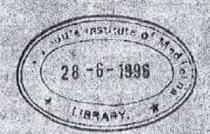
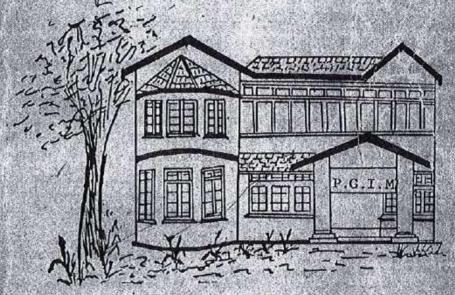
POSTGRADUATE INSTITUTE OF MEDICINE University of Colombo





HAND BOOK AND PROSPECTUS
1992

## POSTGRADUATE INSTITUTE OF MEDICINE

UNIVERSITY OF COLOMBO SRI LANKA



# HAND BOOK

and

# **PROSPECTUS**

1992

No. 160, Norris Canal Road, Colombo 8 Sri Lanka

## ACKNOWLEDGEMENTS

The contribution made by Dr. I. G. Premadasa, Assistant Director of Medical Education of the Centre of Medical Education, Kuwait University, to get this prospectus into its final format on the computer, which was done free of any payment in his Department at Kuwait University, is acknowledged with thanks.

Director PGIM

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#### INSTITUTIONAL OBJECTIVES OF PGIM

- to produce health manpower of high quality and in sufficient quantity to meet the needs of the Ministry of Health and the non government sector.
- to maintain and improve the skills and competencies of health personnel through continuing education.
- to innovate and design methodology that will facilitate continuing education of medical personnel.
- to orientate training of health manpower primarily to satisfy the health requirements of Sri Lanka.
- to inculcate attitudes whereby there is expression of a feeling of concern for the sick and one's fellow men.
- 6. to inculcate the habit of self learning.
- to promote the use of available resources and appropriate technology in scientific manoeuvres with regard to postgraduate education.
- to inculcate the concepts of using the health care team approach where necessary in solving health problems.
- to evaluate medical education programmes in order to obtain information with regard to flaws and pointers to improvements.
- to arrange in-service training programmes where preventive and curative care and nursing care are well integrated.
- to develop collaboration with institutions abroad in order to promote development of high standards of postgraduate medical education in Sti Lanka.
- 12. to decentralise the training systems wherever possible, and make maximum utilisation of facilities for postgraduate medical education available throughout Sri Lanka, by establishing centres of excellence at the periphery in selected fields of medicine.

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### GENERAL INFORMATION

## POSTGRADUATE INSTITUTE OF MEDICINE— UNIVERSITY OF COLOMBO

## 1. Historical Background

Medical education in Sri Lanka was started in 1870 with the establishment of the Ceylon Medical College, which after 7 decades was converted to the Faculty of Medicine in 1942 when the University of Ceylon was established.

Until 1952 no postgraduate medical examinations were conducted by the University of Ceylon. For the first time examinations for the degrees of MD and MOG were conducted in 1952. The examination for the degree of MS was started in the following year.

There was no organised postgradute teaching or training of any kind. Training in the specialities of medicine at postgraduate level had to be done in the U. K. and the diplomas, such as, MRCP, FRCS etc. of the Colleges in the UK were recognised for consultant appointments.

The Advisory Committee on Postgraduate Medical Education recommended to the government in 1973 that a supervised in-service training period of 3 years followed by an examination should replace the existing scheme of training abroad. Accordingly, the Institute of Postgraduate Medicine was established in 1976 under the provisions of the University of Ceylon Act No. 1 of 1976 and was attached to the University of Colombo. It was formally inaugurated on 2nd March, 1976 by Dr. Halfdan Mahler, Director General of the WHO. Professor K. N. Seneviratne was appointed the first Director.

However, the work of the newly set-up Institute was handicapped since various examinations of the Colleges in the UK continued to be conducted in Colombo and the doctors preferred these to the examinations of the Institute. Therefore, a review of the work of the Institute became necessary. At the same time the government also decided to stop holding foreign examinations in Sri Lanka and to grant full recognition and preference to the postgraduate degrees of the Institute with effect from 1st January, 1980.

In order to achieve the objectives of the Institute, it was re-established in 1979 under the provisions of the Universities Act No. 16 of 1978 with Dr. S A Cabraal as Director and was renamed the Postgraduate Institute of Medicine (PGIM). Accordingly PGIM Ordinance No. 1 of 1980 made under the provisions of the Universities Act referred to above came into force on 10th April, 1980. The Boards of Study for various specialities in medicine were reorganised and the courses of instruction and examinations were arranged for the different specialities.

## 2. Authorities of the Institute

## 2.1 Board of Management

The Board of Management is the principal administrative and academic authority of the Institute. It is comprised of as follows:-

## Ex-Offico Members

The Director of the PGIM

The Chairman, University Grants Commission

The Secretary to the Ministry of Higher Education

The Secretary to the Ministry of Health

The Secretary to the Ministry of Finance

The Director General of Health Services

The Deputy Director General of Health Services (Medical Services)

The Dean, Faculty of Medicine, University of Colombo

The Dean, Faculty of Medicine, University of Peradeniya

The Dean, Faculty of Medicine, University of Jaffna

The Dean, Faculty of Medicine, University of Ruhuna

The Dean, Faculty of Dental Sciences, University of Peradeniya

## Elected Members

- A member elected by the Faculty Board of the Faculty of Medicine, University of Colombo
- A member elected by the Faculty Board of the Faculty of Medicine, University of Peradeniya
- A member elected by the Faculty Board of the Faculty of Medicine, University of Jaffna
- A member elected by the Faculty Board of the Faculty of Medicine, University of Ruhuna

## Appointed Members

8 members appointed by the University Grants Commission,

## 2.2 Boards of Study

All the academic matters such as preparing syllabuses for the courses of studies, formulating training programmes and standards of examination etc. are determined by the Boards of Study. For each discipline there is a separate Board of Study, constitution of which is as follows :-

- (I) Where the Board of Study is established in respect of a discipline for which one or more than one University has a department of study such Board shall consist of:
  - (a) The Director
  - (b) 6 members elected by the appropriate professional body from among its members

- (c) The Head of the Department of Study of each University having a Faculty of Medicine
- (d) A member elected by the Faculty Board of the Faculty of Medicine of each of the 4 Universities having such a Faculty
- (II) Where a Board of Study is established in respect of a speciality for which no University has established a department of study, such Board shall consist of:
  - (a) The Director
  - (b) 5 members selected by the appropriate professional body from among its members
  - (c) A member elected by the Faculty Board of the Faculty of Medicine of each of the 4 Universities having such a Faculty

At present there are 16 Boards of Study for each of the following specialities:-

Anaesthesiology

Community Medicine

Dental Surgery

Family Medicine

Forensic Medicine

Medicine

Microbiology

Obstetrics and Gynaecology

Ophthalmology

Otolaryngology

Paediatrics

Pathology

Datista

Psychiatry

Radiology

Radiotherapy & Oncology

Surgery



## 3. Academic Programmes

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The following are the Degree and Diploma programmes offered by the Institute:

MD in Anaesthesiology

MD in Community Medicine/Community Dentistry

MD in Family Medicine

MD in Forensic Medicine

MD in Medical Microbiology

MD in Medicine

MD in Paediatrics

MD in Pathology

MD in Psychiatry

MD in Radiology

MD in Radiotherapy & Oncology

MS in Dental Surgery

MS in Obstetrics and Gynaecology

MS in Ophthalmology

MS in Orthodontics

MS in Otolaryngology

MS in Surgery

MSc in Community Medicine/Community Dentistry

MSc in Health Education

Diploma in General Dental Practice (DGDP)

Diploma in Family Medicine (DFM)

Diploma in Legal Medicine (DLM)

Diploma in Tuberculosis and Chest Diseases (DTCD)

Diploma in Medical Microbiology (D. Microbiol)

Diploma in Ophthalmology (DO)

Diploma in Child Health (DCH)

Diploma in Pathology (D Path)

Diploma in Laryngo Oto-Rhinology (DLO)

Certificate of Competence in Anaesthesia (CCA)

All the examinations leading to the above qualifications are held after a specific period of in-service training which is generally supplemented by organised courses of study, seminars, practical work etc.

## 4. Eligibility for admission to the Training Programmes

Candidates seeking registration for the above programmes should possess a medical degree registrable with the Sri Lanka Medical Council and have completed one year of service after internship with supporting documents.

## 5. Structure of the Training Programmes

5.1 Candidates seeking admission to the Training Programmes leading to the degree of MD/MS in the following specialities are admitted only on the results of the Part I examination in the respective specialities.

Anaesthesiology

Dental Surgery

Medicine

Obstetrics and Gynaecology

Ophthalmology

Otolaryngology

**Paediatrics** 

Surgery

5.2 Candidates wishing to follow the training programmes leading to the MD/MS degree in the following specialities should, in the first instance complete the diploma in the respective disciplines as given below. Only those candidates who have successfully completed the Diploma will be permitted to proceed to the MD/MS training programmes.

Family Medicine Forensic Medicine Diploma in Family Medicine
 Diploma in Legal Medicine

Microbiology

- Diploma in Medical Microbiology

Pathology

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- Diploma in Pathology
- 5.3 In the case of specialities of Ophthalmology, Psychiatry, Radiology and Radiotherapy and Oncology, the candidates will be admitted direct to the in-service training programme during which the trainces shall sit MD/MS Part I and II examinations in the respective specialities.
- 5.4 In the case of MD in Community Medicine/Community Dentistry only those candidates who have successfully completed the degree of MSc in Community Medicine/Community Dentistry will be permitted to proceed to the MD Community Medicine/Community Dentistry programmes.
- 5.5 Duration of the training programme in respect of the diploma courses is one to two years depending on the discipline, at the end of which the diploma examination will be held.
- 5.6 Duration of the training programme for the respective degrees of the MD/MS varies from 2 to 4 years depending on the requirements in the particular speciality as determined by the respective Boards of Study.
- 5.7 During the period of in-service training programme leading to the degree of MD/MS, the trainees are required to comply with certain conditions such as appointments to be held, preparation and submission of a Case Book and/or Dissertation etc. as may be stipulated by the respective Boards of Study.

#### 6. Selection for Training Programmes

The following criteria will be applied in selecting trainees for the Training Programmes.

- 6.1 All the applications received for training programmes will be screened by the respective Boards of Study.
- 6.2 Training will be carried out in training units approved by the Board of Management. Allocation of Trainees into Training units will be done on the basis of criteria existing at the time of selection and which have been laid down by the Board of Management of the PGIM.

- 6.3 Names of selected candidates will be submitted to the Ministry of Health for release. However, release of doctors from Ministry to follow the training programme will be the responsibility of Health Ministry.
- 6.4 A medical officer who had either vacated post or resigned should have completed one year of service after re-employment before the officer is selected for the training programme.
- 6.5 In the case of a medical officer who wants to change the speciality in which he is undergoing postgraduate training, such a request for change of course will be allowed only after a period of two years from the date of the request.
- 6.6 If a medical officer wishes to enroll in a postgraduate training programme in another speciality such request will be allowed only after a period of two years of service from the date of completion of the previous postgraduate training programme.
- 6.7 A medical officer should have completed a minimum period of 8 years service before the officer enrolls for a postgraduate course such as DFM where obtaining such a qualification is a requirement for promotion from one grade to another.

#### 7. Examinations

A comprehensive examination will be held at end of the in-service training programme to test knowledge, skills and attitudes of the trainee. The examination will consist of written, oral and clinical/practical components in addition to the assessment of the Case Book or Dissertation where stipulated. Only the trainees who reach the required standard for a pass in all the components will be awarded the Degree/Diploma in the respective speciality granted by the University of Colombo.

Minimum 80% attendance at organised lecture courses, practicals, fieldwork clinicals etc. is a requirement before permission is granted to sit the examinations unless in specific instances the Board of Management waives this requirement on a recommendation of the relevant Board of Study.

### 8. Board Certification as Consultants

#### 8.1 Board Certification of PGIM Trainees

After completing the degree of MD/MS in the respective disciplines the trainees should undergo a minimum of two years of further training of which one year should be at a centre abroad, before they are board certified as consultants by the respective Boards of Study. This period of further training may be increased to 3 to 4 years in the case of some sub-specialities.

8.2 Board Certification of Medical Officers who are in service with foreign specialist qualifications

Medical officers with equivalent foreign qualifications who are already in the Health Services before 1.1.80 could be given privileges of Board Certification on application provided they have completed 7 years of continuous service in the State Health Services after obtaining such qualifications. This category of medical officers will be given privileges of Board Certification as from 01.01.80.

In the case of Medical Officers on the permanent staff of the Faculties of Medicine who have obtained equivalent foreign qualifications before, 1. 3. 87 privileges of Board Certification will be given to those who have completed 7 years service in the Universities of Sri Lanka after obtaining such qualifications.

8.3 Board Certification of Medical Officers sent abroad

Medical officers who have been specifically sent abroad by the Department of Health Services or by the Faculties of Medicine of the Universities of Sri Lanka for obtaining foreign specialist qualifications or higher qualifications after 1st January 1980 could be given privileges of Board Certification on completion of 7 years of continuous service on return to the Island after obtaining qualifications.

8.4 Board Certification of re-employed/employed Medical Officers

Board Certification of re-employed/employed Medical Officers could be done on successful completion of MD/MS in the relevant discipline and after completion of all other requirements of the post MD/MS training programme as laid down by the Board of Management.

#### 9. Exemptions

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Granting of exemptions to any candidate from any part of examination on the basis of training requirements already satisfied or other postgraduate qualifications already obtained in the relevant speciality, will be made on application as specified in the prospectus of the respective Boards of Study.

- 10. The Board of Management of the PGIM reserves the right to modify, alter or totally change any of the rules and regulations in this prospectus from time to time. In the event such modification alteration, or total change is done, the new rules and regulations will apply,
- 11. In the interpretation of the Rules and Regulations embodied in this Prospectus, the Board of Management of the Postgraduate Institute of Medicine reserves the right to be the final authority to give rulings on the interpretation of any rule or regulation or any other matter included in this prospectus and such rulings of the Board of Management would be considered as final.

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Dr. A, Sathasivam, MBBS (Cey,), MD Micro (Col.)

Dr. (Ms.) V. Thevanesam, MBBS (Ccy.), MRCP (UK), DM, MRCPath

Dr. Mirani Wecrasooriya, MBBS (Peradeniya), Ph,D.

Prof. (Mrs.) M. K. de S. Wijesundera, MBBS (Cey.), MSc, (Lond.), Ph.D. (Cey.), MD Micro, (Col.)

Dr. (Mrs.) Nalani Withana, MBBS (Cey.), MSc, (UK), MD Micro (Col.), Dip Bact, (UK)

## Obstetrics / Gynaecology

Prof. S. H. P. Nanayakkara, MBBS (Cey.), FRCS (Eng.), FRCOG (Gt. Brt.) Chairman.

Dr R. N. Haththotuwa, MBBS (Cey.), MS, (Col.) MRCOG, Secretary

Dr. Lakshman Fernando, MBBS (Cey.), FRCOG (Gt. Brit.), FCOG (Cey.)

Prof. M. Gunaratne, MBBS (Cey.), MS (Cey.), FRCOG (Gt. Bri.)

Prof. A. G. de S. Gunasekera, MBS (Cey.), FRCOG (Gt. Brit.), FRCS

Dr. I. M. R. Goonawardene, MBBS (Cey.), MS (Col.), MRCOG (Gt. Bri.)

Dr. J. Jayawardena, MBBS (Cey.), MS, MRCOG (Eng.)

Dr. S. P. Kularaine, MBBS (Ccy.), F.SL.C.O.G. (Ccy.), MCGP (Ccy.), MRCOG (Gt. Brit.), FRCOG (Gt. Brit.)

Prof. W. S. E. Perera, MBBS (Cey.), FRCS (Edin), FRCS (Eng)., FRCOG

Dr. J. N. Rodrigo, MBBS (Cey.), DObst (S.L.), FRCOG (G.B.), FCOG (S.L.)

Prof. H. R. Seneviratne, MBBS (Cey.), FRCOG, DM (Col.)

Dr. B. Y. de Silva, MBBS (Cey.), MS, (Col. MRCOG (UK)

Dr. Kinsley de Silva, MBBS (Ccy.), FRCS (Ed.), FRCOG, FCOG (S.L.)

Prof. M. Sivasuriya MBBS (Cey.), FRCS (Eng.), FRCS (Edi)., FRCS (Glas.) FACS, FRCOG (Gt. Bri.), FCOG (S.L.)

## Ophthalmology

Dr. U. Mendis, MBBS (Cey.), DO (Lond.), FRCS (Eng.), FRCS (Edin.), FC Ophth Chairman.

Dr. (Mrs.) S. Z. A. Subasinghe, MBBS (Cey.) MS (Col.) FRCS, Secretary.

Dr. A. B. Abeysinghe, MBRS (Cey.), DO (Lond), FRCS (Eng.)

Dr. M. H. S. Cassim, MBBS (Cey ), DO (Lond.), FRCS (Eng.)

Dr. Ranjan Dias, MBBS, MS (Col) FRCS (Edin.)

Dr. (Mrs) C. D. Jayaweera Bandara, MBBS (Cey.), DO (Lond.), FRCS (Eng.)

Dr. Reggie Seimon, MBBS (Cey.), DO (Lond), FRCS (Eng.), FCOPATH (UK)

Dr. (Mrs) B. E. Stephen, MBBS (Cey.) DO (Lond.), FRCS (Eng.), FCOPTH (UK.)

#### Otolaryngology

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FACS,

Dr. B. D. P. Edussuriya, MBBS (Cey.), DLO (Lond.), FRCS (Edin.), Chairman.

Dr. W. Ratnayake, MBBS (Cey.), FRCS Edin,), DLO (Lond,), Secretary

Dr. R. Abeywickrama, MBBS (Cey.) DLO (Lond.), MS (Cey.)

Dr. A. G. Buthpitiya, MBBS (Cey.), MS (Col.)

Dr. Ranjan Dias, MBBS, MS (Col.), FRCS (Edin.)

Dr. R. S. Drahaman, MBBS (Cey.), FRCS (Edin.), DLO (Lond.)

Dr. Dayasiri Fernando, MBBS (Cey.), FRCS

Dr. S. Mahendran, MBBS (Cey.), FRCS (Eng.), DLO (Lond.)

#### **Paediatrics**

Prof. S. P. Lamabadusuriya, MBBS (Cey.), Ph.D. (Lond.), MRCP (UK), FRCP (Lond) FRCP (Edin.), FRCP (Glasg), DCH (Eng.), Chairman.

Dr. (Mrs.) M. Senanayake, MBBS (Cey.) MRCP, (UK) MD, (Col.) DCH, Secretary

Dr. M. Fernandopulle, MBBS (Cey.), MRCP (UK), DCH (Cey.)

Dr. E. A. N. Fonseka, MBBS, MRCP, (UK) DCH

Dr. (Mrs.) L. Jayasena, MBBS (Cey.), MRCP (UK)

Dr. (Mrs.) V. Karunakaran, MBBS (Cey.)

Dr. D. R. Karunaratna, MBBS (Cey.), FRCP, DCH (Lond.)

Dr. G. N. Lucas, MBBS (Cey.), DCH (Cey.), MRCP(UK)

Prof. J. C. Nanayakkara, MBBS (Cey.), DCH (Lond.), MRCP (UK)

Dr. B. J. C. Perera, MBBS (Cey.) DCH (Cey.), DCH (Eng.), MD, (Col.) MRCP (UK)

Dr. D. A. Sonnadara, MBBS (Cey.), M,D MRCP (UK), FRCP (UK), DCH (UK)

Prof. D. G. H. de Silva, MBBS (Cey.), DCH (Cey.), MRCP (UK), MSc,

Dr. A. S. B, Wijekoon, MBBS (Cey.), MD, (Col.) MRCP (UK), DCH (Lond.)

## Pathology

Prof. R. G. Panabokke, MBBS (Cey.), MD (Cey.), FRCPath (Lond.), PhD, (Lond.), FCCS (Hon. SL.), Chairman,

Dr. (Mrs.) Rance Perera, MBBS (Cey.), PhD., DCP, Secretary

Dr. P. Angunawela, MBBS (Cey.), Dip (Path.), MD (Col.), MRC Path (UK)

Dr. S. D. Atukorale, MBBS (Cey.), D. Bact (Eng.), MD. MRC Path (UK), FACP(USA)

Dr. Kusuma Amaratunga, MBBS (Cey.), D Path (Eng.), FRC Path (UK)

Dr. Mary Babapulle, MBBS (Ccy.), DPATH (Eng.), MD Path (Col.)

Prof. K. Balasubramanium, BSc. (Cey.), PhD, (USA), FNAS (SL.), Flchem (Cey.), FI Biol (SL.)

Prof. Cecilia Canagaratne (Co-opt) MBBS (Cey.), PhD (UK)

Prof. N. Chandrasiri, MBBS (Cey.), MD (Col.), DLM (S.L.), DMJ Path (Lond.)

Prof. S. B. Ellepola, MBBS (Cey.), D Path (UK), MD (Col.),

Dr. Phyllis Ganegoda, MBBS (Ccy.), MD, (Col.) D Path

Dr. F. R B. Jayaweera, MBBS (Cey.), D Path (UK)

Dr. Mrs P. Kumarasinghe, MBBS (Cey.), MD (Col.), FRACPath (Aust.), DPath

Dr (Mrs.) N. V. I. Ratnatunga, MBBS (Cey.), D Path (Col.), PhD, MD Path (Col.)

Dr. Chitrika de Silva, MBBS (Cey.), D Path (Eng.). DCP (Lond.), FRC Path (UK)

Dr. Mirani Weerasooriya, MBBS (Cey,), PhD, (Perad)

## Psychiatry

Dr. D. V. J. Harischandra, MBBS (Cey,), MRCPSych (UK), DPM (Eng.,) Chairman

Dr. H. Perera, MBBS, MRC Psy (UK), MD Psy (Col.), Secretary,

Dr. D. R, R, Abeysinghe, MBBS (Cey,), MD (Col,), MRCPSych (UK)

Dr. W. R. Edirisinghe, MBBS, MRCPsych (UK)

Dr. R. Jayawardena, MBBS (Cey,), DPM (UK) MRCPSych (UK)

Dr. B. Karunatilleke, MBBS (Cey,), DPM (UK), MRCPSych (UK)

Prof. Nalaka Mendis, MBBS (Cey.), MRCPSych (UK)

Dr. K, M, H, Pereia, MBBS (Cey,), PhD (UK), MD (Col.)

Dr. W. R. Pelera, MBBS (Cey.), DPM (Lond), MRCPSych (Lond)

Dr. E. K. Rodrigo, MBBS (Cey,), MD. (Col.) MRCPaych (UK)

Dr. D. J. Somasundaram, BA (USA) MBBS (Ind.), MD (Col.)

Dr. B. Waidyasekera, MBBS (Cey.), DPM (Eng), MRCP (UK)

## Radiology

Dr. S. N. B. Talwatte, MBBS (Cey.), DMRD (Lond.), FRCR (Lond.), Chairman

Dr. (Mrs.) G. Senanayake, MBBS (Cey.), MD, (Col.) Secretary

Dr. S. V. Alahakoon, MBBS (Cey.), MSc, (Lond.). MD (Col.)

Dr. (Mrs.) P, Amerasinghe, MBBS (Cey.), MD (Col.), DMRD (Lond.)

Dr. (Mrs.) Nimala A. Gooneratne, MBBS (Cey,), MD (Col,)

Dr. M. R. Mohideen, MD (Col.) MRCP (UK)

Prof. P. S. S. Panditharatne, MBBS (Cey.), PhD, (Manch.)

Dr. S. P. de Silva, MBBS (Cey.), DMRD (Lond), FRCR (UK)

Dr. G. K. Warusavithrana, MBBS (Cey.) MD (Col.), DMRD (Lond.), FRCR (UK)

Dr. (Mrs,) U. Wirasinghe, MBBS (Cey.) MD (Col,)

#### Radiotherapy and Oncology

Dr. R. S. Jayatilleka, MBBS (Ccy,), DMRT (UK), FRCR (UK), Chairman,

Mr. M. B. Weerasekera, BSc, (Col.) Secretary

Dr. S. C. A. Abeykoon, MBBS (Cey), MD (Col.)

Dr. E. D Attapattu, MBBS (USSR)

Dr. A. Gabrial, MBBS (Cey.) FRCS (Eng.), FRCS (Edn.), Hon, FCCS, Hon, FDS (S.L.)

Dr. F. R. B. Jayaweera, MBBS (Cey.), D Path (UK)

Dr. W. C. P. de Mel, MBBS (Cey.), MD, (Col.) MRCP (UK), M.Phil (UK), D Path (Col.)

Prof. (Mrs) J. C. Nanayakkara, MBBs (Cey.), DCH (Lond.), MRCP (UK)

Dr. S. P. de Silva, MBBS (Cey.), DMRD (Lond.), FRCR (UK)

## Surgery

Dr. S. J. Stephen, MS (Cey.), FRCS (Eng.), FRCS (Edin.), FACS Hon. FCCP. Chairman,

Dr. Dayasiri Fernando, MBBS (Cey.), FRCS (Eng) Secretary,

Dr. A. G. Buthpitiya, MBBS (Cey.), MS (Col.)

Dr. G. J. B. Jayasekera, MBBS (Cey.), FRCS, MS

Dr. G. W. Kaiunaratne, MBBS (Cey.), FRCS (Eng.)

Dr. P. C. A. Ratnatunga, MBBS (Ccy.), FRCS (Eng.)

Dr. E. D. Rodrigo, MBBS (Cey.), FRCS, (Eng)

Dr, Colvin Samarasinghe, MBRS (Cey.), FRCS (Eng) FRCSE, FACS,

Prof. A. H. Sheriffdeen, MBBS (Cey.), FRCS (Eng.), FRCS (Edin.)

Dr. S. Y. D. C. Wickramasinghe, MS (Cey.), FRCS (Eng.)

Dr. Chanaka G. B. Wijesekera, MBBS (Cey.), M,Ch, (Orth.) FRCS

Note: -- The Director PGIM is an Ex-officio member of all Boards of Study.



## PROSPECTUS IN ANAESTHESIOLOGY

Regulations relating to the training programme in Anaesthesia and Intensive Care, leading to the degree of M.D. (Anaesthesiology) of the Postgraduate Institute of Medicine of the University of Colombo and to Board Certification as a Consultant Anaesthetist.

The Programme is in six stages, inclusive of three examinations.

## 1.0 STAGE 1-M.D Anaesthesiology Part I Examination

- 1.1. The Examination consists of two parts
  - (i) Part I A (Anaesthesia)
  - (ii) Part I B (Basic Sciences)

The two examinations may be sat in any order but successful completion of both examinations is necessary before commencing the clinical training programme for the Part II M.D. Anaesthesiology.

Note: Those who have sat the Part I examination prior to 1992 are governed by the old regulations and require only the Part 1 B to enter the clinical training programme.

## Part I A (Anaesthesia)

## Eligibility

- (a) Candidates should have a registrable degree with the Sri Lanka Medical Council
- (b) They should have six months experience in Anaesthesia prior to sitting the examination.

#### The Examination

The examination will be held twice a year.

The examination will consist of

- (i) A written paper of six essay type questions out of a choice of eight.
- (ii) The viva voce examination of 15 minutes duration.

## Part 1 B (Basic Sciences)

#### Eligibility

(a) Candidates should have completed a one year internship and one year post internship service after graduation, and be registrable with the Sri Lanka Medical Council.

## 1.2. The Examination:

The examination will be held at least once a year. The Board of Examiners shall include at least one external examiner from abroad.

The subjects will be:

- (i) Physiology
- (ii) Pharmacology
- (iii) Physics, Clinical Measurements and Clinical Chemistry, with special emphasis on subjects relevant to fields of Anaesthesia and Intensive Care.

The examination will consist of:

(i) A Multiple Choice Question Paper-A 3 hour paper consisting of 90 questions covering the three subjects

An essay type question paper-A 3 hour paper covering the three subjects,

(iii) An oral examination in each subject,

The Board may decide to hold the MCQ Paper at a date earlier than the rest of the examination and only those candidates who reach a minimum standard in the MCQ Paper will be allowed to sit the essay and viva voce examination.

#### Exemptions 13

Candidates holding foreign qualifications recognised by the Board are exempted from the Part I examination.

- STAGE II CLINICAL TRAINING PROGRAMME 2.0
- 2.1 Eligibility
- 2.1.1 M. D. Anaesthesiology Part I A & B examinations
- The Clinical Training Programme
- 2.2.1 Consists of 2 1/2 years of full time, clinical experience gained under the supervision of the Board of Study after the Part I examination in posts approved by the Board. The programme should be completed to the satisfaction of the Board, duly certified by the respective tutors.
- 2.2.2 A. The programme will consist of 12 month period which will consist of Anaesthesia for

General Surgery and the following specialities.

ENT Surgery Eye Surgery

Emergency & Trauma Genito-Urinary Surgery

Dental Surgery

Vascular Surgery

Orthopaedic Surgery

Plastic Surgery

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- B. Special anaesthetic experience 12 months
  - Obstetrics 8 weeks
     Cardiology/Internal Medicine 8 weeks
     Neuro Surgery 8 weeks
     Cardiothoracic Surgery 12 weeks
     Paediatric Surgery 12 weeks

## C. Intensive Care - 6 months

- 2.2.3 The Board of Study has stipulated what it would accept as suitable experience in each subspeciality. This has been done in terms of sessions. The minimum number of sessions and periods required in each subspeciality has been specified. Details are available in the "Guide to Study".
- 2.2.4 Trainees will follow the Part II study course which will include lectures, tutorials, journal clubs and mortality/morbidity conferences.

## 2.2.5 Case Book

A case book describing 10 patients anaesthetised/managed by the candidate, together with a discussion of each should be submitted to the Board of Study, 6 months prior to the Part II examination. Candidates will not be allowed to sit the examination unless this case book is approved by the Board. Instructions on how these case reports should be prepared and presented are provided in the "Guide to Study".

## 2.2.6 Diary

A diary should be maintained by the student. Details of how this should be done are provided in the "Guide to Study".

## 2.2.7 Certificate of training

The consultant supervising the trainee will be required to issue a certificate of clinical training for the period of supervision. A form is provided for this purpose.

## 2.2.8 Student Assessments

The consultant will also be required to complete an assessment form every 3 months. A form is provided for this purpose

- 2.2.9 The Board will not accept the period of training as having been satisfactorily completed unless it is supported by
  - 1 the Case Book
  - 2 a diary suitably maintained.
  - 3 certificates of training
  - 4 the required number of assessment forms.

## 2.3 Exemptions

Postgraduates with recognised foreign qualifications can

either

2.3.1 (a) claim exemption for any period or periods of the clinical training programme by submitting documentation duly certified by the consultant and/or certifying authority as evidence that they have completed a period of full time in-service training comparable in nature and duration to that described above in section 2.2.2. Such training should have been done after an examination comparable to the Part I. The training and documentation should be submitted 6 months before the examination and should be acceptable to the Board. Any deficiencies in the training programme should be completed to the satisfaction of the Board before the Part II examination.

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- 2.3.2 complete a clinical training programme of 1 1/2 years (78 weeks), I year of the normal clinical training programme being exempt. The sub specialities to be covered during the 1 1/2 years' training programme can be chosen in consultation with the Board.
- 2.3.2 Evidence of having passed the recognised foreign examination should be submitted when applying for exemption.
- 3.0 STAGE III ANAESTHESIOLOGY PART II EXAMINATION
- 3.1 Eligibility
- 3.1.1 M. D. Anaesthesiology Part I Examination
- 3 1.2 Completion of the Clinical Training Programme (Stage II)

#### 3.2 The Examination

The examination will be held at least once a year. The Board of Examiners shall include at least one external examiner from abroad.

The subjects will be

- (1) Theory and practice of Anaesthesia, Analgesia and Intensive care.
- (2) Relevant aspects of Clinical Medicine and Surgery.
- (3) Application of the Basic Sciences, including Anatomy and Pathology to the speciality of Anaesthesiology.

The Examination will consist of written, oral and clinical components.

## 4.0 STAGE IV - TRAINING IN RESEARCH METHODOLOGY

- 4.1 A scientific paper based on the candidate's own observations in the field of Anaesthesia or Intensive Care should be submitted for approval of the Board. The paper should include an extensive review of the subject.
- 4.2 Only projects that have had prior approval of the Board will be accepted.
- 4.3 Further details relating to the preparation of this paper are provided in the "Guide to Study".
- 4.4 This part of the programme may be completed at any time before board certification.

## 5.0 STAGE V - SENIOR REGISTRAR

- 5.1 This stage will commence after the satisfactory completion of the MD Part II examination and the clinical training programme (Stage II)
- 5.2 This period will consist of two years
- 5.2.1 During this period the trainees are expected to gain experience in the following areas:
  - (a) Teaching and organisation of educational activities for undergraduates, postgraduates and other health care personnel.
  - (b) Administration such as drawing up duty rosters
  - (c) Clinical Research
- 5.3 Trainees who have completed the clinical training programme without exemptions shall
  - (a) complete a period of one year as Senior Registrar in Sri Lanka in a teaching hospital approved by the Board under the supervision of a fully qualified. Consultant and be certified by him. This period need not be continuous
  - (b) undergo a period of training abroad of at least one year, in a centre approved by the Board.
- 5.4 Trainees who have been granted exemptions from part of the training programme must complete two years as Senior Registrar Anaesthetist in Sri Lanka.
- 5.4.1 The entire period should be under the direct supervision of a fully qualified Consultant and be certified by him. This period will be spent either
  - (a) the first year in a Teaching Hospital and the second year in a Provincial or Base Hospital
  - (b) Both years in a Provincial or Base Hospital.

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## 6.0 STAGE VI - BOARD CERTIFICATION

Trainees who complete satisfactorily stages 1 to V will be Board Certified.

## 7.0 INTERPRETATION / AMENDMENTS

- 7.1 In any matter relating to the interpretation of the above regulations the decision of the Board of Study, approved by the Board of Management of the PGIM shall be final.
- 7.2 The Board will have the right to amend any of the provisions in the above regulations, with the approval of the Board of Management.
- 7.3 No period of training, clinical training or assistantship will be accepted as having been satisfactorily completed unless the posts have had prior approval of the Board.
- 7.4 The foreign qualifications recognised by the Board for the purpose of exemptions are:
  - 1. F.F.A.R.C.S. (Eng.)
  - 2. F.C. Anaes (Eng.)
  - 3. F.F.A.R.C.S (1)
  - 4. F.F.A.R.A.C.S.

#### 7.5 Leave

Trainees may avail themselves of their leave entitlement in the Department of Health provided that the compulsory total requirement of 450 sessions for the year and the proportionate minimum sessions for the sub specialities are completed.

## 8.0 SUMMARY OF REGULATIONS REGARDING FOREIGN QUALIFIED POSTGRADUATES

8.1 Qualifications recognised: F.F.A.R.C.S. England F.C. Anaesth. of England F.F.A.R.C.S. Ireland F.F.A.R.A.C.S.

- 8.2 Candidates are exempted from Part I
- 8.3 Candidates must complete one year of compulsory service in the department before being released to the programme.
- 8.4 Clinical training programme

8.4.1 Candidates can

either

- 8.4.1 (a) complete a curtailed clinical training programme of 1 1/2 years (78 weeks) with the exemption of 1 year of the normal clinical training programme or
- 8.4.1 (b) claim total exemption of the clinical training programme having satisfied the Board in respect of appointments held overseas.
- 8.4.2 The programme of training referred to in 2.3.1 and 2.3.2 and above will be
  (a) full time
  - (b) supervised by consultants appointed by the Board
  - (e) monitored as in the programme for other trainees.
    - (i) A diary must be maintained
    - (ii) A certificate of training must be completed for each period
    - (iii) Assessment forms must be filled by the supervising consultants
- 8.4.3 A case book of 10 discussions on 10 patients managed should be written and accepted by the Board before sitting the Part II examination.
- 8.4.4 The Part II examination must be successfully completed.
- 8.4.5 A scientific paper should be presented to the Board and found acceptable. Guidelines for the preparation of this paper are provided in the "Guide to Study".
- 8.4.6 A period of two years as Senior Registrar should be served as described in the prospectus. (5.4.1)
  - The entire period should be under the supervision of a fully qualified consultant who will certify that this appointment was completed satisfactorily.
- 8.4.7 Periods referred to in 2.3.1 and 2.3.2, 8.4.1 (a), 8.4.1 (b) and 8.4.6 can only be done on full time release to the PGIM

#### CERTIFICATE OF ANAESTHESIA

Details of Certificate of Competence in Anaesthesia (CCA) for promotion to Grade 1 of the public service could be obtained on application to the Director PGIM.

The CCA is not a degree or diploma awarded by the University of Colombo.

## CERTIFICATE OF COMPETENCE IN ANAESTHESIA(C.C.A.) FOR PROMOTION TO GRADE I OF THE PUBLIC SERVICE

The Certificate of Competence in Anaesthesia will be awarded to medical officers who fulfil the following requirements satisfactorily.

- Certificate of 6 months training in anaesthesia under the direct supervision of a consultant anaesthetist.
  - 2. Part I A (Anaesthesia) M.D. Anaesthesiology examination

#### Eligibility

- 1. Candidates should be registrable with the Sri Lanka Medical Council.
- Candidates should have at least 6 months experience in anaesthesia prior to sitting the examination.

#### The Examination

The examination consists of a written paper and viva voce.

The written examination consists of six essay type questions out of a choice of eight.

The viva voce examination will be of 15 minutes duration.

- Five years experience in anaesthesia certified as satisfactory by the Consultant Anaesthetist in charge or in his/her absence, the chief administrator of the hospital.
- Viva voce examination of 30 minutes duration after the completion of the above criteria.

## Training

Any officer having completed four years of anaesthesia and wishing to avail of six months training prior to the examination may apply to the Secretary, Board of Study with details of previous experience. This training period is not compulsory.

NOTE: The Certificate of Competence will not entitle the holder to a consultant appointment in anaesthesiology in Sri Lanka, and those obtaining the certificate of competence will be expected to work under the supervision of a consultant anaesthetist Those obtaining the certificate of competence will be designated Senior Medical Officer in anaesthesia and will be eligible for promotion to Grade I of the public service.

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### PART I A (ANAESTHESIA)

## OUTLINE OF SUBJECT MATTER

- 1. Human anatomy and physiology considered in relation to anaesthesia.
- The pharmacology of drugs that may be used for or in association with or concurrently with anaesthesia including their elementary chemistry and interactions.
- Elementary physics in relation to apparatus used for the administration of anaesthesia and monitoring.
- 4. The theory and practice of anaesthesia and analgesia (including subarachnoid and epidural block) for obstetrics, ENT, eye, orthopaedic dental and procedures both in adults and children for effective and emergency surgery.
- 5. Anaesthesia in relation to medical disease.
- 6. Pre operative assessment investigations and medication.
- Post operative care which includes oxygen therapy, pain relief, fluid therapy, and
  the recognition and management of the common complications occurring
  during the immediate post operative period.
- Resuscitation and emergency care including CPR, fluid and electrolyte resuscitation and the immediate management of the trauma patient.

The syllabus does not include intensive care, neonatal anaesthesia and anaesthesia for elective neuro and cardiac surgery.

## CONTENT OF TRAINING PRE OPERATIVE ASSESSMENT

History, examination and investigations appropriate to the

- (a) Patient's medical problems
- (b) Surgery involved
- (c) The anaesthetic technique to be employed

#### OBJECTIVES

To identify the risk involved in anaesthesia and surgery for the patient in order to

- (a) assess whether further optimisation is required before anaesthesia and surgery can be embarked upon.
- (b) take decisions with regard to anaesthetic procedure in the choice of
  - (i) technique
  - (ii) drugs
  - (iii) monitoring
- (c) post operative monitoring and care required and for what duration and time.

## PRE OPERATIVE PREPARATION OF THE PATIENT

Restoration of fluid and electrolyte balance Drug treatment - continuation or discontinuation Premedication

## ENDOTRACHEAL INTUBATION

To have acquired the skill of

- 1. predicting a difficult intubation
- 2. oral and nasal intubation
- 3 to manage a difficult and failed intubation and the complications of intubation.

#### OPERATING THEATRE PROCEDURES

Training in the protocol of

- 1. checking the patient and bed head ticket
- 2 maintaining anaesthetic records of anaesthesia administered, and order the necessary post operative fluids, pain relief and monitoring.

#### ANAESTHESIA

To have acquired the knowledge and skill of

- (a) Justification of choice of technique, drugs, monitoring and breathing systems
- (b) administering anaesthesia using the technique and drugs most appropriate for the patient and surgery
- (c) the physiological basis of fluid therapy during surgery, including blood transfusion
- (d) recognising the common complications that can occur during surgery and anaesthesia and management of such complications

#### POST OPERATIVE MANAGEMENT

A knowledge of the common complications that can occur in the immediate post operative period, both minor and major, their recognition, identification of cause, and their management.

Methods available for pain relief and their use in individual patients.

Need for oxygen therapy

Rationale of post operative fluid therapy and assessment of adequacy.

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## SPECIAL PROBLEMS IN MEDICALLY COMPROMISED PATIENTS

Special features in the pre operative assessment, optimisation, intra operative problems and post operative complications that can occur in patients with medical diseases such as

- Hypertension, ischaemic heart disease and common valvular lesions, and anaemia
- 2. Bronchial asthma, chronic obstructive airway disease.
- 3. Renal and hepatic disease
- 4. Diabetes, thyrotoxicosis, hypothyroidism, obesity and epilepsy.

## OBSTETRIC ANAESTHESIA

- To have a knowledge of the special problems encountered in the obstetric patient due to
  - (a) physiological changes in pregnancy
  - (b) the welfare of the foetus and placental transmission of drugs
- To have acquired the skill of providing both regional and general anaesthesia for Caesarean section and forceps delivery and other obstetric manocuvres.
- Prevention and management of gastric acid aspiration, supine hypotensive syndrome, failed intubation etc.
- Management of anaesthesia for patients with PET, eclampsia, valvular heart disease complicating pregnancy and their management.
- 5. To acquire the knowledge and skill of neo natal resuscitation.

## PAEDIATRIC ANAESTHESIA

- 1. To acquire the knowledge of the differences between the neonate and adult.
- To acquire the skill of anaesthetising the child over one month having understood the problems of
  - (a) intubation and the equipment to be used for children
  - (b) to have a knowledge of how to calculate paediatric drug doses.
  - (c) blood loss assessment
  - (d) fluid and electrolyte balance

## REGIONAL ANAESTHESIA

To have acquired the skill of administering regional anaesthesia and also be aware of the complications arising out of the technique and the effects of nerve blockade.

Prevention and management of complications when they occur.

- (a) spinal
- (b) epidural
- (c) IV regional

## ANAESTHESIA FOR THE OUTPATIENT

Special problems in providing anaesthesia for the outpatient with regard to pre operative assessment of fitness, choice of drugs and technique, and assessment of street fitness post operatively.

## SPECIAL PROBLEMS OF PATIENT UNDERGOING ANAESTHESIA FOR

- 1. E.N.T surgery
- 2 Eye surgery

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- 3. Dental surgery
- 4. Orthopaedic surgery

## RESUSCITATION OF THE INJURED PATIENT

- 1. Assessment
- 2. Management of the airway respiration and circulation
- 3. Restoration of fluid and blood loss
- 4. Emergency management of injuries e.g. head, neck, face, chest and limbs.

## CARDIO PULMONARY RESUSCITATION

Diagnosis, management, and aftercare of the patient following cardiac arrest.

## ANAESTHESIA FOR COMMON EMERGENCIES

- 1. Bleeding tonsil
- 2. Open eye injuries
- 3. Mandibular, maxillary zygomatic fractures
- 4. Intestinal obstruction

## APPLICATION OF BASIC SCIENCES TO ANAESTHESIA

## PHARMACOLOGY

Common drugs used in pre operative medication and anaesthesia

#### ANATOMY

Ante cubital fossa Larynx Spinal canal

## PHYSIOLOGY pertaining to

The Cardiovascular system, The Respiratory system, Renal funtion Gastric secretion and motility Nerve, muscle and autonomic nervous system

## EQUIPMENT

To acquire a working knowledge of the following equipment including care of the equipment and how to check the integrity

Anaesthetic machine: Gas supply systems, pressure regulators, rotameters

vaporisers Breathing systems: Magill, Bain, circle circuit

Anaesthetic ventilators: settings, connections and alarms Apparatus for E.C.G and blood pressure measurements.

## SAMPLE QUESTIONS FOR THE PART 1 A (ANAESTHESIA)

- Discuss the relative and absolute contraindications to the use of Thiopentone as an induction agent in anaesthesia.
- 2. What are the advantages and disadvantages of spinal (subarachnoid) anaesthesia
- Discuss the pre operative treatment and anaesthetic management of a patient who is to undergo partial thyroidectomy
- 4. Discuss the effects of posture during anaesthesia
- Describe how you would manage a 6 year old child coming for control of bleeding following tonsilectomy done 3 hours prior
- 6. Discuss the actiology of bronchospasm occurring during anaesthesia How would you treat it

## RECOMMENDED READING

- 1. A textbook of Anaesthesia Smith and Aitkenhead.
- 2. A Handbook of Anaesthesia Attygalle.

## PROSPECTUS IN COMMUNITY MEDICINE AND COMMUNITY DENTISTRY

The Board of Study in Community Medicine (hereinafter referred to as the Board) will conduct training programmes leading to the following degrees:

- 1. MSc (Community Medicine)
- 2. MD (Community Medicine)
- 3. MSc (Community Dentistry)
- 4. MD (Community Dentistry)
- 5. MSc (Health Education)

## PROSPECTUS FOR MSc (COMMUNITY MEDICINE)

## 1. Eligibility for Selection

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The candidate shall have a medical degree registrable with the Sri Lanka Medical Council and shall have a minimum of one year's post-internship experience.

#### 2. Qualifying Examination

Candidates should pass a qualifying competitive examination to enable them to follow the training programme. A written examination will be held every year for this purpose.

#### 3. Training Programme

The training programme will be of one year's duration and consist of two components:

- 1. Course work
- 2 Dissertation

## 1 COURSE WORK

The course will consist of three terms of ten weeks each and will include the following units:

- (a) Basic Statistics, Epidemiology and Demography
- (b) Environmental & Occupational Health
- (c) Maternal & Child Health and Nutrition
- (d) Health Planning and Management, Delivery of Health Care, Social Welfare and Rehabilitation Service
- (e) Health Education and Behavioural Science
- (f) Mental Health
- (g) Gerontology

(h) Oral Health

(i) Applied Epidemiology

 (i) Clinical attachments in General Medicine, Paediatrics, Obstetrics & Gynaecology, Psychiatry, ENT, Ophthalmology and Dermatology

The candidates shall submit a dissertation on an approved topic consisting of about 8,000 words, four weeks prior to the date of commencement of the examination (vide regulations).

## 4. MSc. (Community Medicine) Examination

On satisfactory completion of the training programme the candidate will be eligible to sit the MSc (Community Medicine) examination. This examination will be held once every year and will consist of four written papers, a clinical examination, an oral examination and the dissertation (vide regulations).

## 5. Award of the degree of MSc (Community Medicine)

Candidates successful at the MSc (Community Medicine) examination will be awarded the degree of the MSc (Community Medicine).

- Lecturers and Course Unit Advisors will be appointed by the Board of Study
  and the Examiners will be appointed by the Senate of the University of Colombo
  on the recommendation of the Board of Study and approved by the Board of
  Management.
- Any section of this prospectus may be changed from time to time at the discretion
  of the Board.

## REGULATIONS FOR MSc (COMMUNITY MEDICINE)

- The title of the dissertation, along with the statement of objectives and the usefulness and relevance to Sri Lanka, should be submitted to the Board for approval within ten weeks of commencement of the course.
- On approval of the title, the Board will appoint a supervisor. The supervisor shall be consulted and guidance obtained at all stages of the research project and during the preparation of the dissertation.
- The candidate shall submit the dissertation to the Director, PGIM, four weeks before the date of commencement of MSc examination.
- 4. It is recommended that the dissertation should contain about 8,000 words. It should be type-written using double-spacing on good quality A4 size paper on one side only. A margin of not less than 44 mm should be allowed on the left hand side to facilitate binding, and margins of 20 mm should be left on the top, right hand side and the bottom. Chapter headings should be capitalised and centred, whilst subdivision headings should be typed from the left hand margin

in lower-case type and underlined Tables and figures should be placed as near as possible to the part of the text to which they refer. The contents of the dissertation should be given under the following headings:

- 1. Title
- 2. Author's name and degrees
- 3. Summary or synopsis
- 4. Table of contents
- 5. List of tables
- 6. List of figures
- 7. Introduction
- 8. Review of literature
- 9. Materials and methods
- 10. Results

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- 11. Discussion
- 12. Limitations of study
- 13. Recommendations (if any)
- 14. Acknowledgements
- 15. References (Vancouver system should be used).
- 5. Three copies of the dissertation should be submitted loose bound in the first instance, to enable corrections, if any, to be made. When the dissertation is accepted, it should be bound in a hard cover with the author's name, the degree and year printed in gold on the spine (bottom upwards). The cover should be in black. The front cover should carry the title on top, the author's name in the centre and the year at the bottom printed in gold. Three copies of the dissertation should be submitted to the Director, PGIM. Two copies shall be the property of the PGIM while the third copy will be returned to the candidate.
- 6. If the candidate fails the MSc examination, the same dissertation may be submitted at a subsequent examination if the mark obtained for the dissertation is 50% or more. However the candidate may make appropriate revisions and resubmit it at the subsequent examination for fresh marking. Candidates scoring less than 50% marks for the dissertation shall submit, at the subsequent examination a fresh or modified dissertation as prescribed by the examiners.

#### PROSPECTUS FOR MD (COMMUNITY MEDICINE)

#### 1. Eligibility for Selection

Candidates who have been successful at the MSc (Community Medicine), examination conducted by the PGIM provided they have one year's experience in public health.

### 2. Training Programme

- The Board shall be responsible for the training programme and the examination.
- (ii) Candidates should register for the training programme.
- (iii) The training programme will be in three parts.

#### PART I

During the first three months the candidate shall undergo a training programme at the PGIM. The training programme will include advanced statistics, applied epidemiology and research methodology.

On completion of the training the student shall sit an examination consisting of

- 1. two written papers and
- 2. an oral examination

This examination will be conducted once a year. Candidates should pass Part I to be eligible to proceed to Part II of the training programme.

#### PART II

During Part II of the training programme, the candidate should be assigned to a University or an approved institution for a period of one year and nine months.

During this period the trainee should gain experience in general public health needed for a consultancy in Community Medicine and training should include the three components, service, teaching and preparation of the thesis. At the end of this period the Head of the Institution should certify that the trainee has completed the attachment to his satisfaction.

The candidate shall submit a thesis based on a research project approved by the Board within a period of three years from the date of successful completion of Part I of the training programme (vide Regulations A).

#### PART III

On successful completion of Part II the candidate will undergo a period of supervised training abroad. During this period the student will be attached to one or more centres of excellence approved by the Board (vide Regulations B).

Lecturers and Course Unit Advisors shall be appointed by the Board of Study.
 Examiners shall be appointed by the Senate on the recommendation of the Board of Study and approved by the Board of Management.

#### 4. Exemptions

- (i) Any person who possesses a recognised postgraduate qualification in public health or a related discipline obtained before the 1st January, 1980 and having a minimum of two years experience in that speciality after obtaining the qualification could apply to the Board for exemption from Parts I and III of the training programme. For completion of Part II, the student shall submit a thesis, within four years from the date of registration, on a project approved by the Board and supervised by one or more supervisors appointed by the Board. The student shall defend the thesis at an oral examination
- (ii) On successful completion of Part II the student will be eligible for the award of the degree of MD (Community Medicine).

### 5. Board Certification

The Board will recommend candidates who have successfully completed Parts 1, III of the training programme and those who have exemption from Parts 1 and III and have completed Part II to the Director/PGIM that they be recognised as Board certified consultants.

The effective date of Board Certification for those who have completed Parts I, II and III of the training programme will be the date one calendar year after the date of completion of Part II.

The effective date of Board Certification of candidates exempted from Parts I and III under Section 4 will be the date of completion of Part II.

### REGULATIONS FOR MD (COMMUNTIY MEDICINE)

- The topic of research should be of the applied type and be relevant to Sri Lanka.
   A preproposal containing the title of the project along with a statement of objectives and the usefulness and relevance to Sri Lanka should be submitted to the Board for approval during Part I of the training programme.
- The Board having approved the preproposal will appoint one or more supervisors.
   Thereafter, the candidate in consultation with the supervisor(s), shall draw up a detailed protocol for submission to the Board for approval. The detailed protocol shall include the following.
  - 1. Title of project
  - 2. Justification
  - 3. Objectives and purpose of study
  - 4. Hypotheses (wherever necessary)
  - Methods
  - 6. Plan of implementation
  - 7. Budget with justification
  - 8. Source of funds (if any)
- It is the responsibility of the candidate to consult and obtain guidance from the supervisor(s) at all stages of the research project and in the preparation of the thesis.
- The candidate shall submit quarterly reports to the Director, PGIM on the progress of the research through the supervisor, on the prescribed form.
- The candidate shall submit the thesis to the Director, PGIM within a period of three years from the date of successful completion of Part 1 of the training programme.

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- 6. It is recommended that the thesis should contain 15,000 to 20,000 words. It should be type-written using double-spacing on good quality A4 size paper on one side only. A margin of not less than 40 mm should be allowed on the left hand side to facilitate binding, and margins of 20 mm should be left on the top, right hand side and the bottom. Chapter headings should be capitalised and centred, whilst subdivision headings should be typed from the left hand margin in lower case type and underlined. Tables and figures should be placed as near as possible to the part of the text to which they refer. The contents of the thesis should be given under the following headings:-
  - 1. Title, author's name and degrees
  - A declaration that the work presented in the thesis is the candidate's own and that no part of the thesis has been submitted earlier or concurrently for any other degree
  - 3. Summary or synopsis
  - 4. Table of contents
  - 5. List of tables
  - 6. List of figures
  - 7. Introducton
  - 8. Review of literature
  - 9. Materials and methods
  - 10. Results
  - 11. Discussion
  - 12. Limitations of study
  - 13. Recommendations (if any)
  - 14. Acknowledgements
  - References (Vancouver system should be used).
- 7. The copies of the thesis should be loose bound in the first instance to enable corrections, if any, to be made. If the thesis is accepted, it should be bound in hard cover with the author's name, degree and year printed in gold on the spine (bottom upwards) after corrections have been made. The cover should be in black. The front cover should carry the title on top, the author's name in the centre and the year at the bottom (also printed in gold).

Three copies of the thesis should be submitted to the Director, PGIM; two copies shall be the property of the PGIM while the third copy will be returned to the candidate.

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 The candidate shall defend the thesis at an oral examination conducted by two examiners: the supervisor(s) may be present as observer(s).

9. On successful completion of Part II of the MD (Community Medicine) training It on eft op, nd gin

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programme the candidate will undergo a minimum period of nine months supervised training abroad, when the candidate is expected to be attached to one or more centres of excellence approved by the Board. The candidate shall be attached to any one of these centres for a minimum period of six months. The Board may, however, approve a shorter period of not less than three months.

In exceptional circumstances the Board may consider exemption of a candidate from this requirement and permit this part of the training to be undertaken in one or more centres of excellence in Sri Lanka.

At the end of the training programme the candidate will submit:

- (i) a report of work done in the prescribed manner
- (ii) a certificate/certificates from the supervisor(s) testifying to the satisfactory performance of the candidate.

The Board shall examine the above report and certificate(s) to consider whether the candidate has successfully completed Part II of the MD (Community Medicine) training programme.

### PROSPECTUS IN COMMUNITY DENTISTRY

The Board of Study in Community Medicine (hereinafter referred to as the Board) will conduct a training programme leading to the degree of MSc (Community Dentistry).

#### PROSPECTUS FOR MSe (COMMUNITY DENTISTRY)

#### 1. Eligibility for Selection

Candidates shall have a dental degree registrable with the Sri Lanka Medical Council and shall have a minimum of two years post-qualification experience.

#### 2. Qualifying Examination

Candidates will have to pass a qualifying competitive examination to enable them to follow the training programme. A written examination will be held every year for this purpose.

#### 3. Training Programme

During the training programme the candidate will follow a full-time course of one year's duration. The course will consist of two components:

- Course work
- 2. A dissertation

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be in in the The course will consist of three terms of ten weeks each. The course will consist of the following units:

- (a) Basic Statistics, Epidemiology and Demography
- (b) Environmental and Occupational Health
- (c) Maternal & Child Health and Nutrition
- (d) Health care, Planning and Management, delivery of health care, Social Welfare and Rehabilitation and Health Economics.
- (e) Health Education and Behavioural Sciences
- (f) Mental Health
- (g) Applied Epidemiology
- (h) Gerontology
- (i) Community Dentistry this will be a specific intensive course in Community Dentistry of 4 weeks duration organized by the Department of Community Dental Health of the Faculty of Dental Sciences, University of Peradeniya.

#### 4. Dissertation

The candidate shall submit a dissertation on an approved topic consisting of about 8,000 words, four weeks before the date of commencement of the examination (vide Regulations).

### 5. MSc (Community Deutistry) Examination

On satisfactory completion of the training programme the candidate will be eligible to sit the MSc (Community Dentistry) examination. The examination will be held once every year and will consist of four written papers, a practical examination consisting of short cases, an oral examination and the dissertation.

## 6. Award of the degree of MSc (Community Dentistry)

Candidate successful at the MSc (Community Dentistry) examination will be awarded the degree of MSc (Community Dentistry).

- Lecturers and Course Unit Advisors will be appointed by the Board of Study and
  examiners will be appointed by the senate of the University of Colombo on the
  recommendation of the Board of Study and approved by the Board of
  Management.
- Any section in this prospectus may be changed from time to time at the discretion
  of the Board.

#### REGULATIONS FOR MSc (COMMUNITY DENTISTRY)

- The title of the dissertation, along with the statement of objectives and the
  usefulness and relevance to Sri Lanka, should be submitted to the Board for
  approval within ten weeks of commencement of the course.
- On approval of the title, the Board will appoint a supervisor. The supervisor shall be consulted and guidance obtained at all stages of the research project and during the preparation of the dissertation.

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- The candidate shall submit the dissertation to the Director, PGIM four weeks before the date of commencement of the MSc examination.
- 4. It is recommended that the dissertation should contain about 8,000 words. It should be type-written using double-spacing on good quality A4 size paper on one side only. A margin of not less than 40 mm should be allowed on the left hand side to facilitate binding, and margins of 20 mm should be left on the top, right hand side and the bottom. Chapter headings should be capitalised and centred, whilst subdivision headings should be typed from the left hand margin in lower-case type and underlined. Tables and figures should be placed as near as possible to the part of the text to which they refer. The contents of the dissertation should be given under the following headings:
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  - 8. Review of literature
  - 9. Materials and methods
  - 10. Results
  - 11. Discussion
  - 12. Limitations of study
  - 13. Recommendations (if any)
  - 14. Acknowledgements
  - 15. References (Vancouver system should be used).



5. The copies of the dissertation should be loose bound in the first instance to enable corrections, if any, to be made. When the dissertation is accepted, it should be bound in hard cover with the author's name, degree and year printed in gold on the spine (bottom upwards). The front cover should carry the title on top, the author's name in the centre and the year at the bottom (also printed in gold).

Three copies of the dissertation should be submitted to the Director, PGIM; two copies shall be the property of the PGIM while the third copy will be returned to the candidate.

6. If the candidate fails the MSc examination, the same dissertation may be submitted at a subsequent examination if the mark obtained for the dissertation is 50% or more; however the candidate may make appropriate revisions and resubmit it at the subsequent examination for fresh marking. Candidates scoring less than 50% marks for the dissertation shall submit, at the subsequent examination a fresh or modified dissertation as prescribed by the examiners.

#### PROSPECTUS FOR MD (COMMUNITY DENTISTRY)

#### 1. Eligibility for Selection

Candidates who have been successful at the MSc (Community Dentistry), examination conducted by the PGIM provided they have one year's experience in Community Dentistry in an approved post.

#### 2. Training Programme

- (i) The Board shall be responsible for the training programme and the examination.
- (ii) Candidates should register for the training programme
- (iii) The training programme will be in three parts:

#### PART I

During the first three months the candidate shall undergo a training programme at the PGIM. The training programme will include advanced statistical methods, applied epidemiology and research methodology.

On completion of the training the candidate shall sit an examination consisting of:

- 1. Two written papers and
- An oral examination

This examination will be conducted once a year. Candidates should pass Part I to be eligible to proceed to Part II of the training programme.

#### PART II

During Part II of the training programme, the candidate would be assigned to a University Unit for a period of one year and nine months.

The candidate shall submit a thesis based on a research project approved by the Board within a period of three years from the date of successful completion of Part I of the training programme (vide Regulation A).

After submission of the thesis to the Director, PGIM, the candidate shall defend the thesis at an oral examination. A successful candidate will be eligible for the award of MD (Community Dentistry) (vide Regulations A).

#### PART III

On successful completion of Part II the student will undergo a period of supervised training abroad. During this period the candidate will be attached to one or more centres of excellence approved by the Board (vide Regulations B).

 Lecturers and Course Unit Advisors shall be appointed by the Board of Study and Examiners shall be appointed by the senate of the University of Colombo on the recommendation of the Board of Study and approved by the Board of Management.

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- (i) Any person who possesses a recognised postgraduate qualification in Community Dentistry obtained before 1st January, 1980 and having a minimum of two years experience in that speciality after obtaining the qualfication could apply to the Board for exemption from Parts I and III of the training programme. For Part II, which must be completed within three years from the date of registration the candidate shall submit a thesis on a project approved by the Board and supervised by one or more supervisors appointed by the Board. The candidate shall defend the thesis at an oral examination.
- (ii) On successful completion of Part II the candidate will be eligible for the award of the degree of MD (Community Dentistry).

#### 5. Board Certification

The Boards of Study in Community Medicine and Dental Surgery will jointly recommend candidates who have completed Parts I, II and III of the training programme and candidates who have exemption from Parts I and II and have completed Part II to the Director, PGIM that they be recognised as Board certified consultants.

The effective date of Board certification for those who have completed Parts I, II and III of the training programme will be the date of completion of Part II. The effective date of Board certification of candidates exempted from Parts I and III under Section 4 will be the date of completion of Part II.

### REGULATIONS FOR MD (COMMUNITY DENTISTRY)

- The topic of research should be of the applied type and be relevant to Sri Lanka.
   A preproposal containing the title of the project along with a statement of objectives and the usefulness and relevance to Sri Lanka should be submitted to the Board of Study in Community Medicine for approval during Part I of the training programme.
- 2. The Board having approved the preproposal will appoint one or more supervisors. Thereafter, the candidate in consultation with the supervisor(s) shall draw up a detailed protocol which shall include the following items:
  - 1 Title of project
  - 2. Justification
  - 3. Objectives and purpose of study
  - Hypotheses (wherever necessary)
  - 5. Methods
  - 6 Plan of implementation
  - 7. Budget with justification
  - 8. Source of funds (if any)

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- It is the responsibility of the candidate to consult and obtain guidance from the supervisor at all stages of the research project and in the preparation of the thesis.
- The candidate shall submit quarterly reports to the Director, PGIM on the progress of the research project through the supervisor(s) on the prescribed form.
- The candidate shall submit the thesis to the Director, PGIM within a period of three years from the date of successful completion of Part I of the training programme.
- 6. It is recommended that the thesis should contain 15,000 to 20,000 words. It should be type-written using double-spacing on good quality A4 size paper on one side only. A margin of not less than 40 mm should be allowed on the left hand side to facilitate binding, and margins of 20 mm should be left on the top, right hand side and the bottom. Chapter headings should be capitalised and centred, whilst subdivision headings should be typed from the left hand margin in lower-case type and underlined. Tables and figures should be placed as near as possible to the part of the text to which they refer. The contents of the thesis should be given under the following headings
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  - A declaration certified by the supervisor that the work presented in the thesis is the student's own and that no part of the thesis has been submitted earlier or concurrently for any other degree.
  - 3. Summary or synopsis
  - 4. Table of contents
  - 5. List of figures
  - 6. List of tables
  - 7. Introduction
  - 8. Review of literature
  - 9. Materials and methods
  - 10. Results
  - 11. Discussion
  - 12. Limitations of study
  - 13. Recommendations (if any)
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- The candidate shall defend the thesis at an oral examination conducted by two examiners; the supervisor(s) may be present as observer(s).
- 9. On successful completion of Part II of the MD (Community Dentistry) training programme the candidate will undergo a minimum period of nine months' supervised training abroad, where the candidate will be attached to one or more centres of excellence approved by the Board. The candidate shall be attached to any one of these centres for a minimum period of six months. The Board may, however, approve a shorter period of not less than three months.

In exceptional circumstances the Board may consider exemption of a candidate from this requirement and permit this part of the training to be undertaken in one or more centres of excellence in Sri Lanka.

At the end of the training programme the candidate will submit:

- (i) a report of work done in the prescribed manner.
- (ii) a certificate/certificates from the supervisor(s) testifying to the satisfactory performance of the candidate.

The Board shall examine the above report and certificate(s) to consider whether the student has successfully completed Part III of the MD (Community Dentistry) training programme.

### PROSPECTUS IN DENTAL SURGERY

### MASTER OF SURGERY (DENTAL SURGERY)

#### INTRODUCTION

The following is an outline of the method of selection of trainees, the programme of training and examinations leading to Consultant (Specialist) status in Dental Surgery with the degree of MS (Dental Surgery). The programme shall consist of four stages with two examinations, the MS (Dental Surgery) Part I and MS (Dental Surgery) Part II, and a supervised training period in approved centres in Sri Lanka and abroad.

#### STAGE I

### Eligibility for MS (Dental Surgery) Part I Examination

- (a) A Dental Degree registrable with the Sri Lanka Medical Council; and
- (b) A minimum period of twelve months after passing the final examination for Bachelor in Dental Surgery

The Stage I will be the MS (Dental Surgery) Part I examination. This examination will consist of two papers, one essay type question paper and one multiple choice question paper together with an oral examination in the following subjects:

- A Applied Anatomy and Dental Anatomy;
- B Applied Physiology including Biochemistry;
- C Principles of Pathology including Microbiology;

as pertinent to the practice of dental surgery in hospitals. The emphasis will be on those aspects of the subjects that are of clinical and practical application, and which demonstrate fundamental principles and processes.

#### The Scope of the MS (Part 1) Examination

### (a) APPLIED ANATOMY AND DENTAL ANATOMY

Candidates will be expected to have a general knowledge of the regional, applied, radiological and histological areas, knowledge of the human body excluding the limbs and abdomen and also detailed knowledge of the head and neck including the brain and the thorax.

They should have a good knowledge of the composition, gross and minute structure, development and function of dental and related tissues and such aspects of embryology as have special dental significance and should be able to discuss recent investigations in relation to these matters. This would include detailed knowledge of enamel, dentine, pulp, periodontal ligament, cementum, development of teeth and jaws, salivary glands, maxillary antrum and the temperomandibular joint.

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## (b) APPLIED PHYSIOLOGY INCLUDING BIOCHEMISTRY

Candidates will be expected to have a sound knowledge of physiology of the main systems of the body, the general principles of nutrition and metabolism and the mechanism whereby no mal growth, the structure of the skeleton and the composition of the body fluids are regulated. A mastery of detailed techniques of experiments and tests will not be required. Similarly, in the field of biochemistry a detailed knowledge of chemical reactions, analysis and synthesis is not required. Candidates should, however be familiar with those techniques which are commonly employed in clinical investigations.

### (c) PRINCIPLES OF PATHOLOGY INCLUDING MICROBIOLOGY

Candidates should have a general knowledge of the causation, character and sequelae of inflammation, degeneration, and repair, hypertrophy, atrophy and hyperplasia, thrombosis embolism, infarction, ischaemia, neoplasia and the principles of blood transfusion, and also the action of radiation on the body. They should be familiar with the general characteristics of bacteria and viruses and have a more detailed knowledge of those which are important in dental surgery, wound infection and cross infection. They should have a general understanding of toxins, immunity and actions and uses of antibiotics.

There will be three questions in Applied Anatomy and three questions in Dental Anatomy. Candidates are required to answer TWO of the three questions in each group i.e., a total of four questions. A time of three hours will be provided.

There will be a three hour paper of two parts A & B. Part A will be on Applied Physiology including Biochemistry, which will have three questions of which two require answers. Part B will be the paper on the Principles of Pathology including Microbiology which will have three questions of which two require answers. In addition, there will be one multiple choice question paper together with oral examinations in all three subjects. The three hour multiple choice question paper will have three parts as follows:

- A. Applied Anatomy and Dental Anatomy;
- B. Applied Physiology including Biochemistry;
- C. Principles of Pathology including Microbiology; Each part will have thirty questions.

#### STAGE II

The Stage II will be the two year training programme followed by MS (Dental Surgery) Part II examination. The examination is designed to test skills and competence necessary for a hospital dental consultant practising in the context of health care delivery in Sri Lanka. The examination is broad-based and the subjects of the examination are divided into two groups:-

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#### GROUP 1

General Surgery, General Medicine and Therapeutics as pertaining to the practice of dental surgery, Oral Surgery including maxillo-facial surgery, Oral Medicine, Oral Pathology.

#### GROUP II

Conservative Dentistry, Prosthetic Dentistry, Periodontology, Orthodontics, Paedodontics, Community Dentistry.

The Examination is as follows:

### **GROUP I SUBJECTS**

- Written paper of three hours duration consisting of four theory questions, two of which will be in Oral Surgery.
- (2) Clinical long case; one hour's duration of examination and discussion. Short cases including 'spots'.
- (3) Practical examination.
- (4) Oral examination inclusive of General Surgery and General Medicine

#### GROUP II SUBJECTS

- (1) Written paper of three hours duration consisting of four theory questions, one each being from Conservative Dentistry and Prosthetic Dentistry.
- (2) Clinical examination.
- (3) Practical examination.
- (4) Oral examination.

(The examination will include a practical examination in Restorative Dentistry and Minor Oral Surgery. Comparable skills will be tested as far as possible for the psychomotor component).

### The Scope of MS (Dental Surgery) Part II Examination

The examination is designed to:

- (a) Assess the knowledge of surgery, medicine and therapeutics as they pertain to the practice of dental surgery.
- (b) Test the ability of the candidate to elicit an accurate and clear history and the basic physical signs and symptoms of disease.

- (c) Test the knowledge of naturally occurring variations of morphology and function of teeth.
- (d) Test the knowledge of the actiology, pathology, physical signs, symptoms, natural history and management of disorders of the teeth, mouth, jaws and associated structures.
- (e) Establish that the candidate has sound practical skills for dental practice.

#### Eligibility for MS (Dental Surgery) Part II Examination

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- Pass in MS (Dental Surgery) Part I or Primary FDSRCS of any Royal College of Surgeons of UK prior to 01.01.1980.
- (2) A twelve months appointment with a Consultant Dental Surgeon as Senior House Officer after passing MS (Dental Surgery) Part I. During this appointment the candidate would have to undergo training in General Surgery and General Medicine, one afternoon per week with a Consultant Surgeon and Consultant Physician respectively; and in General Anaesthesia for two weeks (70 hours) with a Consultant Anaesthetist.
- (3) A 38 week rotation appointment at the Faculty of Dental Sciences, University of Peradeniya with instruction in:

3.1	Oral Surgery	3 weeks (70 hours)
3.2	Oral Pathology	4 weeks (140 hours)
3.3	Oral Medicine	4 weeks (140 hours)
3.4	Conservative Dentistry	8 weeks (280 hours)
3.5	Prosthetic Dentistry	8 weeks (280 hours)
3.6	Paedodontics	3 weeks (150 hours)
3.7	Periodontology	3 weeks (150 hours)
3.8	Community Dentistry	3 weeks (150 hours)
3.9	Orthodontics	2 weeks (70 hours)

(4) A 14 week rotation appointment in Colombo or other approved institutions with instructions in:

4.1	Accident Centre	2 weeks	(70 hours)
4.2	Plastic Surgery	2 weeks	(70 hours)
4.3	Neurosurgery	1 week	(35 hours)
4.4	Oncology (Maharagama)	2 weeks	(70 hours)
4.5	Otolaryngology	1 week	(35 hours)
4.6	Haematology	1 week	(35 hours)
4.7	Dermatology	1 week	(35 hours)
4.8	Radiology	1 week	(35 hours)
4.9	Ophthalmology	1 week	(35 hours)
4.10	Orthodontics	2 weeks	(70 hours)

A certificate of satisfactory completion of his/her training from the consultant is necessary vide (2), (3) and (4) above.

#### STAGE III

Stage III will commence after successful completion of MS (Dental Surgery) Part II examination and will consist of a one year period of supervised training in an approved centre abroad. The candidate completing stage III will be required to present a certificate from his/her supervisor to testify to his/her satisfactory performance during this period abroad.

#### STAGE IV

After returning from abroad, the completion of a year of service as a Senior Registrar in the Dental Institute, Colombo or Faculty of Dental Science, Peradeniya or other approved institutions. During this stage, the candidate should have access to facilities in general anaesthesia. The candidate should provide a case record book of forty major cases pertaining to all aspects of dental practice managed by him/her alone or in collaboration. These must be certified by the Consultant responsible for training. This book should be submitted within six menths of returning from training abroad, or within 2 years of passing Part II examination. Part of stage IV may be done before Stage III.

The examiners will be recommended by the Board of Study in Dental Surgery for approval by the Board of Management and the Senate of the University of Colombo.

Approved institutions for training are hospitals where consultants are available :-

SECTION I—applies to posting of candidates preparing for MS (Dental Surgery) Part II Dental Institute, Colombo; Faculty of Dental Sciences, University of Peradeniya; Cancer Institute, Maharagama; and General Hospitals (Teaching) in Colombo, Kandy, Galle and Jaffna.

SECTION II—applies to posting MS (Dental Surgery) awaiting Board Certification. Dental Institute, Colombo; Faculty of Dental Sciences, University of Peradeniya; Cancer Hospital, Maharagama; General Hospitals (Teaching) in Kandy, Galle, Jaffna; Hospitals in Colombo South, Ratnapura and Batticaloa.

The rules and regulations may be amended by the Board of Study as and when necessary.

The programme will be reviewed from time to time together with the nature of the examination.

#### Exemptions

Candidates who have passed the FDSRCS examination of any of the Royal Colleges in the UK shall be exempted from MS (Dental Surgery) Part I examination and MS (Dental Surgery) Part II training programme.

## MASTER OF SURGERY IN ORTHODONTICS

## INTRODUCTION

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The following is an outline of the method of selection of trainces, programme of training and examination leading to Consultant (Specialist) status in Orthodontics with the degree of Master of Surgery in Orthodonties. The programme shall consist of three stages with two examinations, the MS (Dental Surgery) Part I and MS (Orthodontics) followed by a supervised training period at approved centres in Sri Lanka and abroad for the purpose of Board certification.

### STAGE I

Stage I will be the MS (Dental Surgery) Part I examination. This examination will consist of a written (essay type questions and multiple choice question papers) and an oral examination in the following subjects.

- Applied Anatomy and Dental Anatomy
- B. Applied Physiology including Biochemistry
- C. Principles of Pathology including Microbiology

[Details of the scope of the MS (Dental Surgery) Part I examination are given in the Prospectus in Dental Surgery-Master of Surgery (Dental Surgery]

## STAGE II—TRAINING PROGRAMME

Eligibility for admission to the training programme

- (a) MS (Dental Surgery) Part I examination or;
- (b) Part A of the Diploma in Orthodontics of any of the Royal Colleges of the UK prior to 1.1.1980
- or (c) FDSRCS of any of the Royal Colleges in the UK
- (d) Diploma in Orthodontics of any of the Royal Colleges in the UK;

The entire training programme shall consist of 24 months as follows:

(i) At the commencement, the candidates will take rotating appointments for 19 weeks in the Faculty of Dental Sciences, University of Peradeniya as follows:-

Oral Surgery	2 weeks
	2 weeks
	1 week
	4 weeks
	Oral Surgery Oral Pediology Oral Medicine Conservative Dentistry Prosthetic Dentistry Paediatric Dentistry Periodontology Community Dentistry Orthodontics

(ii) 18 months hospital appointment as Senior House Officer under the supervision of a Consultant Orthodontist. During the first 12 months the candidates will undergo training in Plastic Surgery, Radiology and Paediatric Units of Teaching Hospitals in rotation one morning per week.

After successful completion of the training programme the candidates will sit the MS (Orthodontics) Examination, provided that a case book be submitted three months before the examination, vide infra:-

#### MS (ORTHODONTICS) EXAMINATION

The examination is designed to test skills and competence necessary for a hospital dental consultant in orthodontics, practising in the context of health care delivery in Sri Lanka The examination is broadbased and the subjects of the examination are divided into two groups:-

### GROUP 1: Orthodontics

GROUP II: Dental Surgery and Pathology, including Maxillo-Facial Surgery in relation to Orthodontics, practising in the context of health care delivery in Sri Lanka. The examination is broadbased and the subjects of the examination are divided into two groups.

The examination is as follows .-

#### GROUP I SUBJECTS

- Theory paper of three hours consisting of four theory questions all of which will be on different aspects of Orthodontics.
- (a) Clinical long case One hour's duration of examination and discussion
   (b) Clinical short cases including 'spots'.
- Practical examination will be in two sessions of examinations of three hours duration each.
- (N.B: The practical examination in Orthodontics will include both removable and fixed appliances.)

#### GROUP II SUBJECTS

- Theory paper of three hours duration consisting of six questions from Paediatric Dentistry, Dental Surgery and Pathology inclusive of maxillo-facial surgery in relation to Orthodontics, Radiology, Restorative (Prosthetic and Conservative) Dentistry, Periodontology and Dental Materials.
- 2. Clinical examination including 'spots'.
- 3. Oral examination.

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# The scope of the MS (Orthodontics) examination

- (a) The examination is designed to test the candidate's knowledge of Dental Surgery. Paediatric Dentistry, Restorative (Prosthetic and Conservative) Dentistry and Radiology as they pertain to the practice of Orthodontics.
- (b) Test that the candidate is able to elicit a clear history, symptoms of disease and basic physical signs.
- (c) Test that the candidate has a clear and accurate knowledge of the naturally occurring variations of morphology and functions of the teeth, mouth, jaws and associated structures.
- (d) Establish that the candidate has sound practical skills for orthodontic management using removable and fixed appliances, pre and post surgical orthopaedics and premanagement of dysmorphology.

### Submission of the Case Book

A case book encompassing the treatment and management of twenty selected cases under the supervision of the Consultant Orthodontist should be submitted three months before the examination.

## STAGE III - POST - QUALIFICATION TRAINING

For the purpose of Board Certification as specialist Orthodontists the candidates are required to undergo further training of two years, after successfully completing the MS (Orthodontics) examination, as follows:-

- (a) One year supervised training at a centre abroad approved by the Board of Study in Dental Surgery and:
- (b) One year supervised training as Senior Registrar at the Dental Institute, Colombo or at the Faculty of Dental Sciences, University of Peradeniya.

Training at (a) or (b) above may be interchangeable. However candidates should submit a certificate from the supervisor concerned to the effect that the required period of training has been satisfactorily completed. The examiners for the MS (Orthodontics) will be nominated by the Board of Study in Dental Surgery. Rules and regulations may be amended as and when necessary and the programme will be reviewed from time to time together with the nature of the examination.

Approved institutions for training are hospitals where Consultant Orthodontists are available, viz

Dental Institute, Colombo Faculty of Dental Sciences, University of Peradeniya Teaching Hospitals of Kandy and Galle

#### Exemptions

- Candidates who have passed Primary FDSRCS examination of any of the Royal Colleges of the UK prior to 01.01.1980 shall be exempted from MS (Dental Surgery) Part I examination.
- Candidates who have obtained the MS (Dental Surgery) Part II of the PGIM, University of Colombo or the Final PDSRCS of any of the Royal Colleges in the UK will be exempted from the MS (Dental Surgery) Part I examination and the training programme in Group II subjects only.

Candidates with the Diploma in Orthodontics RCS (UK) will be exempted from the training programme in Group I subjects only.

Candidates with both FDSRCS and D. Orth, RCS qualifications will be exempted from MS (Dental Surgery) Part I examination and MS (Orthodontics) Part II training programme.

No exemption will be given from the MS (Orthodontics) examination.

### DIPLOMA IN GENERAL DENTAL PRACTICE

### INTRODUCTION

The Board of Study in Dental Surgery will conduct a training programme leading to a Diploma in General Dental Practice (DGDP) The following is an outline of the programme of training and examination.

#### ELIGIBILITY

To register for the course leading to the DGDP the candidates should have

- (a) a dental degree registrable with the Sri Lanka Medical Council
- (c) completed six years in the Department of Health or Defence Services (for purposes of promotion from Grade II to Grade I in the Department of Health or Defence Services)
- (c) eligibility applicable to General Dental Practitioners

#### COURSE

An eligible candidate should register oneself with the PGIM for the course leading to the DGDP.

#### REQUIREMENTS

#### PART I

A case book of twenty cases as representative as possible. The case book should be submitted three months before the examination.

(A candidate who has failed but obtained pass marks for the case book may present the same case book at the next two consecutive examinations)

11 PART Examination (Theory) - one paper comprising 25 short-answer type questions of three hours duration covering the following sixteen topics/groups

(a) Basic Sciences - Anatomy, Dental Anatomy, Physiology and Biochemistry

(b) Medical/Dental Statistics

(c) Public Health Dentistry/Preventive Dentistry

(d) Dental Radiology

(e) Orthodontics

(f) Conservative Dentistry

(g) Dental Materials

(h) Periodontology

(i) Operative Dental Surgery excluding periodontis and exodontia

(j) Oral Medicine and Oral Pathology

(k) Minor Oral Surgery including exodontia

(l) Dental Prosthetics

(m) Paedodontics

(n) General Medicine

(o) General Surgery

(p) Practice Management: Finance; jurisprudence pertaining to General Dental Practice

PART III

Practice/Clinical Examination/Viva-Voce-Scope to encompass everyday clinical problems facing a General Dental Practitioner in Hospital/General Dental Practice.

Training programme and lectures will be held in the Dental Institute, Colombo/ PGIM.

Training in Conservative and Prosthetic Dentistry will be held at the Faculty of Dental Sciences, University of Peradeniya.

The course will be of one year's duration, with weekend lectures.

This prospectus is subject to review by the Board of Study from time to time.

In all matters regarding the prospectus of in any matter of interpretation of the regulations, the decisions of the Board of Study duly approved by Board of Management of the Post-Graduate Institute of Medicine shall be final.

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#### PROSPECTUS IN FAMILY MEDICINE

#### INTRODUCTION

The Board of Study in Family Medicine conducts a training programme leading to the Diploma in Family Medicine (DFM) by examination. Those who have the Diploma in Family Medicine or an approved equivalent, and 5 years experience in General Practice/Family Practice, or its equivalent could with a further period of supervised research on a subject of relevance to General Practice/Family Practice and presentation of a thesis, obtain the degree of MD in Family Medicine.

The following is an outline of the programme of training and examination leading to-

- (i) Diploma in Family Medicine (DFM); and
- (ii) MD (Family Medicine)

#### DFM COURSE

#### Eligibility criteria

(a) Possession of a medical degree registrable with the Sri Lanka Medical Council and should have completed one year of service after internship.

The DFM Course will consist of-

- (a) 250-300 Course modules (each of 1 hours duration) on topics related to General Practice/Family Medicine.
- (b) Clinical sessions of 2 hours each in each of the following disciplines:

General Medicine	(8)	General Surgery	(4)
Paediatrics	(8)		(8)
Clinical Pathology	(4)	Radiology	(4)
ENT	(4)	Ophthalmology	(4)
Dermatology	(8)	Orthopaedics	(2)
Accident Surgery	(4)	Emergency Medicine	(4)
Psychiatry	(4)	Community Medicine	(4)

and

(c) 30 clinical sessions in General Practice/Family Practice.

The Course teaching/learning activities would take the form of group discussions. Icctures, seminars and clinical demonstrations. These would be conducted on 3 days of the week as follows:

Fridays	2.00 p.m. — 5.15 p.m.
Saturdays	2.00 p.m 5.15 p.m.
Sundays	8.30 a.m. — 11.45 a.m.

The modules will be repeated annually. They could be completed by the candidate in a minimum period of one year or a maximum period of 3 years.

The clinical sessions will be held under the supervision of qualified consultants in approved hospitals in Sri Lanka. The candidate is required to provide evidence of attendance.

The General Practice clinical sessions will be held under the supervision of senior general practitioners in at least three different approved practices in Sri Lanka. The candidate has to provide evidence of attendance.

### DFM EXAMINATION

### Eligibility

- (i) Completion of the DFM Course as stipulated above viz., proof of attendance at 80% of the course modules conducted annually, 70 clinical sessions in the specialities and 30 clinical sessions in General Practice.
- (ii) Those with a medical degree registrable with the Sri Lanka Medical Council who have completed 5 years in General Practice after full registration will be allowed to sit the DFM Examination without the above requirements subject to approval of the Board of Study

The DFM Examination will consist of three parts viz, written examination, clinical examination and practical examination.

The written examination will consist of:-

- (i) The Multiple Choice Question Paper -
  - 600 items True/false type of MCQ will be given.

Duration - 2 hours

(ii) The Modified Essay Question Paper ---

Three problem-solving exercises, where the history is interspersed with questions, will be given.

Duration - 3 hours

The Clinical examination will consist of two parts:

- (i) One 'long' full case for which 15 minutes are allowed for consultation and 10 minutes for discussion with a pair of examiners who have already observed the consultation.
- (ii) Four short cases for each of which 5 minutes are allowed for examination of an anatomical area or system pointed to by the examiners and 5 minutes for discussion.

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(i) Questions on twenty or more exhibits -

These will include items such as clinical photographs, slides, instuments, X rays, ECG tracings, laboratory reports and pathological specimens.

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Duration - 60 minutes

(ii) Viva voce on the Log Diary submitted by the candidate-

The Log Diary provided by the PGIM should be maintained by the candidate on 50 case studies from the candidate's own clinical practice or during clinical attachment in an approved General Practice. The Log Diary should be submitted to the PGIM two weeks before the examination. Two examiners will question the candidate on entries made in the Log Diary and also their involvement in community based activities

Duration - 15 minutes

### MD IN FAMILY MEDICINE

1. Eligibility for registration

- (a) Should have the DFM (candidates who have a Diploma/Degree equivalent to the DFM could apply to the Board of Study for exemption from the DFM to register for the MD in Family Medicine) and
- (b) A minimum of five years' experience in General Practice/Family Practice for equivalent in Primary Health Care) after registration as a medical practitioner under section 29 of the Medical Ordinance of Sri Lanka
- An eligible candidate should register to undertake a supervised research project
  while working in a Family Practice or equivalent in Primary Health Care in Sri
  Lanka. The candidate should submit a protocol for a research project of
  relevance to General/Family Practice.
- 3. The protocol should include the following items:
  - i. Title
  - ii. Introduction
  - iii. Hypotheses (wherever relevant)
  - iv. Objectives of the study
  - v. Review of relevant literature
  - vi. Methods including proposed data analysis
  - vii. Budget
- After approval of the protocol, the Board of Study will nominate a supervisor to guide the candidate in the research project. The candidate may suggest a supervisor for approval by the Board.

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- Before commencing the research project the candidate should be registered for the MD in Family Medicine at the PGIM.
- 6. The supervisor shall be consulted and guidance obtained during the research project and in the preparation of the thesis. The final draft of the thesis shall be read by the supervisor before submission.
- The candidate should submit quarterly reports as stipulated by the Board of Study through the supervisor to the Director, PGIM on the progress of the research project.
- At the end of a minimum period of two years and a maximum of five years after approval of the protocol, the candidate shall submit a thesis on the results of the research to the Director, PGIM.
- It is recommended that the thesis should contain 15,000 to 20,000 words. The format of the thesis should be according to the General Guidelines laid down by the PGIM.
- 10. Three copies of the thesis should be submitted unbound (i.e. in loose-leaf form) for the examination. This will facilitate corrections which may be recommended by the examiners to be incorporated into the final form of the thesis to be submitted to the PGIM after the examination.

All relevant data collection forms, questionnaires, analysis forms and annexes should be submitted with the three unbound copies of the thesis before the examination.

- 11. If the thesis is accepted by the Board of Examiners nominated by the Board of Study in Family Medicine and appointed by the PGIM, the candidate shall defend the thesis at a viva voce examination before the examiners. The candidate's supervisor should be invited to be present as an observer at this examination.
- 12. Before the conferment of the MD in Family Medicine, the candidate shall submit to the Director of the PGIM one copy of the final form of the thesis bound in hard black cover. The front cover should carry the title on top, the author's name in the centre and the year at the bottom. The author's name, degree and year should be on the spine (top to bottom).

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#### PROSPECTUS IN FORENSIC MEDICINE

### MD (FORENSIC MEDICINE)

#### I. INTRODUCTION

The method of selection of trainees and the programme of training leading to the degree M.D. (Forensic Medicine) and consequently, Consultant (Specialist) status in Forensic Medicine are outlined below.

#### II. ELIGIBILITY

- (i) Diploma in Legal Medicine
- (ii) A medical postgraduate degree and training in Forensic Medicine acceptable to the Board of Study and approved by the Board of Management.

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#### III. TRAINING

- (1) The trainee shall be attached for a period of one year to a Department of Forensic Medicine of a University and one year to an office of a Judicial Medical Officer, both approved by the Board of Study. The head of the unit will be responsible for such training. The trainee would be required to take part in the routine work and other activities of the institution and follow the instructions of the head.
- (2) Continuous assessment of attainment and performance of the trainee shall be made during the period of training.
- (3) The trainee shall attend an intensive course of fifty lectures given during the period of two years, and certain other instruction classes and seminars to be arranged from time to time. The course of instruction would include Forensic Medicine, Toxicology, Law and Legal Procedures and Criminal Investigation. A minimum attendance of 80% is necessary. However, supported by a medical certificate 60% may be accepted with approval of the Board of Study and Board of Management.
- (4) During the period of training there would be attachment in the following fields:
  - a. Pathology 6 months
  - Accident service, neuro surgery, thoracic surgery and dentistry
     31 months
  - c. Psychiatry, radiology, obstetrics & gynaecology and venereal
  - diseases 1½ months
    d. Government Analyst's Department 2 weeks
  - e. Police and Attorney General's Department 2 weeks

- (5) The trainee will be required to submit a case book of 20 cases, comprising a minimum of 7 cases in Clinical Forensic Medicine. The case book must be submitted by the prospective candidate in duplicate, 3 months before the examination. The cases should be those with which the candidate has been associated and must be supported by a certificate to such effect by the relevant authority. The acceptance of the case book by the Board of Study is a pre-requisite to sit the examination.
- (6) During the training period the trainee will be under the direct supervision of the head of the unit to which he is attached. The latter is entitled to take appropriate corrective action and where necessary to initiate disciplinary procedures by bringing it to the notice of the Director, PGIM who shall, in collaboration with the Board of Study, have the power to terminate such training with approval of the Board of Management.

#### IV. MD (FORENSIC MEDICINE) EXAMINATION

At the end of the training programme, a comprehensive examination will be held leading to the degree of MD (Forensic Medicine).

The examination will consist of written, clinical, practical and viva components as follows:

#### (a) Written

Shall consist of two papers, each of 3 hours duration, one paper consisting of 10 questions and the other 4 essay type questions.

#### (b) Clinical and Practical

- i. a postmortem examination followed by documentation and an oral examination thereon—duration 3 hours
- ii. an examination, report and discussion on productions—duration 1 hour.
- an examination, report and discussion on histopathological slides duration 1 hour.
- an examination, report and discussion on two or more clinical cases duration 1 hour.

### (c) Viva-voce

duration a minimum of 20 minutes

### V. TRAINING ABROAD

After successful completion of the degree of MD (Forensic Medicine) the trainee will be required to undergo a further period of 1 year's training at a centre abroad, recognised by the Board of Study, for the purpose of Board Certification as a specialist/consultant in Forensic Medicine.

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### VI. EXEMPTIONS

Exemptions from the training programme and case book may be considered by the Board of Study, depending on the applicant's experience and post graduate qualifications in Forensic Medicine.

### DIPLOMA IN LEGAL MEDICINE

### (I) INTRODUCTION

The Board of Study in Forensic Medicine will conduct an examination annually, leading to the award of a Diploma in Legal Medicine. The Diploma will enable the holder to be promoted to Grade I in the Department of Health Services, but shall not entitle the successful candidate to specialist status. The Diploma is also a pre-requisite to join the training course for the MD in Forensic Medicine.

## (II) ELIGIBILITY TO SIT THE EXAMINATION

The prospective candidate should

- (a) be a medical practitioner with a degree from a University, which is registrable by the Sri Lanka Medical Council.
- (b) (i) have completed one year of practice after full registration and completed 12 months of in-service training in a recognised medico-legal unit
  - (ii) have completed a minimum of three years after internship.
- (c) submit a case book acceptable to the examiners on a date stipulated by the Board of Study.

#### (III) TRAINING

- (a) Subject to provisions (II) (a) and (b) (i) any prospective candidate may apply to the Director, PGIM to be entrolled as a trainee.
- (b) The Director PGIM in consultation with the Board of Study will allocate to the trainee a suitable place of training.
- (c) The period of training commences on the date the application is tabled and accepted by the Board of Study, provided the trainee is already attached to a place acceptable to the Board or on the date the trainee reports to the place allocated by the Board.
- (d) The trainee will spend 12 months in a recognized medico-legal unit for inservice training, where the trainee will be expected to gain adequate experience.

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During the period of such training, the trainee will be on secondment to the PGIM and the supervisor will be the head of such unit. The latter may whenever necessary initiate disciplinary procedures by bringing this to the notice of the Director, PGIM.

- (e) During the period of training, the head of such unit will make arrangements for the trainee to gain adequate experience in medico-legal aspects of related specialities. The trainee will be advised to attend lectures, tutorials, workshops etc. designed for postgraduate training in Forensic Medicine.
- (f) A series of 50 hours of lectures, tutorials etc. will be held during the training period. These lectures, tutorials etc., are open to candidates sitting the examination under provisions (II) (b) (ii).

### (IV) CASE BOOK

A case book of 10 cases, four in clinical Forensic Medicine and six in Forensic Pathology, will have to be submitted by the prospective candidate at least 3 months before the date of the examination. The cases should be those with which the candidate has been associated and must be supported with a certificate to such effect by the relevant authority.

### (V) EXAMINATION

The examination will be held once a year.

An eligible candidate should apply for the examination in the prescribed form available with the Director, PGIM after the announcement of the date of such examination.

#### MASTER OF SCIENCE (HEALTH EDUCATION)

#### 1. INTRODUCTION

The Postgraduate Institute of Medicine offers a programme of study and training leading to the degree of MSc in Health Education. The Board of Study in Community Medicine bears overall responsibility for the training programme and evaluation while the immediate responsibility is vested in a group of specialists appointed by the Board of Study in Community Medicine.

The Postgraduate Institute of Medicine will serve as the administrative, coordinating and standard setting body for the programme, and will appoint a full-time member to head the programme. The faculty will be drawn from appropriate university staff and from existing resources of the national community in:

- (a) Public Health.
- (b) Behavioural, Social and Educational Sciences.
- (c) Health Education Practice.

#### 2. CATEGORIES OF CANDIDATES

There shall be two categories of candidates - A and B

#### 2.1 Category A

#### 2.1.1 ELIGIBILITY

A person with a Bachelor's degree of a recognised university in any of the following disciplines: medicine, education, social sciences, humanities, science and any field that may be determined by the Board of Study in Community Medicine from time to time.

### 2.1.2 QUALIFYING EXAMINATION

Candidates should pass a qualifying examination to enable them to follow the training programme; a written examination will be held every year for this purpose.

### 2.1.3 DURATION

The academic programme covers four academic terms with a twelve week field internship between the third and fourth terms.

### 2.1.4 THE SYLLABUS

Section A - Public Health

- (i) Basic statistics and Epidemiology
- (ii) An introduction to Health Systems
- (iii) Introduction to Administration
- (iv) Family Health and Nutrition
- (v) School Health
- (vi) Environmental and Occupational Health
- (vii) Communicable and Non-Communicable diseases.

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Section B - Behavioural Science Foundations-Public Health

- (i) Behavioural Science concepts and application
- (ii) Relating theory to practice

Section C - Educational change processes

- (i) Learning & change process, theory & practice
- (ii) Communication, theory & practice
- (iii) Group and Community Development

Section D - Health Education Management

- (i) Planning & Evaluation
- (ii) Training & Staff development
- (iii) Communication and group process
- (iv) Media, production & utilisation
- i(v) Consultation/Supervision



### 2.1.5 COURSE EVALUATION

Concurrent evaluation will be based on student seminars, a take-home written assignment (term paper) and a term-end examination consisting of a theory paper and an oral examination.

The final assessment will be based on the report of a field project untertaken by the students and a comprehensive final examination consisting of two theory papers and an oral examination.

#### 2.1.6 AWARD OF THE DEGREE

On successful completion of the examination requirements and the twelve weeks field internship as stipulated in the programme the candidate will be awarded the degree of MSc. in Health Education.

#### 2.2 Category B

These candidates will submit a dissertation on an approved research study undertaken by them.

#### 2.2.1 ELIGIBILITY

Candidates should

- (i) hold a postgraduate diploma or a higher degree in Health Education from a recognised University.
- (ii) have experience in the field of Health Education work for more than 3 years, after obtaining postgraduate qualification at (i) above.

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### 2.2.2 PROCEDURE OF ADMISSION

The candidate should apply to the Director, Postgraduate Institute of Medicine with his curriculum vitae seeking approval to undertake a research study.

The candidate's application will be submitted to the Board of Study in Community Medicine for consideraution and the candidate will be informed of the decision of the Board.

### 2.2.3 SELECTION OF TOPIC FOR RESEARCH

The topic of research should preferably be of the applied type related to the Health Education discipline and be of such a nature and size that the student could conduct the research with minimum research assistance. The title of the research project along with a statement of objectives and its usefulness and relevance should be submitted to the Board of Study for approval. If, acceptable, the Board will appoint one or more Supervisors. The candidate may submit names of suitable Supervisors for Board approval.

## 2.2.4 PREPARATION OF RESEARCH PROTOCOL

The candidate with the help of the Supervisors should draw up a detailed protocol for submission to the Board for approval. Written approval of the protocol by the Supervisor should accompany it.

#### It should contain

- (1) Objectives or purposes of the study
- (2) Review of relevant literature
- (3) Hypotheses (wherever necessary)
- (4) Methods
- (5) Limitations of the study
- (6) Plan of implementation
- (7) Budget
- (8) Source of funds
- (9) Proposed date of commencement and completion of the study.

#### 2.2.5 METHODOLOGY

The Supervisor should be consulted and guidance obtained on such matters as research design, methods of study, size and method of sampling, construction and testing of questionnaires, instruments and measures, and training of research assistants.

#### 2.2.6 PREPARATION OF DISSERTATION

A dissertation which includes results of the research and which indicates ability of the student to conduct a scientific investigation with some supervision should be prepared for submission.

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indicates ability ome supervision The supervisors should be consulted before and during preparation of the dissertation; draft/s should be read and approved by the Supervisor before the final dissertation is submitted. The length of the dissertation would vary depending on the topic, nature of study, tables and charts. The length of the dissertation should not be less than 5000 words. Guidelines for the preparation of the dissertation could be obtained from the PGIM.

### 2.2.7 SUBMISSION

The study should be completed and the dissertation submitted to the Director PGIM within three years from the date of approval of the research study.

Three copies of the dissertation should be bound in hard cover with the author's name, degree and year printed in gold on the spine (bottom upwards). The cover should be in black. The front cover will carry the title on top, the author's name in the centre and year at the bottom (also printed in gold). All three copies should be submitted to the Director, Postgraduate Institute of Medicine. Two copies shall become the property of the PGIM while the third copy will be returned to the candidate.

### 2.2.8 EXAMINATION

The candidate is expected to defend his/her dissertation at an oral examination. A panel of three examiners one of whom will be from the discipline of health education will be appointed on the recommendation of the Board of Study in Community Medicine. The Supervisor would also participate at the examination as an observer.

### 2.2.9 AWARD OF DEGREE

On successful completion of the examination the candidate will be awarded the degree of MSc in Health Education.

#### PROSPECTUS IN MEDICINE

#### MD (MEDICINE)

#### INTRODUCTION

The following is an outline of the programme of training and examinations leading to the degree of MD (Medicine) and Board certification as a specialist in Medicine.

The programme shall consist of 5 stages with 2 examinations, MD Part I and Part II and a supervised period of training in approved centres in Sri Lanka and abroad.

There is no published syllabus. The Institute recommends that candidates prepare for the examinations by gaining clinical experience in hospital posts, attending and participating in postgraduate courses and programmes approved by the Board, studying upto date text books, and by reading current medical journals.

### MD (MEDICINE) PART I EXAMINATION

#### Stage I

- A. Stage I will consist of the MD (Medicine) Part I examination.
- B. The eligibility requirements for entry to the Part I examination will be
   (i) The possession of a medical degree registrable with the Sri Lanka Medical Council.

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(ii) The completion of one year of service experience after successful completion of the internship. This internship should be after having obtained the registrable degree.

#### Stage II

- A. (i) Eligibility for entry to Stage II will be the successful completion of the MD Part I Examination.
  - (ii) All candidates should register with the PGIM before entry to Stage II.
- B. This will consist of an in-service training period of 30 months. It will comprise
  - (i) 18 months training as a Registrar in a general medical unit in the teaching hospitals of Colombo, Colombo North, Galle, Jaffna, Kandy, Peradeniya or Sri Jayewardenepura Hospital, Kotte.

This period of training should be continuous.

 (ii) 12 months rotational training in the following medical specialities in specialised units recognised by the PGIM, in the above hospitals.

(a) Cardiology 3 months
(b) Neurology 3 months
(c) Dermatology  $1\frac{1}{2}$  months
(d) Psychiatry  $1\frac{1}{2}$  months
(e) Chest Medicine  $1\frac{1}{2}$  months

(f) Rheumatology

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Each candidate will be expected to complete a case book consisting of 10 'cases'. This should include at least 4 cases from the specialities.

The case reports will be entered by the candidates and signed up by the consultants during their clinical appointments, around the time such patients were in the ward or clinic.

4 case reports should be ready at the time of the mid term assessment.

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The case book should be ready, duly completed and signed by the supervisors at the time the candidate submits the application for the Part II examination.

#### Stage III

Stage III will be the MD Part II examination.

The eligibility for entry to this examination will be

- (i) the successful completion of the MD Part I examination.
- (ii) the successful completion of the training period of 30 months. During this period the consultant under whom the candidate is training will have to complete special forms confirming the adequacy of the training every 6 months, in General Medicine, and at the end of each required period in the specialities.

On successful completion of MD Part II examination the candidate will receive the degree of MD.

#### Stage IV

Stage IV will consist of a 12 month period as a Senior Registrar in a teaching hospital. This could be before or after the period of training abroad (Stage V).

### Stage V

This will consist of a one year period of supervised training in a centre abroad approved by the Board of Study in Medicine. The candidate completing Stage V will have to present a certificate from his supervising officer to testify to the satisfactory performance of the candidate during this period.

On successful completion of all five stages the candidate will be Board certified as a consultant.

#### EXEMPTIONS

The following exemptions will apply to those candidates who have successfully completed the MRCP (UK) examinations

Candidates who have successfully completed the MRCP (UK) will be exempted from MD Part I examination. They should be registered with the PGIM.

#### Stage II

Candidates will have to complete the equivalent of the same 30 months of training, as for Part II MD, after successful completion of the MRCP (UK) examination.

A candidate may claim exemption for a maximum of 12 months of training done abroad, 6 months in General Medicine and 6 months in the specialities with a maximum of 3 months in each recognised speciality. These exemptions will be for training done abroad after the MRCP (UK) and will have to be deemed satisfactory by the Board of Study in Medicine.

The balance of the training must be done in Sri Lanka, under the scheme of training of the PGIM, 12 months of this training will be in General Medicine and 6 months in the specialities which have not been done overseas, with a maximum of 3 months in each speciality.

#### Stage III

On meeting these requirements the candidate may sit MD Part II and if successful will be awarded the degree of MD.

#### Stages IV & V

For Board Certification as a consultant the candidate with the MRCP will have to:-

- (i) be successful in the MD Part II examination and
- (ii) complete a 12 month period of training as a Senior Registrar in a teaching hospital in Sri Lanka.
- (iii) provide evidence that the candidate has satisfactorily completed 12 months training after successful completion of MRCP UK Part II, in a post recognised by the Board of Study in Medicine. In the absence of such evidence the candidate will be required to complete a further 12 months as a Senior Registrar in a teaching hospital in Sri Lanka.

On any other matter regarding this programme or on a matter of interpretation of these regulations the decision of the Board of Study duly approved by the Board of Management of the Postgraduate Institute of Medicine shall be final.

MD (MEDICINE) PART I EXAMINATION

(I) This examination consists of two multiple choice papers, Paper A and B

(2) Paper A

- (a) (time allowed 2 hours) Contains sixty multiple choice questions. The questions are designed to test knowledge of the basis of medical practice over a wide area including elementary statistics and the basic sciences.
- (b) Each question consists of a statement followed by five possible completions (or items) identified ABCDE. There is no restriction on the number of true or false items in a question. It is possible for all items in a question to be true or for all to be false.

One mark (+1) will be awarded to each correct answer. One mark will be deducted (-1) for each incorrect answer.

(3) Paper B

(time allowed 45 minutes). Will follow paper A and consist of 15 multiple choice questions mainly of local interest and will be of the same pattern as Paper A.

As from the 1994 examination, paper 'B' will be replaced by an objective structured examination with clinical orientation.

(4) It will be necessary to pass both in Paper A and B at the same sitting to be successful in the Part I examination.

### MD (MEDICINE) PART II EXAMINATION

(1) Scope of the examination

The candidates are expected to have an adequate knowledge of the physiological, biochemical and pathological basis of Medicine. The candidate must be familiar with health problems in this country and the principles in the prevention and control of diseases and the promotion of health.

It is expected that the candidate possess a specialist knowledge of the principles and practice of internal Medicine and therapeutics, which would enable a person to manage a general medical unit. A high degree of competence would be expected in the clinical skills. This would include a knowledge of the indications for and interpretation of all common pathological, radiological and other investigations.

The candidate should be competent to carry out investigative procedures such as needle biopsies and aspirations, and be able to perform simple side-room laboratory tests. He should also be familiar with the practical procedures involved in intensive medical care. A fundamental knowledge of the subspecialities in Medicine such as Dermatology and Psychiatry etc. is also expected.

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interpretation t by the Board ial. The candidate is expected to have read widely in General Medicine, be familiar with current medical literature, and have some knowledge of medical history and ethics.

#### (2) Content - Structure of the MD Part H examination

The examination will consist of 3 parts: The theory papers, clinicals and the viva-voce examination.

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The theory papers will consist of 2 question papers, viz

Paper I (a) 2 questions, eliciting long answers

(b) 4 questions, eliciting short answers Duration of the paper is 2½ hrs.

Paper II - in 3 parts

- (a) 10 slide questions 20 mins.
- (b) 5 data interpretation questions 45 mins.
- (c) 3 case history questions 45 mins.

Clinical - Long case - 45 min for examination and 20 min, for discussion.

Short cases - minimum of 3 cases in 30 min.

Viva Voce - Each candidate will be examined by 2 sets of examiners, each viva lasting 15 min.

The Prospectus is subject to revision from time to time. Adequate notice will be given of such changes.

#### REQUIREMENTS FOR SPECIALISED TRAINING IN SUB-SPECIALITIES

Following successful completion of the MD Part II, those intending to specialise either in Cardiology, Dermatology, Neurology, Respiratory Medicine or Rheumatology and Rehabilitation will be required to spend a period of two to four years of satisfactory training as follows:

#### Cardiology

A minimum period of 4 years post MD training in Cardiology. Three of these 4 years training will be in a Cardiology Unit in Sri Lanka and fourth year should be in an approved institution abroad.

#### Dermatology

A minimum period of 2 years post MD training in Dermatology. This will include one year satisfactory training in a Dermatology Unit of a teaching hospital in Sri Lanka and one year in an approved institution abroad.

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## ECIALITIES

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#### Neurology

A minimum period of 3 years post MD training in Neurology. Two of the three years will be in a Neurology Unit of a teaching hospital in Sri Lanka and one year in an approved institution abroad,

## Respiratory Medicine

A minimum period of 2 years post MD training in Respiratory Medicine. This will include one year training in a recognised Respiratory Medicine Department in Sri Lanka and one year in an approved institution abroad,

## Rheumatology and Rehabilitation

A minimum period of 2 years post MD training in Rheumatology and Rehabilitation. This will include one year training in a Rheumatology Unit in Sri Lanka with in-patient facilities and one year in an approved institution abroad.

## BOARD CERTIFICATION AS A CONSULTANT

A traince will be certified as a consultant following the completion of a period of 2 to 4 years after the MD Part II examination, depending upon whether the trainee intends to be general Physician or specialised in one of the branches of Medicine as has been indicated above.

## DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES

#### INTRODUCTION

The Board of Study in Medicine will conduct a training programme, duration one year, leading to the Diploma in Tuberculosis and Chest Diseases (DTCD). The diploma will enable the holder to be promoted to Grade I in the Ministry of Health Services but shall not entitle him to Consultant status.

#### ELIGIBILITY

The prospective candidate should

- (a) possess a medical degree registrable with the Sri Lanka Medical Council;
- (b) have had one year's experience in chest diseases after completing internship.

#### III COURSE

The selected candidate will be attached to the Chest Hospital, Welisara, and/or Central Chest Clinic, Colombo.

During this period, the candidate will be given the opportunity to obtain the necessary training in pathology, epidemiology, bacteriology, surgery of tuberculosis, pulmonary and non-pulmonary tuberculosis and non tuberculous chest diseases.

Detailed practical training will be given in

- (1) Interpretation of 70 mm. chest radiographs
- (2) Technique of tuberculin testing and B.C.G. vaccination.
- (3) Technique of doing simple pulmonary function tests
- (4) Use of simple statistical techniques in planning surveys and evaluating their results.

A course of lectures and demonstrations on the diagnosis and treatment of all chest diseases with particular reference to tuberculosis will be given. The Board will also permit a candidate who has had 5 years experience in a chest clinic or chest hospital to sit the examination without undergoing the prescribed course.

A course of lectures and demonstrations on non-respiratory tuberculous diseases will also be given.

#### IV. EXAMINATION

The examination shall consist of 3 components i.e. theory, a clinical and a viva-voce examination.

(a) Theory Papers

This component will consist of two 3 hour papers. The questions will cover all aspects of pulmonary diseases with special reference to TB.

- (b) Clinicals
- (c) Viva Voce

On successful completion of the examination, the candidate will be awarded the Diploma of Tuberculosis and Chest Diseases.

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## DIPLOMA IN MEDICAL MICROBIOLOGY

This is a training programme extending over a period of 15 months at the end of which the examination for the Diploma in Medical Microbiology will be conducted. The first 3 months will be an orientation course.

## ELIGIBILITY

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nce to TB.

- (i) Medical graduates registrable with the Sri Lanka Medical Council with a minimum of one year's service after completion of internship.
- (ii) Graduates in Dental Sciences and Veterinary Sciences with two years post qualification experience will also be considered, if there are vacancies and depending on service needs. In the case of this category of candidates the Head of their Institution should make the request. It should be noted that this category of candidates will not be eligible to proceed to the MD Microbiology programme.

#### TRAINING

Each student will be assigned to a consultant by the Board of Study who will release him/her for additional sessions (lectures & practicals) as prescribed in the course

The candidates will be attached to one of the following centres for training but will be required to follow prescribed training programmes at other centres.

- (i) Medical Research Institute, Colombo
- (ii) Department of Microbiology of the
  - (a) Faculty of Medicine, University of Colombo
  - (b) Faculty of Medicine, University of Peradeniya
  - (c) Faculty of Medicine, University of Ruhuna
- (iii) Department of Microbiology of the
  - (a) General Hospital (Teaching) Colombo
  - (b) General Hospital (Teaching) Peradeniya

Other Institutions for training attachments will be included from time to time as and when such institutions are recognised as approved centres.

The training will cover medical microbiology, bacteriology, virology, mycology, parasitology and immunology under approved supervision. Consultants in charge of training will be required to send periodical progress reports on the trainees. Unsatisfactory reports will result in withdrawal of candidates from the training programme. Assignments will be recorded in an appointment book which will include satisfactory attendance and work.

#### COURSE CONTENT

The course will consist of laboratory and practical work lectures, seminars, tutorials and demonstrations as applied to clinical, preventive and community medicine. These will be held at the approved centres.

The content of the course will include the identification of human pathogenic microorganisms, diagnosis, pathogenesis, prevention, control and principles of treatment of diseases caused by them.

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Special emphasis will be placed on diseases prevalent in Sri Lanka. Topics covered will include general bacteriology, systematic bacteriology, immunology, virology, mycology and parasitology.

The detailed curriculum and its objectives and the format of case books will be provided during the course.

#### CASE BOOKS

Each student is required to prepare a case book of 3 cases during the period of training. Case books should be submitted to the Director, PGIM one month before the date of examination.

#### EXAMINATION

The Diploma in Medical Microbiology examination will consist of:

- (i) A written examination
- (ii) A practical examination
- (iii) An oral examination
- (iv) The presentation of a case book

A minimum mark of 50% in each of the above components and 60% overall will be required for a pass.

The candidates who reach the standard required will be awarded the Diploma in Medical Microbiology (Dip. Med. Microbiol.) of the University of Colombo.

The Diploma would permit the candidate to practise in the field of Medical Microbiology but would not confer consultant status. The successful completion of the examination would enable the candidate to proceed to MD in Medical Microbiology. (see eligibility clause)

#### Award of the Tissa Vitarana Gold Medal

A candidate will be eligible for the Gold Medal if she/he satisfies the following criteria:

- 1. It should be the candidate's first attempt
- An average minimum mark of 75% of the total aggregate must be obtained and the award will be given to the candidate obtaining the highest marks.
- 3. The decision of the Board of Examiners will be final.

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#### MD MEDICAL MICROBIOLOGY

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### ELIGIBILITY

This programme leading to MD Medical Microbiology is open only to medical graduates registrable with the Sri Lanka Medical Council and who have passed the Diploma in Medical Microbiology examination conducted by the Postgraduate Institute of Medicine or have been granted exemption from the PGIM Diploma in Medical Microbiology.

### PROGRAMME OF STUDY

The course has been designed

- (a) Bearing in mind that every student would have a broad based knowledge of the subspecialities of microbiology and immunology
- (b) Towards specialisation
- (c) To permit as much flexibility as possible in the areas of specialisation and service needs.

The following is an outline of training and examination leading to consultant status in Microbiology with the award of the MD (Medical Microbiology)

The programme shall consist of 3 stages.

## % overall Stage I

The allocated period of training is 2 years i.e. 104 weeks divided into about 84 weeks of work and 20 weeks of vacation.

#### COURSE UNITS

Bacteriology, Virology and Parasitology classes of course units have been planned

- 1. 20 credit units each of 28 weeks duration
- 2. 10 credit units each of 12 weeks duration
- 3. 5 credit units each of 6 weeks duration
- 4. 2.5 credit units each of 3 weeks duration
- 5. 20 credit units for project and dissertation

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be obtained narks. The course units have been arranged as shown below:

No. of Units	Bacteriology	Virology	Parasitology I	Period
20		Systemic Virology	Parasitology Medical Entomology	28 weeks
10	Immunology	Immunology	Immunology	l week
05	General Bacteriology	General Virology	General Parasitology	6 weeks
2.5 each subject	Antibacterial therapeutic agents	Antiviral therapeutic agents viral vaccines	Preventive & parasitic therapeutic agents	3 weeks
Trainces have to offer 2 of options giving a	Laboratory Management	Laboratory Management	Laboratory Management	
total of 5 unit	Nosocomial infections	Epidemiology and medical statistics	Epidemiology and medical statistics	
	Food Microbiolog Molecular biology	Molecular biolog	y Molecular biolog	у
20	Project & Dissertation	Project & Dissertation	Project & Dissertation	approx 30 weel

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A candidate will have to obtain at least 50 credit course units to sit the MD (Microbiology) examination.

## EXPLANATORY NOTE

e.g. A person who wishes to specialise in bacteriology will have to offer systematic bacteriology (20 units) immunology (10 units) general bacteriology (5 units) project and dissertation (20 units) and two courses of 2.5 units to make up the 60 credit course units to sit the MD examination.

#### TRAINING

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Each student will be assigned by the Board of Study to a consultant who will release him/her for additional sessions (lectures & practicals) as prescribed in the course.

The candidates will be attached to one of the following centres for training but may be required to follow prescribed training programmes at other centres.

- (i) Medical Research Institute, Colombo
- (ii) Departments of Microbiology of the
  - (a) Faculty of Medicine, University of Colombo
  - (b) Faculty of Medicine, University of Peradeniya
  - (c) Faculty of Medicine, University of Ruhuna
- (iii) Department of Microbiology of the
  - (a) General Hospital (Teaching) Colombo
  - (b) General Hospital (Teaching) Peradeniya

Other Institutions for training attachments will be included from time to time as and when such institutions are recognised as approved centres.

During this period of their training candidates will follow lectures, practicals, demonstrations and seminars in the fields given above. The candidates will have to work on a project of relevance to a health problem in Sri Lanka in the speciality of their choice and prepare a dissertation on the results. On the satisfactory completion of this stage of the programme, they will be eligible to sit the MD (Medical Microbiology) examination.

### Stage II

The MD (Medical Microbiology) examination will consist of theory papers, practical examination and viva voce to test the knowledge, skills and aptitudes of the candidate in Microbiology in the chosen field of specialisation. The candidate will also be examined on the dissertation. After passing the MD (Medical Microbiology) examination the candidates will pass on to Stage III

#### Stage III

This will consist of a period of training (minimum 1 year) in the chosen speciality at a centre overseas approved by the Board of Study in Microbiology. The candidate will have to submit a certificate from the supervisor on satisactory completion of this training.

### Certification

On successful completion of stage II of this programme, the candidate will be awarded the degree of MD (Medical Microbiology).

On completion of Stage III the candidate will be Board certified as a consultant in Medical Microbiology.

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## PROSPECTUS IN OBSTETRICS AND GYNAECOLOGY

The in-service training programme in Obstetrics and Gynaecology will lead to the degree of MS (Obstetrics & Gynaecology) of the Postgraduate Institute of Medicine of the University of Colombo.

#### 1. ELIGIBILITY

## 1.1. MS (Obstetrics & Gynaecology) Part 1

1.1.1. Candidates who possess a medical degree registrable with the Sri Lanka Medical Council are eligible to sit MS (Obstetrics and Gynaecology) Part 1 Examination.

## 1.2. Training Programme for MS (Obstetrics & Gynaecology)

- 1.2.1. Candidates who have passed the MS (Obstetries & Gynaecology) Part I examination of the Postgraduate Institute of Medicine are eligible to enter the Training Programme.
- 1.2.2. Candidates who have obtained the Diploma of Member of the Royal College of Obstetricians and Gynaecologists of the UK may enter the training programme and may be exempted from Stage I and II of the training programme, but would be required to complete all other stages.
- 1.2.3. Such admissions to the training programme and exemptions will have to be applied for and will require approval of the Board of Study and Board of Management.

# 2. IN-SERVICE TRAINING FOR MS (OBSTETRICS & GYNAECOLOGY)

### 2.1. Stage I

This will consist of a 30 month period of continuous in-service training during which the trainee will hold posts specified by the Board of Study.

- 2.1.1. Registrar (or a comparable post) in a Consultant Obstetric & Gynaccology unit at a teaching hospital for a period of 24 months.
- 2.1.2. An elective appointment for a period of 6 months in an associated field approved by the Board of Study. If it is a continuation of an Obstetries & Gynaccological appointment it should be utilised to receive training in a specialised area which would be of value for the practice of Obstetries and Gynaccology in the future. The programme for the elective period should be planted before its commencement.

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## 2.2. Stage II

Preparation and presentation of a book containing case records and commentaries as specified in the guidelines for training in Obstetries & Gynaecology. The book should be submitted to the PGIM for assessment at the end of the 24 months training in Obstetrics & Gynaecology.

## 2.3. Stage III

Completion of a comprehensive examination in Obstetrics & Gynaecology to be held at the end of the satisfactory completion of Stages I & II of the training period. The degree of MS (Obstetrics & Gynaecology) will be awarded after successful completion of Stage III.

### 2.4. Stage IV

A 12 months period of supervised training to be spent at a centre abroad which has been approved by the Board of Study, after the satisfactory completion of stage III

#### 2.5 Stage V

Completion of a 12 month period of supervised training as a Senior Registrar in a teaching hospital in Sri Lanka after satisfactory completion of Stage III.

Stage IV and V may be interchanged.

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#### PROSPECTUS IN OPHTHALMOLOGY

#### INTRODUCTON

The following is an outline of the programme of training, studies and examination for prospective candidates desiring to sit the Diploma in Ophthalmology (DO) and/or the Master of Surgery in Ophthalmology (MS)

### GENERAL INFORMATION

#### DIPLOMA IN OPHTHALMOLOGY

This examination will not be held after 1993.

#### ELIGIBILITY

- (1) Possession of a Medical Degree registrable with the Sri Lanka Medical Council.
- (2) Application to join the course will be considered only one year after the candidate has completed his internship.
- (3) One year's work in Ophthalmology in a teaching hospital.
- (4) The examination will consist of theory papers, orals and clinicals. There will also be a refraction module.

The examination will consist of

- (A) Two multiple choice papers each of 60 questions. Duration of each paper 2 hours.
- (B) Clinical examination

Long Case 20 min. for examination and 20 min. for questions.

(10 min. by each examiner)

Short Cases 20 min duration

The candidate must sit the DO examination at the end of two years of joining the programme.

After the successful completion of the DO examination a trainee should work in a teaching hospital for one year.

#### GUIDELINES FOR STUDY

There is no prescribed syllabus of study. The following are meant to guide the student in his preparation for the examination. Wide reading and participation in the clinical and surgical aspects of the speciality in the clinics and the operating theatres are highly recommended by the PGIM. In addition participation in or attending clinical meetings, seminars, journal clubs of the various medical associations in Sri Lanka provide a fund of knowledge, hard to come by in routine clinical practice.

#### 1. Anatomy

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Sound knowledge of the anatomy of the eye, its adnexae, visual pathways, cranial nerves 3, 4, 5, 6 and 7 orbital and paranasal sinuses; basic knowledge of the neuro-anatomy of the brain with emphasis on those aspects related to ophthalmology. Embryology of the eye and the adnexae. Autonomic nervous system in relevance to the eye and its adnexae. The anatomy of the head and neck.

#### 2. Physiology including Pharmacology

A sound knowledge of all aspects of physiology of the eye and ot vision with special emphasis on the formation, circulation and elimination of aqueous humour intra-ocular pressure, cornea, lens, vitreous and retina. The biochemistry of the eye.

The defence mechanisms of the eye.

Ocular mobility. Pupil, higher visual function and colour vision.

Candidates should have a thorough knowledge of the pharmacological actions of drugs used in ophthalmic practice and the ocular side effects of drugs used in general medical practice.

#### 3. Ophthalmic Medicine, and Surgery

A comprehensive knowledge of the above is required.

#### 4. Ophthalmic Pathology

Knowledge of Pathology of common ocular conditions should be shown.

All candidates must submit a case book comprising 10 medical and 5 surgical cases at least 2 months prior to the examination.

#### OPTICS MODULES

#### Basic and visual ontics

A sound knowledge of all aspects of ophthalmic optics including prisms, contact lenses, extra ocular inplants. The principles of all optical instruments and appliances used in ophthalmic practice. Lasers and fibre optics.

## Theory and practice of refraction

## FORM OF EXAMINATION

- (A) A multiple choice question paper of 60 questions. Duration 2 hours
- (B) Written Paper (essay type) duration 2 hours
- (C) An oral examination duration 20 minutes (10 minutes for each examiner)
- (D) Practical examination in Refraction

Duration 30 minutes. (15 minutes for examining the patient and 15 minutes for questions by the examiner)

#### MS OPHTHALMOLOGY

#### THE PROGRAMME

This comprises a two year in-service training in Ophthalmology leading to the degree of MS (Ophthalmology), Postgraduate Institute of Medicine, University of Colombo, Sri Lanka. Only candidates successfully completing Stages I, II, III and IV will be eligible to receive the degree except as specified in section 2, III.

#### Stage I

A two-year in-service training period holding responsible clinical appointments specified by the Board of Study, Ophthalmology from time to time. The trainee shall prepare a case book comprising a total of fifteen (15) cases ranging from ten (10) cases Ophthalmic Surgery five (5) cases Ophthalmic Medicine to Neuro-Ophthalmology, seeking guidance from his Consultant or the Tutor as to the suitability of the cases chosen for the book. The trainee shall sit the examination only on the completion of the case book and after approval by the PGIM. 80% attendance is mandatory.

All candidates must maintain a log book of operations performed as specified in the annexure. The log book should be signed by the Consultant at the end of each month.

#### Stage II

The successful completion of a comprehensive examination in Ophthalmology.

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The successful candidate(s) shall be awarded the degree of MS Ophthalmology.

#### Stage III

One-year period of supervised training at an approved centre abroad.

#### Stage IV

One year's service as a Senior Registrar at a teaching hospital in Sri Lanka.

Note: Stages III and IV may be interchanged. After the completion of stage IV the trainee will receive Board Certification from the PGIM. This Certification confers Consultant Status on the trainee.

#### ELIGIBILITY

- (i) Every applicant for training shall have a medical degree registrable in Sri Lanka and shall have held house appointments in Surgery and Medicine each of six months' duration.
- (ii) Shall have completed one year's post-internship work in a hospital in Sri Lanka and shall have passed the MS (Ophthalmology) Part I of the Postgraduate Institute of Medicine, University of Colombo and the Refraction Module.

A candidate with foreign qualifications who seeks exemptions of whatever nature should apply to the Board of Study. The Board shall decide each individual case.

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Note: (i) Stage 1 - During the two-year full time in-service training programme in one of the teaching hospitals a continuous assessment of the candidate's performance will be made so as to enable him to proceed with the rest of the programme.

- (ii) During the training period the trainee will be directly under the consultant and the latter is empowered to take disciplinary action against the trainee if the work is unsatisfactory or conduct is wanting by reporting him/her to the Director, PGIM.
- (iii) Certificate of satisfactory conclusion of his/her training is a necessary pre-requisite for sitting Part II of the examination.
- (iv) All candidates will have to submit a log book of surgical operations performed as specified. The work must be signed by the supervising consultant at the end of each month.

All candidates must work in the retinal unit at EHC for a period of 3 months.

The two years training period is considered only after completing the Part I examination.

## Non-conformity, Exemptions and Appeals

This is as for candidates sitting the DO examination.

## PART I MS (OPHTHALMOLOGY) EXAMINATION

### EXAMINATION STRUCTURE

### 1. Eligibility of Candidates

Shall have a medical degree registrable in Sri Lanka and have completed internship and house appointments in Surgery and Medicine each of 6 months duration, and one years service after internship.

#### 2. Examination Content

- A. Anatomy and embryology of the head and neck to include CNS.
- B. Specialised anatomy and embryology of the visual system.
- C. Ocular and visual physiology.
- D. General principles of physiology biochemistry, pharmacology, immunology, microbiology and pathology.

(Please see detailed syllabus)

#### 3. Form of Examination

A. Two multiple choice question papers each of 60 questions. Duration 2 hours each paper.

In Paper 1, approximately two-thirds of the questions will relate to anatomy of the head and neck, CNS and visual systems, including embryology and the remaining one-third will relate to general pathology, microbiology and immunology.

In Paper 2, approximately two-thirds of the questions will relate to ocular and visual physiology and the remaining one-third will relate to general pharmacology, general physiology and biochemistry.

- B. One written paper (either essays or short questions). Duration 3 hours (including problem solving, completion of diagrams, etc.)
- C. There will be an oral examination in
  - (i) Anatomy 15 mins.
  - (ii) Combined Physiology and Pathology 15 mins.

## PART II MS (OPHTHALMOLOGY) EXAMINATION

#### EXAMINATION STRUCTURE

## 1. Eligibility of Candidates

Successful completion of MS Part I examination and completion of the prescribed training programme.

#### 2. Examination Content

(a) Two multiple choice question papers each of 60 questions including all subjects in Ophthalmology. Duration 2 hours each paper

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- (b) One written paper
  Duration 3 hours
  The written paper may include an essay, short questions, or clinical case
  interpretation.
- (c) Two oral examinations
- (i) Pathology to include slides and specimens Duration 20 minutes
- (ii) Medical and surgical ophthalmology including community ophthalmology Duration 30 minutes

Duration 2

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## (d) Two clinical examinations

(1) Surgical Ophthalmology 1 Long Case Duration 1/2 hour Discussion - 1/2 hour

Duration 1/2 hour 5 Short Cases,

(2) Medical Ophthalmology

- Duration 20 minutes 1 Long Case Discussion 10 minutes

- Duration 10 minutes 3 Short Cases

# SYLLABUS FOR DIPLOMA IN OPHTHALMOLOGY

## 1. Anatomy

A sound knowledge of the anatomy of the eye and its adnexae, visual pathways, cranial nerves 3, 4, 5, 6, 7, orbital and paranasal sinuses, basic knowledge of the neuro-anatomy of the brain with emphasis on those aspects related to Ophthalmology. Embryology of the eye and adnexae. Autonomic nervous system in relevance to the eye and its adnexae.

## 2. Physiology including Pharmacology

A sound knowledge of all aspects of physiology, eye and of vision with special emphasis on the formation, circulation and elimination of aqueous humour, intraocular pressure, cornea, lens, vitreous and retina. The biochemistry of the eye.

The defence mechanisms of the eye.

Ocular mobility, pupil, higher visual functions and colour vision. Thorough knowledge of the pharmacological actions of drugs used in ophthalmic practice and the ocular side effects of drugs used in general medical practice.

## 3. Ophthalmic Medicine and Surgery

A comprehensive knowledge of the above is required.

### 4. Ophthalmic Pathology

Inflammation and its sequelae. Intraocular inflammation. Suppurative granulomatous and non granulomatous.

Ocular immunopathology and hypersensitivity Lesions of the eye, lids, conjunctiva and cornea. Injuries to the eye, surgical and traumatic Lens induced reactions Vascular diseases of the eye. Intraocular neoplasms. Lesions of the orbit.

### SYLLABUS FOR OPTICS AND REFRACTION MODULE

- Basic knowledge of the properties of concave and convex mirrors, concave and convex lenses and prisms.
- 2. Laws of reflection and refraction, diffraction and light fluorescence.
- All aspects of ophthalmic optics comprising lenses, prisms contact lenses and intraocular lens implants.
- 4. Principles of all optical appliances used in ophthalmic practice.
- 5. Lasers and fibreoptics.
- 6. Theory and practice of refractions.
- 7. Basic options and visual optics.

## MS (OPHTHALMOLOGY) PART I SYLLABUS

#### Anatomy

#### HEAD AND NECK

An overall acquaintance with the anatomy of the region. Special emphasis on the base of the skull; the three cranial fossae, all the large foramina and fissures. All the cranial blood sinuses and their communications.

The arterial blood supply to the face, head and neck. The carotid system. The arterial circle of Willis. The vertebral and basilar arteries. All facial plexuses of veins.

All cranial nerves.

The nose, pharynx, naso-pharynx and the fossae. All para nasal air sinuses.

All bones of the face, all muscles of the face, the scalp, the deep fascia of the face and its attachments. The cervical vertebrae and parotid gland.

The sympathetic ganglia and the chain in the neck. All sympathetic and parasympathetic ganglia in the head and neck.

The lymphatic drainage of head and neck.

The cervical nerve plexus.

#### THE BRAIN

All of it. Special emphasis on the brain stem and its nuclei; the interconnections between various nuclei. The ascending and descending pathways from and to the spinal cord. The ventricular system; the choroid plexus. CSF drainage pathways. The hypophysis and the pineal. The thyroid and the parathyroid, the thymus, the cervical lymph nodes. The eye orbit and ocular adnexae.

## EMBRYOLOGY

General development, face, branchial arches. Brain. All of the development of the eye, orbit and adnexae.

## General Physiology

#### THE HEART

The heart as a pump, blood flow round the circulation pressure changes in the heart. Venous pressure changes. Work done by the heart. The role of the coronary blood flow and the factors affecting it.

## CIRCULATION

The volume flow. Cardiac output. Arterial blood pressure, peripheral resistance Regulation of the size of the arterioles. Baro receptors-vasomotor centre and factors influencing it eg. CO2 level. Oxygen lack, respiratory centre, sensory nerves, higher centres.

Other factors controlling the size of blood vessels; redistribution of blood; metabolites; reactive hyperaemia; vaso dilatory nerves. Axon relflex and dorsal foots. Triple response. Hypersensitivity and anaphylaxis, auto immunity. Heat/ cold and their effects on blood vessels. Angiotensin. Viscosity of blood. Muscle pump, respiratory pump. Exercise.

Factors influencing cardiac centre, capillary blood pressure, gravity and blood flow, arterial pulses.

Tissue fluids; formation and resorption, oedema, lymphatics and tissue fluid, tissue fluid and restoration of blood volume after haemorrhage.

Pulmonary circulation; resistance of pulmonary blood vessels and their control Bronchial arteries. Pulmonary oedema. Gravity and lung blood flow.

#### RESPIRATION

Respiratory muscles. Pulmonary ventilation at rest and in exercise. Alveolar ventilation. Carriage of gases. Partial pressure. Saturated and non saturated water pressure. Henry's Law of solutions. Alveolar air partial pressure. The role of hacmoglobin in oxygen and carbon dioxide carriage.

Carriage of oxygen and carbon dioxide: A. In solution and in combination with haemoglobin. B. In combination with protein and as 'bicarbonate.

Hydrogen ion concentration. pH natation. Blood pH. Buffer systems. Maintenance of body pH. Proteins as buffers. Haemoglobin as a buffer. Role of respiration in maintaining the pH of blood. Other buffer systems in the blood.

Regulation of re-piration. Chemo receptor activity, Brenthing pure oxygen. Carbon dioxide lack. Voluntary over vontile ion. Asphyxia Hypercapnia. Anexia (hypoxia) and Anoxeemia Acclimatisation. Breathing under water and in space flights. Acid-emia and Alkel-temia.

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#### METABOLISM

Production of heat and energy Hydrolysis and phosphorolysis Conversion of carbohydrate to fat.

Carbohydrate metabolism. Liver glycogen. Muscle glycogen. (Embdenmyerhoff pathway. Aerobic metabolism. Anaerobic metabolism Kreb's cyclic AMP adenyl cyclase. ATP. Glycogenesis (Neoglucogenesis)

Fat metabolism; oxidation of fats. Role of Kreb's cycle. Ketosis. Air hunger.

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Protein metabolism. Amino acids and the amino acid pool Deamination Pathways for exerction of Nitrogen equilibrium balance. Creatinine Purine compounds and nucleic acids. Uric acid. Metabolism of sulphur compounds.

Calories, fuel requirement. Heat and work done. Respiratory quotient BMR normal and in exercise. Calories per day. Calory requirement for growth.

Vitamins

Water and Mineral salts; water, sodium, Phosphorus, Iodine, Iron Zinc,

Fluid compartments; Intra cellular and extra cellular. lonic balance. Molarity Ionic equility. Normal saline Other intra venous fluids Glucose. Hyponatreaemia (Low sodium in plasma). Hypernatraemia (high sodium in plasma) Hyperkalaemia (High plasma potassium)

#### URINE FORMATION AND ITS ELIMINATION

The basic principles illustrating secretion, transport; reabsorption and the glomerular filter. Glomerular filtration. Renal clearance. Resorption Waste products. Secretion by the tubule cells Regulation of pH. Sodium bicarbonate reabsorption. Acidaemia and alkalaemia. Abnormal constituments of urine. Osmotic diuresis. Renal failure. Renal function tests.

#### SKIN AND BODY TEMPERATURE

Temperature regulation. Heat balance; heat gained and heat lost. Evaporation from skin. Core temperature and the temperature in limbs. Heat regulating centre(s). Hot and cold sensation.

#### THE LIVER, SPLEEN AND THYMUS

Liver; Functions. Formation and destruction of blood carrying cells (Erythrocytes Plasma proteins. Blood clotting factors Storing of food. fat. protein and carbohydrates. poisons and detoxication. Liver damage. The transaminases, Liver function tests.

Spleen; Functions. Blood cell formation. Storage of blood. Destruction of blood. A major component of the reticulo endothelial system.

Thymus; Immunological function. Immune systems. T and B lymphocytes.

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Molarity Hyponama) Hypo ium)

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Destruction

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## ENDOCRINE GLANDS

The pituitary, Thyroid, Parathyroids, Adrenals and Glands. Pancreas both endocrine and exocrine. Steroids and their chemical make up. The inter-relationship between the glands. Postaglandins; formation and actions.

## THE MUSCULO NEURAL SYSTEM

Skeletal muscles; structure. Isomeric and isotonic contraction. Latent period. Chemical changes in active muscle. Heat production.

Nerves! Nerve impulses. Membrane potential and action potential Nerve cell potential. Propagation of nerve impulse. Neuro muscular transmission. Agents that block such transmission. Relationship between stimulus applied to a nerve and response in a nerve. Single stimulus. Two successive stimuli and lastly a series of stimuli Axoplasmic transport.

#### NERVOUS SYSTEM

C.N.S. Nerve fibre tracts. Sensory nerves. Skin receptors. Types of receptors. Discrimination. Adaptation. Muscle and joint receptors. Sensory pathways. Cortex and known areas. The EEG. Reticular formation.

Motor nerves. Anterior horn cells and motor neurones. Final common path. Renshaw cells. Reflexes and their general features Extrapyramidal system. The cerebellum. Descending reticular formation. Muscle tone. Decerebrate rigidity. Basal ganglia. Lesions of the nervous system. Mixed nerve section. Degeneration and regeneration of nerves. Transection of spinal cord. Reflex activity following transection. Cerebral blood flow and its regulation.

Autonomic Nervous System: The sympathetic system. Adrenal medulla. Alpha beta receptors and blocking agents. Prostaglandins and noradrenaline release. The parasympathetic ssytem. The cranial outflow. The secral outflow. Visceral afferent fibres and baroreceptors. Higher centre control of A. N. S.

Hypothalamus; Limbic system. Antidiuretic and oxytocic hormone secretion. Control over Anterio Pituitary activity.

(a) TSH-RE (b) LH-RF and (c) HGH-RE. Thirst, Hunger.

Temperature regulation. Vasodilator nerves.

Facilitatory reticular formation.

#### BLOOD

Haematocrit. Blood volume. Erythrocytes. Haemoglobin. Cyanosis. The Red cell Count. The formation and replacement of RBC. Iron and RBC. Vitamin B12. Oxygen lack and RBC formation. Destruction of RBC. Haemolysis of RBC (laking), Effects of freezing on RBC. Blood groups and Rhesus factor. White blood cells (Leucocytes) WBC count. Types cells. Platelets. Clotting of blood. Thrombus formation. Coagulation. Anticoagulants. Bleeding and clotting time.

Plasma; Plasma proteins. Separation of plasma proteins. Formation, Viscosity Erythrocyte sedimentation rate. Functions. Maintenance of osmotic pressure, Transport of substances. Protein reserve. Buffering effects. Antibodies. Blood transfusion. Plasma substitutes.

### CEREBRO SPINAL FLUID

Formation, functions and elimination. Chemistry. Blood CSF and Blood brain barriers.

Penetration of drugs. Increase in CSF pressure. Papillocdema.

#### Biochemistry

Basic knowledge of general biochemistry. All aspects not covered in Physiology and Pathology to be included. Topics closely related to the eye such as pigment metabolism, biochemistry of lens, cornea and retina. The chemical aspects of vision. Biochemical aspects of vision. Biochemical aspects of tissue transplants and rejection.

#### Genetics

General principles of genetics Special emphasis on human genetics. Physico-Chemical nature of genetics. Introduction to genetic engineering and methodology. Eugenics.

#### Pharmacology

Definition of 'Drugs' and 'Pharmacology'. Sources of drugs. Nomenclature.

Absorption. Transport across membranes. Route of administration. Formulation of the preparation. Concentration. Route of administration, systemic, oral, parenteral, enteral, sublingual and rectal Topical; drops, inunctions or intements Also injections; subconjunctional and retroblubar Inotophoresis. Sustained release devices. Formation; isotonicity pH, viscolysing agents. Stability. Chemical deterioration. Distribution; depends on transport across membranes. Type and number of tissue depots, eg. plasma proteins, fats, and intracellular. Mechanisms of drug action; drug receptors, affinity and intrinsic activity. Drug metabolism and excretion. Medifying factors; plasma binding water solubility and active transport.

Drugs used in the eye; Drugs soting upon the autonomic nervous system parasympulatic and sympathetic. Neuro humoral transmission Muscarine and nicotine receptors, Alpha and Beta receptors. Noradrenaline and adrenaline

Parasympathominatic drugs; (antimuscraine drugs—parasympatholytic) and unticholine extende drugs sympathominatic drugs; mimic nor advantine, end sympatholytic (inhibit cetion of sympatholic system). Miotics and mydriatics.

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ous system; scarine and Antibiotics and chemotherapeutic agents; mechanism of action inhibition of protein synthesis and cell wall synthesis. Inhibition of folic acid production. Unwanted side effects.

Antiviral agents. Local anaesthetics. Steroids. Diagnostic agents; stains rose bengal and fluroescein. Antiglaucoma drugs. Enzyme preparations. Artificial tears. Drugs inter actions; CVS, CNS Systemic drugs and ocular side effects.

#### Pathology

Basic principles of disease processes; genetic basis of disease, environmental factors causing disease. Causation character and sequelae of; inflammation, acute vascular and cellular response, chronic phase, Infection-pyogenic infection, wound infection hospital infection. Trauma—general reaction haemorrhage and shock. Wound healing, repair, regeneration, atrophy, hypertrophy and hyperplasia. Oedema and distribution of fluids and electrolyte balance. Thromboembolism, ischaemia and infarction. Neoplasia—incidence, classification, spread, prognosis, screening and mechanism of carcinogenesis Disorders of pigment and disorders of calcium metabolism.

The immune response and principles of immunopathology, hypersensitivity. Principles underlying blood transfusion and haemostasis, Blood disorders. General characteristics of bacteria. Virus, fungi, chlamydia and their reactions. Understanding of toxins and action of antibiotics.

Pathological reactions of neurones and neuroglia.

Organ failure—its associated chemical pathology—data interpretation. Introductory ophthalmic pathology.

#### MS (OPHTHALMOLOGY) PART II

- 1. Ophthalmic pathology
- 2. Medical ophthalmology including relevant general medicine and neurology
- 3. Surgical Ophthalmology

#### PROSPECTUS IN OTOLARYNGOLOGY

### DIPLOMA IN LARYNGO-OTO-RHINOLOGY (DLO)

- 1. The DLO is meant to be a limited degree in the speciality of ENT Surgery.
- 2. This degree does not give the holder any claim to a consultant status.
- 3. It provides no concession to sit the MS examination.

#### ELIGIBILITY

- MBBS or equivalent degree registrable with the Sri Lanka Medical Council
  and should have completed one year after internship.
- Trainces for the MS (Otolaryngology) are eligible to sit after completing one year of their training period.

#### COURSE

Any teaching or provincial hospital recognised by the Board with a fully qualified Otolaryngologist is considered a training centre.

The number selected for training will depend on the accommodation available after giving preference to MS students.

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Training period of one year as a resident MO with on-call duties, to the satisfaction of the consultants concerned. After successful completion of the examination, the candidate should work for six months in a teaching hospital. If he/she has already worked the first year in a teaching hospital, this period may be done in a recognised provincial hospital. This would also facilitate those who have worked in provincial hospitals, to be accommodated in teaching hospitals.

The candidate should gain satisfactory knowledge in the following:

Anatomy/Physiology/Pathology relevant to the speciality, clinical Otolaryngology including Audiology and methods of treatment.

The candidate should attend lectures, seminars etc. whenever these are arranged by the PGIM.

#### EXAMINATION CONTENT

- 1. Papers-3 of three hours each
  - (a) Anatomy/Physiology
  - (b) & (c) Clinical Otolaryngology and Pathology
- 2. Viva voce examination
- 3. Clinical examination

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#### MASTER OF SURGERY (OTOLARYNGOLOGY)

The following is an outline of the programme of training and examination leading to consultant status in Otolaryngology with award of the degree of MS (Otolaryngology)

The programme shall comprise of 4 stages consisting of the examinations MS Part I and II, training periods in approved centres in Sri Lanka and abroad and the preparation of a case book.

#### ELIGIBILITY

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n of the pital. If I may be who have Candidates registrable with the Sri Lanka Medical Council who have passed the MS Part I examination in Surgery conducted by the PGIM or passed the primary FRCS examination of any of the Royal Colleges of Surgeons of UK prior to 01.01.1980.

Stage I shall consist of the following appointments.

Otolaryngology	18 months
General Surgery	6 months
Thoracic Surgery	2 months
Neuro Surgery	2 months
Cancer Institute	2 months

12 months of Otolaryngology shall be a continuous appointment, which should include training in Paediatric Otolaryngology.

The following appointments done as a post-intern before passing the MS Part I will be considered for recognition in place of the relevant appointments above.

Thoracic Surgery	2 months	
Neuro Surgery	2 months	
Cancer Institute	2 months	

General Surgery - A continuous period of one year as HO/SHO under a fully qualified consultant in any government hospital may be accepted as 6 months of General Surgery. But a continuous period of only 6 months will be accepted as 3 months for the training programme.

The candidate should prepare a case book of 15 patients managed by him/her during the Otolaryngology appointment. This should be submitted to the Director PGIM four months before the date of examination in case of local candidates and six months before, in case of candidates residing abroad. The guidelines for the case book will be available to the candidates on request.

## APPROVED INSTITUTIONS FOR TRAINING

Teaching Hospitals in Colombo, Colombo North, Kandy, Jaffna and Galle under fully qualified Otolaryngologists.

Certificates of satisfactory completion of training should be obtained from the consultants and forwarded before the Part II examination.

## STAGE II MS (OTOLARYNGOLOGY) PART II EXAMINATION

#### Eligibility

Successful completion of the training programme as outlined under Stage I. A candidate may be allowed to sit the examination within the last 8 weeks of the training programme, but he/she will have to complete the appointments before moving to Stage III.

The examination shall consist of theory papers, clinicals, and orals in Otolaryngology (includes clinical Otolaryngology and Anatomy, Physiology and Pathology as related to Otolaryngology) and General Surgery (includes principles and practice of surgery with special emphasis on General Surgery in relation to Otolaryngology).

THEORY PAPERS — Otolaryngology 2 papers of 3 hours duration each General Surgery I paper of 3 hours duration

CLINICALS — Otolaryngology

Long case 1 hour (examination and discussion)

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Short cases 1 hour General Surgery

Short cases 45 minutes

ORALS — Otolaryngology — 30 minutes General Surgery — 20 minutes

#### STAGE III

One year training in an approved institution abroad.

#### STAGE IV

One year as an Assistant to an Otolaryngologist in a Teaching Hospital in Sri Lanka

Stage III& IV are interchangeable.

#### Exemptions

Those possessing the Diploma of a Fellow of the Royal Colleges of Surgeons of UK, Ireland or Australia are exempted from MS part I examination. Such candidates must show proof that the training programme in Stage I has been fulfilled by them. The validity of appointments done abroad will be decided by the Board of Study individually on application.

Stage III may be after obtaining the Diploma. If this has not been done, Stage IV shall consist of 24 months as an assistant to an Otolaryngologist in Sri Lanka.

The candidate will be certified by the Board as a consultant in Otolaryngology on the successful completion of Stages I to IV of the training programme.

These rules and regulations may be amended by the Board of Study as and when necessary. One any matter regarding this programme not mentioned herein or, on a matter of interpretation of these conditions the decision of the Board of Study shall be final.

## PROSPECTUS IN MD PAEDIATRICS

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## 1. INTRODUCTION

The following is an outline of the programme of training and examination leading upto consultant status in Paediatrics with the degree of MD (Paediatrics).

The programme will consist of 3 supervised stages of training and two examinations.

## 2. OBJECTIVES

To test whether the candidates have acquired adequate knowledge, skills and attitudes to enable them to

- (a) have a comprehensive knowledge of the problems of health and disease from conception through birth and childhood to adolescence in Sri Lanka.
- (b) be competent in diagnosing and managing paediatric problems in a global setting with special reference to diseases that are prevalent in Sri Lanka.

For this purpose the candidate should

- 2.1. have an understanding of and competence in the principles and practice of the clinical methods in order to be capable of identifying, analysing and managing such patients, efficiently and humanely.
- 2.2. be able to acquire and take preventive measures whenever feasible to promote health and well being of infants and children.
- 2.3. Acquire competence in teaching and training undergraduates, post-graduates and paramedical workers in paediatric care.
- 2.4. be motivated to conduct clinical, laboratory or health systems research (HSR)
- 2.5. be able to function as a member of a team in handling child care problems and be competent to assume the role of leadership when required.

## 3. MD (PAEDIATRICS) PART I EXAMINATION

- 3.1. Entry to the training programme will be, by passing the MD (Pacdiatrics) Part I Examination.
- 3.2. Eligibility for entry to MD Part I Examination will be
  - (d) the possession of a medical degree registrable with the Sri Lanka Medical Council and one year of service after internship.

(b) with effect from 01.01.95 a minimum of six months experience in General Paediatrics with first-on-call duties. In the interim period a doctor may enter the training programme without this requirement but six months experience with first-on-call duties should be obtained after passing MD (Paediatrics) Part I and prior to commencing the training.

MD Part I will consist of 2 papers designed to test the knowledge of basics of Medicine and Paediatrics.

Paper A-will consist of 60 MCQ to test the knowledge of Basic Sciences, Medicine and Pacdiatrics.

Paper B-will consist of fifteen questions of same type confined to Paediatrics.

MD Part I examination will usually be held once a year.

A pass in papers (A & B) at the same time is necessary to pass the MD Part I examination.

Total number of four attempts will be allowed for the MD (Paediatrics) Part I examination.

#### 4. STAGE I TRAINING

A candidate who has been successful at the Part I examination will be allowed to proceed to the stage I training after completing a minimum of twenty-four months of in-service experience inclusive of internship. Candidates should enter the stage I training programme within a period of 3 years after passing the Part I examination. This would consist of 24 months in-service training as a Registrar in Paediatrics in one of the following Teaching Hospitals.

Lady Ridgeway Hospital
Peradeniya Teaching Hospital
Kandy Teaching Hospital
Galle Teaching Hospital
North Colombo General Hospital (Teaching)
Sri Jayawardenapura General Hospital, Kotte
Jaffna Teaching Hospital

This period should include 3 months of training in Neonatology with first on call duties. This 2 year appointment may be done as a single 2 year appointment in one of the above hospitals or as two, one year appointments in any two of the above hospitals.

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rith first on pointment in of the above During this period the trainee should have clinical responsibility for patients with on call duties. The trainee should also participate in any in-service training programme arranged by the Board of Study during this period.

At the completion of stage I training the trainee would be eligible to sit Part II examination provided a testimonial from the supervisor/s has been submitted certifying satisfactory performance during this stage of training.

## 5. MD (PAEDIATRICS) PART II EXAMINATION

## 5.1. Eligibility for entry to the Part II Examination

(a) completion of MD Part I

(b) completion of stage I training as stipulated above

Part II examination will usually be held once a year.

A total number of four attempts will be allowed for the MD Paediatrics Part II examination.

The examination will consist of 2 components.

- (a) written and investigation-oriented practicals
- (b) clinicals

## A. (i) Written component will consist of 3 papers :

- Paper I will consist of case histories and questions of a problem solving type. Duration 3 hrs.
- Paper II will consist of 5 structured essay type of questions, each with several parts. Duration 3 hrs.
- Paper III Traditional essay on a topic of relevance to child health in Sri Lanka. Duration 1 hr.

## (ii) Investigation Oriented Practical

Pratical will consist of several items, including X-rays, ECGs, EEGs, slides and specimens in Pathology, Microbiology, Parasitology and other relevant clinical material. Specific questions will have to be answered on each item.

#### B. Clinical Examination will consist of

(a) One long case

One hour will be given to take a history and examine a patient. The candidate will be questioned for 30 minutes by a pair of examiners,

#### (b) Short Cases

A few patients will be presented for brief examination of a particular aspect. A pair of examiners will question the candidate on her/his findings Time per patient is not specified but the total duration will be about 30 minutes.

#### Evaluation

The overall pass mark is 60% for the entire examination. A candidate will have to obtain a minimum of 50% at each of the two components of the examination viz written (including investigation oriented practicals) and clinicals (long and short cases in combination).

#### 6. STAGE II TRAINING

On successful completion of MD Part II, the trainee will be awarded the Degree of MD (Paediatrics) and admitted to stage II.

This consists of 12 months supervised training as a Senior Registrar in Paediatrics in a Paediatric Unit in an approved Teaching Hospital in Sri Lanka.

The 12 months would consist of

6/12 General Paediatics experience as Senior Registrar with on call duties in a Teaching Hospital Unit.

3/12 Intensive Paediatric Care in Lady Ridgeway Hospital where the Senior Registrar is the first on call.

3/12 Neonatal experience consisting of:

1/12 Intensive Neonatal Care at Sri Jayawardenapura General Hospital, Kotte or Peradeniya Teaching Hospital, as first on call and

2/12 Neonatal Care at DMH/CSMHW or any other teaching unit.

A testimonial from the supervisors will be required, certifying satisfactory performance after each component of training.

#### 7. STAGE III TRAINING

Each candidate should obtain the Board approval prior to embarking on the training period abroad.

This will consist of at least 12 months supervised training as a SHO/Registrar equivalent at an approved centre abroad.

In exceptional circumstances, with the approval of the Board of Study, in lieu of this period abroad, they could do an additional I year of training in Sri Lanka.

During this stage of training, the trainee is expected to provide progress reports at six monthly intervals.

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- 8. (i) The trainee should be engaged in a research project after entering the training programme. The project proposal should be submitted to the Board of Study for prior approval. The final project report should be submitted for evaluation to the Board of Study prior to Board Certification.
- 8. (ii) They should also undergo a period of training in medical education.

## 9. BOARD CERTIFICATION AND AWARD OF DEGREE MD (PAEDIATRICS)

On successful completion of both examinations and the three stages of training, the trainee would be Board certified as a Consultant Specialist in Paediatrics.

# 10. ELIGIBILITY FOR BOARD CERTIFICATION FOR THOSE APPLYING WITH FOREIGN POSTGRADUATE QUALIFICATIONS

A candidate with MRCP (UK) MRACP or North American or Canadian Board certification may apply for exemption from MD Part I examination.

However, to sit the Part II MD examination in Sri Lanka, the candidate must show proof of having done two years of training abroad in a Pacdiatric Unit approved by the Board of Study, after successful completion of the MRCP I or MRACP. In the case of other foreign Postgraduates, they should show proof of their Paediatric training abroad.

Stage III training for the above category would be a period of 2 years in a recognised unit in Sri Lanka.

11. A trainee should complete his/her entire programme of training within 2 years of entering stage I of the training programme.

#### 12. ENTERPRETATION AND AMENDMENTS

In any matter relating to interpretation of the above regulations, the decision of the Board of Study duly approved by the Board of Management of the PGIM will be final. The Board of Study shall have the right to amend any other provisions in the above regulations with the approval of the Board of Management of the PGIM from time to time.

### DIPLOMA IN CHILD HEALTH

#### 1. INTRODUCTION

The Board of Study in Paediatrics will conduct the DCH examination in order to impove the knowledge and skills of medical officers in the provision of child care

The acquisition of this diploma will

- (a) not entitle him/her to consultant status
- (b) not give any concession in the MD programme leading to the MD (Paediatrics) examination.

#### 2. OBJECTIVES OF THE EXAMINATION

- 2.1. To test whether the candidates have acquired adequate knowledge, skills and attitudes to enable them to
  - (a) have a basic understanding of the problems of health and disease, from conception through birth and childhood to adolescence in Sri Lanka.
  - (b) be able to treat common illnesses that are of importance to child health care in Sri Lanka.

For this purpose candidates should

- 2.1.1. Have an understanding of and competence in the principles and practice of the clinical methods in order to be able to identify, analyse and manage such patients efficiently and humanely.
- 2.1.2. Be able to identify and refer those problems that require specialised treatment.
- 2.1.3. Be able to carry out long term treatment for those referred back from a referral clinic including chronically ill and teminally ill patients.
- 2.1.4. Be able to take preventive measures whenever feasible and to promote health and well being of infants and children.
  For this purpose the candidate should have an understanding of
  - (a) normal growth and development and any problems related thereto.
  - (b) community and hospital services and the particular role of health care and social service programmes (either in government or non government sector) such as the following:

Nutritional intervention, Immunisation, Family Planning, Health Education, Care of mentally and physically handicapped.

## 3. ELIGIBILITY TO SIT THE EXAMINATION

## 3.1. All Medical Officers possessing

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- (a) a medical degree registrable with Sri Lanka Medical Council and
- (b) 5 years experience from the commencement of internship
- (c) a minimum of six months experience in General Paediatries with first on call duties. (This requirement is applicable from 01.01.95 and in the interim period a doctor who has not fulfilled this requirement should do a period of 3/12 of first on call duties in General Paediatrics during the period of clinical training provided he has the following requirements:-
  - (i) 20 clinical sessions (each session having a minimum duration of 2 hrs.) with a Paediatrician in a government hospital recognised by the Board;

#### (ii) Case Book

10 discussions on patients clerked during these clinical sessions should be written up in a case book marked by the supervising consultant and submitted to the Board of Study; and

(iii) 23 social paediatric sessions approved by the Board of Study.

The 23 sessions in Social Paediatries are as follows:-

- 1.1 session with a school medical officer
- 2.1 session with a medical officer at an ante natal clinic
- 3.1 session with a medical officer at a family planning clinic
- 4.1 session with a medical officer at a child welfare clinic
- 5.2 sessions at a child guidance clinic
- 6.1 session at a rehabilitation centre.
- 7.1 session at an institute for deaf children.
- 8.1 session at an institute for blind children
- 0.1 session at all institute for blind binderen
- 9.1 session at an institute for educationally subnormal children.
- 10.1 session with severely mentally handicapped
- 11.2 sessions with a general practitioner approved by the Board of Study in Paediatrics.
- 12.1 session at the Anti Malaria Campaign
- 13.1 session at the Anti TB Campaign
- 14.1 session at the Anti Leprosy Campaign
- 15.1 session at a sexually transmitted diseases clinic
- 16.1 session with public health nurses and family health workers in the field under supervision of medical officer of health (MOH).
- 17.1 session with a public health inspector in the field under supervision of MOH.
- 18.1 session each at Family Health Bureau, Health Education Bureau and Epidemiology Department.
- 19.1 session with a probation and child care officer.

#### 3.2 Exemptions

(a) The Board may decide to exempt a MO from 3. 1 (i) and (ii) if he/she has done a recognised 6 month appointment in General Paediatrics under a Consultant Paediatrician within 5 years immediately preceding the examination.

or

- (b) Has done two years in General Paediatrics recognized by the Board after having obtained a degree registrable with the Sri Lanka Medical Council. Provided that both the above categories have attended the 23 sessions in Social Paediatrics.
- 3.3. The Board will study the eligibility criteria of all the applicants and make the final decision.

#### 3.4. Screening Test

A screening test in the form of a MCQ Paper may be held to limit the number of candidates about 6 months prior to the examination.

The results are valid for the following examination only.

#### 4. TRAINING COURSE

Training courses may be organised by the following:

PGIM

Universities

Sri Lanka Paediatrics Association and any other recognised Medical Association.

Paediatric units in Colombo/Kandy/Galle/Jaffna.

Other courses would be subject to approval by the Board-

#### 5. EXAMINATION

The examination will comprise of 2 components

- (a) Written paper
- (b) Clinical examination

#### 5.1. Written papers

This component will comprise of

- (a) MCQ paper
- (b) Structured essay paper.

#### 5.2. Clinical examination

This component will be in 2 parts

- (a) One Long case where candidates will be given 40 mins. to take a history and examine after which he will be tested by a panel of examiners for 20 mins.
- (b) Two or more short cases and a spot case where the candidates will be called upon to examine a patient in the presence of the examiner and then questioned.

#### 6. EVALUATION

The overall pass mark is 60% for the entire examination. A candidate will have to obtain a minimum of 50% at each of the two components of the examination viz. written and clinicals (long and short cases in combination).

- 7. The successful candidate will be awarded the Diploma in Child Health.
- In any matter regarding this Prospectus or in its interpretation, the decision of the Board of Study in Paediatries duly approved by the Board of Management of the PGIM shall be final.

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#### PROSPECTUS IN PATHOLOGY

#### THE PROGRAMME

A candidate will qualify for conferment of the degree of MD (Pathology) on completion of the first four parts of the following programme. After completion of Part V the candidate will be Board Certified as Consultant in Pathology.

- Part I—In-service experience of 2 years duration in any of the recognised centres (the Departments of Pathology of the teaching hospitals of Medical Faculties in Colombo, Peradeniya, Jaffna, Ruhuna, and Colombo North Hospital Sri Jayawardenepura Hospital, Kotte and the Cancer Institute Maharagama).
- Part II—Diploma in Pathology examination which covers Morbid Anatomy and Histopathology, Haematology, Chemical Pathology and Clinical Microbiology.
- Part III—Period of in-service training in one of the following fields for a period of 2 years, under a Consultant Pathologist approved by the Board of Study:
  - (1) Morbid Anatomy and Histopathology
  - (2) Haematology
  - (3) Chemical Pathology
- Part IV—MD Pathology Examination. The candidate will sit the examination in the field in which he/she has received training.

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Part V—Minimum period of one year's training in the chosen field at a centre abroad approved by the Board of Study in Pathology. He should submit a certificate from his supervisor certifying satisfactory completion of the training. A candidate is required to submit a case book in his selected field 6 months prior to Board Certification. The format of the case book may be obtained from the PGIM.

#### DIPLOMA IN PATHOLOGY

#### ELIGIBILITY

- MBBS or equivalent medical degree registrable with the Sri Lanka Medical Council, and completion of one year after internship.
- In-service experience of 2 years in a Pathology Laboratory of a recognised centre.

#### EXAMINATION

#### Theory

One three hour paper consisting of 60 MCQs to cover the following fields:

- (1) Morbid Anatomy and Histopathology
- (2) Haematology
- (3) Chemical Pathology
- (4) Clinical Microbiology.

#### Practical Examination

(i) MORRID ANATOMY AND HISTOPATHOLOGY

To describe and report on the histopathology of a number of slides from
"surgical" and "medical" case material.

## (ii) HAEMATOLOGY

- (a) To identify and comment on blood and bone marrow films of cases of haematological interest. Patients or case histories with relevant material will be provided.
- (b) Carry out tests used in Blood Transfusion and Coagulation and comment on the results.

# (iii) CHEMICAL PATHOLOGY

- (a) Carry out laboratory investigative procedures routinely done in the Chemical Pathology Department of a laboratory.
- (b) Evaluate and correlate results with clinical findings.

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Candiate will be examined for 15 minutes in each of the 4 disciplines.

On successful completion of the examination the candidate will be awarded the Diploma in Pathology.

# CURRICULUM INCLUDING OBJECTIVES OF TRAINING

# A. Morbid Anatomy and Histopathology

#### OBJECTIVES

- 1. Be able to perform a post-mortem examination, and give a cause of death.
- Be able to recognise and describe abnormalities brought about by disease processes in body tissue at post-mortem and in surgically removed tissues including tumours.
- Be able to correlate the abnormalities in (2) suggest the causes of the disease process and explain what complications could arise, giving reasons.
- Be able to plan and carry out further laboratory investigations on material recovered at operations or autopsy. Interpret results and elucidate nature of disease processes.
- Be able to correlate post mortem findings with clinical and laboratory findings and other data and explain the clinical picture on the basis of pathological observations.

- Be able to prepare material for histological and histochemical examinations
- Be able to describe and recognise microscopic abnormalities in tissues as a result of disease. Correlate these with microscopic appearances, other laboratory investigations and clinical data and give diagnosis.
- Explain the actiology and pathogenesis of disorders giving rise to microscopic and biochemical abnormalities in tissue.
- Comment on prognosis and complications of diseases which have been diagnosed after laboratory investigations.

# B. Heamatology

# **OBJECTIVES**

- 1. Be able to investigate and diagnose abnormalities in haemopoiesis
- Be able to carry out laboratory investigation in disorders of crythropoiesis and red cell metabolism & interpret results of such investigation.

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- Be able to investigate disorders of iron metabolism, interpret results and indicate how they help in establishing diagnosis.
- Be able to investigate disorders of blood volume, interpret results and indicate how they help in establishing diagnosis.
- Be able to design and carry out investigations in haemorrhagic disorders and interpret the results.
- Be able to plan, organise and supervise the running of a blood transfusion unit in a provincial hospital.
- Be able to prepare and stain blood or bone marrow films, and report on them.
- 8. Be able to carry out a bone marrow aspiration.
- Be able to instruct the laboratory staff on the techniques of common laboratory tests in haematology and also recognise the errors and limitations of the tests and instruments used.
- Be able to correlate clinical features and physical signs with results of haematological investigations and arrive at a diagnosis.
- Be able to comment on the progress, prognosis and complications of a haematological disease and advise on its management.

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# C. Chemical Pathology

#### OBJECTIVES

- Be able to carry out routine biochemical investigations, interpret them and explain how biochemical alterations are brought about by disease processes.
- Be able to operate apparatus routinely used in the chemical pathology section of a pathology laboratory and, thereby be able to check on investitational work delegated to technical staff.
- Be able to advise in the preparation of patients, collection and transport of specimens for biochemical tests.
- Be able to broadly outline the chemical basis of various biochemical tests
  utilised in investigations of disease in a hospital laboratory and comment
  on their accuracy.
- 5. Be able to carry out quality control programmes.

# D. Microbiology

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#### **OBJECTIVES**

- Be able to advise on sterilisation procedures and be able to carry out laboratory investigations with regard to checking sterility.
- Be able to carry out investigations in hospital infection, interpret results, advise with regard to prevention and treatment. Explain aetiology and pathogenesis.
- Be able to organise and supervise the carrying out of routine clinical bacteriological investigations in a hospital laboratory. Examination of smears/cultures/serological tests, antibiotic sensitivity tests.
- 4. Be able to investigate common fungal diseases.
- 5. Be able to investigate and diagnose common parasitic diseases.
- 6. Be able to advise on investigation in viral diseases.

# MD PATHOLOGY

# ELIGIBILITY TO SIT THE MD (PATHOLOGY) EXAMINATION

- Candidates should hold the Diploma in Pathology of the PGIM or, equivalent diploma recognised by the Board of Study in Pathology.
- Two years experience in the chosen discipline under a Consultant in a contre approved by the Board of Study in Pathology.

## **EXAMINATION**

The examination will consist of theory papers, practicals and viva in the chosen discipline (Morbid Anatomy and Histopathology, Haematology or Chemical Pathology).

## Theory

Two papers of 3 hours each.

#### Practical

# 1. MORBID ANATOMY AND HISTOPATHOLOGY

- (a) Pefrormance of autopsy, presentation of material and written report and summary.
- (b) Diagnosis of Histopathological/Cytological material provided, using appropriate stains.
- (c) Reporting on stained Histopathological/Cytological preparations for diagnosis, (clinical details will be provided).
- (d) C.P.C. cases for Morbid Anatomical and Histopathological assessment.
- (e) Reporting on frozen sections.

## 2. HAEMATOLOGY

- (a) Long Cases—Clinical history will be provided for comment and diagnosis on the material given.
- (b) Carry out relevant investigations for diagnosing a haemorrhagic disorder, from case/material provided.
- (c) Blood transfusion serology

# 3. CHEMICAL PATHOLOGY

- (1) (a) Case history will be provided. Suggest investigations and discuss
  - (b) Results of investigation are given for comment, discussion and differential diagnosis.
- (2) Long cases with practicals related to investigation and diagnosis of a case.

#### Viva Voce

Candidate will be examined at the viva in the chosen discipline.

# MD (PATHOLOGY) LEARNING OBJECTIVES FOR HISTOPATHOLOGY AND MORBID ANATOMY

At the end of training a pathologist should be able to.

describe accurately the surgical and biopsy material at the "cut-up", request
appropriate processing and staining techniques, identity points at which
specimens get contaminated or mislabelled and be able to rectify them,
write accurate and helpful reports to the clinician with advice on further
relevant laboratory investigations, use a recognised diagnostic coding
system such as SNOP and identity cases for referral.

- maintain an allround diagnostic ability for light microscopy, the scope of the biopsies being general medical and surgical pathology specimens, needle biopsies of kidney, liver, thyroid, breast etc., endoscopic biopsies of gastrointestinal and bronchial specimens, trephine biopsies of bone, nerve and muscle biopsies of neuromuscular diseases, skin and tumour biopsies and paediatric pathological specimens.
- 3. handle the speciality specimens appropriately and diagnose the common conditions and identity those that need referral for specialised techniques and expertise. The development of an interest in a sub speciality in which they possess particular expertise and the ability to generate their own research programme is to be encouraged.

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- 4. use light microscopy for all purposes including polariscopy, fluorescent and contrast techniques and microphotography and have a basic know-ledge of electron microscopy in order to interpret electron micrographs of common and/or important diseases, cut and stain a frozen section to a degree of competence adequate for diagnosis, interpret the results of histochemical methods for the demonstration of an ever widening array of cell products and markers, interpret the results of immunocyto-chemistry by which many antigens can be localised in tissue, recognise artefacts, identify false positive and negative results and their potential sources.
- be able to prepare and present material for clinicopathological meetings, answer questions and be able to openly admit areas of ignorance and explain the values and limitations of investigations.
- 6. be able conduct a routine autopsy, demonstrate the findings to an audience and correlate them with the clinical history, carry out specialist autopsy techniques for removal of organs and obtain samples for toxicology, microbiology, serology and chemistry and recognise the need for expert opinion in coroner's autopsies (short of criminal) and give evidence at an inquest.
- be able to supervise the screening of cervical cytology specimens and diagnose gynaecological and non-gynaecological smears and advise on appropriate management.
- be able to establish and maintain a fine needle aspiration cytology diagnostic services.
- 9. be able to understand the financing of the laboratory, supervise the safety or the laboratory and mortuary, be aware of inflammatory and explosive hazards, the toxic effects of laboratory chemicals, be familiar with microbiological safety, prepare reports and statistical analyses, understand the problems and needs of all categories of staff and encourage and train junior medical staff.

10. be able to develop and use a laboratory filing and retrieval system, present case reports and own work at meetings, identify problems which require further investigation, judge the merits and validity of research articles in relation to pathology, use the Index Medieus and search and interloan system of the library, gain experience in word processing and data handling and refer rapidly to standard work in all major sub-specialities.

# MD (PATHOLOGY) LEARNING OBJECTIVES FOR CHEMICAL PATHOLOGY

At the end of training a pathologist should be able to

 advise in the preparation of patients, collection, transport and storage of specimens for biochemical tests.

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- organise the activities in a chemical pathology laboratory and supervise the performance of clinical biochemical investigations.
- interpret the results of biochemical investigations and suggest to the clinician
  possible diagnoses and tests which may help in the diagnosis and management of a patient.
- advise clinicians with regard to patient care in specific areas requiring complex interpretation of biochemical data, for example acid base electrolyte imbalance.
- 5. aware of sources of error in the processing of samples for biochemical assays
- 6. cstablish internal and external quality control programmes.
- establish specialised biochemical assays. The development of an interest in a subspeciality in which he/she possesses particular expertise and the ability to generate his/her own research programme is to be encouraged.
- introduce new assay methods for biochemical parameters; in doing so, he/she should be able to take into consideration factors such as accuracy, precision, sensitivity, specificity, cost and availability of equipment.
- able to order suitable equipment for the laboratory with special consideration
  of its cost effectiveness; and take steps for the servicing and maintenance
  of equipment.
- able to take steps to maintain the supply of reagents and other consumables required for continuous maintenance of the laboratory services.

- 11. able to understand the financing of the laboratory, supervise the safety of the laboratory be aware of inflammatory, and explosive hazards, the toxic effects of laboratory chemicals, be familiar with microbiological safety, prepare reports and statistical analyses, understand the problems and needs of all categories of staff and encourage and train junior medical staff.
- 12. able to develop and use a laboratory filing and retrieval system, present case reports and own work at meetings, identify problems which require further investigation, judge the merits and validity of research articles relating to pathology, use the Index Medicus and search and interloan systems of the library, gain experience in word processing the data handling and refer rapidly to standard work in all major sub-specialities.

## LEARNING OBJECTIVES FOR HAEMATOLOGY

At the end of the training programme a Pathologist should be able to

- use the principles and practice of quality control in the monitoring of, laboratory results.
- 2. apply the concept of reference range to identify disease processes
- perform and evaluate basic haematological techniques including the identification of mature blood cells and their precursors.
- to discuss the concept of anaemia, its actiology and classification. Perform investigations to differentiate the different kinds of anaemia and evaluate the results.
- evaluate the actiology and classification of proliferative disorders including cytogenetics.
  - Perform and evaluate the tests used in the laboratory for their diagnosis and treatment.
- evaluate the aetiology and classification of platelet disorders. Perform and evaluate the tests used in the laboratory for their diagnosis.
- evaluate the actiology and classification or inherited and acquired disorders
   of haemostasis. Perform and evaluate the tests used in the laboratory for their diagnosis and treatment.
- umderstand the mechanism, diagnosis, prophylaxis and treatment of venous and arterial thrombosis.

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- discuss the classification of blood group system in man, understand the
  rationale of transfusions of whole blood and the remedial measures taken
  in case of a blood transfusion reaction.
- perform and evaluate the tests used in the laboratory for the identification of antibodies in blood.
- identify the blood changes in infection and infestation and carry out tests to recognise them in the red cells and in the serum.
- 12. understand the financing of the laboratory, supervise the safety of the laboratory and mortuary, be aware of inflammatory and explosive hazards, the toxic effects of laboratory chemicals, be familiar with microbiological safety, prepare reports and statistical analyses, understand the problems and needs of all categories of staff and encourage and train junior medical staff.
- 13. develop and use a laboratory filing and retrieval system, present case reports and own work at meetings, identify problems which require further investigation, judge the merits and validity of research articles in relation to pathology, use the Index Medicus and search and interloan system of the library, gain experience in word processing and data handling and refer rapidly to standard work in all major sub-specialities.

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#### PROPECTUS IN PSYCHIATRY

# MD (PSYCHIATRY)

The objective of the MD (Psychiatry) training programme is to provide the necessary education and training in order to develop a doctor to parctise Psychiatry on a scientific basis at a level of a Consultant.

#### 1. FLIGIBILITY FOR ADMISSION TO THE PROGRAMME

- (a) Should possess a medical degree registrable with the Sri Lanka Medical Council.
- (b) Should have at least one year of post internship clinical experience.
- (c) Those who do not have one year of service after internship are also eligible for admission to the training programme but they would be registrable as trainees of the PGIM only after completion of one year of post internship service.

In order to enter the training programme, candidates should either

(i) Pass MD Psychiatry Part I examination

(iii) Obtain satisfactory marks in a multiple choice question paper in General Medicine.

#### 2. STAGE 1

# MD (Psychiatry) Part I Examination

The candidates will be examined on the following subjects in basic sciences applicable to Psychiatry. Neurophysiology, Neuroanatomy, Psychopathology, Psychopharmacology, Statistics, Social & Cultural aspects of Medicine, General Medicine and Neurology in relation to Psychiatry.

The examination will consist of a written examination of 2 papers.

- (a) MCQ paper
- (b) Essay type question paper

# 3. STAGE II

This stage involves 3 years of intensive clinical training under supervision of a consultant Psychiatrist at a recognised Psychiatry Unit.

# 3.1 Recognised Psychiatry Units

- (a) University Psychiatry Units-Colombo, Peradeniya, Jaffina and Galle.
- (b) Psychiatry Units at the Teaching Hospitals Kandy, Jaffna, Galle.
- (c) Psychiatry Units at other General Hospitals Anuradhapura, Badulla, Batticaloa, Kurunegala & Ratnapura.
- (d) Mental Hospitals Angoda & Mulleriyawa.

## 3.2 Training

- 3.2.1. The trainees are required to gain a comprehensive knowledge in the following areas in Psychiatry.
  - (a) Phenomenological Psychopathology & Psychodynamic Psychopathology
  - (b) Concept of Mental illness Psychodynamic Model, Social Model, Behaviour/Social Learning Model, Medical Model.
  - (c) Sociocultural aspects of Medicine including illness experience, illness behaviour and sick role.
  - (d) Measurements in Psychiatry including use of standardised schedules.
  - (e) Classification of mental disorgers.
  - (f) Mental and Behaviour Disorders.
    - (i) Organic including symptomatic mental disorders.
    - (ii) Mental and Behavioural disorders due to psycho-active substance abuse.
    - (iii) Schizophrenia, Schizotypal Delusional disorders.
    - (iv) Mood Affective disorders.
    - (v) Neurotie, Stress related & Somatoform disorders.
    - (vi) Behavioural syndromes and Mental disorders associated with Physiological dysfunction.
    - (vii) Disorders of adult Personality and Behaviour.
    - (viii) Mental Retardation
      - (ix) Disorders of Psychological Development.
      - (x) Behavioural and emotional disorders with onset usually occurring in childhood or adolescence.
  - (g) Assessment and Management of Mental Disorders
  - (h) Methods of treatment-Physical, Psychological and social.
  - (i) Psychiatry in special settings-Primary Care, Forensic Psychiatry.
  - (j) Social and Transcultural Psychiatry.
  - (k) Administrative Psychiatry including provision of Psychiatry services.
  - Psychology, Anthropology, and Sociology in relation to practice of Clinical Psy.hiatry.
- 3.2.2. During this period the trainees are required to rotate every six months between the consultants or between training units. It will however be compulsory for the trainees to work a minimum of 6 months at the Mental Hospital, Mulleriyawa or Angoda and another priod of at least 6 months at a General Hospital Psychiatry Unit.
- 3.2.3. Postgraduate trainees in Psychiatry are required to submit a case book of 10 or more patients directly managed by them. This case book should be prepared in conformity with the guidelines available from the PGIM and submitted 3 months prior to the commencing date of MD (Psychiatry) Part II

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examination. The case book will be assessed by a panel nominated by the Board of Study who will determine the successful completion of this component of stage II by the trainees.

- 3.2.4. The other requirement that the trainee should satisfy during this period is a short clinical attachment of at least two weeks in one of the following:
  - (a) With a Family Practitioner
  - (b) With a Physician or a Paediatrician
  - (c) In a Provincial Hospital
  - (d) In a Rehabilitation Programme
  - (e) In a School Health Clinic

At the end of this attachment the trainee should submit a report on learning experiences gained during this approintment.

3.2.5. In order to ascertain the clinical competencies, skills, attitudes and knowledge, an evaluation report will be prepared on each trainee by the supervising consultant at the end of each six months. The clinical tutor will discuss this report with the trainee concerned. The Board of Study through such evaluation reports will monitor the progress of the trainee and take the appropriate steps when necessary.

# 3.3. MD (Psychiatry) Part II Examination

- 3.3.1. MD Part II consists of:
  - (a) A written examination
    - (i) MCQ paper
    - (ii) Essay type question paper
  - (b) Clinical examination
    - (i) one long case
    - (ii) two short cases which may include video clips
  - (c) Oral examination
- 3..2. Eligibility
  - (a) Successful completion of Part I examination
  - (b) Satisfactory completion of requirements of Stage II

    Those who successfully complete all the components at Part II examination

will be awarded the degree of MD in Psychiatry.

- 4. Stage III
- 4.1. Two years of post MD part II period of further supervised training.
  - (a) One year as a Senior Registrar under a Consultant Psychiatrist at a recognised Psychiatry Unit.
  - (b) One year at a centre abroad, recognised by the Board of Study in Psychiatry. The supervising consultants will submit half yearly progress reports on the trainee.

# 4.2. Research Project and submitting a dissertation

The trainee should submit the protocol of a proposed research project to the Board of Study for approval. A supervisor will be appointed by the Board for each research student. The dissertation should be completed in conformity with the PGIM guidelines, and submitted within 2 years of passing the MD Part II examination. The candidate is required to defend the dissertation at an oral examination.

#### 5. Board Certification

At the successful completion of Stage I, II & III the trainee shall be Board Certified as a Consultant Psychiatrist.

## 6. Exemptions

On application made to PGIM those who possess M.R.C. Psychiatry (UK) or equivalent qualification could be considered for exemption from Part I examination and Stage II sections 3.2.2.; 3.2.3.; 3.2.4.; and 3.2.5.

Any other requests for exemption will be considered by the Board.

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# PROSPECTUS IN RADIOLOGY

# MD (RADIOLOGY)

- The training programme leading to the degree of MD (Radiology) shall be conducted by the Postgraduate Institute of Medicine.
- All examinations in connection with the award of the degree MD (Radiology) shall be held by the Postgraduate Institute of Medicine.
- The Board of Study in Radiology shall be directly responsible for the training programme leading to the degree of MD (Radiology).

#### 4. OBJECTIVES

To produce specialists in Radiology with competence in all branches of Radiology including ultrasound, computed tomography, magnetic resonance imaging, nuclear imaging, digital substraction angiography, interventional radiology, and with knowledge of their appropriateness in the investigation and management of patients.

# 5. SELECTION OF TRAINEES

# 5.1. Eligibility

- 5.1.1. Shall possess a medical degree registrable in Sri Lanka.
- 5.1.2. Should have completed a period of one year's service after internship.
- 5.1.3. Shall be under 35 years of age on the date of closure of applications.

#### 5.2. The number of Trainees

- 5.2.1. Shall be determined by the Board of Study in Radiology
- 5.2.2. Shall be subject to review annually.

# 5.3. Selection Procedure

- 5.3.1. Applications shall be called by the appropriate authority.
- 5.3.2 The applicants shall be interviewed by a selection committee comprising of :
  - (a) Chairman. Board of Study in Radiology
  - (b) A member of the Board of Study in Radiology
  - (c) Director/Coordinator PGIM
- 5.3.3. At the interview, selection shall be made on the basis of a point scheme
- 5.3.4. Allocation of points will be as follows:
  - (a) Seniority
    - 5 points per year for every completed year of service after internship upto
    - a maximum of 30 points

# (b) Merit

Up to a maximum of 40 points allocated as follows:

Final MBBS 1st Class	20 points
2nd or 3rd MBBS 2nd Class	5 points
Final MBBS 2nd Class	10 points
Distinction in any subject in the medical curriculum	S points

- (c) Performance at the interview upto a maximum of 30 points
- 5.3.5. The allocation of training centres recognised by the Board of Study in Radiology shall be determined by the selection committee taking into consideration the trainee's preferences.

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#### 6. TRAINING PROGRAMME

- 6.1. Duration shall be a minimum period of 3 years incorporating two examinations viz. Part I and II of MD Radiology (see below)
- 6.2. Training programme shall comprise
  - (a) In-service training in diagnostic radiology
  - (b) Lecture demonstrations and tutorials.
- 6.3. The training programme for MD (Radiology) Part I shall be conducted at the Radiology Department General Hospital, Colombo. Trainces while being attached to the General Hospital, Colombo will be permitted 2 attempts at the MD Part I and 2 attempts at MD Part II.
  - Trainees who are unsuccessful in the Part II Examination after 2 attempts may be transferred out of the Department of Radiology, General Hospital, Colombo or other recognised institution at the discretion of the Board of Study.
- 6.4 The recognition of training centres for MD (Radiology) Part II shall be considered by the Board of Study in Radiology from time to time or when the need arises.
- 6.5. Periods of training at centres recognised by the Board of Study in Radiology shall be given credit towards MD (Radiology) Part II programme.
- 6.6. Training programme for MD (Radiology) Part F
- 6.6.1. Shall be held in the Department of Radiology, General Hospital, Colombo
- 6.6.2. The trainees shall receive in-service training at the Radiology Department.
- 6.6.3. A lecture programme shall be conducted in radiation physics, radiographic photography, radiography, radiological anatomy, radiological techniques, principles of newer imaging techniques, contrast media and drugs used in radiology.

6.6.4. After completion of this programme the trainees will be eligible to sit the MD (Radiology) Part I examination (see below)

# 6.7. Training programme for MD (Radiology) Part II

- 6.7.1. The trainees shall receive in-service training in diagnostic Radiology.
- 6.7.2. A lecture/tutorial programme in clinical radiology will be conducted.
- 6.8. It is the desire of the Board of Study in Radiology that a dissertation on a subject related to and with relevance to Sri Lanka be presented at some stage of the training programme. This dissertation is not compulsory but the trainees are to be encouraged and provided with all facilities to prepare a dissertation.

# 7. CERTIFICATION AS SPECIALIST IN RADIOLOGY

- 7.1. The trainee who has obtained the degree of MD (Radiology) shall spend a minimum of one year at a centre abroad. Candidate shall train in a radiological field of his/her choice and relevant to the needs of the country.
- 7.2. Both the centre abroad and the field of study have to be approved by the Board of Study in Radiology.
- 7.3. Candidate shall be required to submit to the Board of Study, a certificate from his/her supervisor certifying the satisfactory completion of the training period.
- 7.4. A futher period of one year shall be spent in a hospital in Sri Lanka where a Consultant Radiologist shall superviese the candidate.
- 7.5. On satisfactory completion of this period of 2 years a candidate shall be board certified as Specialist in Radiology.

# 8. MD (RADIOLOGY) EXAMINATION

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8.1. Shall consist of 2 parts viz. Part I and II

#### 8.2. MD (Radiology) Part I examination

- 8.2.1. Eligibility to sit the examination
  - (a) Completion of the MD (Radiology) Part I training programme
  - (b) Attendance of not less than 80% of lecture demonstrations and tutorials
  - (c) Certification by a Consultant regarding the candidate's work.

# 8.2.2. Syllabus for the examination includes

- (a) Radiation physics and apparatus construction
- (b) Radiographic photography
- (c) Radiological anatomy
- (d) Radiography
- (e) Radiological techniques and principles of their diagnostic imaging modalities
- (f) Contrast media and drugs used in Radiology Details of the syllabus are available at the PGIM.

- 8.2.3. Examination will be based on the syllabus and shall consist of
  - (a) A multiple choice paper of 60 questions to be answered in 2 hours

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- (b) A theory paper of 3 hours duration consisting of 9 questions
- (c) A film-viewing session
- (d) An oral examination of 30 minutes duration

The Board of Examiners will consist of one Physicist and 3 diagnostic Radiologists, at least one of whom shall be an external examiner from abroad.

# 8.3. MD (Radiology) Part II examination

#### 8.3.1. ELIGIBILITY TO SIT EXAMINATION

- (a) Successful completion of or exemption from MD (Radiology) Part I examination
- (b) Completion of the 3 year training programme
- (c) Certification by the consultant that the candidate has acquired competence in practical radiological procedures.

#### 8.3.2. SYLLABUS

General radiology forms the largest part of the examination. A knowledge of general clinical radiology is expected, without a highly specialised knowledge of any particular field. A sound basic knowledge of ultrasound, nuclear medicine, computed tomography and magnetic resonance imaging will be required, with particular emphasis on the relationship of each to other imaging procedures.

- 8.3.3. Some questions in medicine, surgery and pathology will be incorporated in the multiple choice question paper (see below)
- 8.3.4. The examination will consist of
  - (a) Two multiple choice question papers each lasting 2 hours and consisting of 60 questions.
  - (b) A theory paper of 3 hours duration
  - (c) A clinico-radiological oral examination of one hours duration. Each candidate will be examined by two pairs of examiners.
- 8.3.5. The Board of Examiners shall consist of 4 diagnostic Radiologists at least one of whom shall be an external examiner from abroad.

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# 9. CONCESSIONS AND EXEMPTIONS TO THOSE HOLDING FOREIGN DIPLOMAS

- 9.1. Medical officers returning to Sri Lanka with a diploma recognised by the Board of Study will be exempted from Part I of MD (Radiology) examination. They shall be required to sit the full Part II examination.
- 9.2. Medical Officers desirous of obtaining these exemptions should communicate with the Board of Study in Radiology with documentary evidence in support of their claims.
- The regulations contained in this prospectus may be changed from time to time at the discretion of the Board of Study in Radiology.

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# PROSPECTUS IN RADIOTHERAPY AND ONCOLOGY

# MD (RADIOTHERAPY & ONCOLOGY)

#### I. INTRODUCTION

Outlined below is the in-service training programme in Radiotherapy and Oncology leading to the Degree of MD (Radiotherapy and Oncology) of the Postgraduate Institute of Medicine of the University of Colombo and to Board Certification as Consultants in Radiotherapy and Oncology.

The programme is divided into 6 stages including two examinations.

# 2. SELECTION OF TRAINEES

# (i) Eligibility

A medical degree registrable with the Sri Lanka Medical Council and one year of service after completion of internship.

## (ii) Selection Procedure

Applications for training shall be called by the PGIM and the trainees will be selected after an interview by a selection committee appointed by the Board of Study.

# 3. TRAINING PROGRAMME

## Stage I

Twelve months full-time resident training at Cancer Institute, Maharagama plus lectures, demonstrations and laboratory exercises in the science and disciplines basic to Radiotherapy and Oncology. This programme will be supplemented by teaching conferences, ward rounds, general review sessions and tutorial sessions.

During this time a trainee is expected to learn the clinical and intellectual skill of understanding and dealing with the problems of cancer patients as radio-therapist, chemotherapist and cancer consultant.

# Stage II-MD (Radiotherapy and Oncology) Part I Examination

# (a) SUBJECTS

- (i) Radiation physics
- (ii) Medical statistics
- (iii) Radiobiology
- (iv) Principles of chemotherapy and pathology.

# (b) FORMAT OF THE EXAMINATION

- (i) Two theory papers, each of 3 hrs. duration
   Paper I—Physics and statistics
   Paper II—Radiobiology, principles of chemotherapy and pathology
- (i) Oral examination.

This will be a comprehensive examination to test the basic knowledge, skills and attitudes of the trainee. Successful completion will make the trainee eligible for the subsequent programmes.

## Stage III

Continued in-service training at Cancer Institute, Maharagama or at other cancer centres to be decided by the Broad of Study, for at least 24 months.

Further lectures and demonstrations in specialised clinical subjects to expand the trainee's competence will be arranged.

Every trainee during this stage will prepare a casebook containing the records of 20 cancer cases managed by him. The casebook will be assessed at the MD Part II examination.

# Stage IV-MD Part II final Examination

#### **SUBJECTS**

Radiotherapy and Clinical Oncology

#### B. FORMAT OF THE EXAMINATION

- (i) Two theory papers in Radiotherapy; each of 3 hrs. duration
- (ii) A multiple choice question paper in clinical oncology 2 hrs. duration
- (iii) Clinical, practical and oral examinations in Radiotherapy and Oncology
  - (a) Clinical
    - (1) Long case
    - (2) Short cases
  - (b) Treatment planning session
  - (c) Viva voce examination.
- (C) Assessment of case books

#### Stage V

A one year period of supervised training to be spent at a centre abroad, approved by the Board of Study. A report in writing of this experience should be submitted from his supervising consultant.

## Stage VI

Completion of one year service as Senior Registrar in Radiotherapy and Oncology in a teaching or other approved hospital / cancer centre in Sri Lanka and completion of a dissertation in a field of Oncology based on a trainee's original observations, preferably having relevance to problems in Sri Lanka.

One copy of the dissertation should be typewritten and submitted in unbound form 3 months prior to the date of the Part II Examination, to be forwarded to the foreign examiner for assessment. Once the unbound copy is returned to the candidates any corrections are to be made and 3 copies in bound form should be submitted to the Director /PGIM.

Format of the dissertation should be in conformity with the approved guidelines.

Stage V and VI may be interchanged.

 A trainec, on successful completion of all the above stages, will be certified by the Board as a consultant in Radiotherapy and Oncolegy.

# 51 EXEMPTIONS FOR THOSE WITH FOREIGN QUALIFICATIONS

- (i) Holders of FRCR;
  - (a) Requirements of case books and dissertation for MD Part II examination
- (ii) Exemptions for past experience in Radiotherapy and Oncology of the trainees These exemptions will be considered by the Board of Study on individual basis on application by the trainees.

Note: The guidelines contained in this prospectus may be changed from time to time at the discretion of the Board of Study in Radiotherapy and Oncology.

Syllabus for MD Part I & II examinations is available at the PGIM.

# SYLLABUS FOR MD PART I EXAMINATION

#### 1. Radiation Physics

- (1) Production of X-rays;
  Factors controlling the quantity and quality of X-ray emission
- (2) Interaction of X-rays and other ionising radiations with matter.

  The photo-electric, Compton and pair-production processes. The parameters upon which their magnitudes depend. Their relative importance in clinical practice. The range of the secondary electrons emitted, and its clinical importance.

Attenuation and absorption. Coefficients and the exponential law. Half value layer and filtration. Range of charged particles and the Bragg curve.

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(3) The measurement of X-and-gamma-Rays

Exposure, kerma, and a absorbed dose; units, ionisation, photographic, thermoluminescent and other methods of measurement and detection. Simple principles of air ionisation measurements. Derivation of absorbed dose from air kerma, including calibration standardisation Relationship between exposure, kerma and absorbed dose. Absorbed dose in heterogeneous materials. Data acquisition for treatment planning.

(4) The physical basis of radiation teletherapy

The steps involved in the establishment of the absorbed dose at any point in an irradiated patient: phantoms., "output" calibration, depth dose data. TAR and isodose curves. Features of external photon and electron, beams. Beam modification-filters and tissue compensators. Principles of rotation therapy.

(5) Beam therapy apparatus

Relative merits of different types of radiotherapy equipment in routine use. (A knowledge of generator circuitry is not required). Collimation "applicators", moving diapharagms, Penumbra. Controls and safety interloks. Principles of high LET radiation.

(6) The principles of treatment planning.

Localisation, Simulators, Dose computations and construction of isodose distributions. Principles of obiliquity and inhomogeneity corrections. Applications of computers to treatment planning, including CT planning, Front and back pointers, isocentric mounting, treatment shells. Principles of treatment verification.

(7) General Properties and production of radioactive material.

Radioactive decay, half life and equilibrium units of radioactivity. Radiations from radioactive materials with special reference to clinical usage. Specific activity Radionuclides in treatment:

- Sealed sources and their construction, including Beta ray sources, Principles of dosage systems.
- (ii) Unsealed sources.General principles of their use.

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(8) Principles and practice of radiation protection.

Radiation hazards, Protective arrangements in Radiotherapy Departments. Care and custody of sealed and unsealed sources. Monitoring. Protection of the patient and the public. Relevant aspects of the current legislation.

# 2. Medical Statistics and Epidemiology

- (I) Summarising and presenting data
  - (i) Qualitative data: proportions, bar charts, contingency tables, relative risk.
  - (ii) Quantitative data: measurements of location and spread, histograms, transformations, the normal distribution, scatter diagrams.
- (2) Sampling

concept of a source population random sampling, sample mean as estimating the population mean, standard error of sample mean and of a proportion, confidence limits.

- (3) Statistical significance.
  - (i) Concepts of null hypothesis, types I and II errors.
  - (ii) Paired and two-sample t-tests, analysis of 2×2 contingency tables, the ideas of extension to analysis of variance and larger tables, simple linear regression, non-parametric analogues of the t-test.
- (4) Survival and recurrence data

Presentation of individual patient survival data. crude survival rate, age-adjusted survival rate, life-table (actuarial) calculation of survival rate, survival curves, comparison of two curves, logrank test, concept of a cured group, recurrence-free rates.

(5) Clinical trials

problems of retrospective comparisons and use of historical controls, prospective randomised controlled studies, protocols, aim of study, patient eligibility, informed consent, methods of allocating treatment options, numbers required, multicentre studies, double-blind studies.

Measures of response-tumour regression, quality of life morbidity. local and regional recurrence, distant metastases, death.

(6) Epidemiology

mortality rates, standardised mortality rates, cancer registration and follow up cancer incidence and mortality rates for major anatomical s tes, trends in cancer incidence and mortality, actiological and diagnostic studies.

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- 3. Radiobiology
- 3.1. THE BIOLOGY OF CELLS IN RELATION TO CANCER AND ITS TREATMENT

A basic knowledge of cytology, histology and physiology of normal cells and tissues is assumed. This will include:

(i) Cell structures and function; principles of DNA, RNA and protein synthesis. Nuclear organisation, cytoplasmic organelles including the cytoskeleton, their role in miosis and the cell cycle.

- (ii) An introduction to the principles of cellular chemistry and the concept of molecular biology; DNA strand breakage and repair, ionisation, free radical production and interaction with biological molecules in aqueous system.
- (iii) Cellular injury: damage to cell organelles, eg; chromatids, chromosomes biochemical pathways of injury and their roles in leading to division delay, mitotic and interphase cell death.
- (iv) Cell survival curves; the concepts of cellular reproductive integrity and clonogeneoity, methods for their determination with irradiated normal or neoplastic cell populations. The description of derivation of current formulae applied to cell survival curves.
- (v) Biological and chemical modifiers of cell survival; recovery from sublethal injury and the repair of potentially lethal damage. The effect of sensitisers eg. oxygen, electronaffinic agents. Protective agents. Dose modifying factors and their determination. Variation of response with growth and the progression of cells through the phases of the cell cycle.
- (vi) Physical factors influencing cell survival Relative Biological Effectiveness; its definition and determination, dependence upon linear energy transfer dose, dose-rate, and fractionation, Hyperthermia.

# (vii) Cytogenetics

- (a) Description of changes in chromosomes in human malignant neoplasia.
- (b) Evidence that human cancer is caused by chromosomal abnormalities.
- (c) Methods available for showing human chromosome abnormalities the use of quinacrine mustard and giemsa staining to produce banding.
- (d) Typical chromosomal abnormalities in human malignancies translocations; deletions; oncogenes.

# 3.2. THE RADIOBIOLOGY OF TISSUES AND ORGANS AT LONG TERM RISK.

- (i) A consideration, using the principles of cellular biology and dynamic histology, of the acute responses of normal renewal tissues, eg. bone marrow, epithelia and testis.
- (i) The injury of tissues and organs at long term risk.
- (iii) The concepts of normal tissue tolerance, fractionation formulae and their radiobiological rationale. The therapeutic ration and the potential influence of changes in dose, dose-rate, number of fractions, overall time, quality of irradiation, oxygenation and cell proliferation kinetics.

- (iv) The biological hazards of irradiation; dose protraction and LET; whole body syndromes; effects on the embryo and the foetus; life shortening, leukaemogenesis and carcinogenesis, genetic and somatic hazards for exposed individuals and populations. Biological basis of radiological protection.
- (v) Oncogenes.

# 4. Principle of Chemotherapy

THE BIOLOGY OF CELLS IN RELATION TO CANCER AND ITS TREATMENT

A basic knowledge of cytology, histology and physiology of normal cells and tissues is assumed. This will include:

- (i) Cell structure and function; principles of DNA, RNA and protein synthesis Nuclear organisation, cytoplasmic organelles including the cytoskeleton, their role in mitosis and the cell cycle.
- (ii) An introduction to the principles of cellular chemistry and the concept of molecular biology; DNA strand breakage and repair; ionisation, free radical production and interaction with biological molecules in aqueous systems.
- (iii) Cellular injury: damage to cell organelles, eg. chromatids, choromosomes; biochemical pathways of injury and their roles in leading to division delay, mitotic and interphase cell death.
- (iv) Cell survival curves: the concepts of cellular reproductive integrity and clonogenecity, methods for their determination with irradiated normal or neoplastic cell populations. The description of derivation of current formulae applied to cell survival curve.
- (v) Biological and chemical modifiers of cell survival; recovery from sublethal injury and the repair of potentially lethal damage. The effect of sensitisers, eg. oxygen, electron affinic agents. Protective agents. Dose modifying factors and their determination, Variation of response with growth and the progression of cells through the phases of response with growth and the progression of cells through the phases of the cell cycle.

Physical factors influencing cell survival; relative Biological Effectiveness; its definition and determination, dependence upon linear energy transfer, dose, dose-rate and fractionation, Hyperthermia. Cytogenetics

- (a) Description of changes in chromosomes in human malignant neoplasia.
- (b) Evidence that human cancer is caused by chromosome abnormalities.

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- (c) Methods available for showing human chromosome abnormalities the use of quinacrine mustard and giemsa staining to produce banding.
- (d) Typical chromosomal abnormalities in human malignancies; translocations; deletions; oncogenes.

## 5. Pathology

# GENERAL PATHOLOGY

- (1) Definitions of and distinctions between different types of growth disorder
- (2) Classification of neoplasms.
- (3) Actiology, mechanisms of carcinogenesis, known types of carcinogen and their effect upon the cell. The relative importance of different factors in the causation of human cancer.
- (4) Mode of origin of tumours—monoclonal, multifocal, structure, differentiation and retention of function, Tumour marker substances, Pre-malignant and pre-invasive states.
- (5) Rate of growth, methods of measurement. Factors affecting growth rate. Mechanisms of spread, Local effects of tumours, Local and systemic reactions to tumours, Effects of therapy on tumours and normal tissues.
- (6) Investigative techniques
  Uses and value of biopsy material

#### SYSTEMIC PATHOLOGY

Candidates should be familiar with the origin, classification, natural history and histopathology of tumours in all systems, including:

- (1) Incidence, frequency, age and sex distribution
- (2) Histogenesis, actiological factors and epidemiology
- (3) Macroscopic and microscopic appearances
- (4) Classifications, staging, grading and methods of spread.
- (5) Prognostic indicators, including response to treatment
- (6) Screening and early detection.

# SYLLABUS-MD PART II

# RADIOTHERAPY

The use of radiation for any morbid condition in which its value has been established. A detailed knowledge of these conditions will be required, including their actiology, pathology, symptoms and investigation, as well as treatment by means other than Radiotherapy. Candidates should be familiar with the relevant literature and may be questioned upon methods which have not, up to the time of the examination, reached the standard textbooks. Attention will be paid in the examination

to the experimental, biological and pathological aspects of the subject. Candidates should be prepared to discuss the detailed organisation of radiotherapeutic services, including relevant legislation.

# CLINICAL ONCOLOGY

A wide knowledge will be required of the actiology, natural history and investigation and treatment of neoplastic disorders. Candidates will be required to be familiar with the principles and practice of cancer chemotherapy, hormonal measures and methods such as immunotherapy which are under development. The questions may include aspects of the following subjects relevant to Radiotherapy or to the management of patients with neoplastic disorders.

PATHOLOGY (including its special branches)

MEDICINE

SURGERY (including its special branches, and gynaegology)

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# PROSPECTUS IN SURGERY

# INTRODUCTION

The M.S. Examination in General Surgery is conducted in two parts, Part I and Part II. The Part I examination is conducted in three subjects viz. Anatomy, Physiology and Pathology. The Part II is an examination conducted in General Surgery, the emphasis being on clinical practice relevant to all forms of Surgery, and those aspects of the finer specialities which are relevant to General Surgical practice.

# REGULATIONS OF THE EXAMINATION

# 1. M.S. (Surgery) Part I

## 1.1. ELIGIBILITY

A candidate holding a medical degree registrable with the Sri Lanka Medical Council and completed one year of service after internship.

# 1.2. EXEMPTIONS FROM PART I

A candidate holding a Fellowship in General Surgery of the Royal College of Surgeons of England, Edinburgh, Glasgow, Ireland or Australia or a recognised postgraduate qualification in Surgery from any other country to be approved by the Board of Study in Surgery.

# 1.3. SCOPE AND CONTENT OF THE EXAMINATION

This section comprises

Anatomy

Physiology, Biochemistry and Pharmacology

General Pathology, including Cell Biology, Immunology and Genetics.

#### 1.3.1. Anatomy

The candidates should have a three dimensional understanding of surface and deep Anatomy, as is appropriate to clinical examination, surgical disorders and surgical procedures. They should also have a basic understanding of imaging methods such as radiology, ultrasound, computerised tomography and magnetic resonance and some basic knowledge of their interpretation.

Candidates should have a knowledge of those aspects of regional anatomy relevant to clinical and operative surgery. Within this broad field, the emphasis will be on the following:

- (a) Myology
- (b) Neuroanatomy
- (c) Osteology and Arthrology
- (d) Splanchnology
- (e) The Vascular System

(f) The Endocrine System

(g) The Skin and Subcutaneous Tissues

(h) Embryology and Growth

(i) Histology and Basic Cytology

# 1.3.2. Physiology, Biochemistry and Pharmacology

Candidates should have a knowledge of the physiology and biochemistry of all the body's systems but should pay particular attention to the following:-

(a) Metabolism

(b) The Cardio-Vascular System

(c) The Respiratory System

(d) The Nervous System

(e) The Alimentary, Genito-Urinary, Endocrine and Musculoskeletal Systems

(f) Basic Pharmacology

# 1.3.3. General Pathology

The following aspects of general pathology are of particular importance:-

(a) Cellular Function

(b) Immunology & Molecular Biology

(c) Genetics

(d) Tissue Healing

(e) Oncogenesis

(f) Hacmatology

(g) Microbiology

# 1.4. EXAMINATION PROCEDURE

The examination consists of M.C.Q. written (theory) papers and viva voce (oral).

# 1.4.1. MCQ Paper

A 2 hour paper of multiple choice questions comprising 20 questions each in Anatomy, Physiology and Biochemistry and Pathology.

N.B. This paper will be held 2 weeks prior to the written paper. Those who fail to satisfy the examiners in the MCQ paper will not be permitted to complete the rest of the examination of the Part I.

# 1.4.2. Paper I

A 2 hour paper in Anatomy. This paper will be in 4 parts. Each part will have 2 questions, one question from each part must be answered.

# 1.4.3. Paper II

A 2 hour paper in Physiology and Pathology. This paper will be in 2 parts (Part A Physiology and Part B Pathology) Each part will consist of 3 questions. Question I and one other must be answered from each part.

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# 1.4.4. Viva Voce (oral)

Three twenty-minute vivas in the subjects, Anatomy, Physiology, (including Biochemistry and Pharmacology) and Pathology.

## M.S. (Surgery) Part II

#### 2.1. ELIGIBILITY

A candidate may enter the Part II Examination:

- 2.1.1. After passing the Part I Examination, or after exemption from the Part I as laid down in Regulation 1.2.
- 2.1.2. After completing three years of mandatory training in hospital posts recognised by the PGIM as training posts.
- 2.1.2. (a) The Mandatory Training Period:
  - (1) 18 months in General Surgery
  - (2) 06 months in Orthopaedics which must include the management of trauma
  - (3) 02 months in an Accident Service or Trauma Centre
  - (4) 02 months in Cancer Surgery
  - (5) 02 months in Thoracic Surgery
  - (6) 02 months in Neurosurgery
  - (7) 02 months in Paediatric Surgery
  - (8) 01 month in Urology
  - (9) 01 month in Critical Care (in an Intensive Care Unit)
- Note (1) The 18 months in General Surgery consist of an obligatory continuous period of one year in one surgical unit. The balance 06 months may be spent in another unit.
- Note (2) A candidate may apply for exemption from the General Surgical training upto a maximum of 06 months provided that he has completed 12 months or more of a general surgical appointment in a recognised post prior to the obtaining of the M.S. Part I. Approval for such exemption would be at the discretion of the Board of Study and should be obtained prior to the commencement of the appointment.
- Note (3) A candidate possessing the degree of M.Phil (surgery or related subject) could apply for 12 months exemption from the General Surgical training provided the supervising surgeon certifies that the candidate has had sufficient equivalent training in General Surgery whilst conducting research subject to approval by the Board of Study.
- Note (4) The mandatory period of training must be confirmed by a declaration by the candidate and certified by the consultant.

2.1.2. (b) Hospital posts recognised by the PGIM as training posts.

Posts recognised for the mandatory training period are in the Teaching Hospitals of Sri Lanka. These are:

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- (1) The General Hospital, Colombo
- (2) The Lady Ridgeway Children's Hospital, Colombo
- (3) The Colombo North General Hospital, Ragama
- (4) The Sri Jayawardenapura General Hospital, Thalpathpitiya
- (5) The Peradeniya Teaching Hospital, Peradeniya
- (6) The General Hospital, Kandy.
- (7) The Karapitiya Teaching Hospital, Galle.
- (8) The General Hospital, Jaffina.
- 2.1.3. Has presented a Case Book of 10 cases prepared according to a format approved by the PGIM.
- 2.1.4. Infringement of the Regulations.

The Board of Study may refuse to admit, or to proceed with, the examination of any candidate who infringes any of the Regulations, or who is considered by the examiners to be guilty of behaviour prejudical to the proper conduct of the examination.

# 2.1.5. Exemptions

Candidates with recognised foreign specialist qualifications who wish to claim exemption for any period or periods of the clinical training programme may apply with documetation duly certified by the Consultant and/or certifying authority. Such applications will be scrutinised by the Board of Study and the recommendations of the Board of Study and the Board of Management will be final.

- 2.2. SCOPE AND CONTENT OF THE EXAMINATION Candidates are advised to refer to the handbook published by the PGIM.
- 2.3. EXAMINATION PROCEDURE

The examination consists of written (theory) papers, clinical examination and viva voce (oral).

- 2.3.1. The written papers consist of two papers, each lasting two hours. There will be two questions in each paper both of which must be answered.
- 2.3.2. The clinical examination consists of a 50 minute session for the long case, (half an hour for the examination of the patient and 20 minutes for presentation) and a 20 minute session for the short cases.
- 2.3.3. In the viva voce examination there will be orals in each of the following subjects:
   (1) Operative surgery and surgical topics.
  - (2) Surgical Pathology.
  - (3) Management of surgical problems, clinical problems and clinical research.

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# 2.4 REPRESENTATION

Under no circumstance should representations with regard to the conduct of the examination be made to an examiner.

# 2.5. THE AWARD OF THE DEGREE OF M.S. (SURGERY) COLOMBO

A candidate who has successfully completed the Part II examination and complied with all the requirements under Regulations (1) and (2) is entitled to the award of the degree of M.S. (Surgery) Colombo.

# 3. Board Certification as a Specialist

Board certification as a specialist requires in addition to the MS (Surgery) degree, the satisfactory completion of a period of training in Sri Lanka and abroad.

- 3.1. In the case of the speciality of General Surgery, this will be a period of two years, one year of which will be as a Senior Registrar in one of the Teaching Hospitals of Sri Lanka, and the other in an approved institution abroad.
- 3.2. In the case of other specialities in Surgery, the period of training would be different and longer.
- in Gastro enterology, Paediatric, Plastic, Orthopaedic, Urology Thoracic and Vascular a three year period of satisfactory training in a specialised unit in the respective disciplines is required, at least one year of which should be in an approved institution abroad, and the balance in a Teaching Hospital in Sri Lanka.
- in Neuro Surgery and Cardiac Thoracic Surgery, a four year period of satisfactory training in a specialised unit in the respective discipline is required, at least 2 years of which should be in an approved Institution abroad, and the balance in an approved unit in a Teaching Hospital in Sri Lanka.
- 3.3. On satisfactory completion of the appropriate period of training in the respective disciplines after completion of the Part II the trainee could apply for Board Certification in the speciality.

# LIBRARY OF THE POSTGRADUATE INSTITUTE OF MEDICINE

#### SITUATION

General Hospital, Kynsey Road, Colombo 8.

#### MEMBERSHIP

Reading membership is open to medical officers registered with the Sri Lanka Medical Council preparing for postgraduate examinations conducted by the Institute.

Application for membership must be made on the approved form with 2 passport size photographs of the applicant and submitted to Director, PGIM. Application forms must be obtained from Senior Assistant Librarian of the PGIM.

The annual membership fee for general members, who are given facilities to read in the Library only, is Rs. 100.00. PGIM trainees may borrow books on payment of a refundable library deposit of Rs. 2,500.00. Free membership is granted to the teachers of the PGIM, on the recommendation of the respective Boards of Study. The fees and deposit referred to above are liable to be revised from time to time.

#### LIBRARY HOURS

 Monday-Friday
 8.30 a.m.—7.30 p.m.

 Saturday
 8.30 a.m.—1.00 p.m.

 2.00 p.m.—6.00 p.m.

 Sunday
 8.30 a.m.—1.00 p.m.

The library is closed on all Public Holidays.

#### GENERAL RULES

- (a) Members are entitled to two reader tickets and one library membership card. These tickets are not transferable.
- (b) Members may enrol once and possess only one set of tickets during their year of enrolment.
- (c) Membership should be renewed within three months of the date of expiry. Membership tickets should be surrendered for this purpose.
- (d) Any change of address of the reader should be notified to the Librarian.
- (e) Members should bring their library membership card with them when they visit the Library. Only members of the Library are entitled to make use of library facilities.
- (f) Borrowing members who wish to withdraw their library membership and obtain the refund of Rs. 2,500,00 should submit a request to the Librarian along with the receipt issued by the Assistant Bursar. The membership tickets should be surrendered for this purpose.

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- (g) Member's personal property-The PGIM Library regrets that it cannot allow any member to take personal property into the Library. Facilities are available to leave such items at the Reception Desk.
- (h) Overdue/damaged/lost materials Upto two weeks, a fine of Re. 1.00 per day will be levied on all books not returned by the due date. From the 15th day onwards, the fine will be Rs. 5.00 per day. If a book is damaged or lost, it should be replaced or the cost of the book plus 25% of the cost must be paid to the Library.
- (i) Lost tickets- Replacements for lost tickets may be obtained after one month of the loss of such tickets on payment of a nominal fee of Re. 1.00. Members are warned that books issued on lost tickets remain the responsibility of the member in whose name the tickets were issued.

These rules may be subject to amendment from time to time.

# LIBRARY FACILITIES

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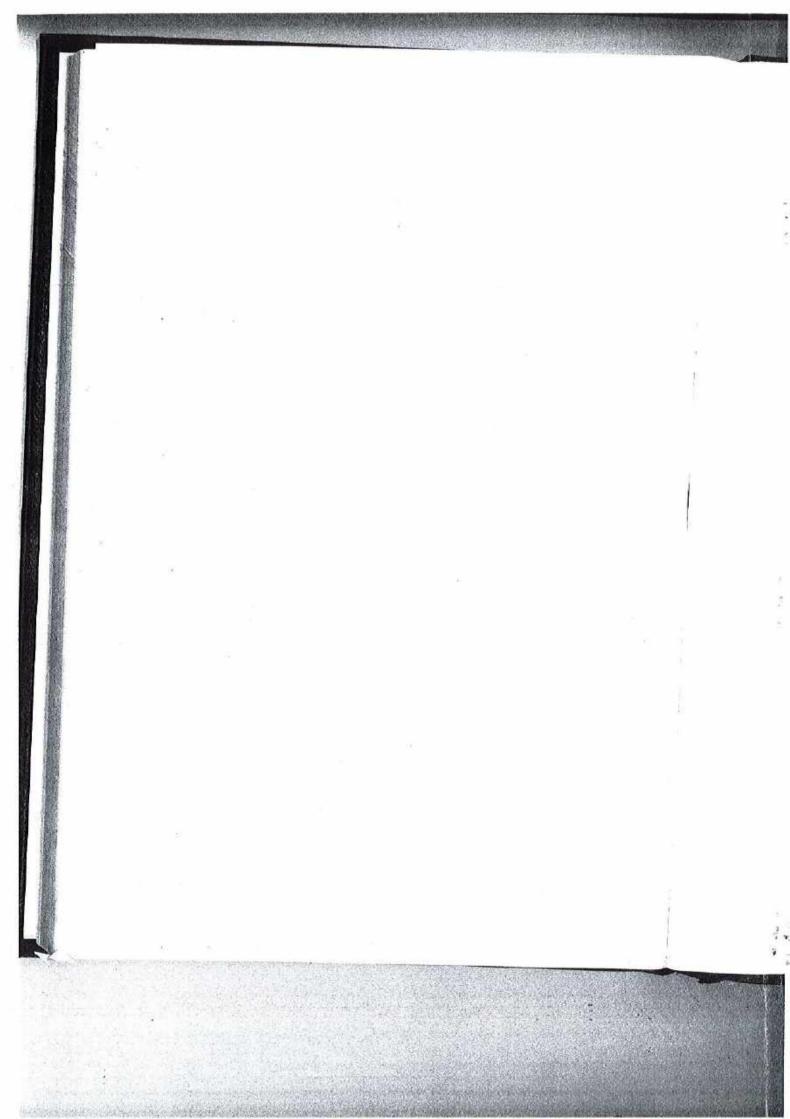
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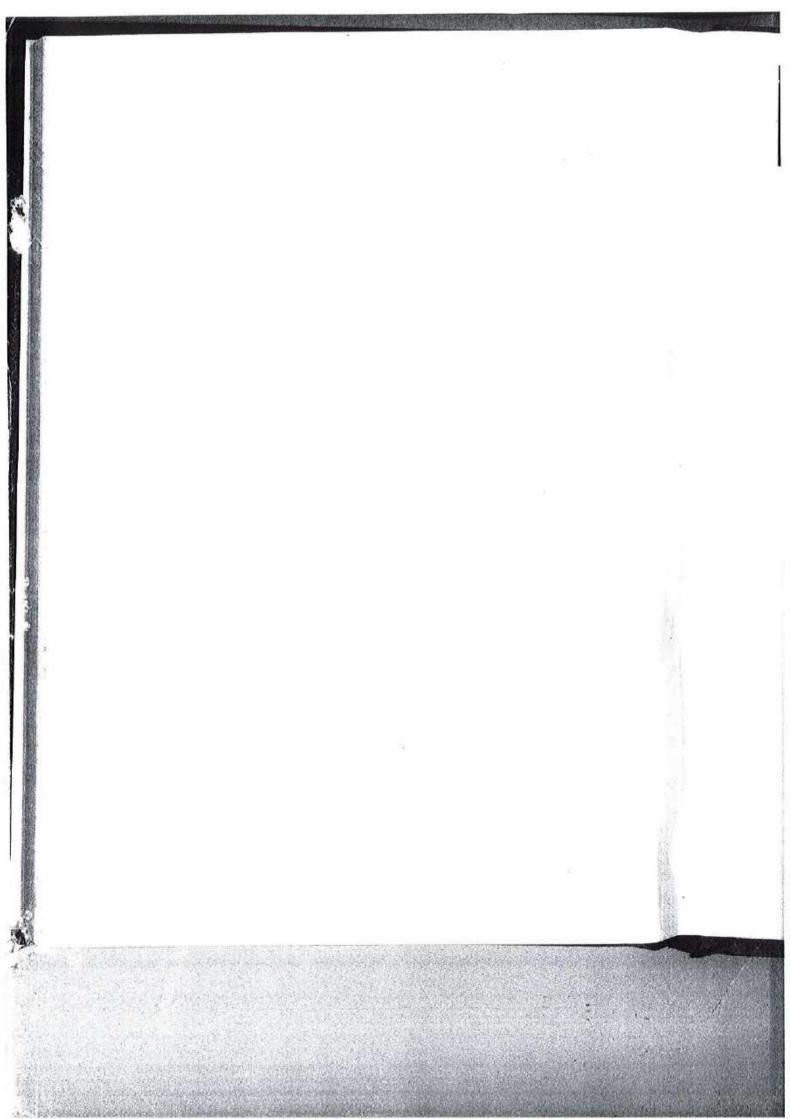
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- (a) Loan of Books Books which are not classified as permanent reference, may be borrowed for a period of one week by the general members and two weeks by the teachers of the PGIM. Books loaned may be renewed once at the end of this period if they are not in demand.
- (b) Periodicals-At present, only reference facilities are made available to members as far as the periodical literature is concerned.
- (c) Inter-library loans-Books and back issues of periodicals which are not available in this Library may be borrowed from another Library by making a request to the Librarian. These books and periodicals should be returned within one week from the date of issue to the member.
- (d) Photocopying of library material-This facility is available to the members of the Library on payment of a nominal fee.
- (e) Photocopies of journal articles from other libraries and WHO-A member who is in need of a journal article which is not available in the PGIM Library can make a requst to the PGIM Library, giving details, such as title, volume number, month and year of the journal and title and author of the article needed. An attempt will be made to supply a photocopy or the article from another Library or the WHO Regional Office in New Delhi.
- (f) MEDLINE searches-Provided free of charge to members of the Library with the aid of WHO.

The Director has appointed an ad hoc committee to advise him when advice is required on library matters pertaining to the Boards of Study. It consists of a representative from each Board of Study.





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