION IN LAGOON FRINGING AND ESTUARINE MANGROVES FROM POTTUVIL TO OKANDA IN THE EAST COAST OF SRI LANKA</i> | Prof. K B Ranawana<br>Prof. K M G G Jayasooriya                           |
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### Plant Sciences

- |     |                          |                                                                                                                                                                           |                                                                          |
|-----|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| 01. | Kathirgamanathan Mohanan | <i>DEVELOPMENT OF MICROBIAL CO-CULTURES FOR LIGNOCELLULOSE DEGRADATION</i>                                                                                                | Prof. S A Kulasooriya<br>Dr. R Rathnayake<br>Prof. C L Abayasekera       |
| 02. | YS Athugala              | <i>SEED DORMANCY AND STORAGE BEHAVIOR PROFILE AND DORMANCY BREAKING TREATMENTS FOR TROPICAL MONTANE SPECIES IN SRI LANKA; WITH SPECIAL REFERENCE TO EPICOTYL DORMANCY</i> | Prof. K M G G Jayasuriya<br>Dr. A M Karunaratne<br>Dr. A M T A Gunaratne |
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**Table 3: M.Phil. Degrees Awarded in 2019**

| <i>No</i>                                 | <i>Degree Awardees</i> | <i>Titles of Theses</i>                                                                                                                                                     | <i>Supervisors</i>                               |
|-------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>Biochemistry and Molecular Biology</b> |                        |                                                                                                                                                                             |                                                  |
| 01.                                       | Rizliya Visvanathan    | <i>INTERACTION OF GLUCOSE OXIDASE (GOX) WITH NON-GLUCOSE SUGARS: ASSOCIATED CLINICAL IMPLICATIONS AND ITS APPLICATION IN ASSESSING <math>\alpha</math>-AMYLASE ACTIVITY</i> | Dr. Ruvini Liyanage<br>Prof. R Sivakanesan       |
| 02.                                       | RWK Amarasekara        | <i>IDENTIFICATION OF BACTERIA AND FUNGI IN THE ATMOSPHERIC PARTICULATE MATTER AT SELECTED LOCATIONS OF KANDY, SRI LANKA</i>                                                 | Prof. D N Magana Arachchi<br>Prof. P Samaraweera |



|     |                 |                                                                                                                                                                    |                                           |
|-----|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 03. | RMHW Rathnayake | <i>THE EFFECT OF PROXIMATE COMPOSITION, AND CHROMIUM, ZINC, CALCIUM AND PROSPEROUS ION CONCENTRATIONS ON IN VIVO GLYCEMIC RESPONSE IN DIFFERENT RICE VARIETIES</i> | Prof. J G S Ranasinghe<br>Dr. S S P Silva |
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### Chemical Sciences

|     |                    |                                                                                                                                                                         |                                                     |
|-----|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| 01. | AGMS Wijesingha    | <i>DETERMINATION OF MECHANISMS AND RATES IN SONOCHEMICAL REACTIONS USING ELECTRONIC STRUCTURE METHODS</i>                                                               | Prof. Asiri Nanayakkara<br>Prof. Rohan Weerasooriya |
| 02. | MM Subasinghe      | <i>SEASONAL VARIATION OF BIOCHEMICAL COMPOSITION, FATTY ACIDS AND METAL CONTENT IN CULTURED AND WILD OYSTER (CRASSOSTREA MADRASENSIS) AT PUTTALAM LAGOON, SRI LANKA</i> | Prof. A N Navarathne<br>Mr. B K K K Jinadasa        |
| 03. | HRWMDPK Niyangoda  | <i>CHEMISTRY AND BIOCHEMISTRY OF FIVE POPULAR EDIBLE FRUITS IN SRI LANKA</i>                                                                                            | Prof. Lalith Jayasinghe<br>Prof. N S Kumar          |
| 04. | DMDM Dissanayake   | <i>CHEMISTRY AND BIOACTIVITY OF SECONDARY METABOLITES PRODUCED BY ENDOPHYTIC FUNGI IN THE FRUITS OF PHYLLANTHUS ACIDUS AND ELAEOCARPUS SERRATUS</i>                     | Prof. Lalith Jayasinghe<br>Prof. N S Kumar          |
| 05. | Sathya Sambavathas | <i>INVESTIGATION OF ACETYLCHOLINESTERASE INHIBITORY ACTIVITY OF SELECTED SRI LANKAN GROWN SPICES AS POTENTIAL THERAPEUTIC AGENTS FOR ALZHEIMER'S DISEASE</i>            | Prof. Lalith Jayasinghe<br>Dr. N R Amarasinghe      |
| 06. | RBJ Buddhika       | <i>METHODS FOR ENHANCING SOLUBILITY OF RESVERATROL</i>                                                                                                                  | Prof. N L V V Karunaratne<br>Prof. D N Karunaratne  |
| 07. | MCR Peiris         | <i>SYNTHESIS OF METAL COMPLEXES THAT CAN BE USED AS CATALYSIS FOR THE CONVERSION OF CARBON DIOXIDE INTO USEFUL CHEMICALS</i>                                            | Prof. M Y U Ganehenage                              |

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### Earth Sciences

|     |                  |                                                                                                                                   |                                                |
|-----|------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| 01. | AAV Dias         | <i>SPATIAL ANALYSIS AND MODELLING FOR LANDSLIDE SUSCEPTIBILITY MAPPING IN KALAWANA, SRI LANKA</i>                                 | Dr. Jagath Gunatilake<br>Prof. Cees Van Westen |
| 02. | DLC Pushpakumara | <i>INVESTIGATION OF PERMEABLE ZONES ON DAM ABUTMENT AND DESIGNING EFFECTIVE GROUT CURTAINS CASE STUDY FOR UPPER KOTHEMALE DAM</i> | Dr. Jagath Gunatilake                          |

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## Environmental Science

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|-----|---------------------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 01. | Gnanapragasam<br>Naveendrakumar | <i>HISTORICAL TRENDS IN AVERAGES AND<br/>EXTREMES OF RAINFALL, TEMPERATURE AND<br/>RUNOFF OF SRI LANKA</i> | Dr. S Pathmaraj<br>Dr. M C M Iqbal<br>Dr. M Vithanage |
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## Mathematics

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|-----|-------------------|--------------------------------------------------------------------------------------------------------------|------------------------|
| 01. | Yogeswary Raviraj | <i>REAL TIME TRAFFIC CONTROL OPTIMUM<br/>PHASES AT ROAD ISOLATED INTERSECTIONS<br/>AND ARTERIAL NETWORKS</i> | Prof. W B Daundasekara |
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## Physics

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|-----|---------------|---------------------------------------------------------------------------------------------|--------------------------------------------|
| 01. | KJRS Fernando | <i>REDUCTION OF COST OF PORCELAIN PRODUCTS<br/>BY INCREASING LOCAL RAW MATERIAL PORTION</i> | Prof. B S B Karunaratne                    |
| 02. | HMPS Herath   | <i>BEHAVIOUR OF SINGLE BUBBLE<br/>SONOLUMINESCENCE IN DIFFERENT LIQUID<br/>MEDIA</i>        | Prof. A Nanayakkara<br>Dr. V A Seneviratne |
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## Plant Sciences

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|-----|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| 01. | BMSK Bandaranayake        | <i>TAXONOMY AND BIOGEOGRAPHY OF SRI<br/>LANKAN LEAFY LIVERWORTS (PHYLUM<br/>MARCHANTIOPHYTA CLASS<br/>JUNGERMANNIOPSIDA)</i>                                                      | Dr. S C K Rubasinghe                                                       |
| 02. | BRRMYSTB<br>Bambaradeniya | <i>INCIDENCE AND LIFE HISTORIES OF DIPTERANS<br/>CAUSING MYIASIS IN PATIENTS ADMITTED TO<br/>THE SURGICAL WARDS OF HOSPITALS IN AND<br/>AROUND CENTRAL PROVINCE, SRI LANKA</i>    | Dr. W A I P Karunaratne<br>Dr. I Goonerathne<br>Dr. H M S R B Kotakadeniya |
| 03. | EMMWKO<br>Bandaranayaka   | <i>INTRA-AURAL TICKS CAUSING HUMAN<br/>OTOACARISIS: SEASONALITY AND RISK FACTORS<br/>AFFECTING DISEASE INCIDENCE IN TWO<br/>CLIMATICALLY DIFFERENT DISTRICTS IN SRI<br/>LANKA</i> | Dr. R S Rajakaruna<br>Prof. R P V J Rajapakse                              |
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## Zoological Sciences

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|-----|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| 01. | IS Ileperuma Arachchi | <i>MOLECULAR PHYLOGENETIC RELATIONSHIPS OF<br/>SELECTED CRAB SPIDER GENERA (ARANEAE:<br/>THOMISIDAE) WITH NOTES ON NEW SPECIES<br/>FROM SRI LANKA</i> | Prof. S P Benjamin<br>Dr. P Samaraweera |
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|-----|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| 02. | Nilani Kanesharatnam | <i>MOLECULAR PHYLOGENY AND TAXONOMIC REVISION OF <span style="float: right;">TRIBE</span> CHRYSILLINI INCLUDING SELECTED JUMPING SPIDER GENERA (FAMILY: SALTICIDAE)</i> | Prof. S P Benjamin<br>Dr.Madhava<br>Meegaskumbura |
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**Table 4: M.Sc. Degrees Awarded in 2019**

| <i>No.</i>                          | <i>Awardees</i>    | <i>Titles of Research Project Reports</i>                                                                                                     |
|-------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>M.Sc. – Analytical Chemistry</b> |                    |                                                                                                                                               |
| 1.                                  | RADSMR Weerasekara | <i>ANALYSIS OF LEAD (PB) CONTENT OF SELECTED ENAMEL PAINTS AFTER THE ENFORCEMENT OF PB CONTROL ACT (2013)</i>                                 |
| 2.                                  | RMVHC Rajapakshe   | <i>INVESTIGATION OF GYRINOPS WALLA GAERTN</i>                                                                                                 |
| 3.                                  | GK Rupasinghe      | <i>EFFECT OF RUSTED PIPELINES ON IRON CONTENT IN TAP WATER OF THE FACULTY OF SCIENCE, UNIVERSITY OF PERADENIYA, SRI LANKA</i>                 |
| 4.                                  | KSD Premarathna    | <i>CLAY-BIOCHAR COMPOSITES FOR SORPTIVE REMOVAL OF TETRACYCLINE ANTIBIOTICS IN AQUEOUS MEDIA</i>                                              |
| 5.                                  | PWY Lakshani       | <i>MONITORING OF PESTICIDE RESIDUES IN SEVERAL SELECTED VEGETABLES IN SELECTED AREAS IN SRI LANKA BY GAS CHROMATOGRAPHY-MASS SPECTROMETRY</i> |
| 6.                                  | JHMS Ranaweera     | <i>BIO REMOVAL OF <math>Pb^{2+}</math> AND <math>Cd^{2+}</math> BY NELUMBO NUCIFERA RHIZOME POWDER AND FIBER</i>                              |
| 7.                                  | UND Uduwela        | <i>CHARACTERIZATION AND TOXICITY STUDIES OF POE-15 SURFACTANT IN GLYPHOSATE FORMULATION (ROUNDUP) AVAILABLE IN SRI LANKA</i>                  |
| 8.                                  | HDH Thirilanka     | <i>INCREASING THE SOLUBILITY OF POTASSIUM FELDSPAR WITH RICH CULTURE OF NATURAL SOIL MICROBES</i>                                             |
| 9.                                  | WDPTK Wimalasena   | <i>REMOVAL OF COPPER (II) USING SCRAPED COCONUT WASTE</i>                                                                                     |
| 10.                                 | DMAL Dissanayake   | <i>APPLICATION OF TEA WASTE AS A BIOSORBENT FOR REMOVAL OF <math>Cu^{2+}</math> FROM AQUEOUS SOLUTION - A PRELIMINARY INITIATIVE</i>          |
| 11.                                 | GPRS Premachandra  | <i>IMPACT OF HARDNESS ON THE INTERACTION OF ZN (II) WITH PANICUM MAXIMUM DRIED LEAVES</i>                                                     |
| 12.                                 | JAPC Jayasinghe    | <i>LOW COST TREATMENT METHOD TO IMPROVE THE QUALITY OF EFFLUENT WATER FROM SMALL SCALE VEHICLE SERVICE STATIONS</i>                           |

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|-----|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 13. | SM Hinnawala         | <i>DEVELOPMENT AND ANALYSIS OF HERBAL HAIR DYE</i>                                                                                              |
| 14. | UW Erandini          | <i>ANTIOXIDANT ACTIVITY AND CYTOTOXICITY OF SEVEN ALIEN INVASIVE PLANTS IN SRI LANKA</i>                                                        |
| 15. | BT Kumara            | <i>FREE ENERGY PROFILES OF CELL PENETRATING PEPTIDES PASSIVELY TRANSLOCATING DIOLEYLPHOSPHATIDYLCHOLINE (DOPC) LIPID BILAYER</i>                |
| 16. | BAGSP Karunathilaka  | <i>EFFECT OF REPEATED HEATING OF COCONUT OIL, PALM OIL AND 1:1 MIXTURE OF OILS ON CHANGES OF THEIR PHYSICOCHEMICAL PROPERTIES</i>               |
| 17. | TMCK Thalwaththehena | <i>COMPARATIVE CHEMICAL ANALYSIS OF A BLACK TEA GRADE FROM DIFFERENT REGIONS IN SRI LANKA</i>                                                   |
| 18. | UGPP Subasinghe      | <i>ENCAPSULATION OF CINNAMON LEAF OIL WITHIN CHITOSAN: FORMULATION AND INVITRO EVALUATION OF ANTIFUNGAL EFFICACY AGAINST ASPERGILLUS FLAVUS</i> |
| 19. | BWV Vidya            | <i>DETERMINATION OF INORGANIC ARSENIC SPECIES IN NATURAL WATER BY ANODIC STRIPPING VOLTAMMETRY</i>                                              |
| 20. | MMSP Maparathne      | <i>MONTMORILLONITE COMPOSITES OF NOTHAPODYTES FOETIDA ALKALOIDS</i>                                                                             |
| 21. | PKWLS Bandaranayake  | <i>REMOVAL OF <math>Pb^{2+}</math> AND <math>Cd^{2+}</math> USING MORINGA OLEIFERA SEEDS</i>                                                    |

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#### **M.Sc. – Applied Epidemiology**

|    |                   |                                                                |
|----|-------------------|----------------------------------------------------------------|
| 1. | WMIA Senevirathne | <i>TEENAGE PREGNANCIES IN SRI LANKA: A SYSTEMATIC APPROACH</i> |
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#### **M.Sc. – Applied Statistics**

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|----|-------------------------------|--------------------------------------------------------------------------------------------------|
| 1. | Mohamed Ismail Rifkhan Ahamed | <i>DYNAMICS OF SRI LANKAN EXCHANGE RATES OF MAIN TRADING PARTNERS</i>                            |
| 2. | KN Rathnayake                 | <i>DEVELOPMENT OF RAINFALL INTENSITY DURATION FREQUENCY (IDF) CURVES FOR WATAWALA, SRI LANKA</i> |

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#### **M.Sc. – Biodiversity, Ecotourism and Environment Management**

|    |                      |                                                                                                           |
|----|----------------------|-----------------------------------------------------------------------------------------------------------|
| 1. | Packiyathan Rajkumar | <i>IDENTIFICATION OF ECOTOURISM POTENTIAL IN THE JAFFNA DISTRICT</i>                                      |
| 2. | ND Samarawickrama    | <i>DISTRIBUTION PATTERN OF MYROXYLON BALSAMUN AT UDAWATTAKELE FOREST RESERVE</i>                          |
| 3. | DDD Kumari           | <i>THE ANTIOXIDANT ACTIVITY OF GYMNEMA SYLVESTRE LEAF EXTRACT</i>                                         |
| 4. | HMP Peiris           | <i>ECOTOURISM POTENTIAL OF MASKELIYA TEA PLANTATION AREA WITH SPECIAL EMPHASIS ON HAPUGASTENNA ESTATE</i> |
| 5. | TK Weerakkody        | <i>PERCEPTIONS OF INTERNATIONAL TOURISTS TOWARDS THE</i>                                                  |

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|----|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------|
|    |                       | <i>ENVIRONMENTAL MANAGEMENT IN CULTURAL HERITAGE AREAS IN KANDY DISTRICT</i>                                                           |
| 6. | Ponnushamy Jeyanthini | <i>TOURISM IMPACT AND ECOTOURISM POTENTIAL IN PASSIKUDAH (BATTICALOA DISTRICT) SRI LANKA</i>                                           |
| 7. | DP Kalyanawansa       | <i>MANAGEMENT OF SOLID WASTE GENERATED BY THE SRIPADA PILGRIMAGE THROUGH THE PRACTICE OF ECOTOURISM WITHIN THE NALLATHANNIYA ROUTE</i> |

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**M.Sc. – Clinical Biochemistry**

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|----|-----------------|---------------------------------------------------------------------------------------------------------|
| 1. | KG Nilmanel     | <i>ASSESSMENT OF IN VITRO ANTIDIABETIC EFFECTS OF TERMINALIA ARJUNA, SARACA ASOCA AND MIMOSA PUDICA</i> |
| 2. | O Dheeraseskara | <i>ANTIGLYCATION EFFECTS OF SOME MEDICINAL PLANTS USED TO TREAT SKIN CONDITIONS</i>                     |
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**M.Sc. – Computer Science**

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|-----|-----------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 1.  | DMPS Dissanayake            | <i>ONLINE LECTURING SUPORT SYSTEM</i>                                                                                 |
| 2.  | SMSP Sundarapperuma         | <i>AN INFORMATION SYSTEM FOR REGIONAL CIVILADMINISTARION OFFICE AT KILINCHCHI</i>                                     |
| 3.  | WMA Bandara                 | <i>EXTRACTION OF RESEARCH AND DEVELOPMENT EXPERTISE WITH SIMILARITY BASED WEB CLUSTERING</i>                          |
| 4.  | SDDN Sirimevan              | <i>IDENTIFICATION OF MANGO PLANT LEAVES USED IN AYURVEDIC MEDICINE USING COMPUTER BASED VENATION PATTERN ANALYSIS</i> |
| 5.  | VE Nirmalan                 | <i>A COMPUTER VISION BASED SYSTEM FOR RICE GRAIN CLASSIFICATION</i>                                                   |
| 6.  | DSRC Sawanawadu             | <i>PREVENTING BOTNET ACTIVITIES ON ANDROID SMART DEVICES</i>                                                          |
| 7.  | KMGK Herath                 | <i>GAME BASED APPROACH TO TEACH SQL FOR GENERATION Z STUDENTS IN HIGHER EDUCATION</i>                                 |
| 8.  | Sundaramoorthy Sriharan     | <i>A WEB-BASED SYSTEM FOR MANAGING ACTIVITIES IN TELLIPPALAI DIVISIONAL SECRETARIAT</i>                               |
| 9.  | KNG Kasthuriarachchi        | <i>DEVELOPMENT OF AN ON-LINE SHIPPING CARGO AND LOGISTICS APPLICATION</i>                                             |
| 10. | Jeyaprashan Puvanendran     | <i>RESUME SUMMARIZING USING NATURAL LANGUAGE PROCESSING AND MACHINE LEARNING</i>                                      |
| 11. | Kanagasabai Thiruthanigesan | <i>OPTICAL CHARACTER TRANSLATION USING SPECTACLES (OCTS)</i>                                                          |
| 12. | Rajaratnam Senthana         | <i>A STUDY ON MULTIAGENT BASED APPROACH TO SIMPLIFY DATABASE</i>                                                      |

13. Mohamed Muzammil  
Mohamed Mufassirin *A NOVEL FILTER-WRAPPER BASED FEATURE SELECTION APPROACH FOR CANCER DATA CLASSIFICATION*

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**M.Sc. – Disaster Management**

1. WGW Wanasinghe *A STUDY OF HUMAN ELEPHANT CONFLICT AND ELECTRIC FENCING AS A MITIGATION METHOD IN THE KURUNEGALA DISTRICT*
2. WMSMB Samarakoon *SOCIAL AND ENVIRONMENTAL IMPACTS OF LIMESTONE INDUSTRY IN KUNDASALE AREA, SRI LANKA*
3. Thevarajah Rasaroopan *IMPACT OF RAINFALL ON GLACIAL LANDFORMS: LANDSLIDE DEVELOPMENT IN KALUTARA DISTRICT*

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**M.Sc. – Engineering Geology & Hydrogeology**

1. BKC Basnagoda *MODIFICATION OF BLAST DESIGN TO IMPROVE THE TUNNEL EXCAVATION PROGRESS UNDER ADVERSE GEOLOGICAL CONDITIONS: CASE FROM UMA-OYA PROJECT*
2. HSL Kumara *ENGINEERING GEOLOGICAL ASSESSMENT OF POWERHOUSE COMPLEX IN UMA OYA MULTIPURPOSE DEVELOPMENT PROJECT, SRI LANKA*
3. WKSM Wakwella *GEOTECHNICAL INVESTIGATION AND STABILITY ANALYSIS OF THE LANDSLIDE AT WATAKOLULANDA, IMBULPE IN RATNAPURA DISTRICT*
4. RD Perera *CORRELATION OF STANDARD PENETRATION TEST AND DYNAMIC PROBE SUPER HEAVY PENETRATION RESISTANCE VALUES IN SRI LANKAN SOILS*

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**M.Sc. – Environmental Science**

1. DL Munasinghe *TRENDS IN TRANSNATIONAL ILLEGAL WILDLIFE TRADE OF FAUNA IDENTIFIED THROUGH CUSTOMS DATA AND THE CITIES CONVENTION IN SRI LANKA'S CONTEXT*
2. HMKP Dissanayake *ANALYSIS OF WATER QUALITY IN CKDU PREVALENCE AREAS IN MONARAGALA DISTRICT SRI LANKA*
3. DMKG Dissanayake *COMPARATIVE STUDY ON DESULFURIZATION OF WASTE RUBBER PYROLYSIS OIL IN SRI LANKA*
4. JWMES Weerappuliarachchi *SYNTHESIS AND OPTIMIZATION OF PROPERTIES OF ANTIBACTERIAL NYLON*
5. AP Wijesinghe *EVALUATING THE ENVIRONMENTAL IMPACTS DUE TO CONSTRUCTION OF THE CENTRAL EXPRESSWAY, SRI LANKA*

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|-----|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.  | DM Abeysekara             | <i>COMPARISON OF HEAVY METALS IN TOMATOES &amp; CHILLI PLANTS BETWEEN ORGANIC AND CHEMICAL FERTILIZERS</i>                                                        |
| 7.  | AMEN Adhikari             | <i>CONSERVATION OF EXACUM PEDUNCULATUM L. , A CRITICALLY ENDANGERED PLANT ONLY KNOWN FROM BOBELLA, NAULA</i>                                                      |
| 8.  | WPGSE Jayarathna          | <i>REMOVAL OF DYES FROM TEXTILE DYEING EFFLUENTS USING NATURAL ADSORBENTS</i>                                                                                     |
| 9.  | WMGISL Wijethunga         | <i>IMPACT IDENTIFICATION AND PREPARATION OF A CATCHMENT MANAGEMENT PLAN FOR ATIPOLA MOUNTAIN RANGE, MATALE DISTRICT, SRI LANKA</i>                                |
| 10. | RMUH Senanayake           | <i>SUGGESTED IMPACT ASSESSMENT OF THE REJECT WATER QUALITY OF REVERSE OSMOSIS PLANTS IN MADAWACHCHIYA DIVISIONAL SECRETARIAT</i>                                  |
| 11. | RMNK Rajakaruna           | <i>HEALTH RISKS OF USING REVERSE OSMOSIS WATER: A CASE STUDY FROM MEDAWACHCHIYA DIVISIONAL SECRETARIAT</i>                                                        |
| 12. | GDNM Rajapaksha           | <i>REDUCTION OF COLOR OF LEACHATE USING ACTIVATE CHARCOAL-CLAY BRICK SYSTEM</i>                                                                                   |
| 13. | KVDHR Karawita            | <i>STUDY OF FORAGING BEHAVIOUR AND FEEDING ECOLOGY OF INDIAN PANGOLON (MANIS CRASSICAUDATA) IN A HABITAT AND ASSOCIATED CULTIVATIONS IN SOUTHWEST SRI LANKA</i>   |
| 14. | BMCS Wijesinghe           | <i>DEFINING A SENSITIVE MARINE HABITAT EXCLUSION CRITERION FOR DRILLING OPERATIONS IN THE HYDROCARBON EXPLORATION BLOCK M2 IN THE GULF OF MANNAR OF SRI LANKA</i> |
| 15. | KRS Perera                | <i>POTENTIAL USE OF SELECTED MACROPHYTES BASED WETLANDS FOR IMPROVING WATER QUALITY IN TREATMENT OF LANDFILL LEACHATE</i>                                         |
| 16. | RAJ Chathuranga           | <i>CHEMICAL ANALYSIS OF BULK DEPOSITION IN SELECTED LOCATIONS IN GAMPAHA DISTRICT</i>                                                                             |
| 17. | Raveendranathan Rajiharan | <i>A STUDY ON HEAVY METAL CONTAMINATION IN SELECTED MAN-MADE BRACKISH WATER AQUACULTURE SYSTEMS IN THE EASTERN PROVINCE</i>                                       |

#### **M.Sc. – Experimental Biotechnology**

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|----|------------------|-----------------------------------------------------------------------------------------------------------------|
| 1. | SNP Withanage    | <i>EVALUATION OF HEPATOTOXICITY BY DIFFERENT PHENETIC GROUPS OF MONOCHORIA VAGINALIS</i>                        |
| 2. | HPKU Jayathilake | <i>DETERMINATION OF THE PHYLOGENETIC POSITION OF NEPENTHES DISTILLATORIA USING RBCL AND RBCS SEQUENCES</i>      |
| 3. | RN Dissanayake   | <i>DIVERSITY ANALYSIS OF SELECTED SOLANUM SPECIES IN SRI LANKA USING MOLECULAR AND CONVENTIONAL DESCRIPTORS</i> |
| 4. | SASM Kumari      | <i>DIVERSITY ANALYSIS OF LUFFA VARIETIES IN SRI LANKA</i>                                                       |

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| 5.  | Arani Mahipalan       | <i>ASSESSMENT OF THE DIVERSITY AMONG THE SELECTED MEMBERS OF GENUS ALTERNANTHERA IN SRI LANKA</i>                                                                                                            |
| 7.  | MGKP Dayarathne       | <i>IDENTIFICATION, PARTIAL PURIFICATION AND CHARACTERIZATION OF SERINE AND ASPARTIC PROTEASE INHIBITATION FROM NORTHOPEGIA BEDDOMEI</i>                                                                      |
| 8.  | RB Senanayake         | <i>PHYLOGENETIC ANALYSIS OF THE KEY ARTOCARPUS SPECIES (A NOBILIS, A HETEROPHYLLUS, A ALTILIS, A CAMANSI AND A.GOMENZIANUS IN SRI LANKA)</i>                                                                 |
| 9.  | KMMG Karunanayake     | <i>COMPARISON OF THE LIPID LEVELS OF NEWLY DIAGNOSED PATIENTS WITH DIABETES, HYPERTENSION, AND ISCHEMIC HEART DISEASE WITH INDIVIDUALS WHO ARE NOT DIAGNOSED AS HAVING SUCH DISEASES IN DAMBADENIYA</i>      |
| 10. | EGCN Premathilaka     | <i>EVALUTION OF THE DEVELOPMENT OF BONE MICROARCHITECTURE AND RAPID FRACTURE HEALING OF OSTEOPOROTIC MICE FED WITH PLANT EXTRACTS OF SALACIA RETICULATA AND PSYCHOTRIA SARMENTOSA</i>                        |
| 11. | ALA Lakmini           | <i>BACTERIAL DIVERSITY PROFILE OF RICE ENDOPHYTES WITH BIOFILM BIO FERTILIZER AND CHEMICAL FERTILIZER APPLICATION PRACTICES</i>                                                                              |
| 12. | WDBN Perera           | <i>A WGS DERIVED GENOMIC CONTIG ANALYSIS OF A PUTATIVE ANGIOTENSINOGEN FROM THE TELEOST SEBASTES SCHLEGELII: A TRIAGE OF IN - SILICO ANALYSIS, MOLECULAR CLONING AND RESPONSE STUDY TO IMMUNE CHALLENGES</i> |
| 13. | Kowsalavani Rangasamy | <i>EXPOSURE RATE TO ZIKA VIRUS INFECTION IN A SUB COHORT OF CLINICALLY DIAGNOSED DENGUE PATIENTS PRESENTED TO THE TEACHING HOSPITAL JAFFNA, SRI LANKA</i>                                                    |

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#### **M.Sc. – GIS & Remote Sensing**

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|----|----------------------|------------------------------------------------------------------------------------------------------------------------------|
| 1. | WML Weerasinghe      | <i>SPATIAL DISTRIBUTION OF SOIL ORGANIC CARBON STOCK IN SRI LANKA: A GIS APPROACH</i>                                        |
| 2. | HMNGIP Herath        | <i>EXTENSIBLE REMOTE SENSING PLATFORM FOR AIR QUALITY MONITORING: A CASE STUDY IN KANDY CITY LIMITS</i>                      |
| 3. | KBC Jayanthi         | <i>APPLICATION OF GIS IN ENVIRONMENTAL IMPACT ASSESSEMENT STUDIES-A CASE STUDY FROM BADULLA-KANDY-HIGHWAY-SRI LANKA</i>      |
| 4. | HP Siriwardhana      | <i>SPATIAL DISTRIBUTION OF METAL QUARRIES AND THEIR IMPACTS ON SURROUNDING AREAS A CASE STUDY FROM KURUNEGALA, SRI LANKA</i> |
| 5. | VLN Thembiliyagodage | <i>GIS MODEL FOR RESIDENTIAL LAND SUITABILITY FOR URBAN PLANNING IN KANDY MUNICIPAL AREA</i>                                 |
| 6. | Sandhanam Nishanthi  | <i>SPATIAL PATTERN OF REGIONAL DEVELOPMENT DISPARITIES IN NUWARA ELIYA DISTRICT USING GIS</i>                                |



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| 7. | SRMUBB Rathnayake | <i>DEVELOPMENT OF A NOISE MAP FOR KANDY AREA-SRI LANKA</i>                                                                              |
| 8. | SSK Wattedgedara  | <i>APPLICATION OF GIS AND REMOTE SENSING IN FLOOD MANAGEMENT: A CASE STUDY IN THE SEGMENT OF KELANI RIVER BASIN, COLOMBO, SRI LANKA</i> |
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**M.Sc. – Gemmology & Industrial Minerals**

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|----|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | SVTD Raveendrasinghe | <i>A HEAT TREATMENT METHOD TO CONVERT SRI LANKAN PALE REDDISH BLUE COLOUR DEGUNA STONES TO PADPARADSCHA SAPPHIRE USING LAKMINI FURNACE</i> |
| 2. | AADC Shanthapriya    | <i>COMPARISON OF INCLUSION CHARACTERISTICS IN SAPPHIRES OF ELAHERA AND RATNAPURA GEMMING REGIONS OF SRI LANKA</i>                          |
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**M.Sc. – Industrial Chemistry**

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|----|---------------|----------------------------------------------------------------------------------------------------|
| 1. | SMTK Labutale | <i>PRESSURE RELIANCE ELECTRONICALLY CONDUCTING COMPOSITE MATERIALS BASED ON POLYMER AND CARBON</i> |
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**M.Sc. – Industrial Mathematics**

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| 1.  | WADM Welagedara     | <i>THE VERHULST LOGISTIC GROWTH MODEL AND GOMPertz MODEL TO FORECAST POPULATION OF SRI LANKA</i>                                          |
| 2.  | SBMAU Herath        | <i>SOME COSMOLOGICAL MODELS WITH THE INFLATIONARY UNIVERSE</i>                                                                            |
| 3.  | AMSK Abeykoon       | <i>A CASE STUDY OF NURSE SCHEDULING PROBLEM USING GOAL PROGRAMMING</i>                                                                    |
| 4.  | AMR Sandamali       | <i>OPTIMIZATION TECHNIQUES FOR THE VEHICLE ROUTING PROBLEM ARISEN AT A MILK COLLECTION CENTER</i>                                         |
| 5.  | AMP Chandrasiri     | <i>FUZZY INVENTORY MODEL WITH SHORTAGE USING TRAPEZOIDAL FUZZY NUMBERS &amp; SINGED DISTANCE METHOD</i>                                   |
| 6.  | WTCH Costha         | <i>AUTOMATIC QUEUING MODEL FOR BANKING APPLICATIONS</i>                                                                                   |
| 7.  | MAUS Marasinghe     | <i>A MATHEMATICAL APPROACH TO TIMETABLING IN TECHNICAL COLLEGE</i>                                                                        |
| 8.  | SH Thalpehewa       | <i>MODELING THE EMERGENCY SURGICAL INPATIENT FLOW AN APPLICATION OF QUEUING THEORY</i>                                                    |
| 9.  | MGPAK Thilakarathna | <i>THE IMPACT OF JOB SATISFACTION ON EMPLOYEE RETENTION AMONG JUNIOR STAFF MEMBERS: A CASE STUDY OF A SELECTED INSTITUTE IN SRI LANKA</i> |
| 10. | LDVP De Silva       | <i>AN EFFECTIVE APPROACH FOR SOLVING ELECTRIC VEHICLE SHORTESTPATH PROBLEM WITH INTERMEDIATE STOPS AND AVOIDING CITIES</i>                |

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|-----|----------------------|-----------------------------------------------------------------------------------------------------------------------|
| 11. | Jeayarajah Sharachie | <i>PRODUCTION PLANNING FOR A DAIRY PRODUCT</i>                                                                        |
| 12. | PAND Pathiraja       | <i>MATHEMATICAL MODELING OF 2017 VIRAL FEVER OUTBREAK IN UNIVERSITY</i>                                               |
| 13. | WMAK Wijesuriya      | <i>A GENERALIZED MODEL FOR SYNCHRONIZATION IN MULTI-MANUFACTURE<br/>MULTI-BUYER INTEGRATED INVENTORY SUPPLY CHAIN</i> |

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**M.Sc. – Medical Physics**

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| 1. | SW Arachchi           | <i>TWO DIMENSIONAL TREATMENT PLANNING OF BREAST USING LOCALLY<br/>MADE BREAST CALIPER MEASUREMENTS</i>                                                          |
| 2. | ILU Chandrasiri       | <i>ASSESSMENT OF CORRELATION BETWEEN MAMMOGRAPHIC BREAST DENSITY<br/>AND AFFECTING FACTORS: A QUANTITATIVE APPROACH</i>                                         |
| 3. | SB Herath             | <i>EVALUATION OF POINT-OF-CARE INSTRUMENT FOR INTRAVENOUS<br/>HEMOGLOBIN CONCENTRATION</i>                                                                      |
| 4. | AS Munasinghe         | <i>STUDY OF THE EFFECTIVE HALF-LIFE TIME AND ESTIMATION OF DOSE RATE<br/>MEASUREMENTS OF THE PATIENTS TREATED WITH RADIOACTIVE IODINE<br/>(<sup>131</sup>I)</i> |
| 5. | RMGK Ariyasinghe      | <i>ESTIMATION OF SURFACE AND BUILD-UP REGION DOSE FOR COBALT-60 TELE-<br/>THERAPY UNITS</i>                                                                     |
| 6. | Loganathan Thasanthan | <i>IMPACT OF TREATMENT DURATION ON CERVICAL CANCER OUTCOMES WITH<br/>CONCOMITANT CHEMORADIATION</i>                                                             |

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**M.Sc. – Medical Microbiology**

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|----|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Mohamed Najimudeen<br>Fathima Shahnas | <i>COMPARISON OF ANTIBIOTIC SUSCEPTIBILITY AND BIO-FILM FORMATION<br/>ABILITY OF ACINETOBACTERS OF COMMUNITY AND HOSPITAL ORIGIN</i>   |
| 2. | TPGRR Karunarathna                    | <i>LARVICIDAL EFFECT OF CARICA PAPAYA LEAF EXTRACT AGAINST AEDES<br/>SPECIES</i>                                                       |
| 3. | TS Munasinghe                         | <i>COLONIZATION WITH ANTIBIOTIC RESISTANT BACTERIA AMONG HEALTHY<br/>YOUNG ADULTS IN UNIVERSITY OF PERADENIYA</i>                      |
| 4. | WMA Indeewari                         | <i>ANTIVIRAL ACTIVITY OF CARICA PAPAYA L. LEAF EXTRACT AGAINST DENGUE<br/>VIRUS-1 IN EXPERIMENTAL INFECTIONS</i>                       |
| 5. | SDK Wijesuriya                        | <i>CLINICAL LABORATORY PROFILES AND COMPARISON OF NS1 AND VIRAL RNA<br/>DETECTION IN A SELECTED GROUP OF DENGUE SUSPECTED PATIENTS</i> |
| 6. | KCAS Somarathna                       | <i>SEROPREVALENCE AND CARRIER STATUS OF LEPTOSPIROSIS RAT INFESTED<br/>IN GIRANDURUKOTTE, SRI LANKA</i>                                |

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**M.Sc. – Nanoscience & Nanotechnology**

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|-----|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | KEDYT Dayananda     | <i>SYNTHESIS OF HEAMATITE NANOMATERIALS FROM SRI LANKAN LATERITES</i>                                                                      |
| 2.  | UGM Ekanayake       | <i>FABRICATION OF STEARIC ACID LAYERED TREATED ZNO UMBRELLA CANOPY WITH SUPERHYDROPHOBIC AND UV BLOCKING PROPERTIES</i>                    |
| 3.  | DN Liyanage         | <i>ALKYL-FUNCTIONALIZED ORGANIC DYE FOR DYE-SENSITIZED SOLID-STATE SOLAR CELL CONSISTING COPPER IODIDE AS A HOLE CONDUCTOR</i>             |
| 4.  | LMSU Lemasthota     | <i>SYNTHESIS OF VALUE ADDED IRON OXIDE NANOPARTICLES FROM SRI LANKAN RED EARTH DEPOSITS</i>                                                |
| 5.  | Raagulan Kanthasamy | <i>SYNTHESIS AND CHARACTERIZATION OF PHOTOCATALYTICALLY ACTIVE <math>U_3O_8@ZNO</math> NANOCOMPOSITE</i>                                   |
| 6.  | BPN Gunawardhana    | <i>HEAMATITE NANOPARTICLES PREPARED FROM LATERITES AS ADSORBENTS FOR THE REMOVAL OF <math>CD(II)</math> AND <math>NI(II)</math></i>        |
| 7.  | WRWMAUB Weerakoon   | <i>IMPROVEMENT OF MECHANICAL PROPERTIES OF CLAY BASED CERAMICS USING SYNTHESIZED NANO-ALUMINA AND FLY ASH</i>                              |
| 8.  | A Heenatigala       | <i>DEVELOPMENT OF A SUPER CAPACITOR WITH ACTIVATED COCONUT CHARCOAL ELECTRODES WITH TRIETHYLAMINE THIOCYANATE (TAT) AS THE ELECTROLYTE</i> |
| 9.  | MAYU Jayathilaka    | <i>LIQUID BASED DYE-SENSITIZED SOLAR CELLS USING ACTIVATED CHARCOAL COUNTER ELECTRODE WITH MORPHOL AS A BINDER</i>                         |
| 10. | JMCB Jayasinghe     | <i>VISIBLE LIGHT DRIVEN PHOTOCATALYTIC HYDROGEN PRODUCTION BY COPPER DOPED <math>TiO_2</math></i>                                          |
| 11. | SMCG Samarakoon     | <i>EFFECT OF PARTICLE SIZE OF SILVER NANOPARTICLES IN CARBON SUPPORTED SILVER ON ELECTRO-CATALYTIC ACTIVITY TOWARDS OXYGEN REDUCTION</i>   |
| 12. | SAJA Kumari         | <i>ZINK OXIDE DISPERSED POLY(METHYL METHACRYLATE) NANOCOMPOSITE AS AN ANTIBACTERIAL FOOD PACKING MATERIAL</i>                              |

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#### **M.Sc. – Physics of Materials**

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|----|------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | KLK Sankalpa     | <i>CHARACTERIZATION OF CDS THIN FILMS SYNTHESIZED BY CHEMICAL BATH DEPOSITION: EFFECT OF PURGING &amp; ANNEALING WITH <math>N_2</math></i> |
| 2. | WKDAU Wijesinghe | <i>EFFECT OF ASCORBIC ACID ON CHEMICAL BATH DEPOSITION OF CDS ON GLASS SUBSTRATES</i>                                                      |
| 3. | KGSPB Samarakoon | <i>PHYTOFABRICATION OF SILVER NANOPARTICLES USING AZADIRACHTA INDICA</i>                                                                   |
| 4. | KK Wimalaweera   | <i>EFFECT OF <math>Al_2O_3</math> CERAMIC FILLER ON STRUCTURAL AND IONIC PROPERTIES</i>                                                    |

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**M.Sc. – Science Education**

1. EMPGSY Priyadarshani *INVESTIGATION ON THE EFFECTIVENESS OF GCE (A/L) SCIENCE STUDENT'S PROJECTS: A CASE STUDY IN HANGURANKETHA EDUCATION ZONE*
2. Naazneen Abdulla Didi *AN EMPIRICAL STUDY OF INVESTIGATING THE EFFECT OF USING LOW COST MATERIALS IN PRACTICALS IN TEACHING CHEMISTRY IN LOWER SECONDARY SCHOOLS IN ADDU CITY, MALDIVES*
3. Sulthan Ramiz *LOWER SECONDARY BIOLOGY TEACHER'S PERCEPTION TOWARDS INQUIRY BASED TEACHING IN MALE SCHOOL OF MALDIVES*
4. DI Abeywickrama *USE OF AN ALTERNATIVE APPROACH TO TEACH PROPERTIES OF ELEMENTS IN THE PERIODIC TABLE: A CASE STUDY FOR GRADE 10 STUDENTS*
5. SAB Maheshinee *AN INVESTIGATION OF STUDENTS' SELF CONCEPTS AND MOTIVATION ON DIFFERENT TEACHING METHODS IN G.C.E. (O/L) PHYSICS*
6. HHVM Sanjeewani *MISCONCEPTIONS IN BIOLOGY: TEACHING STRATEGIES FOR CONCEPTUAL CHANGES IN STUDENTS*
7. Mohamed Asanar  
Fathima Firoza Farlin *INVESTIGATION OF TEACHERS' PERCEPTIONS ON SUPPORT MATERIALS AND IN-SERVICE TRAINING FOR REVISED G.C.E. ADVANCED LEVEL BIOLOGY CURRICULUM*
8. LJH Wijayasekara *PLANNING AND EVALUATING THE INFLUENCE OF PROGRAMMED INSTRUCTION IN CHEMISTRY LESSONS FOR ADVANCED LEVEL BY USING B.F. SKINNERS OPERANT CONDITIONING*
9. GM Elgirige *AN EFFECTIVE USE OF GEOGEBRA\_6 SOFTWARE ON MATHEMATICS ACHIEVEMENTS:-ENLIGHTENING TRIGONOMETRY FUNCTIONS TO GRADE 12 MATHEMATICS STUDENTS*
10. JCK Ekanayake *APPLICATION OF AUTHENTIC ASSESSMENT IN JUNIOR SECONDARY SCHOOL BIOLOGY IN SRI LANKA: AN ILLUSTRATIVE STUDY ON GRADE 9 SCIENCE-OBSERVE THE ENVIRONMENT AS A SCIENTIST*
11. PWG Rambanda *EFFECT OF ADDITIONAL HELP IN GRADE 11 STUDENTS' MATHEMATICS ON ACHIEVEMENT IN PHYSICS: A CASE STUDY FROM THELDENIYA ZONE*
12. EJKPP Hemamali *FACTORS AFFECTING PERFORMANCE OF STUDENTS IN GRADE 11 MATHEMATICS: A CASE STUDY*
13. DGNI Vijayanthi *RELATIONSHIPS BETWEEN STUDENTS' PERFORMANCE IN FOUR SELECTED CORE SUBJECTS AND G.C.E. (O/L) EXAMINATION RESULTS*
14. NR Somarathne *FACTORS AFFECTING STUDENT PERFORMANCE IN SCIENCE AT G.C.E.(A/L): A*

*CASE STUDY FROM NEWLY UPGRADED SECONDARY SCHOOLS IN THE  
KURUNEGALA EDUCATION ZONE*

- |     |                                    |                                                                                                                                                                                       |
|-----|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15. | Mohammed Farook<br>Mohammed Jesmin | <i>A COMPARATIVE STUDY OF STUDENT PERFORMANCE ON TRADITIONAL<br/>LEARNING AND ACTIVITY BASED LEARNING: A CASE STUDY IN GRADE 10<br/>PHYSICS</i>                                       |
| 16. | Logeswaran Senthuran               | <i>INVESTIGATION OF FACTORS AFFECTING POOR PERFORMANCE IN G.C.E.(O/L)<br/>SCIENCE AT KOPAY DIVISION IN JAFFNA EDUCATIONAL ZONE AND FINDING<br/>REMEDIAL MEASURES</i>                  |
| 17. | WACK Wickremasinghe                | <i>STUDENTS' PERFORMANCES AND ISSUES ON CHEMISTRY NUMERICAL<br/>CALCULATIONS IN GENERAL CERTIFICATE OF EDUCATION (ADVANCED<br/>LEVEL): A CASE STUDY IN KANDY EDUCATIONAL DIVISION</i> |

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**M.Sc. – Water Resources Management**

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|----|---------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | V K N Sameera | <i>ENVIRONMENTAL IMPACT OF NEWLY BUILT TANKS SYSTEM UNDER THE<br/>MORAGAHAKANDA - KALUGANGA RE-SETTLEMENT PROGRAMME OF SRI<br/>LANKA</i> |
|----|---------------|------------------------------------------------------------------------------------------------------------------------------------------|
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### 1.3 RESEARCH CONGRESS



The PGIS Research Congress (PGIS RESCON) was initiated to promote and strengthen the research culture of the Postgraduate Institute of Science (PGIS), University of Peradeniya, and in turn to contribute to the expansion of research activities of the country. After five extremely successful events from 2014 to 2018, this year its sixth Research Congress 'RESCON - 2019' was successfully held on 11<sup>th</sup> of October 2019. The event was organized jointly by the PGIS and the Ministry of Science, Technology and Research. As a premier event in the academic calendar of scientists in the country, the PGIS RESCON 2019 provided the opportunity for researchers to disseminate their findings, and update their knowledge on the cutting-edge of scientific research in Sri Lanka.

Over three hundred and fifty participants registered at the congress and the event was inaugurated ceremonially by the Chief Guest, His Excellency Mr. Taranjit Singh Sandhu, the High Commissioner of India to Sri Lanka on Friday, 11<sup>th</sup> October 2019 at the Postgraduate Institute of Science. Mr. Dhirendra Singh, the Assistant High Commissioner of India to Sri Lanka also graced the occasion. The Guest of Honor for the occasion was Prof. S. H. P. P. Karunaratne (Deputy Vice-Chancellor, University of Peradeniya) representing Prof. Upul B. Dissanayake, the Vice Chancellor, University of Peradeniya. Mr. H M B C Herath (Additional Secretary, Ministry of Science, Technology and Research) representing the Secretary, Ministry of Science, Technology and Research also graced the occasion. Professor Alan Lyons of the College of Staten Island and Graduate Center of CUNY, USA delivered the keynote address at the inauguration. The inauguration ceremony was followed by Technical Sessions, and the Congress Dinner was held at Amaya Hills Hotel, Kandy on the same day.

Technical sessions of the PGIS Research Congress were held on the same day at the Postgraduate Institute of Science premises. PGIS RESCON 2019 provided an excellent platform for researchers from many disciplines and promoted the interaction among postgraduate students and researchers while providing an opportunity for them to develop relationships with scientists having diverse background. A total of 145 abstracts were selected following a peer review process. These presentations were categorized into five broad themes: Earth and Environmental Science; Information & Communication Technology, Mathematics and Statistics; Life Sciences; Physical Sciences; and Science Education. Of the selected 145

abstracts presented, 117 were oral presentations and 28 were poster presentations. Oral presentations were held in 9 parallel sessions, while poster presentations were also displayed throughout the day.

Sponsors who have extended financial support for the RESCON 2019 include the following: Ministry of Science Technology and Research, ATG Ceylon (Pvt) Ltd, Biomedite (Pvt) Ltd, Thisaru Lanka Chemicals (Pvt) Ltd, People's Bank (Peradeniya), Bank of Ceylon (Peradeniya), Rotak Instruments (Pvt) Ltd and *INSEE Ecocycle* Lanka Pvt Ltd.

## 1.4 POSTGRADUATE OUTPUT DURING THE YEAR

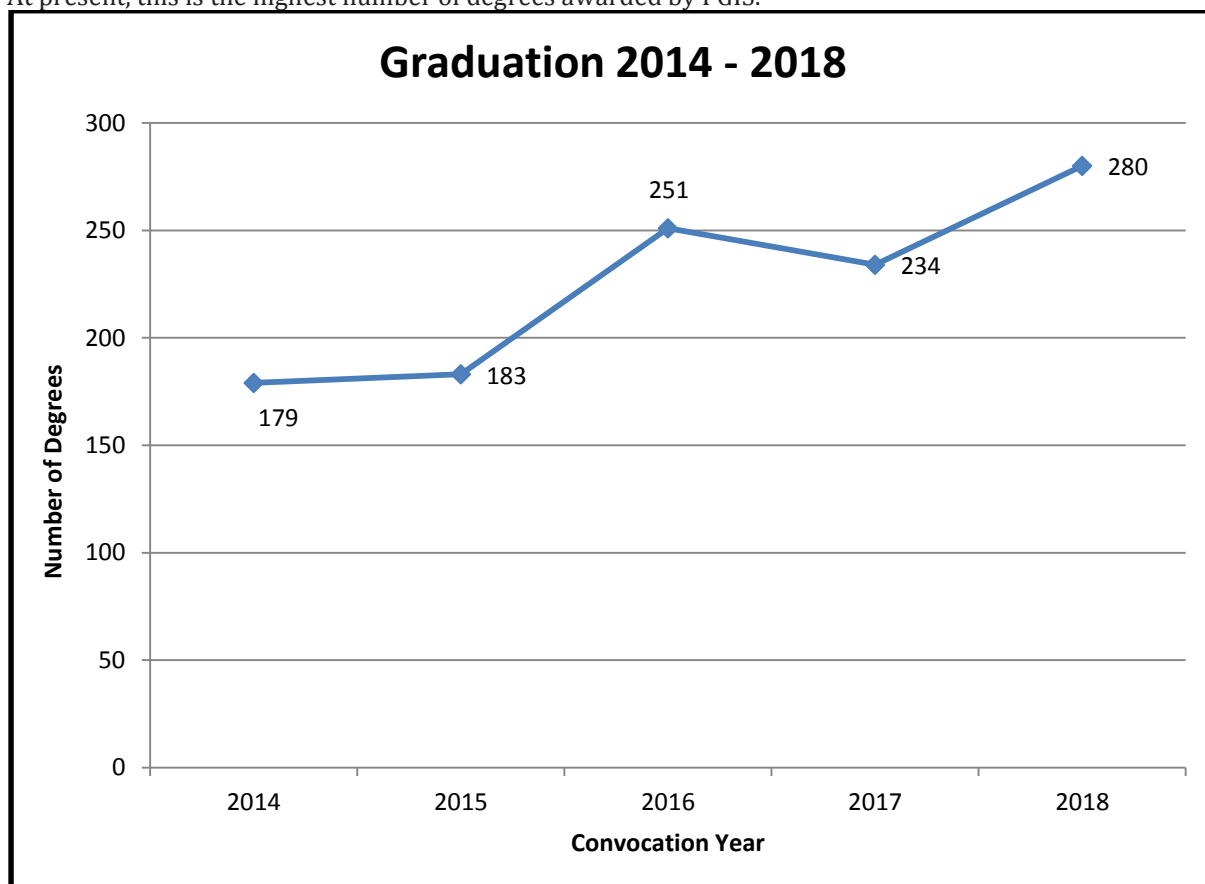
### 1.4.1 GRADUATION

All academic activities have successfully been completed as per the scheduled in the calendar of dates, during the 2018/19 academic year as well. Accordingly, 280 graduands from Postgraduate Institute of Science received their postgraduate degrees.

**Table 5: Graduands**

| Degree       | No. of Students |
|--------------|-----------------|
| Ph.D.        | 11              |
| M. Phil.     | 26              |
| M.Sc.        | 243             |
| <b>Total</b> | <b>280</b>      |

At present, this is the highest number of degrees awarded by PGIS.



**Table 6: Students Enrolment during the Year**

| <b>Board of Study</b>                               | <b>Course<br/>(Coursework)</b>                             | <b>Intake in<br/>2019</b> | <b>Previous<br/>Year<br/>Intake</b> |
|-----------------------------------------------------|------------------------------------------------------------|---------------------------|-------------------------------------|
| <b>Biochemistry &amp;<br/>Molecular<br/>Biology</b> | M.Sc. in Clinical Biochemistry                             | 19                        | -                                   |
|                                                     | M.Sc. in Experimental Biotechnology                        | 22                        | -                                   |
| <b>Chemical<br/>Sciences</b>                        | M.Sc. in Analytical Chemistry                              | 22                        | <b>34</b>                           |
|                                                     | M.Sc. in Industrial Chemistry                              | 07                        | <b>9</b>                            |
|                                                     | M.Sc. in Nanoscience & Nanotechnology                      | 34                        | <b>37</b>                           |
| <b>Earth Sciences</b>                               | M.Sc. in Disaster Management                               | 15                        | -                                   |
|                                                     | M.Sc. in GIS & Remote Sensing                              | 34                        | <b>53</b>                           |
|                                                     | M.Sc. in Engineering Geology & Hydrogeology                | 15                        | <b>38</b>                           |
|                                                     | M.Sc. in Water Resources Management                        | -                         | <b>10</b>                           |
|                                                     | M.Sc. in Gemmology & Industrial Minerals                   | -                         | <b>9</b>                            |
| <b>Environmental<br/>Science</b>                    | M.Sc. in Environmental Science                             | 25                        | <b>27</b>                           |
|                                                     | M.Sc. in Biodiversity, Ecotourism & Environment Management | 18                        | -                                   |
| <b>Mathematics</b>                                  | M.Sc. in Industrial Mathematics                            | 13                        | <b>20</b>                           |
| <b>Physics</b>                                      | M.Sc. in Physics of Materials                              | 16                        | <b>12</b>                           |
|                                                     | M.Sc. in Medical Physics                                   | 09                        | -                                   |
| <b>Plant Sciences</b>                               | M.Sc. in Medical Microbiology                              | -                         | -                                   |
|                                                     | M.Sc. in Pharmaceutical Botany                             | 12                        | -                                   |
| <b>Science<br/>Education</b>                        | M.Sc. in Science Education                                 | 10                        | <b>27</b>                           |
|                                                     | PG Diploma in Science Education                            | 10                        | -                                   |
| <b>Statistics &amp;<br/>Computer<br/>Science</b>    | M.Sc. in Applied Statistics                                | 34                        | -                                   |
|                                                     | M.Sc. in Computer Science                                  | 55                        | <b>66</b>                           |
|                                                     | PG Diploma in Information Technology                       | -                         | -                                   |
|                                                     | M.Sc. in Information Technology                            | 37                        | -                                   |
| <b>Zoological<br/>Sciences</b>                      | M.Sc. in Applied Epidemiology                              | -                         | -                                   |
|                                                     | M.Sc. in Fish & Wildlife Management                        | -                         | -                                   |
| <b>TOTAL</b>                                        |                                                            | <b>397</b>                | <b>342</b>                          |



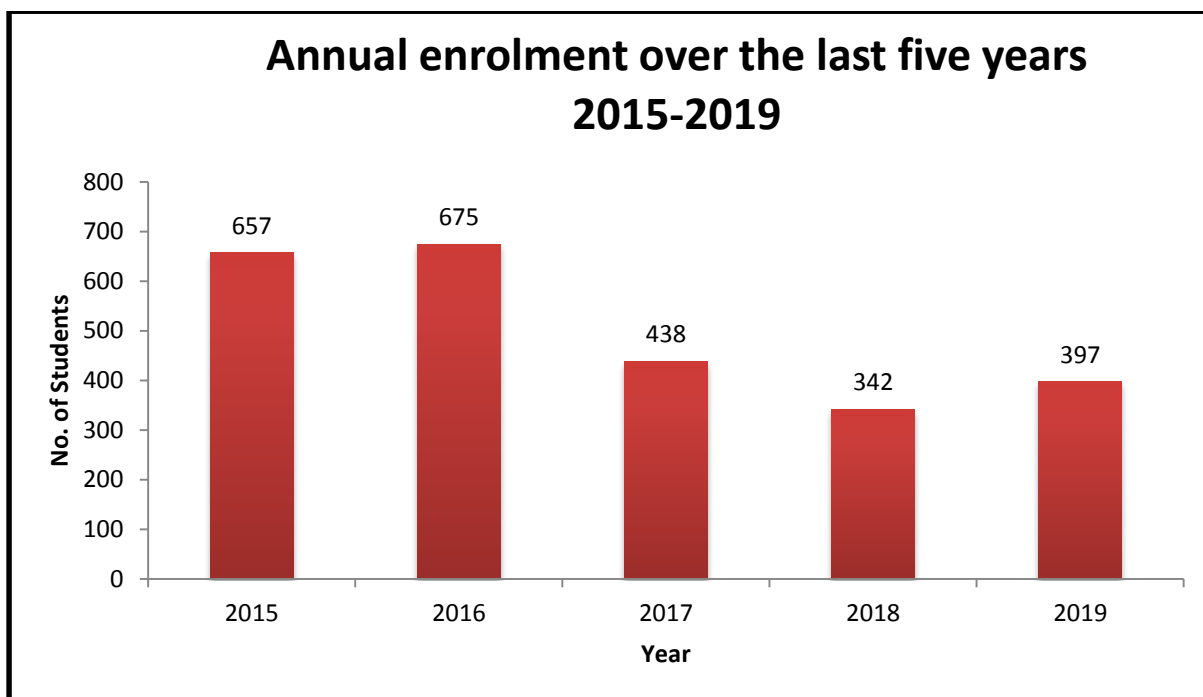


Figure 1: Annual Enrolment

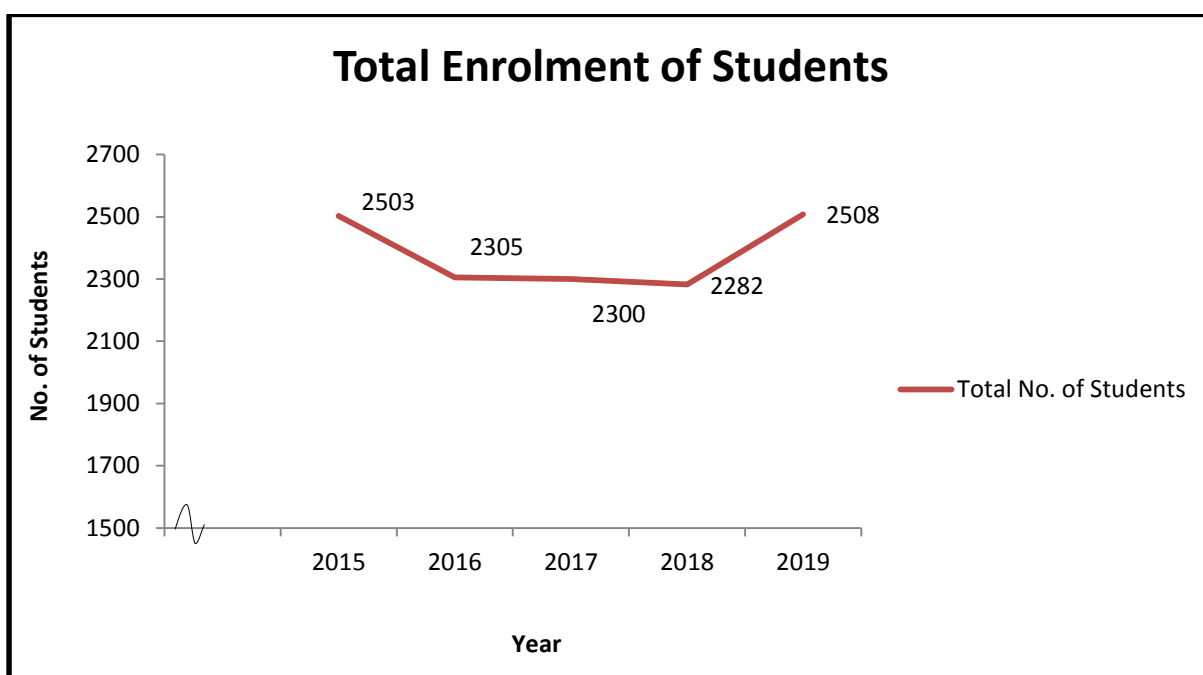


Figure 2: Total Enrolment

**Table 7: Local Students to Postgraduate Degree Programmes**

| <i>Board of Study</i>                               | <i>Course Name</i>                                                         | <i>Intake<br/>2019<br/>Ph.D.</i> | <i>Intake<br/>2019<br/>M.Phil.</i> | <i>Intake 2019 M.Sc.</i> | <i>Diploma</i> | <i>No. of Graduated<br/>M.Sc./M.Phil./Ph.D.<br/>Please see the foot<br/>note*</i> |                |              | <i>No. of<br/>Diploma<br/>Completed</i> |
|-----------------------------------------------------|----------------------------------------------------------------------------|----------------------------------|------------------------------------|--------------------------|----------------|-----------------------------------------------------------------------------------|----------------|--------------|-----------------------------------------|
|                                                     |                                                                            |                                  |                                    |                          |                | <i>M.Sc.</i>                                                                      | <i>M.Phil.</i> | <i>Ph.D.</i> |                                         |
| <b>Biochemistry<br/>&amp; Molecular<br/>Biology</b> | M.Sc. in Clinical<br>Biochemistry                                          |                                  |                                    | 19                       | --             |                                                                                   |                |              | <b>07</b>                               |
|                                                     | M.Sc. in<br>Experimental<br>Biotechnology                                  | 01                               | 02                                 | 22                       | --             | 25                                                                                | 04             | 01           | <b>04</b>                               |
| <b>Chemical<br/>Sciences</b>                        | M.Sc. in<br>Analytical<br>Chemistry                                        |                                  |                                    | 26                       | --             | 23                                                                                |                |              | <b>02</b>                               |
|                                                     | M.Sc. in<br>Industrial<br>Chemistry                                        | --                               | 04                                 | 07                       | --             | 05                                                                                | 07             | 05           | --                                      |
|                                                     | M.Sc. in<br>Nanoscience &<br>Nanotechnology                                |                                  |                                    | 34                       | --             | 16                                                                                |                |              | <b>03</b>                               |
| <b>Environmental<br/>Science</b>                    | M.Sc. in<br>Biodiversity,<br>Ecotourism and<br>Environmental<br>Management | --                               | 05                                 | 18                       | --             | 36                                                                                | 01             | 02           | <b>01</b>                               |
|                                                     | M.Sc. in<br>Environmental<br>Science                                       |                                  |                                    | 29                       | --             | 27                                                                                |                |              | <b>03</b>                               |
| <b>Earth Sciences</b>                               | M.Sc. in<br>Engineering<br>Geology &<br>Hydrogeology                       |                                  |                                    | 15                       | --             | 04                                                                                |                |              | <b>07</b>                               |
|                                                     | M.Sc. in Disaster<br>Management                                            |                                  |                                    | 15                       | --             | 02                                                                                |                |              | <b>11</b>                               |
|                                                     | M.Sc. in GIS &<br>Remote Sensing                                           | --                               | 06                                 | 33                       | --             | 09                                                                                | 02             | --           | --                                      |
|                                                     | M.Sc. in Water<br>Resources<br>Management                                  |                                  |                                    | --                       | --             | 01                                                                                |                |              | <b>01</b>                               |
|                                                     | Gemology &<br>Industrial<br>Minerals                                       |                                  |                                    | --                       | --             | 02                                                                                |                |              | --                                      |

|                                          |                                 |           |           |            |           |            |           |           |           |
|------------------------------------------|---------------------------------|-----------|-----------|------------|-----------|------------|-----------|-----------|-----------|
| <b>Plant Sciences</b>                    | M.Sc. in Medical Microbiology   |           |           | --         | --        | 05         |           |           | <b>02</b> |
|                                          | M.Sc. in Pharmaceutical Botany  | 01        | --        | 12         | --        | 07         | 01        | 02        | --        |
| <b>Physics</b>                           | M.Sc. in Physics of Materials   |           |           | 16         | --        | 07         |           |           | <b>02</b> |
|                                          | M.Sc. in Medical Physics        | --        | 03        | 10         | --        | 06         | 02        | --        | --        |
| <b>Science Education</b>                 | M.Sc. in Science Education      |           |           | 10         | --        | 18         |           |           | <b>01</b> |
|                                          | PG Diploma in Science Education | --        | 02        | --         | 10        | --         | --        | --        | --        |
| <b>Statistics &amp; Computer Science</b> | M.Sc. in Applied Statistics     |           |           | 34         | --        | 02         |           |           | <b>05</b> |
|                                          | M.Sc. in Computer Science       |           |           | 53         | --        | 43         |           |           | <b>12</b> |
|                                          | PG Diploma in IT                | --        | 02        | --         | --        | --         | --        | --        | --        |
|                                          | M.Sc. in Information Technology |           |           | 37         | --        | 04         |           |           | --        |
| <b>Mathematics</b>                       | Industrial Mathematics          | --        | 02        | 13         | --        | 13         | 01        | --        | <b>01</b> |
| <b>Zoological Sciences</b>               | Applied Epidemiology            | --        | 03        | --         | --        | 01         | 04        | --        | <b>01</b> |
| <b>TOTAL</b>                             |                                 | <b>02</b> | <b>29</b> | <b>403</b> | <b>10</b> | <b>258</b> | <b>22</b> | <b>10</b> | <b>63</b> |

**\* Note: Students graduated are from the previous batches**

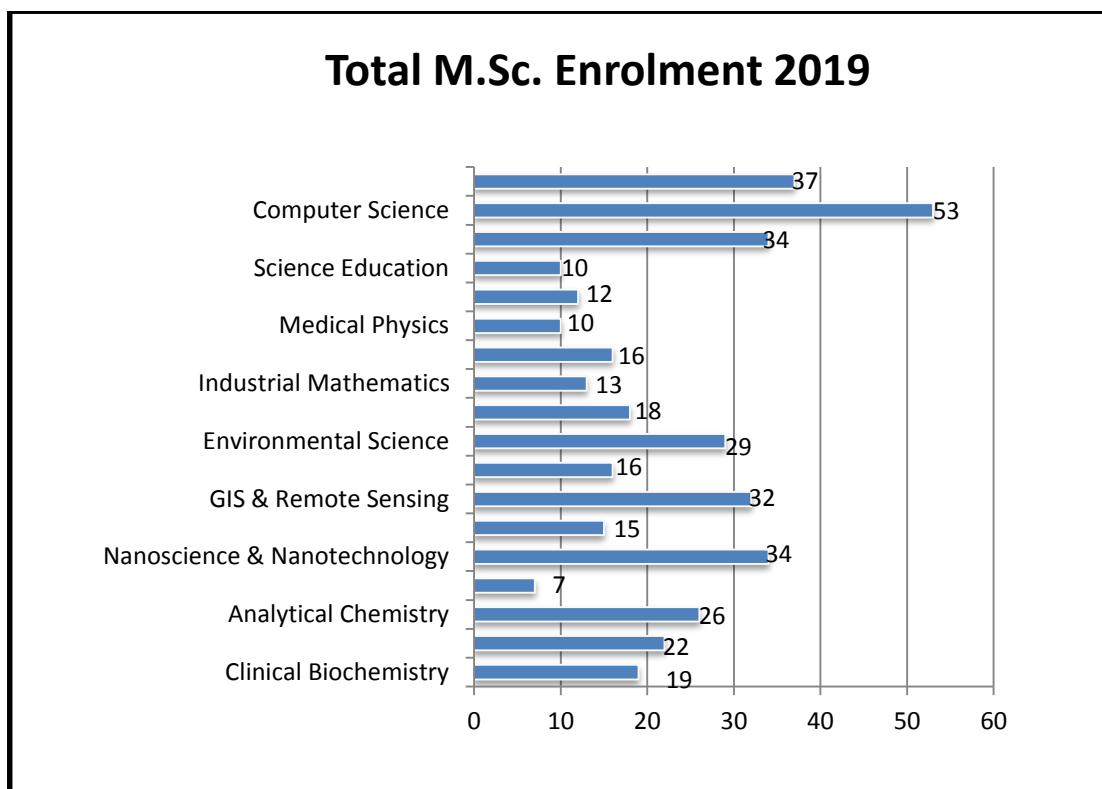


Figure 3: Total M.Sc. Enrolment

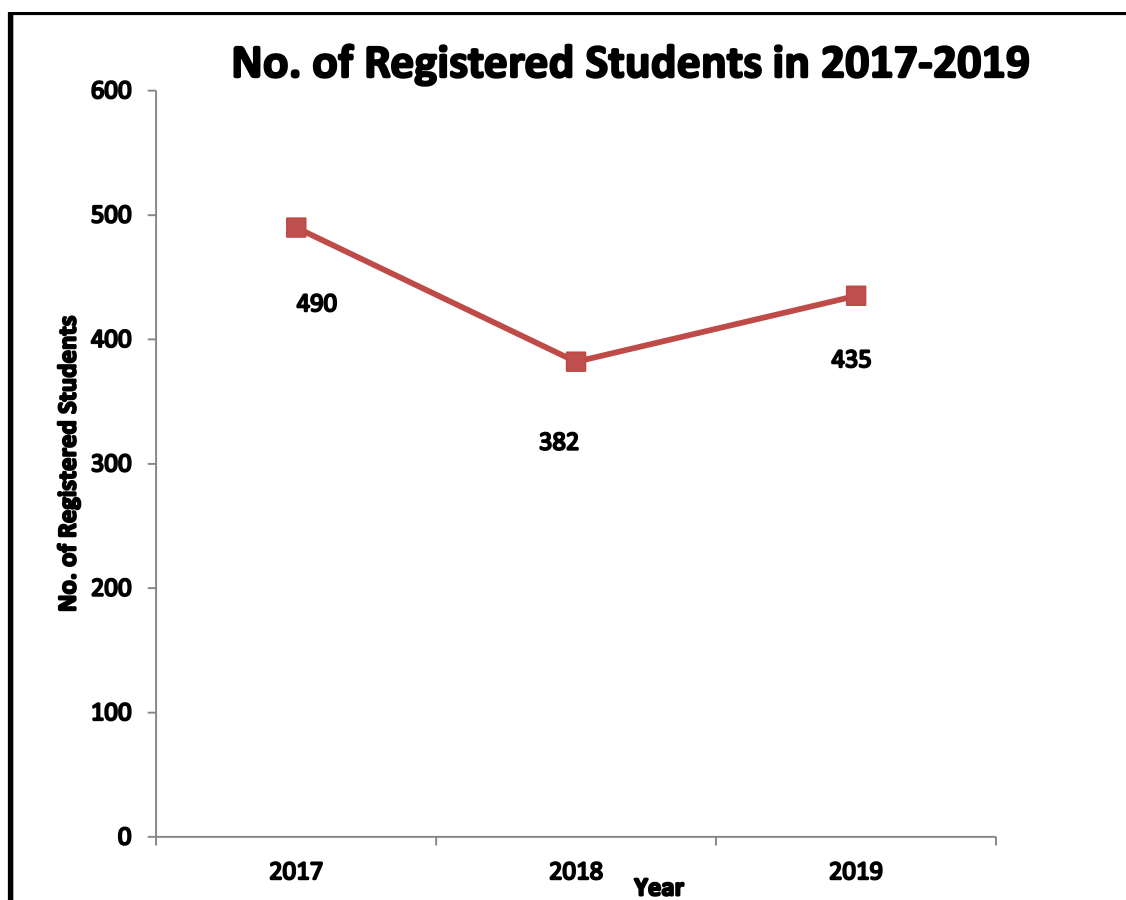


Figure 4: Registered Students

**Table 8: Foreign Students New Entrants and Enrolment in Postgraduate Degree Programmes**

| Programme of Study | Full Time/<br>Part Time | New Entrants<br>(Jan-Dec 2019) |        |       | Student Enrolment (Total<br>No. of Registered Students<br>as at 31st December 2019) |        |       | No. of<br>Graduated* |
|--------------------|-------------------------|--------------------------------|--------|-------|-------------------------------------------------------------------------------------|--------|-------|----------------------|
|                    |                         | MALE                           | FEMALE | TOTAL | MALE                                                                                | FEMALE | TOTAL |                      |
| Ph. D.             | Full Time               | 0                              | 0      | 0     | 1                                                                                   | 0      | 1     | --                   |
| M.Phil.            | Full Time               | 1                              | 0      | 1     | 1                                                                                   | 0      | 1     | --                   |
| M.Sc.              | Full Time               | 3                              | 0      | 3     | 5                                                                                   | 3      | 8     | 2                    |

**Table 9: New Courses UGC Approved**

| Programme    | Programme Type           | Duration | Medium  |
|--------------|--------------------------|----------|---------|
| Data Science | Masters Degree Programme | 2 Years  | English |

**Table 10: MOU's Signed with International Organizations**

| Foreign Institute                          | Duration        | Purpose                     |
|--------------------------------------------|-----------------|-----------------------------|
| 1. National Chung Hsing University, Taiwan | 5 Yrs from 2017 | Student Exchange Programmes |
| 2. Asian Institute of Technology, Thailand |                 | Student Exchange Programmes |

**Table 11: Details of Patents**

| Patent Application No. | Title                                                                                                         | Published by                                                                                                                                                                                                  |
|------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LK/P/1/17769           | Synthesis of Nanomaterials of Magnesium Hydroxide and Magnesium Oxide using Dolomite and Magnesite, Sri Lanka | <ol style="list-style-type: none"> <li>1. Prof. D. G. G. P. Karunaratne</li> <li>2. Prof. H. M. T. G. A. Pitawala</li> <li>3. Prof. R. M. G. Rajapakse</li> <li>4. Dr. M. M. M. G. P. G. Mantilaka</li> </ol> |

## 1.5 CONFERENCES AND SHORT-TERM PROGRAMMES



Four international conferences on thematic areas of **‘Mathematics and Mathematics Education’**, **‘Water and Air Pollution’**, **‘Sri Lanka-Japan Collaborative Research’** and **‘Water Quality and Human Health’** were conducted with the contribution of both local and foreign participants. In addition, 5 workshops on **‘Scientific Writing for PGIS Students’** and 8 short courses on **‘GIS and Applications’** were conducted at the PGIS. In collaboration with International Affairs Office (IAO) and Queensland University of Technology (QUT), two workshops (WSs) were conducted based on **‘Higher Studies Opportunities and Prospective Research Student’** and **‘Effective Research Supervisory Practices’**. A workshop on **‘Artificial Intelligence’** was conducted with collaboration with IAO. A symposium was conducted for Ayurvedhic Practitioners of Central Province at the PGIS to **‘Promote Research in Traditional Medicine’**.

**Table 12: Workshops Held in 2019**

|     | <b>Programme</b>                                                                                                             | <b>Coordinator(s)<br/>(Board of Study)</b>                                                 | <b>Date(s)</b> | <b>No. of<br/>Participant<br/>s</b> |
|-----|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------|-------------------------------------|
| 1.  | <b>13<sup>th</sup> Workshop on Scientific Writing for PGIS students</b>                                                      | Dr. N C Bandara (PGIS)                                                                     | Feb. 9-10      | <b>61</b>                           |
| 2.  | <b>Queensland University of Technology (QUT) Workshop on Higher Studies Opportunities and Prospective Research Student</b>   | QUT, International Affairs Office & PGIS                                                   | Feb. 13        | <b>171</b>                          |
| 3.  | <b>Queensland University of Technology (QUT) Workshop on Effective Research Supervisory Practices</b>                        | QUT, International Affairs Office & PGIS                                                   | Feb. 13        | <b>46</b>                           |
| 4.  | <b>82<sup>nd</sup> (108<sup>th</sup>) Short Course on GIS &amp; Applications</b>                                             | Dr. Jagath Gunatilake (Earth Sciences)                                                     | March 4-9      | <b>05</b>                           |
| 5.  | <b>14<sup>th</sup> Workshop on Scientific Writing for PGIS students</b>                                                      | Dr. N C Bandara (PGIS)                                                                     | March 16-17    | <b>120</b>                          |
| 6.  | <b>International Conference on Mathematics &amp; Mathematics Education (ICMME)</b>                                           | Prof. W B Daundasekara<br>Dr. W D Chandrasena (Mathematics/Math. Ed.)                      | March 22-23    | <b>155</b>                          |
| 7.  | <b>International Symposium on Water and Air Pollution</b>                                                                    | Prof. H M D N Priyantha, Prof. M Chen,<br>Dr. B Dassanayake, Dr. N Balasooriya             | March 29-30    | <b>171</b>                          |
| 8.  | <b>(109<sup>th</sup>) 1-Day Training Programme on GIS for Licensed Surveyors of Kandy</b>                                    | Dr. Jagath Gunatilake                                                                      | March 29       | <b>60</b>                           |
| 9.  | <b>(110<sup>th</sup>) Training Programme on GIS for Research Staff of Parliament</b>                                         | Dr. Jagath Gunatilake                                                                      | May 27-30      | <b>11</b>                           |
| 10. | <b>Workshop on Research Report Writing (for PGIS students following M.Sc. in Science Education Programme) (Org. by SEAA)</b> | Dr. S Y Ekanayake<br>Mr. AMRS Bandara                                                      | June 1-2       | <b>32</b>                           |
| 11. | <b>(111<sup>th</sup>) Short Course on GIS &amp; Applications</b>                                                             | Dr. Jagath Gunatilake                                                                      | June 17-22     | <b>11</b>                           |
| 12. | <b>Symposium to Promote Research in Traditional Medicine (for Ayurvedhic Practitioners of Central Province)</b>              | Prof. I A U N Gunathilaka                                                                  | June 25        | <b>132</b>                          |
| 13. | <b>15<sup>th</sup> Workshop on Scientific Writing for PGIS students</b>                                                      | Dr. N C Bandara (PGIS)                                                                     | June 29-30     | <b>89</b>                           |
| 14. | <b>7<sup>th</sup> Conference on Sri Lanka-Japan Collaborative Research (SLJCR 2019)</b>                                      | SL-Japan Study Centre (SLJSC),<br>Embassy of Japan in SL &<br>International Affairs Office | Aug. 24        | <b>100</b>                          |
| 15. | <b>Workshop on Bridge to Japan</b>                                                                                           | SL-Japan Study Centre (SLJSC),                                                             | Aug. 24        | <b>60</b>                           |

|                                                                                     |                                                                                   |            |            |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------|------------|
|                                                                                     | Embassy of Japan in SL & International Affairs Office                             |            |            |
| <b>16. Workshop on Initiation of Research Project (M.Sc./Science Education)</b>     | Dr. A K Amarasinghe<br>Dr. R Palamakumbura<br>(Science Ed.)                       | Aug. 30    | <b>19</b>  |
| <b>17. Workshop on Artificial Intelligence</b>                                      | Dr. S Jinadasa<br>Dr. A Pinidiyaarachchi<br>(Statistics & Computer Science)       | Sep. 3-6   | <b>34</b>  |
| <b>18. 16<sup>th</sup> Workshop on Scientific Writing for PGIS students</b>         | Dr. N C Bandara (PGIS)                                                            | Sep. 7-8   | <b>84</b>  |
| <b>19. PGIS Research Congress (RESCON-2019)</b>                                     | Prof. A D L C Perera<br>Dr. Suranjith Gamarachchi                                 | Oct. 11    | <b>350</b> |
| <b>20. Post-Congress Workshop on Scientific Writing</b>                             | Prof. A D L C Perera<br>Dr. W S S Gunathilake                                     | Oct. 12    | <b>135</b> |
| <b>21. 1-Day Seminar on 'Horizon 2020'</b>                                          | International Affairs Office,<br>European Union & PGIS                            | Oct. 24    | <b>105</b> |
| <b>22. 17<sup>th</sup> Workshop on Scientific Writing for PGIS Students</b>         | Dr. N C Bandara (PGIS)                                                            | Nov. 9-10  | <b>99</b>  |
| <b>23. Erasmus+ Awareness Session</b>                                               | International Affairs Office<br>& PGIS                                            | Nov. 14    | <b>47</b>  |
| <b>24. 112<sup>th</sup> Short Course on GIS &amp; Applications</b>                  | Dr. Jagath Gunatilake<br>(Earth Sciences)                                         | Nov. 25-30 | <b>38</b>  |
| <b>25. 113<sup>th</sup> Short Course on GIS &amp; Applications (UAV)</b>            | Dr. Jagath Gunatilake<br>(Earth Sciences)                                         | Dec. 5-6   | <b>21</b>  |
| <b>26. 7<sup>th</sup> International Symposium on Water Quality and Human Health</b> | Prof. S Yatigammana<br>Dr. W S S Gunathilake<br>Dr. J A T C Ariyasena             | Dec. 6-7   | <b>132</b> |
| <b>27. 114<sup>th</sup> Short Course on GIS &amp; Applications</b>                  | Dr. Jagath Gunatilake                                                             | Dec. 9-14  | <b>21</b>  |
| <b>28. Workshop on Greening Sri Lanka</b>                                           | Prof. H M S P Madawala<br>Dr. A M T A Gunaratne                                   | Dec. 13-14 | <b>32</b>  |
| <b>29. Workshop on STEM Education</b>                                               | Provincial Department of Education<br>(Central) & BoS/Science Education<br>(PGIS) | Dec. 14-15 | <b>41</b>  |
| <b>30. 115<sup>th</sup> Short Course on GIS &amp; Applications</b>                  | Dr. Jagath Gunatilake                                                             | Dec. 16-21 | <b>5</b>   |

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## 1.6 DEVELOPMENT OF HUMAN AND PHYSICAL RESOURCES

### 1.6.1 Human Resources

Several members visited overseas universities and laboratories for special training programmes, workshops, conferences and collaborative research activities. Meanwhile, one academic staff position, an academic support staff position and two non-academic vacancies were filled in 2019.



During the year both faculty as well as non-academic staff of PGIS rendered valuable service to the achievement of institutional goals.

**Table 13: Academic Staff (Visiting)**

| Board of Study                                   | Subject                                              | Senior Professor/<br>Professor/Assoc.<br>Professor | Senior<br>Lecturer/<br>Lecturer | Instructor |
|--------------------------------------------------|------------------------------------------------------|----------------------------------------------------|---------------------------------|------------|
| <b>Biochemistry of<br/>Molecular<br/>Biology</b> | Clinical Biochemistry                                | 11                                                 | 11                              | <b>03</b>  |
|                                                  | Experimental Biotechnology                           | 08                                                 | 03                              | <b>14</b>  |
| <b>Chemical<br/>Sciences</b>                     | Analytical Chemistry                                 | 04                                                 | 14                              | <b>13</b>  |
|                                                  | Industrial Chemistry                                 | 12                                                 | 16                              | <b>05</b>  |
|                                                  | Nanoscience & Nanotechnology                         | 18                                                 | 26                              | <b>06</b>  |
| <b>Earth Sciences</b>                            | Disaster Management                                  | 05                                                 | 16                              | -          |
|                                                  | Engineering Geology and<br>Hydrogeology              | 06                                                 | 16                              | <b>02</b>  |
|                                                  | GIS & Remote Sensing                                 | -                                                  | 13                              | <b>04</b>  |
|                                                  | Water Resources Management                           | 11                                                 | 11                              | -          |
| <b>Environmental<br/>Science</b>                 | Biodiversity, Ecotourism &<br>Environment Management | 09                                                 | 06                              | <b>02</b>  |
|                                                  | Environmental Science                                | 10                                                 | 12                              | <b>03</b>  |
| <b>Mathematics</b>                               | Industrial Mathematics                               | 02                                                 | 12                              | -          |
| <b>Physics</b>                                   | Physics of Materials                                 | 04                                                 | 11                              | <b>02</b>  |
|                                                  | Medical Physics                                      | 04                                                 | 12                              | -          |
| <b>Plant Sciences</b>                            | Medical Microbiology                                 | 06                                                 | 23                              | <b>01</b>  |
|                                                  | Pharmaceutical Botany                                | 20                                                 | 20                              | <b>04</b>  |
| <b>Science<br/>Education</b>                     | Diploma in Science Education                         | -                                                  | 13                              | -          |
|                                                  | Science Education                                    | 24                                                 | 41                              | <b>01</b>  |
| <b>Statistics &amp;<br/>Computer<br/>Science</b> | Applied Statistics                                   | 03                                                 | 13                              | -          |
|                                                  | Computer Science                                     | 05                                                 | 09                              | <b>04</b>  |
|                                                  | Information Technology                               | 04                                                 | 13                              | <b>06</b>  |
| <b>Zoological<br/>Sciences</b>                   | Applied Epidemiology                                 | 05                                                 | 07                              | -          |
| <b>TOTAL</b>                                     |                                                      | <b>171</b>                                         | <b>318</b>                      | <b>70</b>  |

**Table 14: Staff Enrolment**

| Distribution of Staff |        |                      |        |                    |        |                        |        |       |        |
|-----------------------|--------|----------------------|--------|--------------------|--------|------------------------|--------|-------|--------|
| Academic Staff        |        | Administrative Staff |        | Non-Academic Staff |        | Academic Support Staff |        | Total |        |
| MALE                  | FEMALE | MALE                 | FEMALE | MALE               | FEMALE | MALE                   | FEMALE | MALE  | FEMALE |
| 01                    | 01     | 02                   | 02     | 12                 | 11     | 03*                    | --     | 18    | 14     |

\*) Scientific Assistant was resigned on 16.06 2019

**Table 15: Academic Staff**

|              | Director  | Professor | Visiting Professor       | Senior Lecturer        |
|--------------|-----------|-----------|--------------------------|------------------------|
|              | 01        | --        | 01<br>(Assignment Basis) | 02<br>(01 - temporary) |
| <b>Total</b> | <b>01</b> | <b>--</b> | <b>01</b>                | <b>02</b>              |

**Table 16: Non-Academic Staff**

|                        | Designation                                       | No. of Staff Members                                                 |
|------------------------|---------------------------------------------------|----------------------------------------------------------------------|
| Academic Support Staff | Temporary Research Assistant                      | 02                                                                   |
|                        | Scientific Assistant                              | 01<br>(Resigned on 15/06/2019)                                       |
| Administrative Staff   | Deputy Registrar                                  | 01-Assistant Registrar<br>(Duties covered by an Assistant Registrar) |
|                        | Senior Assistant Bursar<br>(Acting Deputy Bursar) | 01                                                                   |
|                        | Senior Assistant Registrar (Assistant Registrar)  | 01                                                                   |
| Other Executive        | Electronic Engineer                               | 01                                                                   |
| Technical Staff        | Audio Visual Technical Officer                    | 01                                                                   |

|                            |                                 |                                               |
|----------------------------|---------------------------------|-----------------------------------------------|
|                            | Technical Officer               | 02                                            |
| Clerical and Allied Grades | Clerk                           | 03                                            |
|                            | Book Keeper                     | 01                                            |
|                            | Computer Applications Assistant | 03                                            |
|                            | Stenographer                    | 02                                            |
|                            | Clerk Cum Data Entry Operator   | 01                                            |
|                            | Shroff Cum Stores Clerk         | 01                                            |
|                            | Management Assistant            | 02                                            |
|                            | Library Assistant               | -                                             |
| Primary Staff              | Driver                          | 02<br>(One driver was resigned on 04/12/2019) |
|                            | Labourer                        | 03                                            |
| <b>Total</b>               |                                 | <b>31</b>                                     |

**Table 17: Training Programmes (PGIS Staff Undergone)**

| Programme/Theme                                   | National / International | Date of held                                     | Duration | No. of Participants |
|---------------------------------------------------|--------------------------|--------------------------------------------------|----------|---------------------|
| Training Programme for Bruker XRD System, Germany | International            | 4 <sup>th</sup> to 8 <sup>th</sup> November 2019 | 5 Days   | 02                  |
| Workshop on Team work & Leadership                | National                 | 28 <sup>th</sup> November 2019                   | 1 Day    | 25                  |

## 1.6.2 PHYSICAL RESOURCES

### 1.6.2.1 THE POWDER X-RAY DIFFRACTOMETER

The Powder X-Ray Diffractometer, which is commonly known as PXRD has been installed to facilitate research work. The newly constructed building is facilitated with lecture theaters, a fully-equipped conference room, a student welfare center and a well-equipped teaching laboratory and a research laboratory.

### 1.6.2.2 SCIENCE LIBRARY – UNIVERSITY OF PERADENIYA

**Table 18: Library Allocations Received in 2019**

|                    |   |     |             |
|--------------------|---|-----|-------------|
| PGIS Allocation    | - | Rs. | 461 678.28  |
| Faculty Allocation | - | Rs. | -470 160.42 |

**Table 19: Acquisitions**

|        |   |     |
|--------|---|-----|
| Books  | - | 35  |
| Theses | - | 147 |

**Table 20: Details of the Books Added (Purchased & Donations)**

|           |   |     |
|-----------|---|-----|
| Purchased | - | 89  |
| Donations | - | 20  |
| Theses    | - | 147 |

**Table 21: Library User Categories**

|                                  |   |      |
|----------------------------------|---|------|
| Postgraduate Students            | - | 814  |
| Undergraduate Students           | - | 1639 |
| Permanent Academic Staff Members | - | 126  |
| Permanent Academic Support Staff | - | 01   |
| Members                          |   |      |
| Temporary Academic Staff Members | - | 16   |
| Technical Officers               | - | 06   |
| <i>Total</i>                     | - | 2602 |

**Table 22: Library Books Borrowed**

|                                          |   |      |
|------------------------------------------|---|------|
| Postgraduate Students                    | - | 189  |
| Undergraduate Students                   | - | 2779 |
| Permanent Academic Staff Members         | - | 118  |
| Permanent Academic Support Staff Members | - | 05   |
| Temporary Academic Staff Members         | - | 12   |
| <i>Total</i>                             | - | 3103 |

**Table 23: In-House Usage**

|                           |   |      |
|---------------------------|---|------|
| Reference & Lending Books | - | 2779 |
| Postgraduate Theses       | - | 62   |
| Past Papers               | - | 252  |

## 1.7 ADMINISTRATIVE AND FINANCIAL ACHIEVEMENT

PGIS was received a qualified audit opinion for 2019.

### 1.7.1 DETAILS OF INFRASTRUCTURE FACILITIES 2019

**Table 24: All Ongoing Capital Projects**

| Name of the Project | Name of the Contractor | Tender Amount with VAT (Rs.) | Interim Payments upto 31.12.2019 (Rs.) | Physical Progress % |
|---------------------|------------------------|------------------------------|----------------------------------------|---------------------|
| PGIS New Building   | ASB( PVT) Ltd          | 131,100,000                  | 123,049,252                            | 100%                |

**Table 25: Total Income in 2018 Vs 2019**

|                                     | 2018 (Rs)          | 2019 (Rs.)         |
|-------------------------------------|--------------------|--------------------|
| Recurrent Grant                     | 10,000,000         | 15,000,000         |
| Self-Financing Activities-Net Value | 93,781,645         | 94,376,105         |
| All other Internal Income           | 48,457,371         | 51,624,845         |
| <b>Total</b>                        | <b>152,239,016</b> | <b>161,000,950</b> |

**Table 26: Capital Payments in 2018 Vs 2019**

| <b>Capital Payments</b>             | <b>Government Grant</b> |                  | <b>Generated Income</b> |                  | <b>Total Payments</b> |                  |
|-------------------------------------|-------------------------|------------------|-------------------------|------------------|-----------------------|------------------|
|                                     | <b>2019 (Rs)</b>        | <b>2018 (Rs)</b> | <b>2019 (Rs)</b>        | <b>2018 (Rs)</b> | <b>2019 (Rs)</b>      | <b>2018 (Rs)</b> |
| <b>Building</b>                     | 10,000,000              | 44,608,423       | 18,748,173              | 1,748,286        | 28,748,173            | 46,356,709       |
| <b>Lab &amp; teaching Equipment</b> | 10,000,000              | 11,733,996       | 39,484,521              | --               | 49,484,521            | 11,733,996       |
| <b>Office Equipment</b>             | --                      | 507,581          | 1,599,416               | --               | 1,599,416             | 507,581          |
| <b>Library Book</b>                 | --                      | --               | 161,505                 | --               | 161,505               | --               |
| <b>Total</b>                        | 20,000,000              | 56,850,000       | 59,993,615              | 1,748,286        | 79,993,615            | 58,598,286       |

**Table 27: Recurrent Expenditure**

| <b>Programme</b>                         | <b>Expenditure (Rs.)</b> |
|------------------------------------------|--------------------------|
| <b>Personal Emoluments -Academic</b>     | 29,143,792               |
| <b>Personal Emoluments -Non Academic</b> | 34,007,503               |
| <b>Travelling Expenses</b>               | 805,036                  |
| <b>Supplies</b>                          | 5,100,147                |
| <b>Maintenance Expenses</b>              | 2,348,768                |
| <b>Contractual Services</b>              | 7,138,552                |
| <b>Other Recurrent Expenses</b>          | 28,114,334               |
| <b>Depreciation</b>                      | 30,825,832               |
| <b>Grand Total</b>                       | 137,483,964              |

**Table 28: Financial Progress (Expenditure)**

| Subject   | 2019        |
|-----------|-------------|
| Recurrent | 106,658,132 |
| Capital   | 183,395,339 |

**Table 29: Financial Progress (General Income)**

| Source of Revenue    | Collection in 2019 Rs. |
|----------------------|------------------------|
| Postgraduate Studies | 99,360,900             |
| Other                | 47,817,758             |
| Government Grant     | 15,000,000             |

**Table 30: Financial Performance Analysis**

| Subject                                                       | Exp. Per Student Rs. |
|---------------------------------------------------------------|----------------------|
| Recurrent Expenditure per student (RE)<br>(RE/ No of Student) | 72987.40             |

**Table 31: Fund Allocation, Utilization and Management**

|                  | Allocation (Mn) | Received and Utilized (Mn) |
|------------------|-----------------|----------------------------|
| Capital Grants   | 20              | 20                         |
| Recurrent Grants | 15              | 15                         |



**Table 32: Research Grants Received (External Funds, 2015-2019)**

| Year | No. of Research Grants | Value (Rs. Mn) |
|------|------------------------|----------------|
| 2015 | 5                      | 19040010.00    |
| 2016 | 8                      | 19874125.00    |
| 2017 | 4                      | 14001100.00    |
| 2018 | 6                      | 10288860.00    |
| 2019 | 4                      | 3982048.96     |

**Table 33: Details Of Projects Expenditure (Local Funded) Year 2019**

| Name and Details                               | Grant                         | Funding Agency                       | Total Cost Estimate Rs. |
|------------------------------------------------|-------------------------------|--------------------------------------|-------------------------|
| Prof. A Pitawala<br>(Ms. R D S Samaradiwakara) | NRC Grant AB 19-004<br>(6282) | National Research Council<br>(NRC)   | 4 392 000.00            |
| Ms. R W M G K Kapukotuwa<br>(Scholar)          | NSF/SCH/2019/04<br>(6283)     | National Science Foundation<br>(NSF) | 3 476 300.00            |

**Table 34: Details of Projects Expenditure (Foreign Funded) Year 2019**

| Name and Details      | Grant                                     | Funding Agency                                     | Total Cost Estimate |
|-----------------------|-------------------------------------------|----------------------------------------------------|---------------------|
| Dr. K G N Nanayakkara | 6284                                      | International Foundation for Science (IFS)         | 1200 USD            |
| Dr. K B S N Jinadasa  | LEF Project for Kurunegala Lake<br>(6286) | Nanyang Technological University (NEWRI-Singapore) | SGD \$ 61169        |

## **2. FAILURES AND JUSTIFICATIONS**

A few lapses were identified in the dispose of chemical waste from the laboratories and actions are being taken to implement proper waste management system. Due to insufficient marketing strategy, less number of students has been attracted for some of the postgraduate programmes.

## **3. FUTURE PLANS OF PGIS**

- Development of computerized and online systems for registration process, document handling, instrument booking and data management
- Purchasing sophisticated major instruments/equipment to develop PGIS as a high-quality well-equipped research center
- Development of research material storage facility for laboratories to avoid delays in research activities and projects
- Mechanisms to promote degree programmes and other PGIS events (Social media, PGIS YouTube channel, media team and PGIS ambassadors to promote events among foreign institutes)
- Setting up career guidance and counseling mechanisms through workshops and possibly a center or office
- Development of existing laboratories to promote good research practices and research culture
- Implementation of new industrial outreach activities such as PGIS startup programme and R & D support for industries
- Awarding PGIS research grants
- Formulation and implementation of new degree programmes to meet with the current demand
- Introducing new conferences, workshops and awareness programmes with the latest topics in the world
- Attraction and registration of more international students to improve university ranking.

## **4. SUSTAINABLE DEVELOPMENT**

### **4.1 SUSTAINABLE DEVELOPMENT PROGRAMMES IMPLEMENTED AT THE POSTGRADUATE INSTITUTE OF SCIENCE IN 2019**

- Propose garbage segregation programme & introduce separate bins
- Handover segregated waste to authorized collectors
- Waste Paper and polythene were segregated and recycled.
- Cylinders of laboratories were located outside the building with proper attachments to the building. Leak free gas lines are provided under a colored lines into laboratories.
- Researchers are asked to use fume hoods for their solvent based activities to avoid chemical poisoning and hazards. Fume hoods are designed to release air pollutants with proper mechanism.
- Laboratory users have been instructed to wear lab coats and safety glasses during their sessions at the laboratory.
- Introduce autoclaving method for the disposal of bio hazardous waste
- Chemical wastes are directed to specially allocated sinks and the sinks are draining into special underground pits as liquid waste management plan
- Trees and decorator plants have been placed outside and inside the buildings as environmental protection green method
- Standard chemical storage cabinets have been used and chemical storing is done under standard conditions and locations
- Safety equipment including fire safety equipment and standard lab protecting have been located properly
- Exhauster fans have been placed inside laboratories and class rooms for air circulation
- Introduced paperless effective communication system. Email, MIS and newly introduced SMS system
- Promote efficient use of energy
  - Replace bulbs with Light-Emitting Diode (LED)
  - Introduce motion sensing bulbs
  - Introduce solar power plant to generate clean energy
  - Conducting capacity building programmes to promote the efficient use of energy

## 4.2 SUSTAINABILITY DEVELOPMENT RELATED RESEARCH CONDUCTED DURING 2020

1. *"HYDROMETALLURGICAL EXTRACTION OF HAZARDOUS HEAVY METALS FROM INDUSTRIAL SLUDGE"*
2. *"ENGINEERED CLAY-BIOCHAR COMPOSITE FOR TRAPPING ANTIBIOTIC CIPROFLOXACIN FROM AQUEOUS MEDIA"*
3. *"MICRO PLASTICS AS A VECTOR FOR TRANSPORTING CIPROFLOXACIN IN WATER AT DIFFERENT ENVIRONMENTAL CONDITIONS"*
4. *"URBAN LAKE WATER QUALITY: A CASE STUDY IN KURUNAGALA LAKE"*
5. *"ADSORPTIVE REMOVAL OF ANTIBIOTIC OXYTETRACYCLINE HYDROCHLORIDE USING BIOCHAR MONTMORILLONITE CLAY COMPOSITE"*
6. *"A STUDY ON HEAVY METAL CONTAMINATION IN SELECTED MAN-MADE BRACKISH WATER AQUACULTURE SYSTEMS IN THE EASTERN PROVINCE"*
7. *"ESTIMATING THE CORBON FOOTPRINT OF THE UNIVERSITY OF PERADENIYA FOR YEAR 2014"*
8. *"CHEMICAL ANALYSIS OF BULK DEPOSITION IN SELECTED LOCATIONS IN GAMPAHA DISTRICT"*
9. *"HISTORICAL TRENDS IN AVERAGES AND EXTREMES OF RAINFALL, TEMPERATURE AND RUNOFF OF SRI LANKA"*
10. *"SPECIES COMPOSITION, DENSITY, DIVERSITY, COMMUNITY STRUCTURE AND FUNCTION IN LAGOON AND ESTUARINE MANGROVE ECOSYSTEMS IN POTTUVIL TO OKANDA COASTAL STRETCH IN THE EAST COAST OF SRI LANKA"*
11. *"DISTRIBUTION AND MOBILITY OF MAJOR AND TRACE ELEMENTS IN GROUND WATER AND SOILS FROM DIFFERENT CLIMATIC ZONES OF SRI LANKA – IMPLICATIONS TO HUMAN HEALTH AND AGRICULTURE"*



# FINANCIAL STATEMENT 2019

POSTGRADUATE INSTITUTE OF SCIENCE

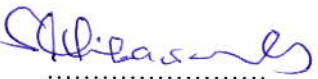
STATEMENT OF FINANCIAL POSITION  
AS AT 31ST DECEMBER 2019

|                                        | Note | As at 31/12/2019   | Restated<br>As at 31/12/2018 |
|----------------------------------------|------|--------------------|------------------------------|
|                                        |      | <u>Rs.</u>         | <u>Rs.</u>                   |
| <b>Current Assets</b>                  |      |                    |                              |
| Cash & Cash Equivalents                | 1    | 35,864,154         | 53,741,254                   |
| Receivable                             | 2    | 40,087,645         | 28,250,945                   |
| Loan & advances to staff               | 3    | 1,580,895          | 1,281,035                    |
| Inventories                            | 4    | 2,411,010          | 2,500,410                    |
| Other Advances                         | 5    | -                  | 6,639,360                    |
| <b>Total Current Assets</b>            |      | <b>79,943,704</b>  | <b>92,413,004</b>            |
| <b>Non Current Assets</b>              |      |                    |                              |
| Loan & advances to staff               | 3    | 2,615,205          | 2,760,620                    |
| Investments                            | 6    | 410,650,564        | 398,687,080                  |
| Financial misappropriation-(2008-2016) |      | 50,338,160         | 50,338,160                   |
| Intangible asset                       | 7    | 247,551            | 256,500                      |
| Work in Progress                       | 8    | -                  | 97,111,814                   |
| Property, Plant & Equipments           | 9    | 241,260,174        | 88,690,667                   |
| <b>Total Non Current Assets</b>        |      | <b>705,111,654</b> | <b>637,844,841</b>           |
| <b>Total Assets</b>                    |      | <b>785,055,358</b> | <b>730,257,845</b>           |
| <b>LIABILITIES</b>                     |      |                    |                              |
| <b>Current Liabilities</b>             |      |                    |                              |
| Accrued expenses                       | 10   | 9,356,853          | 5,406,586                    |
| Other payables                         | 11   | 23,039,369         | 21,131,294                   |
| Refundable deposits                    | 12   | 9,192,696          | 7,647,196                    |
| Differed Income                        |      | 7,949,592          | 3,051,830                    |
| Provisions                             | 13   | 8,209,497          | 10,132,852                   |
| <b>Total Current Liabilities</b>       |      | <b>57,748,005</b>  | <b>47,369,758</b>            |
| <b>Non Current Liabilities</b>         |      |                    |                              |
| Provision for Gratuity                 | 14   | 9,006,825          | 6,678,275                    |
| Funds                                  | 15   | 11,881,515         | 11,781,238                   |
| Refundable deposits                    | 12   | 3,187,000          | 3,043,000                    |
| <b>Total Non Current Liabilities</b>   |      | <b>24,075,340</b>  | <b>21,502,513</b>            |
| <b>TOTAL LIABILITIES</b>               |      | <b>81,823,346</b>  | <b>68,872,271</b>            |
| <b>NET ASSETS</b>                      |      | <b>703,232,013</b> | <b>661,385,573</b>           |
| <b>EQUITY</b>                          |      |                    |                              |
| General Reserves                       |      | 535,021,423        | 493,224,830                  |
| Restricted Funds                       | 16   | 14,754,538         | 17,079,162                   |
| Capital Grant                          |      | 137,149,617        | 133,259,074                  |
| Revaluation Reserve                    |      | 16,306,435         | 17,822,507                   |
| <b>TOTAL EQUITY</b>                    |      | <b>703,232,013</b> | <b>661,385,573</b>           |

These financial statements are in compliance with the requirements of the University Act. No. 16 of 1978 and other statutory provisions.

  
A.M.R.A. Priyashantha.  
Actg. Deputy Bursar.

The Board of Management is responsible for the preparation and presentation of these financial statements signed for and on behalf of the Board of Management

  
Prof. H.M.T.G.A. Pitawala  
Director/PGIS

The Accounting Policies and Notes on pages 8 to 13 from an integral part of these Financial Statements.

**29.02.2020**

**POSTGRADUATE INSTITUTE OF SCIENCE**

**STATEMENT OF FINANCIAL PERFORMANCE  
FOR THE YEAR ENDED 31ST DECEMBER 2019**

|                                         | Note | <u>2019</u>        | <u>Restated</u>    |
|-----------------------------------------|------|--------------------|--------------------|
| <b>Revenue</b>                          |      | <b><u>Rs.</u></b>  | <b><u>2018</u></b> |
|                                         |      |                    | <b><u>Rs.</u></b>  |
| Government Grant (Recurrent )           |      | 15,000,000         | 10,000,000         |
| Examination Fee                         |      | 1,456,500          | 1,536,028          |
| Tuition Fee                             |      | 86,262,905         | 86,736,108         |
| Registration Fee                        |      | 4,217,000          | 3,212,500          |
| Miscellaneous Income                    | 17   | 2,887,091          | 3,322,444          |
| Research Congress Income                |      | 1,571,800          | 1,078,950          |
| Medical Fee                             |      | 71,200             | 60,010             |
| Services & Facilities Fee               |      | 133,300            | 606,500            |
| Vehicle Hiring Charges                  |      | 392,605            | 368,045            |
| Library Tickets                         |      | 757,500            | 651,000            |
| Supervision Fee                         |      | 656,000            | 813,500            |
| Interest Income                         | 18   | 31,727,071         | 28,627,972         |
| Bench Fee                               |      | 955,000            | 772,500            |
| Exchange Gain/Loss                      |      | 1,177,709          | 27,214,023         |
| Amortization of Capital Grant           | 19   | 16,109,457         | 11,544,842         |
| Research Grant Income                   |      | 14,912,978         | 14,453,462         |
|                                         |      | <b>178,288,115</b> | <b>190,997,883</b> |
| <b>Expenses</b>                         |      |                    |                    |
| Personal Emoluments                     | 20   | 63,151,294         | 52,133,500         |
| Travelling                              | 21   | 805,036            | 564,092            |
| Supplies & Consumables                  | 22   | 5,100,147          | 3,512,987          |
| Maintenance                             | 23   | 2,348,768          | 3,529,330          |
| Contractual Services                    | 24   | 7,138,552          | 5,393,399          |
| Other Expenses                          | 25   | 28,114,334         | 28,683,448         |
| Depreciation                            | 26   | 30,825,832         | 20,291,449         |
|                                         |      | <b>137,483,964</b> | <b>114,108,205</b> |
| <b>Net surplus/deficit for the year</b> |      | <b>40,804,151</b>  | <b>76,889,677</b>  |



**POSTGRADUATE INSTITUTE OF SCIENCE**  
**CASH FLOW STATEMENT FOR THE YEAR ENDED 31ST DECEMBER 2019**

|                                                             | 2019                | 2018<br>Restated     |
|-------------------------------------------------------------|---------------------|----------------------|
| <b>Cash Flows from Operating Activities</b>                 |                     |                      |
| Surplus from Ordinary Activities                            | 40,804,151          | 76,889,677           |
| <b>Non - Cash movements</b>                                 |                     |                      |
| Depreciation & Amortization                                 | 30,884,781          | 20,291,449           |
| Amortization of capital grants                              | (16,109,457)        | (11,544,842)         |
| Interest income                                             | (31,727,071)        | (28,467,530)         |
| Increase / Decrease of Provision for Audit Fees             | (362,363)           | 956,103              |
| Increase / Decrease Provision for Gratuity                  | 2,328,550           | (224,274)            |
| Increase / Decrease Provision for Security Charges          | (256,620)           | 88,260               |
| Increase / Decrease Provision for Visiting Lecturer Fees    | (1,199,974)         | 4,136,031            |
| Increase / Decrease Provision for cleaning services         | (104,400)           | 104,400              |
| <b>Operating surplus before the working capital changes</b> | <b>24,257,597</b>   | <b>62,229,274</b>    |
| Increase / Decrease Receivables                             | (12,351,893)        | (15,670,770)         |
| Increase / Decrease loans & advances                        | (154,445)           | (431,262)            |
| Increase / Decrease inventories                             | 89,401              | (93,212)             |
| Increase / Decrease accrued expenses                        | 1,644,358           | (1,380,320)          |
| Increase / Decrease payables                                | 4,563,433           | 7,053,718            |
| Increase / Decrease refundable deposits                     | 1,689,500           | 664,630              |
| Increase / decrease differed income                         | 4,897,762           | (7,719,697)          |
| <b>Net cash Flow from Operating Activities</b>              | <b>24,635,713</b>   | <b>44,652,361</b>    |
| <b>Cash Flows from Investing Activities</b>                 |                     |                      |
| Purchase of Property Plant & Equipments                     | (79,865,739)        | (18,203,819)         |
| Purchase of Intangible assets                               | (180,000)           | (126,500)            |
| Payments for working progress                               |                     | (44,747,808)         |
| Investment in fixed Deposits                                | (31,104,723)        | (70,637,062)         |
| Interest Income                                             | 32,242,264          | 26,853,219           |
| <b>Net cash Flow from Investing Activities</b>              | <b>(78,908,198)</b> | <b>(106,861,969)</b> |
| <b>Cash Flows from Financing Activities</b>                 |                     |                      |
| Government capital Grants                                   | 20,000,000          | 56,850,000           |
| Scholarship fund                                            | 103,728             | 49,722               |
| Fixed deposits withdrawals                                  | 19,141,239          | -                    |
| Workshop & Event fund                                       | (3,450)             |                      |
| Research Grant Receipts                                     | 12,505,622          | 14,191,230           |
| Research Grant payments                                     | (15,351,754)        | (14,972,822)         |
| <b>Net Cash Flows from Financing Activities</b>             | <b>36,395,385</b>   | <b>56,118,130</b>    |
| Increase / Decrease in Cash & Cash Equivalent               | (17,877,100)        | (6,091,478)          |
| Cash & Cash Equivalent at the Beginning of the Year         | 53,741,254          | 59,832,732           |
| Cash & Cash Equivalent at the End of the Year               | <b>35,864,154</b>   | <b>53,741,254</b>    |

**POSTGRADUATE INSTITUTE OF SCIENCE**

**STATEMENT OF COMPARISON BUDGET & ACTUAL  
FOR THE YEAR ENDED 31ST DECEMBER 2019**

| <b>Revenue</b>                          | <b>Note</b> | <b><u>2019 Actual</u></b><br><b><u>Rs.</u></b> | <b><u>2019 Budget</u></b><br><b><u>Rs.</u></b> |
|-----------------------------------------|-------------|------------------------------------------------|------------------------------------------------|
| Government Grant (Recurrent )           |             | 15,000,000                                     | 15,000,000                                     |
| Examination Fee                         |             | 1,456,500                                      | 1,685,000                                      |
| Tuition Fee                             |             | 86,262,905                                     | 54,500,000                                     |
| Registration Fee                        |             | 4,217,000                                      | 3,500,000                                      |
| Miscellaneous Income                    | 17          | 2,887,091                                      | 2,980,000                                      |
| Rescon Income                           |             | 1,571,800                                      | 1,600,000                                      |
| Medical Fee                             |             | 71,200                                         | 89,000                                         |
| Services & Facilities Fee               |             | 133,300                                        | 135,000                                        |
| Vehicle Hiring Charges                  |             | 392,605                                        | 375,000                                        |
| Library Tickets                         |             | 757,500                                        | 900,000                                        |
| Supervision Fee                         |             | 656,000                                        | 675,000                                        |
| Interest Income                         | 18          | 31,727,071                                     | 21,859,000                                     |
| Bench Fee                               |             | 955,000                                        | 1,000,000                                      |
| Exchange Gain/Loss                      |             | 1,177,709                                      | -                                              |
| Amortization of Capital Grant           | 19          | 16,109,457                                     | -                                              |
| Research Grant Income                   |             | 14,912,978                                     |                                                |
|                                         |             | <b>178,288,115</b>                             | <b>104,298,000</b>                             |
| <b>Expenses</b>                         |             |                                                |                                                |
| Personal Emoluments                     | 20          | 63,151,294                                     | 65,140,000                                     |
| Travelling                              | 21          | 805,036                                        | 2,400,000                                      |
| Supplies & Consumables used             | 22          | 5,100,147                                      | 6,684,000                                      |
| Maintenance                             | 23          | 2,348,768                                      | 3,965,000                                      |
| Contractual Services                    | 24          | 7,138,552                                      | 7,728,000                                      |
| Other Expenses                          | 25          | 28,114,334                                     | 18,381,000                                     |
| Depreciation                            | 26          | 30,825,832                                     | -                                              |
|                                         |             | <b>137,483,964</b>                             | <b>104,298,000</b>                             |
| <b>Net surplus/deficit for the year</b> |             | <b>40,804,151</b>                              | <b>-</b>                                       |

POSTGRADUATE INSTITUTE OF SCIENCE

STATEMENT OF CHANGES IN NET ASSET/EQUITY  
FOR THE YEAR ENDED 31ST DECEMBER 2019

|                                          | Capital Grant      | Revaluation Reserve | Retain Earnings    | Total              |
|------------------------------------------|--------------------|---------------------|--------------------|--------------------|
| <b>Balance as at 01.01.2019</b>          | <b>139,859,074</b> | <b>17,822,507</b>   | <b>471,196,030</b> | <b>628,877,611</b> |
| Change in Accounting policies            |                    |                     | 15,428,800         | 15,428,800         |
| Correction of Accounting Errors          | (6,600,000)        |                     | 6,600,000          | -                  |
| <b>Restated Balance as at 01.01.2019</b> | <b>133,259,074</b> | <b>17,822,507</b>   | <b>493,224,830</b> | <b>644,306,411</b> |
| Surplus/Deficit for the period           |                    |                     | 40,804,151         | 40,804,151         |
| Research Grant Adjustment                |                    |                     | (523,630)          | (523,630)          |
| Capital Grant received                   | 20,000,000         |                     |                    | 20,000,000         |
| Transfer to General Reserve              |                    | (1,516,072)         | 1,516,072          | -                  |
| Amortization of Grant                    | (16,109,457)       |                     |                    | (16,109,457)       |
|                                          |                    |                     |                    | -                  |
| <b>Balance as at 31 December 2019</b>    | <b>137,149,617</b> | <b>16,306,435</b>   | <b>535,021,423</b> | <b>688,477,475</b> |



## **Notes to the Final Statements**

### **1. Significant Accounting Policies**

#### **1.1 General Policies**

##### **1.1.1 Reporting Entity**

The Postgraduate Institute of Science (PGIS) was established in 1996 by an ordinance made by the University Grants Commission under section 18 with section 24 of the Universities Act No 16 of 1978.

##### **1.1.2 Principal activities and nature of operations**

The principal objective of the PGIS is providing, promoting developing higher education in science.

##### **1.1.3 Basis of preparation**

###### **(a) Statements of Compliance**

The Financial Statements comprise the statements of financial positions, statements of financial performance, statements of changes in equity, cash flow statements, notes to the financial statements and statement of comparison of budget and actual amounts.

The Financial Statements of the PGIS are prepared in conformity with Sri Lanka Public Sector Accounting Standards and relevant Sri Lanka Accounting standards for the accrual basis of accounts. All accounting policies adopted by the PGIS are applied consistently with those of the previous year. Change in accounting policies have been disclosed separately.

###### **(b) Basis of measurement**

The Financial Statements of PGIS are prepared under the historical cost convention and do not take into account changes in money values, except where it is stated.

###### **(c) Functional and presentation currency**

The Financial Statements are presented in Sri Lankan Rupees, which is the institute functional and presentation currency.

###### **(d) Going concern**

The Financial Statements have been prepared on a going concern basis.

#### **1.2 Assets and the basis of valuation**

##### **1.2.1 Property, Plant & Equipment**

Buildings, Laboratory and Teaching Equipment, Furniture & Fittings, Library Books and Periodicals, Motor Vehicles, and Other Assets include the items acquired out of government grant, internally generated funds, and donations.

#### **a) Basis of Recognition and Measurement**

Property, Plant and Equipment are recognized if it is probable that future Economics benefits associated with the item will flow to the entity and the cost of the items can be reliably measured. Property, plant and equipments are recorded at cost less accumulated depreciation. The cost of property, plant and equipment is the cost of purchase or construction together with any incidental capital expenses there on.

#### **b) Cost**

The cost of property, plant and equipment comprises its purchase or construction cost and any directly attributable cost of bringing the assets working condition for its intended use.

#### **c) Subsequent expenditure on existing Fixed Assets**

Expenditure incurred on tangible fixed assets is charged to the Statement of Financial Performance in the period it is incurred, unless it meets one of the following criteria, in which case it is capitalized and depreciates on the relevant basis.

- Market value of fixed assets has subsequently increased.
- Asset capacity increase.
- Sustainable improvement in the quality of output or reduction in operating cost.
- Significant extension of the asset life beyond that confirmed by repair and maintenance.

#### **d) Depreciation**

Depreciation is recognized in the Statements of Financial Performance on a Straight-Line Method over the estimated useful life of Property, Plant and Equipments from the date that they were made available for use. Lands are not depreciated. The estimated useful life periods are as follows.

| Description                     | Estimated useful life period |
|---------------------------------|------------------------------|
| Laboratory, teaching equipments | 5Years                       |
| Motor vehicles                  | 5 Years                      |
| Library Books and Periodicals   | 5 Years                      |
| Telephone                       | 10 Years                     |
| Other Equipments                | 5 Years                      |
| Building                        | 20Years                      |

The method of depreciation is adopted in using the rates in the UGC circular 649, and hope to continue in future.

**(f) Land**

The ownership of the Lands of the PGIS has not yet been transferred to the PGIS. Hence the value of the land not taken in to account. However it is noted that PGIS is attached to the university if Peradeniya (PGIS ordinance No 01 of 1996 dated 12<sup>th</sup> February 1996)

**1.2.2 Inventories**

Inventories are stated at the lower of cost and net realizable value. In general, cost is determined on a first in first out basis and includes expenditure incurred in acquiring the inventories and bringing them to their existing condition and location.

**1.2.3 Intangible Asset**

An intangible asset is recognized only when its cost can be measured reliably and it is probable that the expected future economic benefits are attributable to it will flow to the university. The development of the Accounting software is completed in year 2019. The cost of the Blue lotus 360 (upgraded version ) Accounting software will be amortized over 5 years period commencing from year 2019 as per the guide lines of Sri Lanka Public Sector Accounting standards 20 ( SLPSAS 20 ) .

**1.2.4 Receivables**

Receivables are stated at the amounts they are estimated to be realized.

**1.2.5 Cash & cash equivalents**

Cash & cash equivalents comprise cash & deposits saving at bank.

The receipts & payments of the foreign currency of the RFC 2233593US\$ account, maintained at the Bank of Ceylon, Peradeniya Branch is converted in to local currency at the Exchange rate existing on the dates of receipts and payments. Exchange gain/ loss have been calculated t by using the Central bank year end exchange rate.

**1.2.6 Financial Misappropriation amount of Rs 50,338,160.18**

As per the final forensic audit report issued by Auditor General Department on 26/07/2018, They identified the capital loss incurred due to obtaining money anomalously by cancelling fixed deposit by former Senior Assistant Bursar Mr W.M.M.S.M Iddawala as Rs 50,338,160.18 (Excluding redeposit amount of Rs 5,000,000.00) .Further in their report they identified that interest income of Rs 24,346,723 has been lost due to fraudulently withdrawn fixed deposit by Mr. W.M.M.S.M Iddawala from 14/03/2008 to 30/11/2017.

Criminal case is going on at Kandy Magistrate court under the case No MC/B43167/17. Attorney General department is in the process of lodging a civil case against Mr W.M.M.S.M Iddawala to recover the losses. Our lawyers are in the view that there is a high possibility to recover the financial losses. Therefore financial misappropriation amount of Rs 50,338,160 is categorized under noncurrent assets.



### **1.3. Liabilities & Provisions**

All known liabilities as at the balance sheet date are included in the financial statements and adequate provisions are made for liabilities which are known to exist but the amount of which cannot be determined accurately. Liabilities payable after one year from the balance sheet date are treated as noncurrent liabilities in the balance sheet.

Provision has been made in the financial statements for all unclaimed lecture fees, based on the respective approved budget.

#### **1.3.1 Provision for Gratuity**

The provision for gratuity as at 31/12/2019 has been calculated by using Actuarial Valuation method prescribed Sri Lanka public sector Accounting Standard 19 (Employee Benefits). Disclosures are made in the accounts in line with the requirements of the standard.

#### **1.3.2 University Provident Fund (UPF) & University Pension Fund**

The university and employees, contribute 15% or 7% and 10% respectively, on the salary of each employee to the University provident fund in line with the respective statutes and legislation in Sri Lanka and University Act. Also the university contributes 8% to the University Pension Fund in respect of pensionable employees.

#### **1.3.3 Employee's Trust Fund (ETF)**

The university contributes 3% on the salary of each employee to the Employees Trust Fund.

#### **1.3.4 Accounting for Government Grants**

Grants that compensate the PGIS for expenses incurred are recognized as revenue in the income statement in the same period in which the expenses are recognized. Grant that compensate the institute for the Cost of an asset is recognized in the income statement on a systematic basis over the useful life of the related asset as per the Sri Lanka Accounting Standard 20. (LKAS 20). The PGIS adopt income approach accounting principal when identifying capital grants.

#### **1.3.5 Research and Scholarships fund & Work shop & event fund**

Research and development fund has been created by transferring the old research balances , and work shop and event fund has been created by transferring old unclaimed workshops balances , with the approval of the finance committee and the Board of Management in 2018.

### **1.4 Income Statement**

#### **1.4.1 Revenue Recognition**

##### **(a ) Interest Income**

Interest income is recognized on accrual basis.

**( b ) Tution fees income**

The accounting policy applicable to recognize the tuition fees income is changed in 2019. Previously receivable tuition fees applicable to the year has not been considered as part of tuition fees income for the year. As per the revise accounting policy receivable tuition fees applicable to the year also consider as a part of year's tuition fees income in line with the accrual accounting principle

Retrospective applications to the accounts were made according to the Sri Lanka Public Sector Accounting Standards 3 (Accounting policies, Changes in Accounting Estimates and errors) to the extent of information available. accordingly Receivable tuition fee income of Rs.15,428,800 applicable to year 2018 is adjusted in the restated financial figures in year 2018.

**( C ) Recurrent Government Grants**

Revenue from recurrent grants is recognized in the period in which they are received.

**( d ) Research Grants Income & expenditure**

The new accounting policy for presentation of research grant income is introduced in 2019. According to new accounting policy, the amount equal to recurrent research expenditure for the year is presented as research grant income in the statement of financial performance. Comparative figures have been restated in line with the Sri Lanka public sector accounting standards 03 (Accounting policies, Changes in Accounting Estimates and errors)

**(e). Other Income**

Other incomes are recognized on accrual basis.

**(f) Amortization of Government Grants**

Grant that compensate for the Cost of an asset is recognized in the income statement on a systematic basis over the useful life of the related asset.

Total grant received for the year was Rs.35, 000,000.00 . This used as follows

|                                                |                   |
|------------------------------------------------|-------------------|
| Government Grant for Recurrent Expenditure     | 15,000,000        |
| Capital Grant for Rehabilitation               | 2,000,000         |
| Capital grant for Acquisition of fixed assets  | 8,000,000         |
| Capital Grant for Construction of New Building | 10,000,000        |
| <b>Total</b>                                   | <b>35,000,000</b> |



#### **g. Income from workshops, short courses and seminars**

The administrative income from workshop, Short courses and seminars are disclosed under the miscellaneous income.

#### **1.4.2 Expenditure**

Expenditure has been recognized on accrual basis and charged to the revenue in ascertaining the income over expenditure.

### **2. Comparative Information**

Comparatives have been restated in the financial statements where necessary in line with the requirements of Sri Lanka public Sector Accounting Standards.

### **3. Cash Flow Statement**

The cash flow statement has been prepared using indirect method in line with the Sri Lanka public sector Accounting Standards 2 (SLPSAS 2 )

### **4. Accounting errors corrections**

Following errors were corrected in the current year.

**4.1** Correction of Rs 6,600,000 for financial misappropriation adjustments in 2018.

**4.2** Correction of erroneously identified administrative income of Rs 523,630.00 from Prof M.A.K.L Dissanayake's research grant in 2016 and 2017.

Correction adjustments were made in the accounts in line with the requirements of Sri Lanka public sector accounting standards 03 ( Accounting policies , Changes in accounting estimates and errors )

| <b><u>Cash &amp; cash equivalents</u></b>   | <b>Note</b>      | <b>2019</b>        | <b>2018</b>       |
|---------------------------------------------|------------------|--------------------|-------------------|
|                                             | <b>1</b>         | <b>Rs</b>          | <b>Rs</b>         |
| Cash at bank 0001273990                     |                  | 117,922            | 5,774,737         |
| Cash at bank 0001274002                     |                  | 1,824,590          | 4,811,734         |
| Cash at bank 0571001911338034               |                  | 339,940            | 1,958,529         |
| Cash at bank 057100161338035                |                  | 71,810             | 1,997,890         |
| Cash at Bank A/C 81041788                   |                  | 4,351,360          | 12,342,279        |
| US \$ Saving A/C-RFC                        |                  | 17,271,673         | 11,659,821        |
| Saving A/C                                  |                  | 11,886,859         | 15,196,264        |
|                                             |                  | <b>35,864,154</b>  | <b>53,741,254</b> |
| <b><u>Receivables</u></b>                   | <b>2</b>         |                    |                   |
| Receivable-Programme fee                    |                  | 27,988,800         | 15,428,800        |
| Accrued Interest                            |                  | 11,549,664         | 12,064,857        |
| Vehicle hiring charges                      |                  | 98,963             | 175,687           |
| Prepayments                                 |                  | 249,586            | 317,519           |
| Receivable deposit                          |                  | 2,500              | 2,500             |
| Sundry debtors                              |                  | 98,132             | 98,132            |
| Deposits for services                       |                  | 100,000            | 100,000           |
| Miscellaneous advance                       |                  | -                  | 63,450            |
|                                             |                  | <b>40,087,645</b>  | <b>28,250,945</b> |
| <b><u>Loans &amp; advances to staff</u></b> | <b>3</b>         |                    |                   |
|                                             | <b>Current</b>   | <b>Non Current</b> | <b>Total</b>      |
| Distress loan                               | 1,328,087        | 2,241,156          | 3,569,243         |
| Computer loan                               | 91,230           | 109,000            | 200,230           |
| Vehicle loan                                | 140,338          | 231,289            | 371,627           |
| Staff loan                                  | 15,640           | 33,760             | 49,400            |
| Special Advance                             | 1,600            |                    | 1,600             |
| Festival Advance                            | 4,000            |                    | 4,000             |
|                                             | <b>1,580,895</b> | <b>2,615,205</b>   | <b>4,196,100</b>  |
| <b><u>Inventories / Stock</u></b>           | <b>4</b>         |                    |                   |
| Stationary                                  |                  | 1,254,815          | 1,254,815         |
| Chemical stock                              |                  | 1,156,194          | 1,245,594         |
|                                             |                  | <b>2,411,010</b>   | <b>2,500,410</b>  |
| <b><u>Other advances</u></b>                | <b>5</b>         |                    |                   |
| Mobilization advances                       |                  | -                  | 6,639,360         |
|                                             |                  | <b>-</b>           | <b>6,639,360</b>  |

**Investments**

6

|                                 |                    |                    |
|---------------------------------|--------------------|--------------------|
| Fixed deposits at BOC           | 41,119,288         | 37,195,291         |
| Fixed deposits at NSB           | 2,200,000          | 2,200,000          |
| Fixed deposit RFC               | 162,730,623        | 157,039,208        |
| Fixed deposits at People's bank | 204,600,653        | 202,252,580        |
|                                 | <b>410,650,564</b> | <b>398,687,080</b> |

**Intangible Asset**

7

**Computer Software****Cost:**

|                      |                |                |
|----------------------|----------------|----------------|
| Opening Balance      | 256,500        | -              |
| Additions            | 50,000         | 256,500        |
| Balance as at end of | <b>306,500</b> | <b>256,500</b> |

**Accumulated Amortization**

|                      |               |          |
|----------------------|---------------|----------|
| Opening Balance      | -             | -        |
| Amortization Charge  | 58,949        | -        |
| Balance as at end of | <b>58,949</b> | <b>-</b> |

**Net Book Value**

|                |                |
|----------------|----------------|
| <b>247,551</b> | <b>256,500</b> |
|----------------|----------------|

**Work in progress**

8

|                   |          |                   |
|-------------------|----------|-------------------|
| PGIS new building | -        | 97,111,814        |
|                   | <b>-</b> | <b>97,111,814</b> |

**Property, plant & Equipment**

Rs.

| <b>Cost</b>                                              | <b>Building</b>    | <b>Telephone</b> | <b>Laboratory &amp; Teaching Equip.</b> | <b>Library Books</b> | <b>Motor Vehicle</b> | <b>Office Equipments</b> | <b>Total</b>       |
|----------------------------------------------------------|--------------------|------------------|-----------------------------------------|----------------------|----------------------|--------------------------|--------------------|
| Opening Balance as at 1st January 2019                   | 80,223,759         | 528,000          | 86,261,788                              | 9,274,251            | 16,320,091           | 12,563,365               | 205,171,254        |
| Adjustments/Disposals                                    |                    |                  |                                         |                      |                      |                          | -                  |
| During the year Additions                                | 97,864,152         | -                | 71,935,721                              | 461,739              | -                    | 13,133,727               | 183,395,339        |
| <b>Closing Balance as at 31st Dec. 2019</b>              | <b>178,087,911</b> | <b>528,000</b>   | <b>158,197,509</b>                      | <b>9,735,990</b>     | <b>16,320,091</b>    | <b>25,697,092</b>        | <b>388,566,593</b> |
| <b>Less Depreciation</b>                                 |                    |                  |                                         |                      |                      |                          |                    |
| Opening balance as at 1st January 2019                   | 27,185,267         | 361,024          | 55,420,508                              | 8,751,778            | 14,923,231           | 9,838,779                | 116,480,587        |
| Adjustments/Disposals                                    |                    |                  |                                         |                      |                      |                          |                    |
| During the year Additions                                | 6,731,509          | 52,800           | 20,145,925                              | 350,177              | 1,172,628            | 2,372,793                | 30,825,832         |
| <b>Accumulated depreciation as at 31st December 2019</b> | <b>33,916,777</b>  | <b>413,824</b>   | <b>75,566,433</b>                       | <b>9,101,955</b>     | <b>16,095,860</b>    | <b>12,211,572</b>        | <b>147,306,419</b> |
| <b>Net Book Value as at 31st December 2019</b>           | <b>144,171,135</b> | <b>114,176</b>   | <b>82,631,077</b>                       | <b>634,035</b>       | <b>224,232</b>       | <b>13,485,519</b>        | <b>241,260,174</b> |



|                                               | Notes       | 2019              | 2018              |
|-----------------------------------------------|-------------|-------------------|-------------------|
| <b><u>Accrued expenses</u></b>                | <b>10</b>   |                   |                   |
| Accrued expenses - Recurrent                  |             | 6,405,419         | 4,761,061         |
| Accrued expense - Capital                     |             | 2,951,434         | 645,526           |
|                                               |             | <b>9,356,853</b>  | <b>5,406,586</b>  |
| <b><u>Payables</u></b>                        | <b>11</b>   |                   |                   |
| Stamp duty payables                           |             | 12,325            | 12,775            |
| Payee tax                                     |             | 463,419           | 361,192           |
| Withholding tax                               |             | 2,520             |                   |
| Book sale commission payable                  |             | 10,623            | 10,623            |
| Other Payable-Board of Study                  | 11.1        | 1,149,624         | 1,147,176         |
| Other Payable-Short Course & Workshop         | 11.2        | 15,019,917        | 10,564,439        |
| Security Bond                                 |             | 12,460            | 11,251            |
| Retention                                     |             | 6,368,481         | 9,023,839         |
|                                               |             | <b>23,039,369</b> | <b>21,131,294</b> |
| <b><u>Other Payable-Board of Study</u></b>    | <b>11.1</b> |                   |                   |
| Board of study in Chemical Sciences           |             | 8,100             | 8,100             |
| Board of study in Earth Sciences              |             | 955,939           | 963,849           |
| Board of Study in Enviromental Science        |             | 1,625             | 1,625             |
| Board of study in Physics                     |             | 11,740            | 11,740            |
| Board of study in Plant Sciences              |             | 4,346             | 1,725             |
| Board of study in Science Education           |             | 76,362            | 68,625            |
| Board of study in Statistics Computer Science |             | 39,550            | 39,550            |
| Board of study in Zoological Sciences         |             | 51,962            | 51,962            |
|                                               |             | <b>1,149,624</b>  | <b>1,147,176</b>  |

| <b><u>Other Payable-Short Course , Workshop &amp; Other</u></b> | <b>Notes<br/>11.2</b> | <b>2019</b>       | <b>2018</b>       |
|-----------------------------------------------------------------|-----------------------|-------------------|-------------------|
| Postgraduate certificate course                                 |                       | 206,250           | -                 |
| Certificate course in Teaching Methodology                      |                       | -                 | 154,736           |
| 04 W/S on Scientific Data Management                            |                       | 36,715            | 36,715            |
| 23rd Adv S/C on GIS application                                 |                       | 342,160           | 342,160           |
| 72nd S/C on GIS application                                     |                       | 654,097           | 654,097           |
| 74th S/C on GIS application                                     |                       | 362,050           | 362,050           |
| 24th Advance S/C on GIS                                         |                       | 993,097           | 993,097           |
| W/S on effecet of climate change                                |                       | 4,724             | 4,724             |
| 25th Advance S/C on GIS                                         |                       | 487,210           | 487,210           |
| S/C on R & R Studio                                             |                       | 10,463            | 10,463            |
| 73rd S/C on GIS Application                                     |                       | 345,844           | 405,406           |
| 76th S/C on GIS Application                                     |                       | 442,650           | 442,650           |
| 77 S/C on GIS & Application                                     |                       | 890,030           | 890,030           |
| S/C on ICTA                                                     |                       | 2,797,004         | 2,460,000         |
| Tailor-Made S/C on GIS                                          |                       | 150,000           | 150,000           |
| 78th S/C Gis and Application                                    |                       | 14,074            | 14,074            |
| 26th advance S/C on GIS                                         |                       | 197,301           | 197,301           |
| DMC Training Programme                                          |                       | 570,450           | 570,450           |
| 79th S/C on GIS Application                                     |                       | 302,664           | 302,664           |
| 80th S/C on GIS Application                                     |                       | 1,106,076         | 1,076,076         |
| W/S on Air Quality Awareness & Mgt                              |                       | 2,037             | 10,537            |
| ICMME-Conference                                                |                       | 61,371            | 1,000,000         |
| 7th int,l Symposium W/S on Water Quality                        |                       | 1,048             |                   |
| 108th S/C on GIS & Application                                  |                       | 37,925            |                   |
| 109th S/C on GIS & Application                                  |                       | 175,000           |                   |
| 111th S/C on GIS & Application                                  |                       | 293,700           |                   |
| 112th S/C on GIS & Application                                  |                       | 157,739           |                   |
| 113th S/C on GIS & Application                                  |                       | 16,000            |                   |
| 114th S/C on GIS & Application                                  |                       | 222,545           |                   |
| 115th S/C on GIS & Application                                  |                       | 58,565            |                   |
| ICEMS-2020                                                      |                       | 972,050           |                   |
| S/C on Application GIS for Servey                               |                       | 35,000            |                   |
| Curriculum Dev.In Data Science                                  |                       | 3,047,091         |                   |
| Bio Film & Bio Fertilizer                                       |                       | 1,000             |                   |
| W/S on Report Writing                                           |                       | 24,987            |                   |
| W/S on Scientific Writing                                       |                       | 1,000             |                   |
|                                                                 |                       | <b>15,019,917</b> | <b>10,564,439</b> |

|                                                  | 12               |                  | 2019              | 2018              |
|--------------------------------------------------|------------------|------------------|-------------------|-------------------|
| <b>Deposits</b>                                  | Current          | Non current      | Total             |                   |
| Library deposits                                 | 5,136,614        | 1,714,000        | 6,850,614         | 5,932,614         |
| Science deposits                                 | 3,979,358        | 1,473,000        | 5,452,358         | 4,693,358         |
| Other deposits                                   | 74,594           | -                | 74,594            | 62,094            |
| Refundable deposit                               | 2,130            | -                | 2,130             | 2,130             |
|                                                  | <b>9,192,696</b> | <b>3,187,000</b> | <b>12,379,696</b> | <b>10,690,196</b> |
|                                                  |                  |                  |                   |                   |
| <b>Provisions</b>                                | 13               |                  |                   |                   |
| Provision for Audit fees                         |                  |                  | 1,598,790         | 1,961,153         |
| Provision for security                           |                  |                  | -                 | 256,620           |
| Provision for lecturer fees                      |                  |                  | 6,610,706         | 7,810,680         |
| Provision for Cleaning Services                  |                  |                  | -                 | 104,400           |
|                                                  |                  |                  | <b>8,209,497</b>  | <b>10,132,852</b> |
|                                                  |                  |                  |                   |                   |
| <b>Retiring Gratiuty</b>                         | 14               |                  |                   |                   |
| Balance as at 1st January                        |                  |                  | 6,678,275         | 7,426,579         |
| Charge for the Year                              | 14.1             |                  | 3,319,298         | (224,275)         |
|                                                  |                  |                  | 9,997,573         | 7,202,304         |
| Payments made during the year                    |                  |                  | (990,748)         | (524,029)         |
| Balance as at end of December                    |                  |                  | <b>9,006,825</b>  | <b>6,678,275</b>  |
|                                                  |                  |                  |                   |                   |
| <b>Charge for the Year</b>                       | 14.1             |                  |                   |                   |
| Interest Cost                                    |                  |                  | 734,610           |                   |
| Current Service Cost                             |                  |                  | 577,300           |                   |
| Net Actuarial (Gain)/Loss recognised immediately |                  |                  | 2,007,388         |                   |
| Expenses recogniezed in the Income Statetment    |                  |                  | <b>3,319,298</b>  |                   |
|                                                  |                  |                  |                   |                   |
| <b>Funds</b>                                     | 15               |                  |                   |                   |
| Scholarship Fund-Amarasinghe                     |                  |                  | 1,258,597         | 1,154,869.69      |
| Research & Scholarship Funds                     |                  |                  | 8,038,458         | 8,038,458.47      |
| Workshop & Event Fund                            |                  |                  | 2,584,460         | 2,587,909.81      |
|                                                  |                  |                  | <b>11,881,515</b> | <b>11,781,238</b> |



| Restricted Funds            |                            | Note      | 2019              | 2018              |
|-----------------------------|----------------------------|-----------|-------------------|-------------------|
| Grant No                    | Grantee Name               | 16        | Rs                | Rs                |
| 6074                        | Prof.K.Dhanayake           |           | 1,926,642         | 1,926,642         |
| 6142                        | Ms. Tilini Tilipan         |           | 144,496           | 144,496           |
| 6230                        | Prof. I A U N Gunatilleke  |           | 97,569            | 163,609           |
| 6250                        | Prof. Rohana Chandrajith   |           | 62,739            | 62,739            |
| 6252                        | Dr.Mrs.S.Puncharaja        |           | 72,557            | 72,557            |
| 6255 D                      | Prof. Weerasinghe          |           | 474,587           | 474,587           |
| 6259                        | Prof. H A H Jayasena       |           | 10,662            | 10,662            |
| 6260                        | Prof. M A K L Dissanayake  |           | 51,298            | 150,420           |
| 6262                        | Dr. J.W. Damunupola        |           |                   | 362,953           |
| 6263                        | Prof. J.G.S. Ranasinghe    |           | 92,387            | 143,887           |
| 6265                        | Prof.A.Wickramasinghe      |           | 1,094,313         | 1,446,985         |
| 6266                        | Dr.S.C.K.Rubasinghe        |           |                   | 117,135           |
| 6267                        | Dr.C.V.Hettiarachchi       |           | 95,522            | 843,172           |
| 6268                        | Prof.R.M.G.Rajapakse       |           | 1,418,297         | 1,536,595         |
| 6270                        | Dr.S.C.K.Rubasinghe        |           | 121,575           | 121,575           |
| 6271                        | Dr.K.M.G.G.Jayasooriya     |           | 5,465             | 8,065             |
| 6272                        | Dr.N.S.P.Kumburegama       |           | 4,020             | 4,020             |
| 6273                        | Prof.Rohana Chandrajith    |           | 560,872           | 2,528,347         |
| 6274                        | Dr.M.C.S Perera            |           | 872,346           | 1,282,529         |
| 6275                        | Prof.R.M.G.Rajapakse       |           | 808,601           | 651,945           |
| 6276                        | Dr.N P S Kumburegama       |           |                   | 1,149,661         |
| 6277                        | Ms.H.M.K.M.Premaratne      |           | 605,297           | 401,372           |
| 6278                        | Dr.Nanda Gunawardena       |           | 1,160,152         | 1,343,750         |
| 6279                        | Prof.H.M.S.P.Madawala      |           | 116,350           | 224,950           |
| 6280                        | Dr.C.L.Vithana             |           | 236,960           | 999,410           |
| 6281                        | Ms.P.M.Weeraratne          |           | 765,485           | 907,100           |
| 6282                        | Sisira Samaradiwakara      |           | 1,095,216         |                   |
| 6283                        | Ms R W M G K Kapukotuwa    |           | 586,533           |                   |
| 6284                        | Dr K G N Nanayakkara       |           | 1,785,932         |                   |
| 6286                        | Dr K B S N Jinadasa        |           | 488,666           |                   |
|                             |                            |           | <b>14,754,538</b> | <b>17,079,162</b> |
| <b>Miscellaneous Income</b> |                            | <b>17</b> |                   |                   |
|                             | Printing Income            |           | 369,201           | 457,935           |
|                             | Administration Charges     |           | 751,304           | 720,311           |
|                             | Certificate Fee            |           | 151,025           | 141,080           |
|                             | Rooftop Reservation Income |           | 5,000             | 50,000            |
|                             | Application Processing Fee |           | 1,216,500         | 1,320,650         |
|                             | XRD Analysis Income        |           | 283,850           | -                 |
|                             | Other Income               |           | 110,211           | 632,468           |
|                             |                            |           | <b>2,887,091</b>  | <b>3,322,444</b>  |



|                                                  | Notes | 2019              | 2018              |
|--------------------------------------------------|-------|-------------------|-------------------|
| <b><u>Interest Income</u></b>                    |       |                   |                   |
| Fixed Deposit Interest                           | 18    | 30,626,165        | 27,841,051        |
| RFC Interest                                     |       | 320,304           | 204,984           |
| Staff Loan Interest                              |       | 150,067           | 160,442           |
| Savings Interest                                 |       | 630,536           | 421,496           |
|                                                  |       | <b>31,727,071</b> | <b>28,627,972</b> |
| <b><u>Amortization of Capital Grant</u></b>      | 19    |                   |                   |
| Building                                         |       | 2,780,672         | 36,475            |
| Lab & Teaching Equipment                         |       | 11,456,052        | 10,742,480        |
| Library Book                                     |       | 243,220           | 349,862           |
| Office Equipments                                |       | 1,629,514         | 416,024           |
|                                                  |       | <b>16,109,457</b> | <b>11,544,842</b> |
| <b>General Administration and Staff Services</b> |       |                   |                   |
| <b>Personal Emoluments</b>                       |       |                   |                   |
| <b>Personal Emoluments (Academic)</b>            | 20    |                   |                   |
| Salaries and Wages                               |       | 2,369,991         | 1,083,012         |
| U.P.F                                            |       | 669,297           | 179,314           |
| Pension                                          |       | 224,957           | 204,931           |
| E.T.F                                            |       | 178,851           | 76,848            |
| Academic Allowance                               |       | 3,404,752         | 1,385,020         |
| Other Allowances                                 |       | 56,826            |                   |
| Additional Allowance                             |       | 435,047           | 183,446           |
| Gratuity                                         |       | 1,207,410         | -                 |
| COL                                              |       | 186,948           | 93,600            |
| Research Allowance                               |       | 761,333           | 321,031           |
| Visiting Lecture Fees Note 17.01                 |       | 19,648,379        | 20,373,840        |
|                                                  |       | <b>29,143,792</b> | <b>23,901,043</b> |
| <b>Personal Emoluments (Non academic)</b>        | 20    |                   |                   |
| Salaries and Wages                               |       | 13,117,792        | 11,902,526        |
| U.P.F                                            |       | 1,834,316         | 1,648,586         |
| Pension                                          |       | 1,336,160         | 1,115,170         |
| E.T.F                                            |       | 634,095           | 553,430           |
| Overtime                                         |       | 2,192,958         | 1,991,452         |
| Holiday Payments                                 |       | 411,175           | 509,037           |
| Other Allowances                                 |       | 5,400             | 11,150            |
| Monthly Compensation Allowance - MCA             |       | 5,446,828         | 3,984,029         |
| Gratuity                                         |       | 2,111,888         | -                 |
| Research Allowance                               |       | 427,809           | 539,976           |
| Additional Allowance 20%                         |       | 2,420,812         | 1,960,031         |
| Adjustment Allowance                             |       | 143,786           | 909,884           |
| Cost of Living                                   |       | 2,550,457         | 2,477,003         |
| Staff Benefits                                   |       | 175,859           | 133,538           |
|                                                  |       | <b>32,809,338</b> | <b>27,735,812</b> |
| <b>Personal Emoluments (Casual)</b>              | 20    |                   |                   |
| Casual Wages                                     |       | 1,198,165         | 496,645           |
|                                                  |       | <b>1,198,165</b>  | <b>496,645</b>    |
| <b>Travelling and Subsistence</b>                | Notes | 2019              | 2018              |
|                                                  | 21    |                   |                   |
| Travelling Expenses (Domestic)                   |       | 755,036           | 564,092           |
| Travelling Expenses (Foreign)                    |       | 50,000            |                   |
|                                                  |       | <b>805,036</b>    | <b>564,092</b>    |
|                                                  | 20    |                   |                   |

|                                       | Notes     | 2019               | 2018               |
|---------------------------------------|-----------|--------------------|--------------------|
| <b>Travelling and Subsistence</b>     | <b>21</b> |                    |                    |
| Travelling Expenses (Domestic)        |           | 755,036            | 564,092            |
| Travelling Expenses (Foreign)         |           | 50,000             |                    |
|                                       |           | <b>805,036</b>     | <b>564,092</b>     |
| <b>Supplies</b>                       | <b>22</b> |                    |                    |
| Stationery & Office Requisites        |           | 2,349,188          | 1,533,210          |
| Fuel & Lubricant                      |           | 448,803            | 518,866            |
| Uniform & Tailoring                   |           | 32,178             | 23,197             |
| Mechanical & Electrical               |           | 576,100            | 237,404            |
| Chemicals & Glassware                 |           | 1,693,878          | 1,200,310          |
|                                       |           | <b>5,100,147</b>   | <b>3,512,987</b>   |
| <b>Maintenance</b>                    | <b>23</b> |                    |                    |
| Vehicles                              |           | 423,988            | 845,372            |
| Plant, Machinery & Equipments         |           | 1,626,726          | 2,504,348          |
| Building & Structure                  |           | 298,054            | 179,610            |
|                                       |           | <b>2,348,768</b>   | <b>3,529,330</b>   |
| <b>Contractual Services</b>           | <b>24</b> |                    |                    |
| Telecommunications                    |           | 2,269,034          | 1,977,174          |
| Postal Charges                        |           | 250,466            | 271,081            |
| Electricity                           |           | 1,139,101          | 840,586            |
| Security Services                     |           | 1,351,847          | 1,005,755          |
| Water Charges                         |           | 22,286             | 43,794             |
| Cleaning Services                     |           | 2,105,818          | 1,255,008          |
|                                       |           | <b>7,138,552</b>   | <b>5,393,399</b>   |
| <b>Other Recurrent Expenditure</b>    | <b>25</b> |                    |                    |
| Printing and Advertising              |           | 928,794            | 1,113,693          |
| Audit Fee                             |           | 559,133            | 956,103            |
| Special Services Council & Commit.    |           | 1,498,854          | 1,120,817          |
| Special Services Professional & Other |           | 163,716            | 42,362             |
| Workshops & Seminars                  |           | 877,783            | 771,663            |
| Academic Research                     |           | 105,999            | 39,103             |
| Staff Development                     |           | 172,220            | 842,421            |
| Holiday Warrant                       |           | 10,040             | 21,340             |
| Bank Charges                          |           | 160,923            | 69,003             |
| Awards & Indemnities                  |           | 180,000            | 775,000            |
| Examination Expenses                  |           | 4,800,899          | 4,349,810          |
| Other - Newspaper, Magazines          |           | 519,913            | 1,560,126          |
| Staff Welfare                         |           | 190,000            | 201,910            |
| Legal & Documentation                 |           | 265,535            |                    |
| Convocation                           |           | 500,000            | 500,000            |
| PGIS Research Congress                |           | 2,178,999          | 1,842,711          |
| Stamp Duty                            |           | 29,600             | 23,925             |
| Intangible Asset Amortize expenses    |           | 58,949             |                    |
| Research Grant Expenditure            |           | 14,912,978         | 14,453,462         |
|                                       |           | <b>28,114,334</b>  | <b>28,683,448</b>  |
| <b>Depreciation</b>                   | <b>26</b> |                    |                    |
| Building                              |           | 6,731,510          | 3,917,911          |
| Telephone                             |           | 52,800             | 51,400             |
| Lab & Teaching Equipment              |           | 20,145,925         | 12,995,857         |
| Books and Periodicals                 |           | 350,177            | 379,941            |
| Office Equipment                      |           | 2,372,793          | 963,711            |
| Motor Vehicles                        |           | 1,172,628          | 1,982,628          |
|                                       |           | <b>30,825,832</b>  | <b>20,291,449</b>  |
|                                       | <b>21</b> | <b>137,483,964</b> | <b>114,108,205</b> |



**POSTGRADUATE INSTITUTE OF SCIENCE**

**TRIAL BALANCE AS AT 31ST DECEMBER,2019**

| CODE  | ACCOUNT NAME                        | DR          | CR          |
|-------|-------------------------------------|-------------|-------------|
| 00001 | CASH BOOK A/C 0001273990            | 117,922     |             |
| 00002 | CASH BOOK A/C 0001274002            | 1,824,590   |             |
| 00003 | CASH BOOK A/C 057100191338034       | 339,940     |             |
| 00004 | CASH BOOK A/C 057100161338035       | 71,810      |             |
| 00007 | CASH BOOK A/C NO 81041788           | 4,351,360   |             |
| 01001 | SUNDRY DEBTORS                      | 98,132      |             |
| 01004 | STOCK AS AT 31ST DECEMBER           | 2,411,010   |             |
| 01006 | PREPAYMENTS                         | 249,586     |             |
| 01009 | RECEIVABLE-DEPOSIT                  | 2,500       |             |
| 02000 | DISTRESS LOAN                       | 3,569,243   |             |
| 02002 | COMPUTER LOAN                       | 200,230     |             |
| 02003 | STAFF LOAN                          | 49,400      |             |
| 02004 | VEHICLE LOAN                        | 371,627     |             |
| 02005 | SPECIAL ADVANCE                     | 1,600       |             |
| 02006 | FESTIVAL ADVANCE                    | 4,000       |             |
| 03000 | ACCRUDE INCOME                      | 11,549,664  |             |
| 03100 | RECEIVABLE - VEHICLE HIRING CHARGES | 98,963      |             |
| 03200 | RECEIVABLE-PROGRAMME FEE            | 27,988,800  |             |
| 04000 | DEPOSIT FOR SERVICES- FUEL          | 100,000     |             |
| 05000 | RFC                                 | 17,271,673  |             |
| 10000 | BUILDING                            | 178,087,911 |             |
| 10002 | TELEPHONE                           | 528,000     |             |
| 10003 | LAB & TEACHING EQUIPMENTS           | 158,197,509 |             |
| 10004 | LIBRARY BOOKS                       | 9,735,990   |             |
| 10005 | MOTOR VEHICLES                      | 16,320,091  |             |
| 10006 | OFFICE FURNITURE EQUIPMENTS         | 25,697,092  |             |
| 10040 | ACCOUNTING SOFTWARE                 | 306,500     |             |
| 10095 | FINANCIAL MISAPPROPRIATION A/C      | 50,338,160  |             |
| 10100 | FIXED DEPOSIT - BOC                 | 41,119,288  |             |
| 10110 | FIXED DEPOSIT - BOC - RFC           | 162,730,623 |             |
| 10200 | FIXED DEPOSITS - PEOPLES BANK       | 204,600,653 |             |
| 10300 | SAVINGS ACCOUNTS - PEOPLES BANK     | 7,709       |             |
| 10310 | SAVING-P.AMARASINGHE SCH.FUND       | 679,403     |             |
| 10320 | SAVING-BOC-A/C No 84023069          | 11,199,746  |             |
| 10500 | FIXED DEPOSIT- NSB                  | 2,200,000   |             |
| 20000 | GENERAL RESERVES                    | -           | 494,217,272 |
| 20500 | RESEARCH & SCHOLARSHIP FUNDS        |             | 8,038,458   |
| 20600 | WORKSHOP & SHORT COURSE FUND        |             | 2,584,460   |
| 21000 | CAPITAL GRANT - SPENT               | -           | 137,149,617 |
| 21500 | REVALUATION RESERVE                 | -           | 16,306,435  |
| 23020 | BOARDS OF STUDY IN CHEMICAL SCIENCE | -           | 8,100       |
| 23030 | BOARDS OF STUDY IN EARTH SCIENCE    | -           | 955,939     |

| CODE  | ACCOUNT NAME                                     | DR | CR        |
|-------|--------------------------------------------------|----|-----------|
| 23040 | BOARDS OF STUDY IN ENVIRONMENTAL SCIENCE         | -  | 1,625     |
| 23060 | BOARDS OF STUDY IN PHYSICS                       | -  | 11,740    |
| 23070 | BOARDS OF STUDY IN PLANT SCIENCES                | -  | 4,346     |
| 23080 | BOARDS OF STUDY IN SCIENCE EDUCATION             | -  | 76,362    |
| 23090 | BOARDS OF STUDY IN STATISTICS & COMPUTER SCIENCE | -  | 39,550    |
| 23100 | BOARDS OF STUDY IN ZOOLOGICAL SCIENCES           | -  | 51,962    |
| 23110 | RETENTION OF CAPITAL WORK                        |    | 6,368,481 |
| 23200 | DIFFERED INCOME                                  | -  | 7,949,592 |
| 30004 | LIBRARY DEPOSIT                                  | -  | 6,850,614 |
| 30005 | SCIENCE DEPOSIT                                  | -  | 5,452,358 |
| 30100 | DEPOSITS                                         | -  | 74,594    |
| 30200 | SECURITY BOND                                    | -  | 12,460    |
| 30250 | REFUNDABLE DEPOSITS                              |    | 2,130     |
| 30300 | ACCRUED EXPENDITURE                              | -  | 6,405,419 |
| 30700 | SUNDRY CREDITORS                                 | -  | 2,951,434 |
| 30929 | W/S ON SCIENTIFIC WRITING                        |    | 1,000     |
| 30937 | A S/C ON R & R STUDIO                            |    | 10,463    |
| 30938 | 27th ADVANCE S/C ON GIS                          |    | 175,000   |
| 31950 | STAMP DUTY                                       | -  | 12,325    |
| 31952 | WHT                                              |    | 2,520     |
| 31954 | PAYEE TAX                                        | -  | 463,419   |
| 32027 | BOOKS SALE                                       | -  | 10,623    |
| 31520 | POSTGRADUATE CERTIFICATE                         |    | 206,250   |
| 32082 | PROF.P AMARASINGHE SCHOLARSHIP FUND              | -  | 1,258,597 |
| 32084 | 04 W/S ON SCIENTIFIC DATA MANAGEMENT             | -  | 36,715    |
| 32087 | 23 ADV. S/C ON GIS & APPLICATION                 | -  | 342,160   |
| 32091 | 72 S/C ON GIS & APPLICATION                      | -  | 654,097   |
| 32095 | 74TH S/C ON GIS & APPLICATION                    | -  | 362,050   |
| 32096 | 24TH ADVANCE S/C ON GIS                          | -  | 993,097   |
| 32098 | W/S ON EFFECT OF CLIMATE CHANGE ON BIODIVERSITY  | -  | 4,724     |
| 32099 | 25TH ADVANCE S/C ON GIS                          | -  | 487,210   |
| 32100 | 73RD S/C ON GIS                                  |    | 345,844   |
| 32101 | 76TH S/C ON GIS                                  |    | 442,650   |
| 32102 | 77 S/C ON GIS & APPLICATION                      |    | 890,030   |
| 32103 | S/C ON ICTA                                      |    | 2,797,004 |
| 32104 | TAILOR-MADE S/C ON GIS                           |    | 150,000   |
| 32106 | 78TH S/C GIS AND APPLICATION                     |    | 14,074    |
| 32107 | 26TH ADVANCE S/C ON GIS                          |    | 197,301   |
| 32108 | DMC TRAINING PROGRAMME                           |    | 570,450   |
| 32109 | 79TH S/C ON GIS                                  |    | 302,664   |
| 32110 | 80TH S/C ON GIS                                  |    | 1,106,076 |
| 32111 | W/S ON AIR QUALITY AWARENESS & MGT               |    | 2,037     |
| 32112 | ICMME-CONFERENCE                                 |    | 61,371    |
| 32114 | 82nd S/C ON GIS                                  |    | 37,925    |
| 32115 | S/C ON GIS SERVEY                                |    | 35,000    |
| 32117 | W/S ON REPORT WRITING                            |    | 24,987    |

| CODE  | ACCOUNT NAME                                        | DR | CR         |
|-------|-----------------------------------------------------|----|------------|
| 32118 | 111th S/C ON GIS & APPLICATION                      |    | 293,700    |
| 32119 | 112th S/C ON GIS & APPLICATION                      |    | 157,739    |
| 32120 | ICEMS-2020                                          |    | 972,050    |
| 32122 | 7Th INTERNATIONAL SYMPOSIUM ON WATER QUALITY        |    | 1,048      |
| 32124 | W/S ON BIO FILM,BIO FERTILIZER                      |    | 1,000      |
| 32125 | 114th S/C ON GIS & APPLICATION                      |    | 222,545    |
| 32126 | 115th S/C ON GIS & APPLICATION                      |    | 58,565     |
| 32127 | 113TH S/C ON GIS & APPLICATION                      |    | 16,000     |
| 35000 | PROVISION FOR DEPRECIATION - BUILDING               | -  | 33,916,777 |
| 35200 | PROVISION FOR DEPRECIATION - LAB TEACHING EQUIPMENT | -  | 75,566,433 |
| 35300 | PROVISION FOR DEPRECIATION - LIBRARY BOOKS          | -  | 9,101,955  |
| 35400 | PROVISION FOR DEPRECIATION - MOTOR VEHICLES         | -  | 16,095,860 |
| 35500 | PROVISION FOR DEPRECIATION - OFFICE EQUIPMENT       | -  | 12,211,572 |
| 35600 | PROVISION FOR DEPRECIATION - TELEPHONE              | -  | 413,824    |
| 35650 | PROVISION FOR DEPRECIATION - SOFTWARE               |    | 58,949     |
| 35700 | PROVISION FOR AUDIT FEES                            | -  | 1,598,790  |
| 35720 | PROVISION FOR GRATUITY                              | -  | 9,006,825  |
| 35740 | PROVISION FOR SECURITY SERVICE                      | -  | -          |
| 35760 | PROVISION FOR LECTURE FEE                           | -  | 6,610,706  |
| 35780 | PROVISION FOR CLEANING SERVICES                     |    | -          |
| 60000 | GOVERNMENT GRANT FOR RECCURANT                      | -  | 15,000,000 |
| 70010 | EXAMINATION FEES                                    | -  | 1,456,500  |
| 70020 | TUTION FEES                                         | -  | 86,262,905 |
| 70030 | REGISTRATION FEE                                    | -  | 4,217,000  |
| 70061 | EXCHANGE GAIN /LOSS                                 | -  | 1,177,709  |
| 70070 | MISCELLANEOUS INCOME                                | -  | 110,211    |
| 70090 | MEDICAL FEE                                         | -  | 71,200     |
| 70190 | SERVICES & FACILITIES FEE                           | -  | 133,300    |
| 70200 | VEHICAL HIRING CHARGES                              | -  | 392,605    |
| 70250 | LIBRARY TICKET                                      | -  | 757,500    |
| 75060 | INTEREST INCOME ON FD                               |    | 30,626,165 |
| 75000 | INTEREST FROM SAVING A/C                            |    | 630,536    |
| 75005 | INTEREST ON RFC                                     |    | 320,304    |
| 75010 | INTEREST INCOME FROM LOANS & ADVANCES               | -  | 150,067    |
| 75064 | SUPERVISION FEE                                     | -  | 656,000    |
| 75100 | BENCH FEE                                           | -  | 955,000    |
| 75102 | AMORTIZATION OF GRANT                               |    | 16,109,457 |
| 75103 | RESEARCH GRANT INCOME                               |    | 14,912,978 |
| 70071 | PRINTING INCOME                                     |    | 369,201    |
| 70072 | ADMINISTRATION CHARGES                              |    | 751,304    |
| 70073 | CERTIFICATE FEE                                     |    | 151,025    |
| 70074 | ROOFTOP RESERVATION INCOME                          |    | 5,000      |
| 70075 | APPLICATION PROCESSING FEE                          |    | 1,216,500  |
| 70076 | RESCON INCOME                                       |    | 1,571,800  |



| CODE  | ACCOUNT NAME                                 | DR         | CR      |
|-------|----------------------------------------------|------------|---------|
| 70077 | XRD ANALYSIS                                 |            | 283,850 |
| 80501 | TRAVELLING EXPENSES (DOMESTIC)               | 755,036    | -       |
| 80502 | TRAVELLING EXPENSES (FORIGN)                 | 50,000     | -       |
| 80601 | STATIONARY & OFFICE REQUISITES               | 2,349,188  | -       |
| 80602 | FUELL & LUBRICANT                            | 448,803    | -       |
| 80603 | UNIFORM & TAILORING                          | 32,178     | -       |
| 80604 | MECHANICAL & ELECTRICAL GOODS                | 576,100    | -       |
| 80605 | CHEMICAL & GLASSWARE                         | 1,693,878  | -       |
| 80701 | VEHICLES                                     | 423,988    | -       |
| 80702 | PLANT , MACHINARY & EQUIPMENT                | 1,626,726  | -       |
| 80703 | BUILDING & STRUCTURES                        | 298,054    | -       |
| 80802 | TELECOMMUNICATION                            | 2,269,034  | -       |
| 80803 | POSTAL CHARGES                               | 250,466    | -       |
| 80804 | ELECTRICITY                                  | 1,139,101  | -       |
| 80805 | SECURITY SERIVES                             | 1,351,847  | -       |
| 80806 | WATER CHARGES                                | 22,286     | -       |
| 80807 | CLEANING SERVICES                            | 2,105,818  | -       |
| 80810 | PRINTING ADVERTISING ECT                     | 928,794    | -       |
| 80811 | AUDIT FEES                                   | 559,133    | -       |
| 80812 | LEGAL & DOCUMENTATION CHARGES                | 265,535    | -       |
| 80902 | SPECIAL SERVICES COUNCIL & COMMITIES         | 1,498,854  | -       |
| 80903 | SPECIAL SERVICES - PROFESSIONAL & OTHER FEES | 163,716    | -       |
| 80904 | WORKSHOP & SEMINAS                           | 877,783    | -       |
| 80905 | ACADEMIC RESEARCH                            | 105,999    | -       |
| 80906 | STAFF DEVELOPMENT                            | 172,220    | -       |
| 80908 | HOLIDAY WARRENT & SEASON TICKETS             | 10,040     | -       |
| 80910 | BANK CHARGES                                 | 160,923    | -       |
| 80911 | AWARDS & INDEMNITIES                         | 180,000    | -       |
| 80913 | CONVERCATIONS                                | 500,000    | -       |
| 80914 | EXAMINATION EXPENSES                         | 4,800,899  | -       |
| 80915 | OTHER - NEWSPAPER MAGAZINES ECT              | 519,913    | -       |
| 80916 | VISITING LECTURE FEES                        | 19,648,379 | -       |
| 80930 | STAFF WELFARE                                | 190,000    | -       |
| 80935 | PGIS RESEARCH CONGRESS                       | 2,178,999  | -       |
| 80941 | RESEARCH GRANT EXPENSES                      | 14,912,978 | -       |
| 80950 | DEPRECIATION - BUILDING                      | 6,731,510  | -       |
| 80951 | DEPRECIATION - TELEPHONE                     | 52,800     | -       |
| 80953 | DEPRECIATION - LAB & TEACHING EQUIP          | 20,145,925 | -       |
| 80954 | DEPRECIATION - LIBRARY BOOKS                 | 350,177    | -       |
| 80955 | DEPRECIATION - OFFICE EQUIPMENTS             | 2,372,793  | -       |
| 80956 | DEPRECIATION - MOTOR VEHICALS                | 1,172,628  | -       |
| 80957 | Depreciation - SOFTWARE                      | 58,949     | -       |
| 84101 | ACA-SALARIES & WAGES                         | 2,369,991  | -       |
| 84102 | ACA-U .P .F                                  | 669,297    | -       |
| 84103 | ACA-PENSION                                  | 224,957    | -       |
| 84104 | ACA-E. T. F                                  | 178,851    | -       |

| CODE  | ACCOUNT NAME               | DR                   | CR                   |
|-------|----------------------------|----------------------|----------------------|
| 84108 | ACA-ACADEMIC ALLOWANCES    | 3,404,752            | -                    |
| 84110 | ACA-Other Allowances       | 56,826               | -                    |
| 84112 | ACA-ADDITIONAL ALL. 20%    | 435,047              | -                    |
| 84114 | ACA-GRATUITY               | 1,207,410            | -                    |
| 84120 | ACA-COL                    | 186,948              | -                    |
| 84121 | ACA-RESEARCH ALLOWANCE 25% | 761,333              | -                    |
| 84201 | NON-ACA-SALARIES           | 13,117,792           | -                    |
| 84202 | NON-ACA- U P F             | 1,834,316            | -                    |
| 84203 | NON-ACA PENTION            | 1,336,160            | -                    |
| 84204 | NON-ACA- E.T.F             | 634,095              | -                    |
| 84208 | NON- OVER TIME             | 2,192,958            | -                    |
| 84209 | NON-HOLIDAY PAYMENTS       | 411,175              | -                    |
| 84210 | NON- OTHER ALLOWANCE       | 5,400                | -                    |
| 84212 | NON-ACA-MCA.20%            | 5,446,828            | -                    |
| 84214 | GRATUITY                   | 2,111,888            | -                    |
| 84216 | NON ACA. RESEARCH ALL. 25% | 427,809              | -                    |
| 84217 | NON-ADDITIONAL ALLOWANCE   | 2,420,812            | -                    |
| 84218 | NON-ACA-ADJUSTMENT ALL.    | 143,786              | -                    |
| 84220 | NON-COL                    | 2,550,457            | -                    |
| 84221 | NON-STAFF BENIFIT          | 175,859              | -                    |
| 84249 | CASUAL VAGES               | 1,198,165            | -                    |
| 90275 | STAMP DUTY EXPENSE         | 29,600               | -                    |
| Gmt   | GRANT                      |                      | 17,801,629           |
|       |                            | <b>1,069,904,691</b> | <b>1,069,904,691</b> |



# REPORT OF THE AUDITOR GENERAL 2019



The Director  
Post Graduate Institute of Science

Report of the Auditor General on the Financial Statements and Other Legal and Regulatory Requirements of the Post Graduate Institute of Science for the year ended 31 December 2019 in terms of Section 12 of the National Audit Act, No. 19 of 2018

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**1. Financial Statements**

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**1.1 Qualified Opinion**

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The audit of the financial statements of the Post Graduate Institute of Science for the year ended 31 December 2019 comprising the statement of financial position as at 31 December 2019 and the statement of financial performance, statement of changes in equity and cash flow statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies, was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with provisions of the National Audit Act No. 19 of 2018 and the Finance Act, No.38 of 1971. My report to Parliament in pursuance of provisions in Article 154 (6) of the Constitution will be tabled in due course.

In my opinion, except for the effects of the matters described in the basis for Qualified Opinion section of my report, the accompanying financial statements give a true and fair view of the financial position of the Institute as at 31 December 2019, and of its financial performance and its cash flows for the year then ended in accordance with Sri Lanka Public Sector Accounting Standards.

## **1.2 Basis for Qualified Opinion**

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- (a) The Institute had not identified a correct accounting policy relating to account for the course fees and an internal control system related thereto had not been established.
- (b) Outstanding Distress loan balance and Computer loan balance of Rs. 112,988 of an officer had been stated under the current assets during the year under review.
- (c) Despite the uncertainty of the recovery of Rs. 50,338,160 misappropriated during the period from 2008 to 2016, it had been stated under the non-current assets in the financial statements and as such, the assets of the Institute were not properly shown.
- (d) The Institute had understated the receipt of research grants of Rs. 138,594 and payment of research grants of Rs. 140,717 in the financial statements during the year under review.

I conducted my audit in accordance with Sri Lanka Auditing Standards (SLAuSs). My responsibilities, under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my qualified opinion.

## **1.3 Responsibilities of Management and Those Charged with Governance for the Financial Statements**

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Management is responsible for the preparation of financial statements that give a true and fair view in accordance with Sri Lanka Accounting Standards and for such internal control as management determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Institute's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management

either intends to liquidate the Institute or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Institute's financial reporting process.

As per Sub-section 16(1) of the National Audit Act No. 19 of 2018, the Institute is required to maintain proper books and records of all its income, expenditure, assets and liabilities, to enable annual and periodic financial statements to be prepared of the Institute.

#### **1.4 Auditor's Responsibilities for the Audit of the Financial Statements**

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My objective is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sri Lanka Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Sri Lanka Auditing Standards, I exercise professional judgment and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Institute's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the management.
- Conclude on the appropriateness of the management's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Institute's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. However, future events or conditions may cause the Institute to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

## **2. Report on Other Legal and Regulatory Requirements**

National Audit Act, No. 19 of 2018 includes specific provisions for following requirements.

- Except for the effect of the matters described in the Basis for Qualified Opinion paragraph, I have obtained all the information and explanation that required for the audit and as far as appears from my examination, proper accounting records have been kept by the Institute as per the requirement of Section 12 (a) of the National Audit Act, No. 19 of 2018.
- The financial statements presented by the Institute are consistent with the preceding year as per the requirement of section 6 (1) (d) (iii) of the National Audit Act, No. 19 of 2018.
- As per the requirement of section 6 (1) (d) (iv) of the National Audit Act, No. 19 of 2018, the recommendations made by me in the preceding year had been included in the financial statements presented for the year under review.

Based on the procedures performed and evidence obtained were limited to matters that are material, nothing has come to my attention;

- to state that any member of the governing body of the Institute has any direct or indirect interest in any contract entered into by the Institute which are out of the normal cause of business as per the requirement of section 12 (d) of the National Audit Act, No. 19 of 2018.
- to state that the Institute has not complied with any applicable written law, general and special directions issued by the governing body of the Institute as per the requirement of section 12 (f) of the National Audit Act, No. 19 of 2018, except for the following observation.

| Reference to Laws, Rules/Directives<br>----- | Description<br>----- |
|----------------------------------------------|----------------------|
|----------------------------------------------|----------------------|

(a) Internal Audit Circular of the  
University Grants Commission No.  
4/2019 dated 29 July 2019

(i) Section (iii) x                      The Register of Fixed Deposit register had not  
been maintained in accordance with the  
circular

(ii) Section (v)                      The Institute had maintained 33 fixed deposits  
by the end of 2019 and it had not taken action  
to call for bids from other financial institutions  
and invest them in the most profitable  
Institution after the maturity of those deposits  
in accordance with the Circular.

- to state that the Institute has not performed according to its powers, functions and duties as per the requirement of section 12 (g) of the National Audit Act, No. 19 of 2018 except for the following observations.

| Powers, Duties, Functions<br>----- | Observations<br>----- |
|------------------------------------|-----------------------|
|------------------------------------|-----------------------|

|                                                                                                                                                                                                          |                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (a) Criteria 7 of the Handbook on i<br>Graduate Course Review in<br>Universities and Higher Education<br>Institutions of Sri Lanka, released in<br>December 2015 by the University<br>Grants Commission. | For the evaluation of the answer scripts, a<br>second correction methods should be<br>introduced internally and it should be<br>approved by the Governing Body and the<br>University Grants Commission, whereas<br>action had not been taken accordingly. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- ii Although the specific procedures and standards to be followed in planning examinations conducted by the institute preparing, improving, correcting, grading, and reviewing the question papers should be prepared and approved by the Governing Body and the University Grants Commission, Institute had not followed such procedure.
- iii Action had not been taken to prepare a marking scheme to check the answer sheets of the examinations conducted in connection with the courses conducted by the Institute.

(b) Section 05 of the Guidelines on Ethics and Academic Accountability of the Academic Staff of the University No. 914 of 09 April 2015 approved by the University Grants Commission

Although adequate internal control systems had to be developed to detect the dual relationship between academic staff and students or to prevent any adverse effects on quality control, measures had not been taken accordingly.

- to state that the resources of the Institute had not been procured and utilized economically, efficiently and effectively within the time frames and in compliance with the applicable laws as per the requirement of section 12 (h) of the National Audit Act, No. 19 of 2018 except for the following observations.



### 3. Other Audit Observations

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- (a) Although the Institute had paid Rs.8,519,579 for 139 visiting lecturers for 11 postgraduate courses conducted in the year 2019, a system of evaluation from the students to ascertain whether the services of those lecturers were received properly had not been followed.
- (b) There was no formal arrangement in place to appoint an examination evaluation panel for the evaluation of the answer sheets of the examinations conducted by the Institute and to securely store the examined answer sheets.
- (c) Compared to the approved staff and the actual staff in the year 2017, there were 15 vacancies in 11 posts and 07 excesses in 03 posts. Although it has been more than two years since the approval of the cadre, the management had not paid attention for filling the existing vacancies immediately and obtaining approval for excess posts as per the requirements or transferring those officers to other institutions.
- (d) The Institute maintains 24 fixed deposits in a one bank and management had not focused on reducing the amount of deposit certificates to suit the needs of the Institute and minimizing the possibility of committing financial irregularities.
- (e) Since the Institute had not exercised due care and diligence in calling for open bids for awarding the cleaning contract for the year 2019, the Rs.49,335 spent on the first newspaper advertisement had become uneconomic transaction due to publishing newspaper advertisements on two occasions by the Institute.
- (f) Although 04 vehicles had been attached to the Institute by the end of the year 2019, due to the employment of only one driver, 03 vehicles owned by the Institute remained underutilized and it had been a severe impediment to the daily activities of the Institute.
- (g) Although Rs. 10,000 had been paid to the Sri Lanka Transport Board for checking the fuel consumption of 04 vehicles owned by the Institute during the year under review, by the end of 2019, the drivers had recorded the fuel consumption in the daily running charts at different rates than the rate approved by that inspection.

- (h) The closing balance of 03 research projects which had not been executed during the year under review amounted to Rs. 227,714 by the end of the year and no action had been taken to settle the balances of completed researches or spend them on research activities.
- (i) No action had been taken to properly inventory 23 instruments worth Rs. 562,027 purchased under research grants in the year 2019.
- (j) Although Rs. 813,649 had been spent on installing 20 security cameras in 2017 and 2019, the storage time of those cameras was as short as less 21 days.
- (K) Although the Institute had appointed 06 officers including the Store Keeper for the Board of Survey of the year 2018 and submitted the survey reports to the Audit, it was not confirmed that the survey was conducted according to the inventory documents.
- (l) During the audit test check conducted regarding the short term course conducted by the Institute in the year 2019, it was observed that the students who completed 03 courses had been awarded the relevant certificates for those courses without being recovered the outstanding course fees of Rs. 640,000 of those students.
- (m) The Postgraduate Institute of Science had not incurred any expenses from the Fund established for granting facilities for researches and scholarships during the year under review and there was a balance of Rs. 8,038,458 in the Fund at the end of the year.
- (n) No action had been taken to recover vehicle rental income of Rs. 98,962 which had elapsed for a period exceeding 05 months to 08 months as at the end of the year under review.
- (o) Out of the receivable course fee income of Rs.15,428,800 identified in the financial statements for the year 2018, any amount had not been recovered during the year under review.

W.P.C. Wickramaratne

Auditor General

# PGIS REPLY TO AUDIT OBSERVATIONS

## **Reply given for the final Audit Report of the Postgraduate Institute of Science**

### **1. Financial Statements**

#### **1.2 Basis for Qualified Opinion**

- (a) As specified in the Notes 1.4.1 (b) of the financial statements, only the course income pertaining to the current year has been shown in the Statement of Operating Performance under the Course Fee Revenue Head in accordance with the accepted accounting principles. Accordingly, the adjustment in respect of the receipts for the coming year received in the current year (Differed Income) and the adjustment required for the income not received by the end of the current year in relation to the current year have been made to the course income. However, action will be taken to reveal relevant accounting policy clearly in the financial statements in the future.
- (b) The distress loan balance of Rs. 99,988 and the computer loan balance of Rs.13,000 pointed out by the Audit is applicable to Mahesh Iddawala, the Senior Assistant Bursar who has been interdicted at present. Since his university provident fund has not yet been released, action will be taken to recover it in the future.
- (c) As indicated in the Note 1.2.6 in the financial report, the Attorney General's Department is currently in the process of recovering Rs. 50,338,160 relating to the misappropriation. All the proceedings related to filing cases in the court have been finalized by now. The audit report submitted by the Forensic Audit Division of the Government Audit Division has also pointed out with evidence that the accused former Bursar Mahesh Iddawala had fraudulently obtained this amount. Further, steps are also being taken to recover that amount from the People's Bank, which is also a party responsible for the financial loss incurred by the Institute. Accordingly, as we have a reliable expectation of the possibility of recovering this loss, it is correct to state the amount under a non-current asset.
- (d) The differences pointed out in the audit are accepted. Action will be taken to correct it in the future.

### **2. Report of the Other Legal and Regulatory Requirements**

#### **Reference to Laws, Rules/Directives**

- (a) (I) Even though the format of the register of fixed deposit maintained by us in the year 2019

was not compatible with the format 04/2019 presented by the University Grants Commission, all the information contained therein was included in the fixed deposit register maintained by us. However, the fixed deposit register will be maintained in accordance with Circular 04/2019 from the year 2020 onwards.

- (II) The Internal Audit Circular 4/2019 with regard to investing fixed deposit in the bank that offers the highest return on maturities had been submitted in late July 2019 and these recommendations will be implemented from the year 2020.

### **Powers, Duties and Functions**

- (a) (I) The Postgraduate Institute of Science conducts specialized postgraduate courses in the field of higher education. Further, it is found difficult to enroll students for the next academic year if the courses are not completed on time.

The Postgraduate Institute of Science has only two full-time Senior Lecturers in the staff and all academic affairs are conducted by experienced lecturers who specialize in the relevant subject. There are a least number of specialist lecturers in Sri Lanka for many subjects. In some subjects it is difficult to re-check the answer sheets as the courses have to be completed on time and the experts on the subject matter are scarce. However, in case of any problem, the re-checking of the answer sheets is done and we are always ready to do so. However, special attention will be paid to the matters pointed out in the audit in the future.

- (II) In releasing the results, we adopt more accurate and transparent process and confirm and release the results in the following order. If any injustice has been caused to the students in this process, it is also observed. It is then possible to re-check the answer sheets as required.

The order followed in the release of the results is as follows.

1. After surveying the results, the head lecturer in charge of the relevant subject observes them and grades the results.
2. The results are checked by the Coordinator of the relevant postgraduate program.

3. Re-checking and grading by the Board of Studies in the relevant stream
4. Issuing final results subject to the approval of the Director of the Institute

However, when an external lecturer is included, his / her first question paper will be reviewed by an expert. Similarly, the reviewing and grading of the results is done in a well-accepted manner and according to a standard. However, prompt action will be taken to bring the required documents under the purview of the Postgraduate Institute of Science. All postgraduate courses in our institute have been approved by the University Grants Commission.

We carry out the examination and approval of students' research dissertations according to an internationally accepted methodology. Herein, those dissertations and reports are subject to the supervision of three examiners relevant to the stream and the Chair of the Board of Studies. A transparent procedure is adopted in the selection of the examiners. This methodology has been approved by the Governing Body and is implemented in all the universities in Sri Lanka.

- (III) The answer sheets relevant to the scoring procedure are prepared by the examiners. Scoring cannot be carried out according to a specific procedure. Examiners perform a statistical analysis of the students' marks and rank them accordingly. The scoring system is determined based on the number of students, the manner in which the answers have been given, and how the scores are allocated. Arrangements are being made to use modern technology for this purpose. For all these activities, measures are being taken to implement a special computer based modern system with transparency in the near future.
- (b) Two relevant forms were approved by the Council of the University of Peradeniya on 18.03.2019 to ascertain whether there is a dual relationship between the academic staff and the students. The two forms, which have been modified to apply to the Postgraduate Institute of Science, will be used from this year to determine whether there is a dual relationship between academic staff and students.

Form 1 (to be filled by students)

Every time a new student (M.Sc./M.Phil. /Ph.D.) is enrolled, arrangements will be made to obtain this form filled by her or him to the Postgraduate Institute of Science in the future.

Form 2 (to be filled in by the Lecturers)

Arrangements will be made to obtain this form filled by the lecturers to the Postgraduate Institute of Science.

### **3. Other Audit Observations**

- a. Since 2016, the Postgraduate Institute of Science has initiated a system to obtain students' assessment to ensure whether the service of its lecturers is properly provided for the postgraduate courses conducted by the Institute. Although the students' assessments had been obtained from time to time by the Institute or by the respective lecturers, it had not been systematically stored in our Institute. In the future, student evaluation sheets with respect to the services of the respective lecturers will be obtained through a formal system and stored at this institution.
- b. The respective Boards of Studies in each stream act as the Exam Evaluation Panel for the examinations conducted by the Postgraduate Institute of Science. We have established 11 Boards of Studies for this purpose.

Subsequent to the evaluation of these Board of Studies, the relevant results should be tabled again at the relevant Coordinating Committee Meeting before they are issued.

Although answer sheets have been currently stored securely with the lecturers (lecturers have kept such answer sheets with them to show them in case of students' problems), an arrangement will be made to store all the answer sheets securely in this Institute in the future. Answer sheets related to the visiting lecturers who are not working in the University are kept with the Coordinator of the course.

- c. According to the approved cadre list for the year 2017 of the Postgraduate Institute of Science, 02 out of 05 senior level posts (Senior Lecturer) have been filled and the remaining 03 vacancies will be filled according to the requirement of the Institute. Further, the vacancy for the post of Deputy Bursar/ Senior Bursar cannot be filled as the relevant formal disciplinary inquiry has not been completed. Similarly, the vacancy for the post of Deputy Registrar/Senior Registrar will be filled by the University Grants Commission and the post of Assistant Registrar belongs to the permanent cadre (In accordance with the provisions of the cadre list 2013, the University Grants Commission

appointed an Assistant Registrar to the post of Senior Assistant Registrar in the cadre in the year 2016), but this post has not been filled as it does not belong to the approved staff. Arrangements are being made to fill the vacancy of Technical Officer (Internal). Necessary action was taken to recruit one person on the basis of transfer from the primary grade posts to the post of driver and the relevant recommendations have been forwarded to the University Grants Commission at present. Furthermore, the Department of Management Services has already been informed by the University Grants Commission that the Institute does not require the posts of Electrician and Office Machinery Clerk. Arrangements are being made to fill the vacancy in the post of Management Assistant (Shroff) on transfer basis. Further, recruitments to existing positions in the Institute will be made in accordance with the recommendation of the Board of Management, the requirement of the Institute and the amount of cost

The Department of Management Services has been informed about the changes in the cadre list of our Institute by the letters dated 11.07.2018, 12.02.2019, 19.12.2019 and 09.02.2020 through the University Grants Commission. Necessary arrangements are being made to correct the Cadre list of the Institute.

- d. The matter pointed out in the audit is currently being dealt with.
- e. As informed at the Board of Management meeting of the Postgraduate Institute of Science held in September 2018, the new building of the Institute was to be put into use by the end of October 2018 in terms of the contract agreement. Therefore, it was planned to award the contract at the same time as applicable to all three buildings. Nevertheless, the construction of the new building has not been completed as scheduled by October 2018. Objective to take steps to call for bids as applicable to all three buildings (Block A, B, C) was to taking into account the administrative advantage of awarding the cleaning service as a single contract and avoiding the financial disadvantage to the Postgraduate Institute of Science in recruiting the cleaning service by re-publishing a newspaper advertisement for the new building (Block C). Although all the procurement activities have been carried out to commence new cleaning work on 01.11.2018 by opening the building as announced at the Board of Management meeting, the Technical Committee dated 31.10.2018 had to recommend for re-bidding as the construction of the new building was further delayed. This is an unexpected situation. However, this has not caused any financial disadvantage to the Institute.



- f. Two drivers served in the Postgraduate Institute of Science and one of them retired on 04.12.2019. In order to fill the above vacancy, one driver was selected on the basis of transfer from the interview held on 03.02.2020. The relevant recommendations were sent to the University Grants Commission by the letter dated 29/07/2019 and the University Grants Commission has, by letter dated 09/12/2019, informed that he had rejected the appointment and canceled the relevant transfer. At that time, the Government had informed to cancel all new recruitments. Accordingly, as per a request made to the University Grants Commission, a driver was re-selected by conducting an interview on 03/02/2020 using the transfer applications submitted to us and relevant recommendations have been forwarded to the University Grants Commission for necessary action. Due to the current situation in the country, the selected drivers have not yet been referred to our Institute.

The other driver of the institute has been attached to the duties of the Director of the Institute and the drivers of the University of Peradeniya are brought to the Institute to perform the daily duties as per the requirements of the institute. After the recruitment of the new driver, he will be attached to the office duties as in previous years. Our bus is used for field trips attended by large groups of students for the courses and workshops of institute. Accordingly, there are times when the bus does not run in certain months. Field trips are often arranged on weekends, and the application therefor should be submitted a few days in advance. In those cases, the bus is driven by one of the two drivers working in our Institute and a minor employee of the Institute as a driving assistant. Also, the old car owned by the Institute is driven in very limited cases and the same procedure is followed in those instances. In those cases, the remaining driver of the Institute will be used to cover the duties of the office and the duties of the Director. As indicated above, we obtain the services of two drivers for four vehicles to carry out the activities of this Institute very efficiently and all the financial activities are carried out using the income earned by the Postgraduate Institute of Science and the employees have been very effectively attached to the affairs of the Institute.

- g. Defects and other inspections of 04 vehicles belonging to the Institute are carried out by an experienced Assistant Managing Engineer of the Sri Lanka Transport Board with the approval of the Management Committee of the Institute and the fuel consumption test is also carried out by him (Est: Code: Chapter xxvii- 7: 8). The charges on his behalf are paid in accordance with the approval given by the Management Committee.

The bus is used to provide the necessary transport facilities for field trips and short courses organized by the courses of the institute and as the bus transports a large number of students under air conditioning conditions, and in some cases due to traffic congestion and driving on small roads with very steep slopes (e.g. - Ambuluwawa) during these field trips may have resulted in this situation.

Furthermore, as the official vehicle bearing the number CP CAE-0317 used by the Director of the Postgraduate Institute of Science is used for the Director's daily official trips and the number of his travelling on traffic congested roads has increased, this variation may have occurred.

The van owned by the Institute was manufactured in 1996 and has been used extensively for short trips since inception of the Institute (with minor repairs). As it is widely used for short trips, the relevant fuel consumption test values of the van may have changed. (Although requests have been made to the relevant divisions to obtain a van on the requirement of the Institution, we have been informed by the Ministry of Higher Education that the relevant activities have been temporarily suspended as per Circular No: 05/2019 issued by the Department of National Budget).

The Car bearing No.301-6318 owned by the Institute is rarely used as the above van is widely used for daily activities. Due to using it on short trips on requirements and during less traffic congestions (e.g. used on several occasions to get to the Katunayake airport on Sundays) this variation may have occurred. However, the drivers were informed to rectify this situation and to state the reasons for the variations.

- h. The Professors in charge of the relevant projects have been informed to expedite the settlement of the grants of the research projects (Project No. 6142,6252,6259) on which no transaction whatsoever had been carried out during the year 2019 as pointed out by the audit.
- i. The equipment purchased under research grants is included in a separate inventory register. An inventory certificate is also obtained from the relevant researcher for that purpose. A copy of the document containing the assets pointed out by the audit is also submitted to the Audit. Since the Argon Gas Cylinder is not an asset, it has not been included in the register.

- j. Action will be taken to increase the capacity in the future and thereby increase the number of days that data can be stored up to 90.
- k. In addition to the officers of the Institute, Mr. Shanaka Rodrigo, Senior Assistant Bursar of the University of Peradeniya acted as the Chairman of the Board of Surveys conducted in 2018 and an officer of the Internal Audit Division was also involved as a member of it. Further, the relevant survey report has been submitted to the Auditor General and a copy is available in the Institute.
- l. Arrangements are being made to recover the arrears and action will be taken not to issue certificates to those who do not pay money in the future.
- m. Arrangements are being made to utilize the balance of the Research Fund Account.
- n. The balance of Rs. 45,171.87 exists under the overdue charges as pointed out by the audit in transport facilities provided for the NIFS by our Institute. However, the Director of the NIFS informed by letter that the transport facilities had to be obtained to transport students of the Postgraduate Institute of Science and therefore to provide some relief. This matter was discussed at the 37th Monetary Committee Meeting held on 28.04.2020 and it was approved to recover the amount due from the Bench Fees from the students of the Postgraduate Institute of Science in the future. The balance amount shown in the audit has also been recovered at present.
- o. Due to unavoidable reasons including non-academic staff strike, the study could not be completed within the expected time and it took longer than the time scheduled to start of the academic activities of the second semester. As a result, the collection of course fees was delayed. A large amount of arrears has been recovered by now. Course coordinators are constantly informed to take action to recover arrears of course fees.