

Academic

**THE TAMIL NADU
Dr. M.G.R. MEDICAL UNIVERSITY
CHENNAI - 600 032.
1999**



**REGULATIONS FOR THE
POST-GRADUATE DIPLOMA COURSES
IN MEDICINE AND SURGERY**

**REGULATIONS FOR THE
POST-GRADUATE DIPLOMA COURSES
IN MEDICINE AND SURGERY
(Modified upto April 1999)**

**THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY
CHENNAI**

**POST - GRADUATE DIPLOMA COURSES IN
MEDICINE AND SURGERY**

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2. Diploma in Child Health (D.C.H.)	28
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N.B.: - The core syllabus furnished in this book-let is only OUT
LINE.

The Post-Graduate Students should read exhaustively the
Text-Books, Reference Books, Journals etc. for a thorough
understanding of the subject.

**THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY
CHENNAI**

**Regulations for the P.G. Diploma Courses in
Medicine and Surgery
(MODIFIED UPTO 31ST MAY 1999)**

In exercise of the powers conferred by Section 44 of the Tamil Nadu Dr. M.G.R. Medical University, Chennai, Act 1987 (Tamilnadu Act 37 of 1987), the standing Academic Board of the Tamil Nadu Dr. M.G.R. Medical University hereby makes the following regulations.

SHORT TITLE AND COMMENCEMENT:

These regulations shall be called "THE REGULATIONS FOR THE POST-GRADUATE DIPLOMA COURSES IN MEDICINE AND SURGERY OF THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY. CHENNAI."

They shall come into force from the Academic year 1993-94.

The regulations framed are subject to modification made by the standing Academic Board from time to time.

REGULATIONS
Post-Graduate Diploma Courses
REGISTRATION

A candidate admitted into Post-Graduate diploma course in any of the affiliated Institutions of the Tamil Nadu Dr. M.G.R. Medical University, Chennai shall register with the University by remitting the prescribed fees along with the application form for registration duly filled in and forwarded to the Controller of Examinations of this University through the Head of the affiliated institution within the stipulated date.

The candidate's name must be registered in the University within 3 months from the date of his/her admission.

ELIGIBILITY

Candidates for admission to the first year of the Post-Graduate Diploma courses shall be required to possess the following qualifications.

a) He/she having qualified for the M.B.B.S. degree of this University or any other University recognised as equivalent thereto by the authority of this University and the Indian Medical council and obtained permanent registration from any of the State Medical councils.

b) The admitting authorities of the affiliated institutions will strictly ensure that every candidate admitted to the Post-Graduate courses has obtained permanent registration certificate from any one of the State Medical councils.

RECOGNITION FEE

Candidate who have passed the M.B.B.S. Degree from any other University shall remit a recognition fee as prescribed along with the stipulated registration fees.

DURATION OF THE COURSE

A) The period of certified study and training for the Post-Graduate Diploma courses shall be two Academic Years for the award of the degree.

B) No exemption shall be given from the period of study and training.

COMMENCEMENT OF THE COURSE

The academic year for Post-Graduate Diploma courses shall commence from April 1st of the academic year.

CUT-OFF DATES (EXPLANATION VIDE ANNEXURE)

- a) June 30th of the academic year
- b) July 1st to December 31st of the Academic year
- c) January 1st to March 31st of the Academic year.

COMMENCEMENT OF THE EXAMINATION

There shall be two University examinations in an academic year. April 1st / October 1st. If the date of commencement of the examination falls on Saturdays, Sundays or declared Public Holidays, the examination shall begin on the next working day.

WORKING DAYS IN AN ACADEMIC YEAR

Each academic year shall consist of not less than 200 working days.

ATTENDANCE REQUIREMENTS FOR ADMISSION TO EXAMINATIONS

No candidate shall be permitted to appear for the Examination unless he/she put in 80% attendance during his/her period of study

and training in the affiliated institution recognised by this University and produces the necessary certificate of study, attendance and progress from the Head of the Institution.

Separate attendance for Applied Basic Sciences (Anatomy, Physiology, Bio-Chemistry, Pharmacology, Pathology, Microbiology) to be produced by the HOD.

Students should undergo training for a (nine) continuous calendar months in an academic year. The candidate who do not appear for examinations due to lack of attendance he/she be permitted to appear for the subsequent examinations if the candidate has satisfied to attendance requirements.

NUMBER OF APPEARANCE (S) IN EXAMINATION OF FAILED CANDIDATES

A candidate registered for Post-graduate Diploma Course must qualify in the examination within six attempts in 3 years after the completion of the course.

MAINTENANCE OF LOG BOOK

1. Every Post-graduate Diploma candidate shall maintain a record of skills he has acquired during the two year training period certified by the various Heads of Departments he has undergone training.
2. The candidates should also be required to participate in the teaching and training programme of undergraduate students.
3. In addition, the Head of the Department shall involve their post-graduate candidates in Seminars, Journal Clubs, Group

discussions and participation in clinical, clinico - pathological conferences.

4. The Head of the Department shall scrutinize the Log Book once in every three months.

5. At the end of the course, the candidate should summarise the contents and get the Log Book certified by the Head of the Department.

6. The Log Book should be submitted at the time of practical examination for the scrutiny of the Board of Examiners.

MIGRATION/TRANSFER OF CANDIDATES

1. Migration/Transfer of candidates from one recognised medical college to another recognised medical college of this University or from another University shall not be granted unless a NO OBJECTION CERTIFICATE is obtained from the Medical council of India.

2. The provision of combination of attendance shall be granted to a transferee for admission to the examinations of this University on satisfactory fulfillment of the regulations of this University.

RE-ADMISSION AFTER BREAK OF STUDY

Candidates having a break of study of 5 years and above from the date of first discontinuance and more than two spells of break will not be considered for re-admission.

The five years period of break of study shall be calculated from the date of first discontinuance of the candidate to the course for the subsequent spells of break of studies.

If any candidate who discontinued the course, due to various reasons and the break of study of the candidate is for more than 6 months, the candidate should get prior permission from the University for continuing the course if the vacancy remains unfilled.

A candidate having a break of study shall be re-admitted after satisfactory fulfillment of the regulations of the University at the commencement of an academic year only and shall undergo the full duration of the course with no exemption in the period of study and will be permitted to appear for the examinations as prescribed in the regulations.

If the candidate's name is not registered in the University within 3 months from the date of his/her admission permission for re-admission for such candidate will not be issued from the University.

POST - GRADUATE DIPLOMA COURSES IN MEDICINE AND SURGERY

Branches of Study

Candidates shall be examinationed in one of the following branches:

1. Diploma in Obstetrics and Gynaecology (D.G.O.)
2. Diploma in Child Health (D.C.H.)
3. Diploma in Tuberculosis and Chest Diseases (D.T.C.D.)
4. Diploma in Sexually Transmitted Diseases (D.S.T.D.)*
5. Diploma in Dermatology (D.D.)
6. Diploma in Medical Radio Diagnosis (D.M.R.D.)
7. Diploma in Medical Radio Therapy (D.M.R.T.)
8. Diploma in Anesthesiology (D.A.)
9. Diploma in Oto-Rhino Laryngology (D.L.O.)
10. Diploma in Orthopaedics (D. Ortho)
11. Diploma in Clinical Pathology (D.C.P.)
12. Diploma in Ophthalmology (D.O.)
13. Diploma in Psychological Medicine (D.P.M.)
14. Diploma in Public Health (D.P.H.)
15. Diploma in Leprosy (D. Lep)
16. Diploma in Diabetology (D. Diabet.)
17. Diploma in Physical Medicine and Rehabilitation (Dip. Phy. Med.)

SCHEME OF EXAMINATION (Model)**Distribution of Marks:**

Theory	Title	Duration in hours	Max. Marks
Paper-I		3	100
Paper-II		3	100
Paper-III		3	100
	Total		300

Clinical Examinations:

	No. of cases	Duration	Marks
1. Long Case	One	45 Mts.	80
2. Shor Cases	Two	30 Mts.	70
	Total		150

Practicals**Spotting****Slide/Specimen/Chart/X-Ray/Instrument**

Scan					
(1)	(1)	(1)	(1)	(1)	(5 x 2)
					10
Orals					40
					Total
					50

Marks Qualifying for a pass:

50% of marks in the University Theory Examination : 150/300

50% of marks in the University Clinical Examination : 75/150

50% of marks in the aggregate of Theory/Clinical : 250/500

Practical/Oral Examinations

Maximum number of candidates to be examined per day : 8

ANNEXURE**CUT OF DATES - EXPLANATION**

The candidates admitted and registered from 1st April to 30th June shall take up their regular I year/Part-I Examination during March/April of the next year.

The candidates admitted from 1st July upto 31st December shall take up their regular 1st Year/Part-I Examination during the September / October of the subsequent year.

The candidates who have joined on 1st January to 31st March shall register for the year of the selection, but they shall undergo the course along with the subsequent year batch of students. They shall be eligible to appear for Part II or final examination one year after the Part I examination.

**POST-GRADUATE DIPLOMA IN
OBSTETRICS & GYNAECOLOGY)
(D.G.O.)**

DETAILS OF TRAINING:

FIRST YEAR:

Labour Ward	:	3 months
Antenatal Ward/OPD	:	3 months
Gynaecology Ward/OPD	:	3 months
Neonatology Ward	:	1 month
Pathology - Cytology	:	1 month
Family Welfare	:	15 days
Community Obstetrics	:	15 days
Total	:	12 months

SECOND YEAR:

Labour Ward	:	3 months
Antenatal Ward/OPD	:	3 months
Gynaecology Ward/OPD	:	3 months
Anesthesia Department	:	15 days
Oncology Department	:	1 month
Medical Genetics Department	:	15 days
Sonar	:	15 days
Endoscopy	:	15 days
Total	:	12 months

THEORY:

Paper-I Basic Science related to Obstetrics and Gynaecology

Paper-II Obstetrics including Neonatology

Paper-III Gynaecology including Family Welfare

CLINICAL EXAMINATION:

Long Case - One - Obstetrics

Short Case - Two - Gynaecology

SCHEME OF EXAMINATION

Distribution of Marks:

Theory	Title	Duration in hours	Max. Marks
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Part-I			
Paper-I		3	100

Marks Qualifying for a pass
in Part I in DGO 50% marks
in this University. Theory
Examination 50/100

Part-II		3	100
Paper-I			
Paper-II		3	100
Total			200

Clinical Examinations:

	No. of cases	Duration	Marks
1. Long Case	One	45 Mts.	80
2. Short Cases	Two	30 Mts.	70
Total			150

Practicals
Spotting

Slide/Specimens	(5 x 2)		
(3) (2)		:	10
Orals		:	40
Total			50

Marks Qualifying for a pass: in Part II DGO

50% marks in this University Theory Examination : 50/100

50% of marks in the University Theory Examination : 100/200

50% of marks in the University Clinical Examination : 75/150

50% of marks in the aggregate of Theory/Clinical/
Practical/Oral Examinations : 200/400

Maximum number of candidates to be examined per day : 8

Recommended List of Books and Journals

(Only a short list has been provided. The Post-graduate candidate should widen his knowledge by exhaustive reading)

TEXT BOOKS (Latest Editions)

1. Williams Obstetrics
2. Jeffcoate's Principles of Gynaecology
3. Post graduate Obstetrics & Gynaecology - edited by Bhasker Rao
4. Text book of Obstetrics & Gynaecology for Post-graduates - Dewhurst
5. Text book Gynecological Pathology - Novak.
6. Operative Gynaecology - Te Linde's/Bonney/Show
7. Progress in obstetrics & Gynaecology
8. Recent Advance in Obstetrics & Gynaecology
9. Year book in Obstetrics & Gynaecology
10. Diagnostic Ultrasound as applied to Obstetrics & Gynaecology- Sabbagha

REFERENCE BOOKS (LATEST EDITIONS)

1. Clinical Gynaecologic Endocrinology and Infertility - Speroff Glass and Kase.

2. Care of the Newborn - Meharban Singh
3. Harrison's Textbook of Medicine (Two Volumes)

JOURNALS

1. Journal of Obstetrics & Gynaecology of India
2. British Journal of Obstetrics & Gynaecology.
3. American Journal of Obstetrics & Gynaecology
4. Obstetrics & Gynaecological Surgery
5. Contraception
6. Obstetrics & Gynaecology (Green Journal)
7. Fertility and Sterility
8. Clinical Obstetrics & Gynaecology
9. British Medical Journal
10. Lancet.

SYLLABUS

D.G.O. OBSTETRICS & GYNECOLOGY

APPLIED BASIC SCIENCES

ANATOMY

PART I

PAPER I

1. EMBRYOLOGY

Development of Foetus and Placenta - various congenital anomalies.

2. Anatomy

- (i) Anatomy of Hypothalamus - pituitary and relationship with menstrual ovarian cycles.
- (ii) Pelvic Innervation
- (iii) Anatomy of abdominal wall
- (iv) Bony pelvis and pelvic floor
- (v) Development and Anatomy of female genital organs
- (vi) Development and anatomy of urinary tract and abnormal variations.
- (vii) Lymphatic drainage - General * Pelvic lymph nodes with special reference to cancer of the female genital tract.
- (viii) Anatomy of lower alimentary tract.
- (ix) Breasts-anatomy, Blood supply, innervation & lymphatic drainage.

3. PHYSIOLOGY

- (i) Fluid Balance
Body water and external & internal fluid exchange.
- (ii) Renal function
Causes of oedema & composition of oedema fluid
- (iii) Blood
Erythropoiesis, Iron metabolism Rh factor, Blood groups & coagulation of blood.
- (iv) Heart
Cardiac output, Blood pressure, Reaction of body to haemorrhage, Shock mechanism & production.
- (v) Foetal circulation and Respiration.
- (vi) Liver function
Hepatic failure.
- (vii) Physiology of pregnancy.
Pregnancy diagnosis Tests.
- (viii) Mammary Glands & Lactation
- (ix) Uterus
Growth & Contractility of uterus.
- (x) Hormones - Pituitary, Adrenal, Thyroid Ovarian Hormones.
Ovarian & Menstrual cycles.
- (xi) Nutrition
Normal diet.
Nutritional requirements of special groups.

4. BIOCHEMISTRY

- (i) Haemoglobin
Metabolism of Iron, Anaemia, Abnormal Haemoglobin

- (ii) Bile pigments
Circulation of Bile pigments & laboratory investigations for Jaundice.
- (iii) Carbohydrate metabolism
Diabetes, G.T.T. & Glycogen storage disease.
- (iv) Fat metabolism
Disorders of Fat metabolism & Obesity.
- (v) Protein metabolism
Value of plasma proteins & Amino acidurins.
- (vi) Normal & disorders of hormone metabolism, Ovarian tumours, other steroid Hormones, Insulin, thyroxine, Parathormone & Posterior pituitary hormones, placental Hormones.
- (vii) Fluid & Electrolyte balance.

5. PATHOLOGY

- (i) Menstruation
Normal Histology of Ovary & Endometrium
Endometrial pathology.
- (ii) Pathology of Abortions
Genetic factors, Hormonal factors & Placental pathology.
- (iii) Amniocentesis
 - Significance of Alpha feto proteins
 - Chorion villous sampling.
- (iv) Placenta
Placental adhesions in P.P.H., Diseases of Placenta abnormalities of implantation & New Growths.
- (v) Trophoblast
Ventricular mole, Chorio adenoma destruens, & Chorio varcinoma.

- (vi) Cervix
Histology, Benign, Precancerous & malignant lesions of cervix & effects of RT.
- (vii) Vaginal Cytology: in Obstetrics & Gynaecology
Hormonal pattern & cancer screening.
- (viii) Endometrium
Hyperplasia & carcinoma
- (ix) Vagina
Inflammations, Benign & Malignant Lesions.
- (x) Vulva
Inflammations & Benign & Malignant Lesions.
- (xi) Pelvic Endometriosis
- (xii) Pelvic Inflammatory Disease
- (xiii) Ovary
Benign & Malignant tumours.
- (xiv) Genetic & Sex Anomalies.
In abortion, Primary Amenorrhoea congenital anomalies.

MICROBIOLOGY

- (i) Disinfection & Sterilization.
- (ii) Immunology
 - Antigen Antibody reaction
 - Immunity & Hypersensitivity.
 - Antibiotic Sensitivity.
- (iii) Bacteria
 - Classification
 - Microscopic Examination
 - Culture.

- (iv) Infections in Obstetrics & Gynaecology
 - Gram negative Infections
 - STD
 - Genital TB
- (v) Vaginal Infections
 - TV
 - Monibia.
- (vi) Uterus
 - Specific to Hepatitis
 - AIDS - HIV Infection.
 - Torch Infection.

PHARMACOLOGY

- (i) Cordial glycosides and vaso dilatation & Vaso Constriction.
- (ii) Haematinics Adjuncts to Iron therapy Role of cynocobalamine.
- (iii) Diuretics
- (iv) Hormones : Ovarian & Placental Hormones
Male & Female Sex hormones.
- (v) Antihyper Tensives.
- (vi) Thyroid & Iodine
- (vii) Antibiotics
- (viii) Oral Pills.
- (ix) Other Hormones:
 - Thyroid, Iodine, Parathyroid & Calcium.
 - Insulin & Oral Anti diabetics drugs.
 - Adrenal cortical hormones.

- (x) Oxytocics
Ergot & Oxytocin
- (xi) Prosta glandins
- Use in induction of Abortion & Labour.
- (xii) Emetics, Antacids, Digestartis, Vitamins & Laxatives.
- (xiv) Cytotoxic drugs
- (xv) Tevatogenic drugs.
- (xvi) Drugs acting on Autonomic Nervous system & muscle relaxants.

OBSTETRICS & NEONATOLOGY

PART II PAPER-I

1. SPONTANEOUS LABOUR & DELIVERY
 - Parturition: Bio molecular & Physiologic process.
 - Mechanism of Normal labour in Occiput presentation.
 - Puerperium.
2. MANAGEMENT OF NORMAL PREGNANCY
 - Prenatal Care.
 - Technics to evaluate Fetal health.
 - Conduct of Normal labour & delivery.
 - Analgesia & Anaesthesia.
3. ABNORMALITIES OF LABOUR & DELIVERY
 - Dystocia due to abnormalities of the expulsive forces.
 - Precipitate labour.
 - Dystocia due to abnormalities in presentation position & development of fetus
 - Dystocia due to pelvic contraction.
 - Dystocia due to soft tissue abnormalities of the Reproductive tract.

- Techniques for Breech delivery.
- Injuries to the birth canal.
- Abnormalities of the third stage of labour.

4. OPERATIVE OBSTETRICS

- Forceps delivery & related techniques.
- Caesarean section & Caesarean hysterectomy.

5. ABNORMALITIES OF THE PUERPERIUM

- Puerperal Infection
- Other disorders of the puerperium

6. COMPLICATION OF PREGNANCY

- Abortion
- Ectopic Pregnancy
- Diseases & abnormalities of the Placenta & Fetal membranes.
- Multiple Pregnancy
- Hypertensive disorders in Pregnancy
- Obstetrical Haemorrhage
- Abnormalities of the Reproductive tract
- Preterm & Post term retardation
- Intra Uterine growth retardation
- Isoimmunization due to Rh & other Blood group incompatibilities.

7. MEDICAL GENETICS IN OBSTETRICS

- Pattern of Inheritance of Genetic disorders
- Genetic Factors in Recurrent abortions
- Congenital Malformations & Inherited disorders
- Prenatal Diagnosis of Genetic Defects
- Sex determination & Sex selection - ethical issues
- Puberty testing
- Pregnancy in a woman with genetic disorders - investigation and management
- Teratogenesis

8. ENDOCRINOLOGY IN OBSTETRICS

- Pregestational & Gestational Diabetes Mellitus
- Thyrotoxicosis & Hypothyroidism in pregnancy
- Placental Hormones
- Endocrinology of Parturition
- Endocrine emergencies in obstetrics practice
- Hormonal abuse in early Pregnancy

9. NEONATOLOGY

- Diseases of Fetus & New Born
- Infections of the Fetus & New Born
- Injuries of the Fetus & New Born
- Congenital abnormalities

GYNAECOLOGY & FAMILY PLANNING

PAPER-II

1. BREAST PREVENTION & DISEASES

- Lactation
- Galactorrhoea
- Ovulation & Menstruation in relation to lactation
- Abnormalities in breast development & function

2. GENITAL TRACT

- Malformations & Maldevelopment of Genital tract
- Intersex

3. ABORTIONS

- Clinical Types
- Missed Abortion
- Septic abortion
- Medical Termination of pregnancy

4. ECTOPIC PREGNANCY

- Types
- Conservative management of Tubal pregnancy

5. TROPHOBLASTIC TUMORS

- Vascular Mole
- Chorionoma Deotureus
- Choriocarcuoma
- Chemotherapy

6. INJURIES TO GENITAL TRACT

Foreign bodies in Genital tract

- Direct trauma
- Burno
- Complete perneal tear
- Lacerations of cervix
- Rupture & perforation of uterus
- Haematomas: Vulva, Vagina, Broad ligament
- Genital Tract Fistulas
- Acquired atresias & Sterosis of Genital tract.

7. UTERINE DISPLACEMENTS

- Utero vaginal prolapse
- Other displacements
- Retrovected gravid uterus
- Chronic Inversion

8. TORSION OF PELVIC ORGANS

- Uterus
- Myoina
- Hydrosalpix
- Torsion Overian Cyst

9. INFECTIONS OF GENITAL TRACT

- Individual organs
- Pelvic Inflammatory disease
- Sexually Transmitted Disease
- Genital Tuberculosis

10. EPITHELIAL ABNORMALITIES OF GENITAL TRACT

- Vulva - Dystiophies
- Vagina - Basal cell pyperkuplasta * Ultra garthelial Neoplasta

- Cervix - Erosion
 - Basal cell hyperplasia
 - Dysplasias
 - Cervical Ultra epithelial Neoplasia
- Uterine Corpus - Endometrial hyperplasias
 - Squamous cell Metaplasia

11. ENDOMETRIOSIS & ADENOMYOSIS

VULVA

- Developmental abnormalities
- Injury
- Vascular changes
- Infections
- Retention cysts
- Innocent Neoplasms
- Malignant Neoplasms
- Enlargement of Bartholin's Gland

13. VAGINA

- Infections
- Vaginal cysts
- Benign & Malignant Neoplasms

14. CERVIX

Infections

- Innocent Neoplasms
- CARCINOMA CERVIX

15. BODY OF UTERUS

- Dysmenorrhoea
- Innocent Neoplasms - FIBROID UTERUS & OTHERS
- Malignant Neoplasms - CARCINOMA OF ENDOMETRIUM
- SARCOMA etc.

16. FALLOPIAN TUBE

- Innocent Neoplasms & Malignant Neoplasms

17. OVARY

- Cysts

- Benign Ovarian Tumours
- Malignant Ovarian Tumours

18. CLINICAL ENDOCRINOLOGY

- Ovary from conception of anescence
- Mariopause
- Menorrhoea
- Hirsutism
- Dysfunctional Uterine bleeding
- Prostaglandins
- Abnormal Puberty & Growth Problems
- Obesity
- Steroid contraception

19. INFERTILITY

- Sperm & Egg Transport Fertilisation & implantation
- Investigation of the Infertile couple
- Endometriosis & Infertility
- Induction of Ovulation
- Assisted Reproductive techniques

20. MEDICAL GENETICS IN GYNAECOLOGY

Sex determination, asexuality & inter sexuality

21. GYNAECOLOGICAL ENDOSCOPY

- Scope of Laparoscopy
- Scope of Hysteroscopy
- Scope of Colposcopy
- Scope of Salpingoscopy
- Scope of Culdoscopy
- Scope of Chorionoscopy & Chorion Villus sampling

22. CONTRACEPTION

- Temporary Methods
- Permanent Methods
- Latest trends in Contraception

Diploma in Child Health (D.C.H.)

DURATION - 2 YEARS

I YEAR TRAINING PROGRAMME

Departments	Duration
General Paediatrics COMMUNITY PAEDIATRICS	6 months
P.H.C. / Community Hospitals (College affiliated)	2 months
Perinatal Paediatrics & Neonatology	4 months

II YEAR TRAINING PROGRAMME

Department	Duration
Paediatric Gastroentrology	: 1 month
Paediatric Cardiology	: 1 month
Paediatric Neurology	: 1 month
Peripheral Paediatric Clinic (OR)	
M.C.H. Centre / Visit to Centres for Handicapped Children	: 1 month
General Paediatrics Unit	: 4 months
Intensive Care Paediatrics	: 1 month
School Health Services	: 15 days
Medical Genetics	: 15 days
Nutrition	: 1 month

Clinical Pathology	:	15 days
Paediatric Surgery	:	15 days
		12 months

SCHEME OF EXAMINATION

Distribution of Marks:

Theory	Title	Duration in hours	Max. Marks
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Part-I

Paper-I	Basic Sciences related to Paediatrics	3	100
Marks Qualifying for a pass in Part I in DCH 50% marks in this University Theory Examination 50/100.			

Part-II

Paper-I	Neonatology, Developmental Paediatrics, community Paediatrics	3	100
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Paper-II	Clinical Paediatrics	3	100
Total			200

Clinical Examinations:

	No. of cases	Duration	Marks
1. Long Case	One	45 Mts.	80
2. Short Cases	Two	30 Mts.	70
Total			150

Practicals**Spotting**

Slide/Specimens	(5 x 2)		
(3)	(2)	:	10
Orals		:	40
	Total		50

Marks Qualifying for a pass in Part II DCH

50% of marks in the University Theory Examination : 100/200

50% of marks in the University Clinical Examination : 75/150

50% of marks in the aggregate of Theory/Clinical/
Practical/Oral Examinations : 200/400

Maximum number of candidates to be examined per day : 8

D.C.H.**PAPER-I****BASIC SCIENCES RELATED TO PAEDIATRICS**

1. Fetal anatomy and Physiology
2. Developmental anatomy of organ and Organ System
3. Neonatal adaptation/Physiological consideration
4. Fluid and Electrolyte Balance in Neonatal Period, infancy and childhood.
5. Pharmacology of drugs used in Paediatric practice
6. Pathology of Rheumatic heart disease, Nephrotic Syndrome, Acute glomerulonephritis, Liver Disorders, Lymphomas, Tuberculosis of Child-hood.

7. Serological and Microbiological tests in paediatrics
8. Life cycle of Hemoparasites, Intestinal parasites
9. Diagnostic Virology

PAPER-II

NEONATOLOGY, DEVELOPMENTAL PAEDIATRICS PREVENTIVE AND SOCIAL PAEDIATRICS

1. Developmental Paediatrics
2. Preventive Paediatrics and Epidemiology
3. Prenatal disturbances
4. The Fetus and the neonatal Infants (Neonatology)

PAPER-III

CLINICAL PAEDIATRICS

1. Nutrition and Nutritional disorders
2. General considerations in the care of sick children
3. Inborn errors of metabolism
4. Immunity, Allergy and Related diseases
5. Infectious diseases
6. The digestive system
7. The respiratory system
8. Metabolic disorders
9. Paediatric Gynecology and Adolescent Issues
10. Convulsive disorders
11. The Bones and Joints

12. The skin
13. Paediatric Ophthalmology
14. Unclassified diseases
15. Radiation therapy
16. Poisoning from Food, Drugs and Chemicals Pollutants,
Venmos Bites, Mammalian Bites
17. The Cardiovascular system
18. Diseases of the Blood
19. Neoplasms and Neoplasm like Leisions
20. The Urinary system
21. The Endocrine system
22. The Nervous System

**POST-GRADUATE DIPLOMA IN
TUBERCULOSIS AND CHEST DISEASES
(D.T.C.D.)**

Details of Training:

FIRST YEAR:

T.B. & Chest Disease Ward	- 3 months
Cardiology	- 1 month
Thoracic Surgical Ward	- 1 month
Intensive Care Ward	- 1 month
Infectious Diseases & STD Ward	- 15 days
Radiology Unit	- 15 days
Skin and Hansen Ward	- 15 days
Thoracic Medicine Ward	- 1½ months
General Medicine Ward	- 3 months
Total	12 months

II YEAR:

T.B. & Chest Diseases Ward	- 6 months
Thoracic Medicine Ward	- 3 months
Intensive Care Ward	- 2 months
Thoracic Surgical Ward	- 1 month
Total	12 months

**POST GRADUATE DIPLOMA IN TUBERCULOSIS AND
CHEST DISEASES (D.T.C.D.)**

SCHEME OF EXAMINATION (Model)

Distribution of Marks:

Theory	Title	Duration in hours	Max. Marks
Part-I			
Paper-I	Applied Basic Sciences as application to Pulmonary Medicine Marks qualifying for a pass in Part I in DTCD 50% marks in this University Theory Examination 50/100	3	100
Pafprt-II			
Paper-I	Tuberculosis (Pulmonary and Extrapulmonary	3	100
Paper-II	Non-Tuberculosis-Chest Diseases	3	100
	Total		200

Clinical Examinations:

	No. of cases	Duration	Marks
1. Long Case	One	45 Mts.	80
2. Short Cases	Two	30 Mts.	70
		Total	150

Practicals**Spotting**

Slide/Specimen/Chart/X-Ray/Scan (Or) Pulmonary function test
(to carry out student lung
function test with
SPIROMETRY.)

(1)	(1)	(1)	(1)	(1)	(5 x 2)	10
(3)	(2)					

Orals

40

Total

50

Marks Qualifying for a pass in Part II DTCD

50% of marks in the University Theory Examination : 100/200

50% of marks in the University Clinical Examination : 75/150

50% of marks in the aggregate of Theory/Clinical : 200/400

Practical/Oral Examinations

Maximum number of candidates to be examined per day : 8

**Post Graduate Diploma Course in Tuberculosis and
Chest Diseases (D.T.C.D.)**

**RECOMMENDED BOOKS AND JOURNALS
(TEXT BOOKS)**

1. AP Fishman - Pulmonary Diseases and Disorders.
IIInd Edition Magnabull Book Company.
New York.
2. Hand Book of Physiology.
Respiratory System Volume - I.
American Physiology Society, 1985.
3. Baits DV Maclon PT Dchristee,
Respiratory Function and Diseases,
III Edition, Sandoz & Company,
Philadelphia.
4. Hand Book of Physiology,
Respiratory System Volume III
American Physiological Society 1986.
5. Regulation of Breathing Part-I and II,
M. Decker & Co., 1984.
6. Sleep and Breathing,
M. Decker & Co., 1984.
7. Hand Book of physiology,
Respiratory System Volume IV,
American Physiological Society 1937.
8. Pathology for Oxygen,

- Hardward University, U.S.A. 1984.
9. Clinical Examination Testing,
IIIrd Edition,
Sandoz Philadelphia.
10. Physiology and Medicine of Diving,
IIIrd Edition,
Best Book Binder, California, 1982.
11. Hand Book of Physiology,
Respiratory System Volume II,
American Physiological Society.
12. Acid Base - Little Brown & Co.,
Frazer and Boston, 1983.
13. Frazer and Perry, Diagnosis of Diseases of Chest
IInd Edition, W.B. Sandoz, Philadelphia.
14. Clinical Epidamology - A Basic Science for
Clinical Medicine,
Little Brown & Co., Toronto, 1985.
15. Morphegenesis of Lung Cancer,
C.R.C. Press, Florida, Vol. I & Vol. II. 1983.
16. Principles of Chest X-Ray Diagnosis,
C. Simon Ampletender Centry Crafts, 1971.
17. Pathology of the Lung,
Spencer, Oxford Personal Press, 1977.
18. Computer Tomography of Thorax
Roman Press - 1984.

19. Advanced Imaging Techniques, Volume II
Claredel Press, California - 1983.
20. Text Book of Work Physiology,
Niagra Hills, New York, 1977.
21. The Eoesonophil in Health and Diseases,
Grunec and Streton, New York - 1980.
22. Intestinal Lung Diseases,
Bercker - Philadelphia - 1988.
23. Respiratory Diseases - by Crafton & Dulgus - Blackwell.
24. The Lung Structure and function.
G.E. Costs - Blackwell.
25. Work related Lung Disorders,
G.E. Costs.

Post - Graduate Diploma in Tuberculosis & Chest Diseases (D.T.C.D)

SYLLABUS

PULMONARY TUBERCULOSIS

Introductory:

Historical review:

Bacteriology of Tuberculosis:

Acid - fast bacilli, morphology and staining and staining; types differentiation by culture methods; by virulence tests, pathogenicity; a typical strains dissociation, B.C.G. inter - relationship between human and bovine types.

PATHOLOGY OF TUBERCULOSIS:

Modes of infection; morbid histology; contact, inhalation and ingestion. Tissue changes caused by invasion with tuberculosis local, regional and generalised lesions; brochogenic, haematogenous lymphatic and contiguous spreads. Pathological lesions and human tuberculosis in Lungs, gross and histological characteristic early granulomatous tissue, fibrosis, calcification, cavity formation evolution of cavities; fresh and chronic factors determining shape, progress of retrogression. Atelectasis, massive collapse tubercular tracheobronchitis: laryngitis.

Pathology of pleura; lymphatic glands, intestines kidney testis Epididymitis and other genitourinary organs; bones; joints.

RESISTANCE AND IMMUNITY:

Resistance, natural and acquired, immunity reactions serological tests Tuberculin (Preparation of old Tuberculin and P.P.D. standardization by shok method and intractaneous method, in guinea pigs and humans). Koch's phenomenon, Allergy and tuberculosis hypersensitivity; experimental and clinical evidence. Relation between allergic reaction and immunity desensitization with tuberculin Tissue changes in allergic and non - allergic individuals.

EVALUATION OF PULMONARY TUBERCULOSIS:

Clinical forms, childhood and adult types. Ranke's stages Primary complex. Re-infection, endogenous and exogenous.

Types of lesions as reflected in x - ray pictures; exudative, productive, fibrotic and intermediary forms, Epituberculosis, acute and chronic, military tuberculosis, ch. disseminated tuberculosis latent disseminated tuberculosis.

TUBERCULOSIS IN CHILDREN:

ANATOMY OF CHEST:

Thorax, skeleton, ligaments, muscles, nerves and vessels, Lungs, pleura, mediastinum, pericardium and heart Lymph glands and lymphatics, Diaphragm. Histology of lung, bronchi, bronchioles, and alveoli, Development of Heart, lungs etc.

Surgical anatomy of chest and neck with special reference to, surgery in pulmonary tuberculosis.

PULMONARY TUBERCULOSIS

- i. Etiology of pulmonary tuberculosis.
- ii. Symptomatology of pulmonary tuberculosis - Toxic group

local group and group of symptoms referable to other organs.

iii. DIAGNOSIS:

History taking - physical examination, x - ray examination
Temperature chart - Tuberculin tests Laboratory examinations
Sputum, stomach, lavage, urine, faeces, pleural effusions cerebral spinal fluid and other secretions.

iv. DRUG Resistance and sensitivity to T.B. Drugs.

v. Pulmonary disease associated with anonymous Mycobacteria.

TREATMENT:

Introduction and general principles - Home, Ambulatory or Institutional treatment - Rest, graded exercised and conservative treatment - auxiliary surgical intervention psychology of tuberculous patients - hygienic regime - discipline and co-operation of patients, disposal of sputum prognosis.

Symptoms, significance and treatment, cough, sputum, fever, haemoptysis and gastro - intestinal disturbances Chaemo - therapeutic treatment - Occupational therapy.

Surgical treatment - Historical review of collapse therapy its discovery and improvements the principles in the rationale of collapse therapy influence of collapse on pulmonary circulation effect of tuberculous lesion and cavity - Clinical effects as seen in a patient - various of collapse therapy.

Historical review of A.P.K.P.P. Thoracoscotry, Extra pleura Pnemo thorax, Diaphragmatic paralysis, Alcolysis etc.

THORACOPLASTY & RESECTION:

Evolution of operative methods. Indications and contra - indications - technique modification. Operative and post - operative complications and their treatment, combinations of different operative methods.

Treatment of Extra - Pulmonary Tuberculosis in combinations with tuberculosis of the lung like Pleurisy, Empyema Laryngitis Mening it if.

Non - pulmonary Complications in Combination like pregnancy, diabetes etc.

PROGNOSIS IN PULMONARY TUBERCULOSIS:

- i. Immediate.
- ii. Regarding ability to work.
- iii. Regarding length of life.

CLASSIFICATION OF PULMONARY TUBERCULOSIS:

- i. On admission.
- ii. On Discharge.
- iii. Classification according to the Tuberculosis Association of India.

Tuberculosis in the insane.

Medico legal and Insurance Aspect of Tuberculosis. After care and Rehabilitation:

Follow up of cases - supervision and after - care by institutions - Clinic and general practioners - Health visitors and tuberculosis nurse

- Settlements for ex - patients - adaption of occupation Social and economical aspects.

PREVENTION OF TUBERCULOSIS:

Surveys - Purpose, method and conduct with respect to infection rate, morbidity and mortality mass radiography, various types of survey statistical consideration. Prophylactic vaccination experimental and clinical evidence in favour of artificial immunization value of B.C.G. distribution and scope of B.C.G. vaccines.

A CO-ORDINATED ANTI-TUBERCULOSIS SCHEME:

Tuberculosis Clinics - functions and utility Hospitals and sanatoria - Clinics and settlements - Tuberculosis home for incurables.

After - care Committees - Training of Tuberculosis workers Doctors, Specialists, Nurses, Health visitors, National Tuberculosis programme.

PRACTICAL ADMINISTRATORS

BACTERIOLOGY:

1. Smear examination of sputum - Ziehl Neelsen and picric acid.
2. Preparation of different culture media for tubercle bacilli
3. Culture of the bacilli from the sputum.
4. Culture of the bacilli from the pleural fluid.

5. Culture of the bacilli from other tuberculosis fluids.
6. Demonstration of the cultural characters of different types of bacilli and demonstrations of other differentiating points between human and bovine bacilli.

7. Examination of the fakes for tubercle bacilli.

8. Sensitivity tests for various T.B. drugs.

PATHOLOGY

1. Total and differential counts of blood.
2. Sedimentation rate of erythrocytes.
3. Lymphocyte: Monocyte ratio of blood.
4. Method of animal inoculation with bacilli.
5. Post - mortem examination of an animal, and how to make sections of organs for histological examination.
6. Post - mortem examination of human body and how to make sections for histological examination.
7. Normal lung and different types of tuberculosis disease of the lungs (demonstrations).
8. Histology of normal lung and pleura (demonstrations).
9. Histology of tuberculous lung and pleura (demonstrations).

10. Staining methods for tissues - preparation of the issue section - staining and diagnosis.
11. How to preserve and bottle a specimen.
12. Tuberculin readings.
13. Macroscopic and Microscopic appearance of tuberculosis lesions of (demonstrations).
14. Demonstration tuberculosis session.

RADIOLOGY:

1. Demonstration an X - ray plant.
2. Demonstration Screen examination.
3. Demonstration taking skiagram and developing the film.
4. Demonstration stereoscopic pictures and tomography.
5. Demonstration bronchography.
6. Demonstration mass radiography technique Post - mortem room attendance pathological specimens.

CLINICAL WORK:

Includes attend chest out - patient Department of Tuberculosis clinics in patient departments in a recognized sanatorium of hospital for pulmonary tuberculosis.

Attendance lung resections.

Attendance, nose and throat with special demonstration of tubercular conditions in these organs.

Syllabus for non - Tubercular Chest Diseases.
(including Fundamental on Heart Diseases.)

Principles of the physiology and control of respiration Ventilation of lungs, distribution of gas and blood to lungs diffusion of gases in the lungs, test pulmonary function.

Principles of electro Cardiography, cardiac functions, principles of cardiac Catheterisation and blood gas analysis - phono cardiography, Angiocardiogram.

Fundamentals of various radiological methods of diagnosis of diseases of the chest, plain X - ray skiagrams and contrast investigations of the thoracic cage, neck lung heart vessels, oesophagus and mediastinum.

Instructions in the fundamentals of the diseases of the cardiovascular system such as pathophysiology of Heart failure and treatment, congenital heart disease - chronic valvular diseases of the heart Coronary heart disease Pulmonary and systemic arterial hypertension cardiac arrhythmias, diseases of the pericardium, myocardium and mural endocardium; diseases affecting thoracic, aorta shock and circulatory collapse - clinical manifestations etiology, pathology prognosis complications and management of disease of the chest wall, thoracic cage lungs pleuramediastrinum - oesophagus, Tracheobronchial tree.

This will include signs, symptoms and management of congenital Anomalies. Acute and chronic Bronchitis - Bronchiectasis,

Bronchial, Tumours, Brochogenic carcinomas pneumonias, lung abscess, Emphysema, Fungus diseases, Respiratory allergy, Occupational diseases, Corpulmonale, collagen diseases (Pulmonary Medical aspects of chest injuries, Diseases of the Pleura, Mediastinum. Parasitic infections of lungs, pulmonary diseases of known origin (Eosinophilic sareoidos's Diffuse Interstitial fibrosis, Amyloidosis etc.) and Management of Respiratory emergencies. Immunologic disorders, Interstitial diseases. Non infectious diseases such as aspiration, alveolan proteriosis, Pul. oedematelectasis, Depositional diseases, lymphatic system affections circulatory disorders, obstructive Airways disorders, Hyppo ventilation syndromes, sleep disorders of Respiratory system, Respiratory failure, and special therapeutic interventions.

Post Graduate Diploma in Sexually Transmitted Diseases (D.S.T.D)

Details of Training:

FIRST YEAR:

O.P and ward daily and community

Work wherever arranged

- 7 Months

PERIPHERAL POSTING

1. General Medicine

- 2 Months

2. Dermatology

- 1 Month

3. Leprosy

- 15 Days

4. Obstetrics & Gynaecology

- 15 Days

5. Psychiatry

- 15 Days

6. Ophthalmology

- 15 Day

Total - 12 Months

II YEAR:

O.P. and Ward daily and community

Work wherever required

- One Year.

**Post Graduate Diploma in
Sexually Transmitted Diseases (D.S.T.D.)**

Scheme of Examinations

Distribution of Marks:

Theory	Title	Duration in hours	Maximum Marks
Part-I			
Paper I	Applied Basic Sciences	3	100
	Marks qualifying for a pass in Part I in DSTD 50% in this University.Theory Examination 50/100		
Part-II			
Paper I	Clinical Venereology including Laboratory Aspects	3	100
Paper II	Venereology, public Health and Social Aspects	3	100
	Total		200

Clinical Examination :

	No. of cases	Duration	Marks
1. Long Case	One	45 Mts	80
2. Short Cases	Two.	30 Mts.	70
	Total:		150

Practicals :

Spotting

Slides/Specimens/X - rays	(5x2)	10
(2) (2) (1)		
Orals		40
Total		50

Marks qualifying for a pass:

50% Marks in this University Theory Examination : 50/100

50% of Marks in the University Theory Examination : 100/200

50% of Marks in the University Clinical Examination : 75/150

50% of Marks in the aggregate of Theory / Clinical /
Practical / Oral Examination : 200/400

Maximum number of candidates to be examined per day : 8

Post Graduate M.D. Degree in Sexually Transmitted Diseases

Recommended List of Books and Journals:

TEXT BOOKS :

1. Venereal Diseases -
Ambrose King, Claude Nicol Philip Rodin.
2. Sexually Transmitted Diseases -
King K. Holmes et al.
3. Modern clinical Syphilology by Stokes.

REFERENCE :

1. Donovanosis -
Dr. R.V. Rajan & Dr. P.N. Rangiah - Monograph
Ser. No. 25
2. Lymphogranuloma Venereum -
Dr. R.V. Rajan & Dr. P.N. Rangiah - Monograph
Ser. No. 22
3. Pocket Consultant -
Venereology by J.R. Willcox - Infective hepatitis and other
viral conditions.
4. Barrison Text Book of Medicine (Two volumes.)

JOURNALS :

1. Journal of Genito Urinary Medicine.
2. Journal of Sexually Transmitted Diseases.
3. British Medical Journal.
4. Lancet.
5. Aids.

Post Graduate Courses in Sexually Transmitted Diseases

Syllabus - Applied Basic Science

- Historical aspects of Veneral Diseases.
- Anatomy of the human body with special reference to Gonitalia.
- Histology in relation to venereology.
- Physiology in relation to Venereology.
- Microbiology, inclusive of serology in relation to Venereology.
- Syphilis and Gonorrhoea & AIDS in all its aspects
- Chancroid, granuloma venereum, lympho - granuloma venereum and other minor venereal diseases.
- Common dermatological disorders and diseases
- Histopathology in relation to Venereology.
- Allergy in relation to Venereology.
- General Immunology with special emphasis on cell mediated immunity.

ANATOMY INCLUDING HISTORY :

- Basis anatomy of the organs, in detail - anatomy reproductory organs (Male % Female).
- Anatomy of the central nervous system and eyes.
- Anatomy of the heart and aorta.
- Anatomy of joints and bones.
- Anatomy of placenta and the development of foetus.
- Development of teeth.
- Histology of skin

Brain

Spinal cord

Eye

Blood vessels

Heart and liver - spleen

Genito - urinary system.

PHYSIOLOGY AND BIOCHEMISTRY :

CEREBROSPINAL FLUID :

1. Production, constituents and function of cerebrospinal fluid. Chemical and immunological changes in diseases.
2. Serum proteins - production and function: immunological and immunochemical changes in diseases.
3. Basic principles in animal experiments.
4. Physiology of coitus.
5. Spermatogenesis.
6. Physiology of Semen.
7. Prostaglandins.

PHARMACOLOGY :

(a) Fundamental principles in treatment :

Specific therapy.
 Non - specific therapy.
 Adjacent therapy
 Drug intolerance
 Drug resistance
 Drug interaction
 Time factor. Age factor
 Routine and individualisation of treatment.

(b) Antibiotics in details :

Classifications
 Structures etc.

Therapy

Side reactions : Penicillin all forms Streptomycin and other broad spectrum antibiotics
 Macrolide antibiotic

(c) Chemotherapy of sulphonamides - heavy metals.

(d) Corticosteroids

(e) Blocking agents

(f) Metronidazole

- (g) Antiviral drugs
- (h) Interference phenomenon.
- (i) Podophyllin resin

MICROBIOLOGY :

1. Morphology, cultural characteristics and staining of bacteria in general.
2. Detailed study of Gram positive and negative cocci spirochetes, haemophilus and corynebacterium group of organism:-
 - Characteristics
 - Survival in culture
 - Classification
 - Host parasite relationship
 - Susceptibility of different host species to infection.
 - Host parasite interaction
 - Persistence of organisms inspite of treatment.
3. Trichomonas vaginalis.
4. Moniliasis.

IMMUNOLOGY

General principles in the development of immunology
 Resistance:
 Immunopathology
 Fluorescent antibody technique
 Detection and classification of organisms and antibodies by using immunological principles.
 Immuno - diagnostic skin tests.
 Sero - epidemiological studies and its value.

PATHOLOGY :

1. Basic pathologic patterns.
2. Laboratory methods of fixation and staining.

3. Chronic infections granulomas.
4. Non - infectious inflammatory diseases.
5. Tumours of the external genitalia.

I. DISEASES CAUSED BY THE FOLLOWING PATHOGENS

Bacteria

- Neisseria gonorrhoeae
- Chlamydia trachomatis
- Treponema pallidum
- Haemophilus ducreyi
- Calymmatobacterium granulomatis
- Mobiluncus curtisii

Viruses

- Herpes simplex virus I & II
- Cytomegalovirus
- Hepatitis virus (A and B)
- Human Immunodeficiency virus
- Human Papillomavirus

Protozoans

- Trichomonas vaginalis
- Entamoeba histolytica
- Giardia lamblia

Ectoparasites

- Sarcoptes scabies
- Pediculus (Phthirus) pubis

AND

II SYNDROMES

- Vulvitis
- Skenitis
- Bartholinitis

Proctitis
 Urethritis
 Urethral syndrome
 Vaginitis
 Mucopurulent cervicitis
 Endometritis
 Prostatitis
 Gay bowel Syndrome
 Genital Ulcer Disease
 Salpingitis
 Pelvic Inflammatory Disease
 Fitz - Hugh - Curtis syndrome
 Epididymitis
 Epididymo - Curtis syndrome
 Epididmitis
 Epididymo - orchitis
 Venereal warts
 Cervical intra epithelial neoplasia (CIN)

**THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY
CHENNAI - 32. C**

Post Graduate Diploma in Dermatology (D.D)

Details of Training :-

FIRST YEAR

Skin OP / Ward - 12 Months

SECOND YEAR

Skin OP / Ward - 10½ Months

Leprosy Department - 1 Months

Venereology - 15 Days

Total - 12 Months

**THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY
Post Graduate Diploma in Dermatology (D.D)
SCHEME OF EXAMINATION**

Distribution of Marks :

Theory	Title	Duration in Hours	Maximum Marks
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Part-I Paper - I	Basic Sciences related to Dermatology	3	100
	Marks qualifying for a pass in Part I in D.D.		
	50% marks in this		

University Theory
Examination 50/100

Part-II

Paper - I	Tropical Dermatology including Leprosy	3	100
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Paper - II	Dermatology including Therapeutics	3	100
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Total	200
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Clinical Examination :

	No. of Cases	Duration	Marks
1. Long Case	One	45 Mts,	80
2. Short Cases	Two	45 Mts,	70
			150

Practicals :

Spotting

Slides / Specimens	(5x2)	10
(3) (2)		40

Orals	50
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Marks qualifying for a pass in Part II in DD

50% Marks in this University Theory Examination : 50/100

50% of marks in the University Theory Examination : 100/300

50% of marks in the University Clinical Examination : 75/150

50% of marks in the aggregate of Theory / Clinical/
Practical / Oral Examinations : 200/400

Maximum number of candidates to be examined per day : 8

**POST - GRADUATE DIPLOMA COURSE IN
(DIPLOMA IN DERMATOLOGY D.D)**

RECOMMENDED LIST OF BOOKS & JOURNALS

BOOKS RECOMMENDED (Latest Edition)

1. Rook et al Text Book of Dermatology 4 Volumes
(Fifth Edition),
2. Andrew's Diseases of the Skin - Clinical Dermatology
(Eighth Edition)
3. Fitzpatrick TB et al : Dermatology in General Medicine 2
Volumes (Third Edition)
4. Dermis DJ : Clinical Dermatology :
Five Volumes - (Ed.12)
5. Moschella SL et al : Dermatology (Ed 3)
6. Bryceson et al : Leprosy (Ed 3)
7. Lever WF & Lever GS ; Histopathology of the skin (Ed 7)
8. Jopling EH : Hand Book of Leprosy ELBS
9. Maddin S : Current Dermatologic Therapy
10. Dharmendra : Leprosy 2 Volumes
11. Provost TT and Farmer ER : Current THERAPY in
Dermatology.
12. Shelley WB & Shelley ED : Advance Dermatologic Therapy.
13. Wolverton and Wilkin : Systemic Drugs Diseases

14. Thody AZ and Freedmann : Scientific Basic Dermatology.
15. Braverman : Skin signs Systemic Diseases.
16. Rook and Dawber : Diseases of the Hair and scalp.
17. Caterall : Sexually Transmitted Diseases.

JOURNALS :

1. Archives of Dermatology,
2. Britest Journal of Dermatology.
3. Journal of American Academy of Dermatology.
4. International Journal of Dermatology.
5. Aeta Dermato - Venereologica.
6. Journal of Investigative Dermatology.

SYLLABUS**Diploma in Dermatology (D.D)****A. Theoretical (Total 50 lectures)****1. INTRODUCTORY :**

- (i) Introductory remarks - Importance and significance of Dermatology.
- (ii) General Symptomatology, Etiology, Pathology.
- (iii) General Diagnosis and prognosis.
- (iv) General Therapeutics.

2. ANATOMY, PHYSIOLOGY AND EMBRYOLOGY

- (i) Growth and development of skin Embryology.
- (ii) Anatomy and Histology.
- (iii) Physiology and Functional Pathology.

3. ELEMENTARY BIOCHEMISTRY**4. PATHOLOGY, BACTERIOLOGY, PARASITOLOGY MYCOLOGY ETC.,**

- (i) Pathological changes of the epidermis, and corium.
- (ii) Identification of pathogenic bacteria and diseases in animals communicable to man.
Host - parasite relationship.
Autogenous disinfections of the skin.
- (iii) Parasitology in relation to dermatology - Animal parasite.
- (iv) Mycology Fungi, Superficial and deep.

5. PHARMACOLOGY OF DRUGS USED IN DERMATOLOGY:

- II 1. Diseases of the Skin its Appendages, Mucocutaneous Surface and mucous membrane.

Acne and Seborrhoeic Dermatitis, pruritus.

Eczema and Dermatitis.

Urticaria and toxic erythemas.

Drug eruptions

Vesiculo - bullous disorders.

Occupational dermatoses.

Erythematous - Swaunous dermatoses.

Pyodermas.

Fungus infections.

Tuberculosis of the skin and allied disorders.

Syphilis and other venerea, granulomata.

Leprosy.

Virus infections.

Diseases due to animal parasites.

Pigmentary disorder.

Atrophies.

Congenital (Nevoid) anomalies.

Disorders of the mucous membrane.

Disorders of the nail, hair and sweat glands.

Diseases due to physical agents.

Benign tumours of the skin.

Premalignant and malignant tumours.

Metabolic disorders.

Yaws, pinta, bejel, etc.

Dermal Leishmaniasis.

Velat Sore, Naga Sore etc.

Dermatoses due to vitamin and Nutritional deficiencies and excesses.

Miliaria.

2. THERAPEUTICS :

(a) Topical and systemic treatment.

(b) Physical agents.

- (c) Skin surgery.
- (d) Psycho - therapy.

3. PREVENTION OF CUTANEOUS DISEASES, REHABILITATION OF PATIENTS SUFFERING FROM CUTANEOUS DISEASES AND SOCIAL ASPECTS OF DERMATOLOGY.

B. PRACTICAL : (INCLUDING CLINICAL DEMONSTRATION)

1. Histopathology, bacteriology and parasitology demonstrations.
2. Clinical :-
Demonstrations of cases.

Therapeutics Demonstration of special therapy measures adopted in the skin treatment including physical treatment and rehabilitation.

**THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY
CHENNAI - 32**

**Post Graduate Diploma in Medical Radiology
Diagnosis (D.M.R.D)**

Details of Training :

FIRST YEAR

Basic physics & Medical - Diagnostic Radio
physics logy Concurrently 12 Months

SECOND YEAR

General Radiology	-	6 Months
Ultrasonogram	-	1 Month
C.T. Scan	-	1 Month
Paediatrics & Obste & Gyn.	-	1 Month
Other contra study	-	1 Month
Nuclear Medicine	-	1 Month
Cardiology & Vascular study	-	15 Days
Endoscopy	-	15 Days
Total	-	12 Months

POST GRADUATE DIPLOMA IN MEDICAL RADIOLOGY DIAGNOSIS (D.M.R.D)

Scheme of Examination

Distribution of Marks :

Theory	Title	Duration in Hours	Maximum Marks
Paper I	Medical Radiation Physics as applied to Radio Diagnosis		100
Paper II	Radio Diagnosis and Imaging		100
Paper III	Radio Diagnosis including Nuclear Medicine		100

Clinical Examination :

	No. of Cases	Duration	Marks
1. Long Case	One	45Mts	80
2. Short Cases	Two	45 Mts	70
	Total :		150

Practicals:

Spotting

Slides / Specimens / X - Rays / Instrument	(5x2)	10
(2) (1) (1) (11)		

Orals	40
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Total 50

Marks qualifying for a pass :

50% of Marks in the University Theory Examination : 150/300

50% of Marks in the University Clinical Examination : 75/150

50% of Marks in the aggregate of Theory / Clinical/
Practical / Oral Examination : 250/500

Maximum number of candidates to be examined per day : 8

**POST GRADUATE DIPLOMA COURSES
(D.M.R.D.) RADIO - DIAGNOSIS**

RECOMMENDED LIST OF BOOKS AND JOURNALS

TEXT BOOKS (Latest Editions)

1. Text Book of Radiology & Imaging - Sutton.
2. Radionuclide section scanning : An atlas of Clinical Practice - Khan.
3. Alimentary Physics of Radiology - Abdominal Image Margulis.
4. Fundamental physics of Radiology - W.J/ Meredith & J.B. Massey.
5. Diagnostic Ultrasound - Sarti.
6. Oral Radiology : Principles & Interpretation Goaz.
7. Radiographic Anatomy - Meschan.

REFERENCE BOOKS (Latest Editions)

1. Radiology : Diagnosis Imaging Intervention physics - Traveras.
2. Seminars in Ultrasound.
3. Caffey's Pediatric X - Ray Diagnostic Frederic - Silverman.
4. Roentgen sings in Diagnostic Imaging - Meschan.
5. Diagnostic Radiology - An Anglo American Book of Imaging - Grainger & Allison.

JOURNALS:

1. British Journal of Radiology.
2. Clinical Radiology.
3. Radiology.
4. American Journal of Roentgenology.
5. Radiology Clinics of North America.
6. Recent advances in Radiology and Medical Imaging.
7. Year Book of Radiology
8. Indian Journal of Radiology & Imaging,
9. British Medical Journal.
10. LANCET

Syllabus for D.M.R.D. Diploma in Medical Radio Diagnosis

PART I

Fundamentals of applied Medicine and related pathology, and applied surgery and related pathology as related to Radio - Diagnosis and nuclear medicine.

Syllabus for Radiology Physics - General and applied

Fundamentals of Electricity : Basic principles of electrostatics conductor and insulators - Ohm's law - Units of measurement of potential difference, current, resistance and P.D and. E.M.F - cells, primary and secondary.

Resistances in Series and parallel - specific resistance - effect of temperature on conductors and insulators.

Capacitors in series and parallel - unit measurement of capacity.

Heating effect of current - units of measurement of work, energy, power and heat - mechanical equivalent of heat.

Electromagnetic induction - principles of production of A.C and D.C peak value, R.M.S. value and A.C., self and mutual inductance, impedance (qualitative definitions only) power in A.C.

The ammeter, the voltmeter and the Galvanometer.

Transformers : Step up, step down and auto transformers.

Rectifiers and Ratifications : Thermionic values, diode and triode - metal rectifiers - self, half - wave and full wave rectification - Greinaeher and Villard circuit.

Timers.

X - rays: Production and properties of cathode rays - the Gas X-Ray tube - the modern X - ray tube (hot cathode tube) - parts - choice of target materials - focal spot and its size - shape filament - rotating anode.

Methods of cooling the target - tube rating.

Electromagnetic radiations - their general properties - length, energy and velocity.

The X - ray beam - continuous and characteristic rays - factors which control these.

Quantity of X rays (intensity) - roentgen, rad, rbe and rem - standard ionization chamber - integrating and rate meters.

Interaction of X - rays with matter - linear attenuation coefficient and mass attenuation coefficient - photoelectric effect - Compton effect - pair production.

Use of filters in radiology.

Quality of X rays - half value layer.

Physical principles of X - ray diagnosis : Photographic effect X - ray films - density, definition, contrast and distortion - factors controlling these - gamma and speed of X - ray films.

Fluorescence - fluorescent and intensifying screens.

Scattered radiation and use of cones and grids.

High KV technique.

Basic principles of localisation of foreign bodies, iconography image intensification and cineradiography.

Physical principles of X - ray therapy : air dose surface dose and depth dose - factors controlling these - materials - isodose, curves and their use in planning of single and multiple fields, moving beam therapy use of pin and pointer.

Radioactive Isotope: Atomic Structure - electrons protons and neutrons Isotopes - radioactivity, natural and art, decay constant half life and average life - alpha, beta and gamma rays - radioactive - equilibrium principles of radiation decision.

Production of radio - isotope.

CLINICAL APPLICATION OF RADIO NUCLIDE TECHNIQUES

Basic instruments in the use of radioactive - G.M counters, photomultiplier tubes, scintillation counters and scanners.

Important radioactive isotopes and their properties.

Radium and its use.

Radiation Protection : Effect of over exposure - maximum permissible dose - use of film badge - methods of protection - protective barriers - protective measure in diagnostic department - safe handling of radio active tracer and target therapy doses, layout of a radioisotope laboratory.

Supervoltage Radiations : Physical principle accelerator and betatron - the cyclotron - megavolttraditions and their properties cobalt 60 and cesium 137 teletherapy unit.

List of Experiment for Practical work in Radiology.

Physics.

1. Measurement of air dose, surface dose calculation of back scatter.

2. Measurement of depth dose.
3. H.V.L. measurement.
4. Absorption coefficient.
5. Verification of inverse square law.
6. Measurement of focal spot.
7. Localisation of foreign bodies.
8. Determination of plateau of G.M. counter.
9. Use of spectrometer in counting.
10. Absorption of beta particles.
11. Efficiency of counter and iso - response curve of a scintillation counter.
12. Dilution experiments (estimation of volume of a liquid using radio - active isotopes.)
13. Determination of resolving power of a G.M. counter.
14. Counting statistics - determination of standard deviation.
15. Shielding experiments with beta and gamma rays.
16. Medical Applications of Electronics as applied to imaging science.
17. Fundamentals of
 - a) Computer application.
 - b) Medical statistics.
 - c) Equipment maintenance.

**Post Graduate Diploma in Medical Radiology Therapy
(D.M.R.T.)**

TRAINING PROGRAMME

FIRST YEAR

General Medicine	-	Month
Surgery	-	Month
Pathology	-	Days
Bio - Chemistry	-	Days
Physics	-	Months
Radiation oncology OP Wards etc	-	Months
Treatment room	-	Month
Total	-	Months

SECOND YEAR

Radiation oncology OP and Ward	-	Months
Imaging & Sciences	-	Days
Isotopes	-	Days
ENT OP	-	Days
I.O.G.	-	Month
Haematology	-	Days
Chemotherapy	-	Months
Physics	-	Month
Total	-	Month

**Post Graduate Diploma in Medical Radiology
Therapy (D.M.R.T.)**

Scheme of Examination

Distribution of Marks :

Theory	Title	Duration in Hours	Maximum Marks
Paper I	Medical Radiation Physics as applied to Radiotherapy	3	100
Paper II	General Principles of Radiotherapy including Radio - biology and Oncology	3	100
Paper III	Clinical practice and techniques of Radio- therapy & Cancer Chemotherapy	3	100

Clinical Examination :

	No. of Cases	Duration	Marks
Long case	One	45 Mts	80
Short Case	Two	30 Mts	70
	Total		150

Practicals :

Spotting

Slides / Specimens	(5x2)	10
(3) (2)		
Oral		40
Total		50

Practical Clinical examination should consist of and short Cases. Pathology, specimens, Radiology, Radiotherapy techniques, Brachytherapy applications and radiation protection computer application in Radiotherapy simulation mould room technology, Radiotherapy planning etc.

Marks qualifying for a pass :

50% of Marks in the University Theory Examination	: 150/300
50% of Marks in the University Clinical Examination	: 75/150
50% of Marks in the aggregate of Theory / Clinical/ Practical / Oral Examination	: 250/500
Maximum number of candidates to be examined per day	: 8

RADIATION ONCOLOGY

LIST OF STANDARD TEXT BOOKS & REFERENCE BOOKS

1. Text book of Radiotherapy by Gilbert Fletcher 3rd ed. 1981.
2. Cancer - Do Vita 3rd ed. 1989.
3. Principles and Practice of Radiation Oncology
- Carlos perez and Luther Brady 2nd ed. 1987.
4. Cancer - By K.K. Halnan and Korol Sikora 2nd ed. 1990.

5. Text book of Radiotherapy - Hope stone.
6. Radiation Oncology - Principles - Moss & COX ed 1991.
7. Cancer - Diagnosis & Management - 3rd ed. 1989.
- Ackermann and Del Regato.
8. Radiobiology for the Radiologist - Eric Hall 1989.

JOURNALS

1. Journal Cancer.
2. Clinical Oncology - Journal of the Royal College of Radiologists, U.S.A.
3. International Journal - of Radiation Oncology Biology
4. Indian Journal of cancer - from the Indian Society of Oncology (ISO)
5. Journal of Radiotherapy and Oncology -
Journal of the Association of Radiation Oncology
of India.
6. The British Journal of Cancer.
7. The British Journal of Radiology.
8. Acta Radiologica Scandinavia.
9. European Journal of Cancer.

Medical Physics Related to Radiation Oncology

1. BASIC CONCEPTS

Units - fundamental units - Derived units - Electrical units - Radiation Units. Atoms - Nuclous - Atomic Number - Mass number - Isotope - Nuclear Structure energy levels - sending energy - electric magnotic radiation - Quantum nature Radiation - Radiation energy from an atom.

2. NUCLEAR PHYSICS

Radio activity - Units of Activity - Experential decay - half life - transformation constant - disintegration - disintegration - Bota mirus decay - Bota plus decay - Electron capture - Internal conversion - Auger electronic - Osmometric transitions - Fission - Fusion - Nuclear - reactors - Activation of Isotopes.

3. INTERACTION OF RADIATION WITH MATTER

(1) Photon Interaction.

Absorption of energy - Liner attenuation to efficient - Half value layer - mass, electronic and atomic attenuation coefficient - energy transfer and energy absorption Photo electric absorption - compton scattering - pair production total attenuation co-efficient - Relative importance of different types of interactions.

(ii) Particele interaction.

Electron interaction - Ionizational losses - Bremsstrah lung losses - Range of electrons - Electron - Electron spectro - energy specifi-cation - stoping power - LET particles for radio radiotherapy.

4. PRODUCTION OF X-RAYS

X-ray Production.

X-ray circuit - Diagnostic x-ray tubes x-ray tubes for Radiotherapy x-rays spectron - interactions of electrons was the target - Angular distribution of X-rays - quality of x-rays - fitters - HVL.

5. HIGH ENERGY MACHINES

Isotope machines - cobalt 60 unit source housing bear commission - ponumbra cosium 137 - Betaran - Linear acceleration (detailed study) - microtron - Recent development.

6. RADIATION DOSIMETERY

Fluence kerma and absorbed dose - electronic equilibrium Bragg Gray cavity principle.

Exposure - Roontegen - standard air chamber - Thimble chamber - condenser chamber - Farmer chamber - Secondary standard desimeter - Inverse square - Thermeluminescent Desimeter Chemical decimeter film as a desimeter.

7. BEAM THERAPY

Phantoms - percentage depth dose - Tissue air radio-Base scatter factor - Tissues Phantom rations - Tissue maximum ratios equivalent squares for rectangular fields - Isodose curves - cobalt 60 with high energy beams. Wedge filters - integral dose choise of radiation beam.

8. TREATMENT PLANNING

Patient dose calculation - treatment time calculation - SSA and SAD Technique - Body contours - centours - correction - for tissue in hemogeneities - corrections for surface obliquities tissue compensators.

Dose distribution - opposing pairs of beams - three fields technique - Rotation therapy - Wedge pairs - open and wedge field combinations.

Preparation of mould - shielding blocks - styrofoam cutting machine - simulator and its application - Role of CT and Ultra sound treatment planning.

9. BRACHYTHERAPY

Brachytherapy sources - Radium 226 cesium 126 - Cobalt 70 - Iridium 192 - Gold 198 - Iodine 125 - Physical characteristics - source production - storage and transport facility.

Implant technique - types of implant - patterson - parker system - patterson - parket tables - determination of implant area - radiographic examination of implants - orthogonal imaging method - stereo shift method - After loading technique Iridium 192 implant - permanent implant's - clinical examines of does calculation.

Intracavitary application - paris technique - Stockholm technique - Manchester system - Dose specification - Point A and Point B - leading arrangement - Applications - Manual after loading systems - computer dosimetry - examples of dose calculation. Recent developments in Brachytherapy.

10. RADIATION PROTECTION

Biological affects of radiation - sematic and Genetic effects - immediate and late effects - evaluation of radiation hazards - personnel monitoring - film badge pocket desimeter TLD - Area monitoring - survey meters - survey procedures - quality assurance in radiotherapy.

Maximum permissible dose - historical revise - Radiation protection rules in India - ICRP recommendation dose equivalent limits - quality factor - Sivertz.

against leakage radiation and scattered radiation assign considerations for accelerator facility.

Guidelines for safe work practice - recent development in radiation protection.

Physics Practicals

1. Plateau of G.M. tube.
2. Mass absorption coefficient of Beta particles.
3. Range of beta particles.
4. Gamma ray spectrum.
5. Determination of the energy of unknown Isotope.
6. Output measurement in a Telecobalt unit.
7. Determination of % depth dose for cobalt beam.
8. Output measurement in a Liner accelerator.
9. Determination of % depth dose for Liner accelerator.
10. Determination of optical and radiation field congruence.
11. Determination of Timer error in a cobalt unit.
12. Rectal Dose measurement.
13. Verification of Inverse square law.
14. Familiarization of computerised treatment planning system.
15. Familiarization of simulator.
16. Radiation survey in a Teletherapy unit.
17. Radiation survey in a Brachytherapy facility.
18. Dose simulation in multifield with open field and wedge fields.

19. Quality assurance in Radiotherapy.

20. Uptake studies with Gamma camera and scanners.

RADIOBIOLOGY

RADIOBIOLOGY AND LABORATORY RADIOTHERAPY

1. Mammalian Cell radiosensitivity
 - A. Interphase and reproductive death.
 - B. Cell Survival curves in vitro.
 - C. Characterization of Cell survival curves
 - D. Critical sites and target theory
 1. DNA
 2. Membranes
2. Does response curves in Vivo
 1. Skind clones
 2. Surviving Crypts
 3. Bone marrow colonies growing in spoken monolayer culture, Sperieds speroids.
3. Quantitative normal tissue reaction based on systems.
 1. Pig skin,
 2. Redent Skin,
 3. Lung,
 4. Esophagus,
 5. Kidney,
 6. CMS and spinal cord

II. FACTORS THAT MODIFY RADIATION RESPONSE

- A. The oxygen effect.
 1. Effect of Oxygen concentration
 2. Time of action of Oxygen
 3. Mechanism of the Oxygen effect
 4. Implication of radiotherapy

B. The age response function

1. The cell cycle
2. Age response for cells culture in Vitro
3. Age response for tissues in vivo
4. A response for neutrons
5. Oxygen effect through the cycle.
6. Implications for radiotherapy.

C. Potentially lethal damage

1. Repair in vitro
2. Repair in Vivo
3. PLD and high LET radiations
4. Implications in radiotherapy

D. Sublethal damage

1. Split dose experiments with cells in vitro
2. Sublethal damage repair in normal tissues.
3. Sublethal damage repair in tumours.
4. Sublethal damage and hypoxia.
5. Sublethal damage and high LET radiations.
6. Dose as a measure of repair.

E. Dose - rate

1. Dose rate effect in cells in vitro.
2. Dose rate effect normal tissues.
3. Dose rate effect in tumours.
4. Interstitial therapy.
5. Beam therapy at low dose rate.

F. Radiosensitizers

1. The halogenated pyrimidines
2. Hypoxic cell radiosensitizers.
 - a. Structure and mode of action
 - b. Enhancement ratio
 - c. Metronidazole prmidonidazole

- d. Pharmacokinetics in the human
- e. Clinical limitations.

- 3. Antibiotics
- C. Radioprotectors
- 1. Free radical scavenger

III. LINEAR ENERGY TRANSFER

- a. Definition
- b. Track and energy average
- c. LET for different types of radiation
- d. CER as a function of LET.

IV. RELATIVE BIOLOGICAL EFFECTIVENESS

- a. Definition
- b. RBE for different cells and tissues
- c. RBE as a function of dose
- d. RBE and fractionation
- e. RBE as a function of LET
- f. Q factor

CELL AND TISSUE KINETICS

- a. The cell cycle
- b. Autoradiography
- c. Constituent parts of the cell cycle
- d. Percent labelled mitoses technique
- e. Growth kinetics of human tumours.

VI. TISSUE RADIOSENSITIVITY

- a. Classification based on radiation pathology
- b. Types of cell populations
 - 1. Self renewal
 - 2. Conditional renewal
 - 3. Stem cell
 - 4. Differentiated

VII. TIME-DOSE AND FRACTIONATION

- a. The 4R's radiobiology
- b. The basis of fractionation
- c. The strauquist plot
- d. Nominal standard dose
- e. Linear quareate education

12. HYPERTHERMIA

A. Methods of heating

1. RF Microwaves
2. Ultrasound
3. Water baths

B. Systemic hyperthermia

C. Localised heating

D. Cellular response to heat

E. Repair of thermal damage

F. Thermotolerance

G. Hyperthermia combined with irradiation (X-rays)

H. Time sequence of heat and irradiation.

I. Hypoxic cells and heat

J. Effect of Ph on the response to hyperthermia

K. Response of spontaneous tumours to heat

L. Response of transplanted tumours to heat

M. Response of normal tissues to heat

N. Heat and the therapeutic gain factor

O. Hyperthermia and chemotherapy

II. TOTAL BODY IRRADIATION - ACUTE EFFECTS:

A. Prodromal radiation syndrome.

B. Central nervous system/cerebrovascular syndrome.

C. Gastrointestinal syndrome.

D. Hematopoietic syndrome.

E. Mean lethal dose (LD 50)

F. Treatment of radiation accidents.

III. LATE EFFECTS:

A. Non Specific life shortening

1. Definition
2. In animals
3. In man

B. Carcinogenesis

- 1 The latent period
2. Dose response curve in animals
3. Leukemia
4. Breast cancer
5. Thyroid cancer
6. Bone cancer
7. Skin cancer
8. Lung cancer
9. Other tumours
10. Malignancies in prenatally exposed children
11. Mechanisms of radiation carcinogenesis

C. Genetics of irradiation

1. Point mutations
2. Relationship to dose
3. Chromosome aberrations
4. Relationship to dose
5. Doubling dose
6. Genetically significant doses (GSD)
7. Genetic effect in humans
8. Background radiation in relation to the GSD

XIII. RADIATION EFFECTS IN THE DEVELOPING EMBRYOS AND FETUS

- a. Intrauterine death.
- b. Congenital abnormalities including neonatal death.
- c. Growth retardation
- d. Dependence of the above effects on dose, dose - rate and

- stage in gestation.
- e. Carcinogenesis following in utero exposure
- f. Human experience of pregnant women exposed to therapeutic doses.
- g. Occupational exposure of potentially pregnancy Women.
- h. Elective booking or "10 day rule".
- i. The "practical threshold" for therapeutic abortion.

XIV. RADIOPHYSIOLOGY OF HUMAN TISSUES

- A. Effects of irradiation of the skin
 - 1. Clinical manifestations
 - 2. Histological substratus of effects
 - 3. Repair
 - 4. Degrees of equalac
 - 5. Injuries effects
- B. Effects of Irradiation of bone and cartilage
 - 1. Effects on growing bones and cartilage
 - 2. Effects on adult bones and cartilage
 - 3. Clinical manifestations
 - 4. Histological substratum of effects
 - 5. Functional consequence and sequel.
- C. Effects of irradiation of the kidney
 - 1. Clinical manifestations
 - 2. Histological substratus of effects
 - 3. Acute and chronic functional repercussions
 - 4. Permanent sequelac

APPENDIX - D

CLINICAL PRACTICE OF RADIOTHERAPY AND ONCOLGOY

A. PRINCIPLES OF RADIOTHERAPY

- 1. Teletherapy
 - a. Radiation factors

- b. Megavoltage therapy
 - c. Orthovoltage therapy
 - d. Electron therapy
 - e. Heavy particle therapy (Neutron, Photon, Pimeson.)
2. Branchytherapy and Radioactive isotopes
- a. Radium and its substitutes
 - b. Practice of surface, intracavitary and interstitial, Endoluminal.
 - c. Clinical application.
 - d. Rules and techniques
 - Newer developments
 - after leading - Manual
 - Remote
 - Low medium and high dose rates
- B. TECHNIQUES OF RADIOTHERAPY
- 1. Small field beam directed therapy
 - 2. Extended and irregular field therapy
 - 3. Single, double and multiple field therapy
 - 4. Beam modification therapy (wedge filter / compensation etc
 - 5. Rotation and Arc therapy.
 - 6. Techniques in Branchytherapy
 - a. Intracavitary
 - b. Intertitial
 - c. Mould application
 - d. Modern developments and after leading devices.
 - e. Systemic
- D. EFFECTS OF IRRADIATION OF THE LAC
- 1. Acute clinical effects
 - 2. Ultimate effects
 - 3. Histological substratus of effects
 - 4. Measures to reduce final effects
 - 5. Sequelac

E. EFFECTS OF IRRADIATION OF NERVOUS TISSUES

1. Effects on the brain
2. Effects on spinal core
3. Effects on peripheral nerves
4. Clinical manifestations
5. Histological substratus
6. Sequelac

F. EFFECTS OF IRRADIATION OF THE OVARY

1. Clinical manifestations
2. Histological substratus
3. Reversibility of effects
4. Therapeutic implications

G. EFFECTS OF IRRADIATION OF THE TESTIS

1. Clinical consequences
2. Histological substratus
3. Reversibility
4. Protective measures

H. EFFECTS ON IRRADIATION OF THE EYE

1. Clinical consequence
2. Histological substratum
3. Protective measures
4. Time - ses connotations
5. Sequelac therapy

I. EFFECTS OF IRRADIATION OF LYPHEID TISSUE

1. Clinical manifestations
2. Histological substratum
3. Reversibility

J. EFFECTS OF IRRADIATION OF THE BONE MARREW

1. Clinical and laboratory manifestations
2. Chrenelogy of effects
3. Histological substratum

4. Recovery
5. Therapeutic applications

K. EFFECTS OF IRRADIATION OF THE ORAL, PHARYN- GOLARYNGEAL AND ESEPHAGEA MUCUOUS MEMBRANE

1. Clinical manifestations
2. Histological substratum
3. Repair
4. Sequelae

L. EFFECTS OF IRRADIATION OF THE SALIVARY GLANDS

1. Acute manifestations
2. Histological Substratum
3. Dental consequences
4. Prophylaxis

Post Graduate Diploma in Anaesthesiology (D.A.)

Details of Training:

FIRST YEAR

General Surgical Theatre	...	6 Months
Orthopaedics Theatre	...	1 Month
Paediatric Theatre	...	1 Month
Obstetric & Gynaecology Theatre	...	1 Month
Cardiothoracic Theatre	...	1 Month
Neuro Surgical Theatre	...	1 Month
Urology	...	1 Month
Total	...	12 Months

SECOND YEAR

General Surgical Theatre	...	4 Months
Orthopaedic Theatre	...	1 Month
Paediatric Theatre	...	1 Month
Obstetrics & Gynaecology Theatre	...	1 Month
Plastic Surgery Theatre	...	1 Month
E.N.T. Theatre	...	1 Month
Cardio Thoracic Theatre	...	1 Month
Neuro Surgical Theatre	...	1 Month
Urology Theatre	...	1 Month
Total	...	12 Months

Post Graduate Diploma in Anaesthesiology (D.A.)

Scheme of Examination

Theory	Title	Duration in Hours	Maximum Marks
Part-I Paper-I	Basic Science related to anaesthesia, History of Anaesthesia and Physics in ANAESTHESIA	3	100
	Marks qualifying for a pass in Part I in DA 50% Marks in this University Theory Examination 50/100		
Part-II Paper-I	ANAESTHESIOLOGY	3	100
Paper-II	ANAESTHESIOLOGY including critical care and recent advance in Anaesthesia	3	100
	Total		200

Clinical Examination:

	No. of Cases	Duration	Marks
1. Long Case	One	45 Mts.	80
2. Short Cases	Two	30 Mts.	70
	Total		150

Practicals:

Spotting

Slides/Specimens/X-ray/E.C.G. etc.

(2)	(1)	(1)	(1)	(5 X 2)	10
Orals					40

Total

50

Marks qualifying for a pass in Part II in D.A

50% Marks in this University Theory Examination : 50/100

50% of Marks in the University Theory Examination : 100/200

50% of Marks in the University Clinical Examination : 75/150

50% of Marks in the aggregate of Theory / Clinical/
Practical / Oral Examination : 200/400

Maximum number of candidates to be examined per day : 8

**Recommended List of Books And Journals for
All the Anaesthesiology Examination**

BOOKS:

1. Practice of Anaesthesiology — Wylie-Church Davidson.
2. General Anaesthesia — Gray, Nunn, Utting.
3. Anaesthesia — Two Volumes-Ronald D. Mill
4. Anatomy for Anaesthetist — Harold Willis.
5. Understanding Anaesthesia Equipments. — Gorsth & Dorsh.
6. Emergency Anaesthesia — Thronton.
7. Principles of Obstetric Anaesthesia — J.S. Gawford.
8. Physics for Anaesthetist — Muschin & Mactintosh.
9. Neuro Surgical Anaesthesia — Hunter.
10. Paediatric Anaesthesia — Gregory.
11. Cardiac Anaesthesiology - 2 Volumes — Jonathan Benumft.
12. Anaesthesia & Co-existing Diseases — Stoelting.

JOURNALS AND PERIODICALS:

1. Anaesthesia and Analgesia Journal (States)
2. Anaesthesiology Jr.
3. Anaesthesia Jr.
4. Acta Anaesthesia Scandinavia.

5. Canadian Jr. of anaesthesia.
6. Indian Jr. of anaesthesia.
7. British Jr. of anaesthesia.
8. Experta Anaesthesia.
9. Experta Anaesthesia.
10. Year Book of Anaesthesia.
11. Anaesthesia Clinics.
12. Clinics in North America in Anaesthesiology.

Post Graduate courses in Anaesthesiology

Core Syllabus

Basic sciences and related to anaesthesia including anatomy, Physiology, Pharmacology and Biochemistry.

Medicine applied to Anaesthesiology, Physics in Anaesthesiology including electronics, computers and lasers.

History of Anaesthesiology.

Pre anaesthetic evaluation and preparation.

Principles and Practice of Anaesthesiology including pre, per and post operative care.

Different methods of Anaesthetic Techniques.

Regional anaesthesia including, spinal, epidermal and caudal etc.

Local anaesthesia including nerve blocks, management of chronic pain.

Anaesthesia for Gen. Surgery and specialities like Cardiothoracic, Neurosurgical Orthopaedics, Geriatrics, Plastic surgery and surgical endocrinology, paediatric anaesthesiology and Obstetrics and Gynaecology procedures.

Blood transfusion - Fluid and electrolyte balance.

Fires and explosion.

Theatre sterilization procedures.

Oxygen therapy and management of acute and chronic respiratory insufficiencies, and ventilator commitments in I.C.U.

Critical care Anaesthesiology.

Anaesthesia in abnormal environments like high altitude anaesthesia etc.

Complication in Anaesthesiology and their management both pre and post operatively.

Post Graduate Diploma in Oto-Rhino Laryngology (D.L.O.)

Details of Training:

FIRST YEAR

Radiology and Radiotherapy ... 1 Month

Audiology and Speciality
Neuro-otology ... Postings ... 1 Month

Paediatric ENT ... -In rotation
for 4 month ... 2 Months

Anaesthesia ... 1 Month

ENT ... 1 Months

SECOND YEAR

ENT including upper gastrointestinal
and upper respiratory tract ... 12 Months

Post Graduate Diploma in Oto-Rhino Laryngology (D.L.O.)

Scheme of Examination

Theory	Title	Duration in Hours	Maximum Marks
Part-I			
Paper-I	Basic Science in Relation to ENT Marks qualifying for a pass in Part I in D.L.O. 50% marks in this University Theory Examination 50/100	3	100

Part-II			
Paper-I	Oto-rhinolaryngology including Audiology and Neuro-otology	3	100
Paper-II	Oto-rhiniaryngology including Head and Neck Oncology and Endoscopy	3	100
Total			200

Clinical Examination:

	No. of Cases	Duration	Marks
1. Long Case	One	45 Mts.	80
2. Short Cases	Two	30 Mts.	70
Total			150

Practicals:**Spotting**

Slides/Specimens	(5 X 2)	10
(3) (2)		
Orals - X-Rays, Instruments and Viva Voce		40
Total		50

Marks qualifying for a pass in Part II in DLO

50% Marks in this University Theory Examination	: 50/100
50% of Marks in the University Theory Examination	: 100/200
50% of Marks in the University Clinical Examination	: 75/150
50% of Marks in the aggregate of Theory / Clinical/ Practical / Oral Examination	: 200/400
Maximum number of candidates to be examined per day	: 8

**Post Graduate M.S Degree Course in Oto - Rhino
Laryngology - Branch - IV**

RECOMMENDED LIST OF BOOKS AND JOURNALS

1. Scott Brown's Otolaryngology - Five Volumes.
2. Otolaryngology Volumes I to IV
3. Ballenger - Diseases of the Nose, Throat, Ear, Head and Neck.
4. Mawson's Diseases of the Ear.
5. Glasscock and Shambaugh - Surgery of the Ear.
6. Learning Ear Surgery by Temporal Bone Dissection by Dr.K.K. Ramalingam and Dr. Sreeramamoorthy.
7. Year Book of Otolaryngology, Head and Neck Surgery Edited by Michael M. Paperella and Byron J. Bailley.
8. Tumors of the Head and Neck - Clinical and Pathological Considerations by John. G. Batsakis.
9. Rob and Smith - Operative Surgery - Three Volumes.
10. Recent Advances in Otolaryngology.
11. Jacksons Textbook of Broncho - oesophagology.
12. Radiology of Head and Neck by valvssori.

REFERENCES

- Lore Atlas of Head and neck Surgery.
 Microsurgery of the skull base by Ugo Fisch and Doughlas Matto.
 Textbook of Operative Surgery by lee.

JOURNALS

1. Indian Journal of Otolaryngology.
2. British Journal of Otolaryngology.
3. Laryngoscope.
4. North American Clinics of Otolaryngology.
5. Annals of Otolology, Rhinology and Laryngology.
6. Acta Otolaryngologica.
7. Archives of Otolaryngology Head and Neck Surgery.
8. Journal of Paediatric Otolaryngology.

D.L.O.**Diploma in Oto - Rhino - Laryngology****Applied Basic Sciences****Syllabus**

Anatomy, Physiology, Biochemistry, Pathology and Bacteriology related to E.N. T. Speciality :

ANATOMY**1. PRE - NATAL AND POST - NATAL DEVELOPMENT OF THE EAR:**

Internal ear

Fissula ante fenestrum

Air spaces and lining membrane

The Ossicles

Stapes

External ear

Pneumatisation of the mastoid process

2. ANATOMY OF TEMPORAL BONE :

Squamous portion

Mastoid portion

Petrous portion

Tympanic portion

3. ANATOMY OF EAR :

External ear

Middle ear

Internal ear

REFERENCES**DEGREE OF MASTER OF SURGERY****4. ANATOMY OF PERINEAL NERVES :**

With particular reference to facial and auditory nerves.

5. OSTEOLOGY OF THE CRANIAL BONES :

Venous sinuses

The brain

6. ANATOMY OF NOSE AND PARANSAL SINUSES :

Prenatal and Post - natal

The external nose

The nasal cavity

The paranasal sinuses

Nasal Mucous membrane

Blood supply and nerve supply

7. ANATOMY OF THE PHARYNX AND NOSE

Development

The tonsils

The lymphoid

Functions

ANATOMY OF THE LARYNX :

Prenatal and postnatal development of the larynx.

Difference between child and adult larynx.

Muscles and cartilages of larynx.

Anatomy of trachea, bronchi and Oesophagus.

The lung and broncho - pulmonary segments.

The Mediastinum.

This visceral arches, their derivatives developmental defects.

Development of face.

BACTERIOLOGY SYLLABUS :

1. Elementary Bacteriology pertaining to :

1. Cornye Bacteriology Diphtheria.

2. Staphylo, Strepto, Pneumo.

3. Neisseria group.

4. Proteus group.

5. Vincents and Fusiform Bacillus.

2. Fungus : Aspergillus group Rhinosporidiosis etc.

3. Viruses : Adeno virus, Cosake Virus.
4. Immunology.

BIOCHEMISTRY SYLLABUS :

1. Biochemistry of body fluids and C.S.F.
2. Electrolyte balance and maintenance of PH of Blood.
3. Biochemical changes in upper airway obstruction and after tracheostomy.
4. Biochemistry of labyinthine fluids and its variations in diseases.

DEGREE OF MASTER OF SURGERY :

1. Pharmacology of Sympathomimetic and their uses in Otolaryngology.
2. Local anaesthetics and analgesics : Merits and demerits.
3. Chemotherapy of malignant conditions.
4. Cortico steroids and its usage in Otolaryngology.
5. Antibiotics - recent trends.

PATHOLOGY SYLLABUS :

General Pathology - Inflammations, Necrosis, gangrene Repair of wounds.

Shock - Pathology.

Granulomas including midline granulomas.

Thrombosis and Embolism.

Tumours - Aetiology, Classification, Pathology & Histopathology.

SPECIAL PATHOLOGY:

Surgical pathology of mouth, Jaw, neck Salivary glands and Oesophagus.

EAR :

Pathology of the external ear.

Histopathology of the drum membrane.

Inflammations of the middle ear.

Inflammations of Mastoid.

Inflammations of the Petross.
 Histopathology of the inner ear.
 Chronic inflammatory changes in the temporal bone.
 Neoplasms of the ear.

NOSE :

Pathology of the nose.
 Chronic specific infections of the Nose and accesory sinuses.
 (Para Nasal)
 Cysts and tumours of the nose and accessory sinuses.

PHARYNX AND LARYNX :

Oral and Pharyngeal pathology as manifestations of constitutional diseases.
 Pathology of the Nasopharynx and larynx.
 Lungs swellings of tumifactions of the neck.
 Clinical Pathology in its relationship to otolaryngology.

PHYSIOLOGY SYLLABUS :

Regulation of water balance and composition of body fluids by the kidney.
 Coagulation of blood.

PHYSIOLOGY OF SPECIAL SENSES :

Taste
 Smell

DEGREE OF MASTER OF SURGERY

Hearing
 Physiology of respiration including its mechanism and regulation.
 Physiology of deglutition.
 Maintenance of balance of body.
 Physiology of nose and paranasal sinuses.

Carriage of Oxygen by the blood.
 Carbondioxide transport in the body.

AUDIOLOGY SYLLABUS :

PHYSIOLOGY OF HEARING AND BALANCE :

Hearing including physics of sound.
 Sound production.
 Physics of Sound.
 The vibration.
 The decibel.
 The material source.
 Wave motion in a material medium.
 Propagation.
 Complex sound various and phase difference.
 Sound conduction.
 Vestibular function.
 Semicircular canals.
 The otolith organs.

Post Graduate Diploma in Orthopaedics (D.Ortho.)

Details of Training :

FIRST YEAR :

General Surgery	-	3	Months
Hand and Plastic Surgery Unit	-	1	Month
Total	-	4	Months

SECOND YEAR :

1. Anaesthesia

Intubation Technique should be known to surgeons dealing with traumatology.

Regional anesthesia and intensive respiratory care will be on essential knowledge for trauma surgeons.

- 1 Month

2. Medical Oncology

- 1 Month

3. Plastic Surgery

- 1 Month

4. Hand Surgery

- 1 Month

5. Radiology

X - ray Studies

Scan, M.R.I.

Irradiation etc.

- 1 Month

6. Neurology and Neuro Surgery

- 1 Month

Where department of physiotherapy and Artificial limb centres are functioning separately the Students should be posted for these section for one month each section.

**Post Graduate Courses in Orthopaedics
(D.Ortho)**

Scheme of Examination

Distribution of Marks :

Theory	Title	Duration In Hours	Maximum Marks
Part-I			
Paper I	Basis Sciences & General Principles of Surgery	3	100
	Marks qualifying for a pass in Part I in D. Ortho 50% marks in this University Theory Examination 50/100		
Part-II			
Paper I	Traumatology	3	100
Paper II	Orthopaedics and rehabilitation	3	100
	Total		200

Clinical Examination :

	No. of Cases	Duration	Marks
1. Long Case	One	45 Mts.	80
2. Short Cases	Two	30 Mts.	70
	Total		150

Practical Examination :**Spotting :**

Slides Specimens X - rays Instrument prosthetics

&

Orthotics

(1)	(1)	(1)	(1)	(1)	
			(5x2)		10

Oral					40
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Total	50
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Marks qualifying for a pass in Part II in D. Ortho

50% Marks in this University Theory Examination : 50/100

50% of Marks in the University Theory Examination : 100/200

50% of Marks in the University Clinical Examination : 75/150

50% of Marks in the aggregate of Theory / Clinical/
Practical / Oral Examination : 200/400

Maximum number of candidates to be examined per day : 8

**Post Graduate Degree in Orthopaedics
(D. Ortho)**

RECOMMENDED LIST OF TEXT BOOKS AND JOURNALS**TEXT BOOKS :**

1. Systems of Orthopaedics and Fractures - G.Apley
2. Outline of Orthopaedics - C. Adams
3. Text book of Orthopaedics and Transmatology - M. Natarajan
4. Fractures and joint injures Watson jones - Wilson
5. Marcers Orthopaedics surgeon - Duthiea Bently

6. Orthopaedics - S. Turek
7. Operative Orthopaedics - Campell
8. Orthopaedics diseases - Aegertera
kirkpatrick
9. Bone Tumours - Andrew C. Huros
10. Spine - James Cyriax
11. Fractures - Watson Jones
12. Orthopaedics - Mercer.

Journal of Bone and joint Surgery Orthopaedics Clinics of North America ACTA Orthopaedics Scandinavia Clinical Orthopaedics (Kulkarni) Indian of Orthopaedics.

**THE TAMIL NADU DR. MGR MEDICAL UNIVERSITY,
MADRAS - 600 032**

**SYLLABUS FOR POST-GRADUATE DIPLOMA IN
ORTHOPAEDICS APPLIED BASIC SCIENCES**

The course shall cover the following:

ANATOMY OF UPPER EXTERMITY:

Surgical Anatomy of Bones, joints, muscles.

Nerves and Blood Vessels of upper extremity

Surgical Anatomy of Brachial Plexus.

ANATOMY OF LOWER EXTERNITY:

Surgical Anatomy of Bones, Joints, Muscles, Nerves and Blood
Vessels of Lower Extremity.

Arches of foot

Essential Surgical Anatomy of Vertebral column

Ossification centres of Epiphysis of long bones

Blood supply to head and neck of Femur

Blood supply to bones in general.

PHYSIOLOGY AND BIOCHEMISTRY:

Calcium Homeostasis

Clinical importance of vitamin D

Renal function tests

Parathyroid function tests

Acid Base balance

Plasma Proteins

Structure, function and repair of articular cartilage

Physiology of normal coagulation and coagulation disorder

Paratharmone

Structure of Peripheral nerves and Peripheral Nerve injuries.

PATHOLOGY

1. Infections of Bone and joints (specific and nonspecific)
2. Fracture healing
3. Tumours of Bones and Joints
4. Rickets, Osteomalacia, Osteoporosis
5. Osteoarthritis, Rheumatoid arthritis
6. Pathology of Synevitia
7. Pathology of wound healing
8. Pathology of Tetanus and Gas gangrene

MICROBIOLOGY

1. Collection and transport of specimens
2. Sterilisation disinfection and theatre sterilisation
3. Postoperative wound infection, Hospital infection
4. Gram positive and gram negative infections
5. AIDS awareness and precautions
6. Mycotic infections
7. HIV

PHARMACOLOGY

1. Nonsteroidal anti inflammatory drugs
2. General principles of Chemotherapy of infections
3. Antibiotics effective in both gram positive and gram negative infections
4. Chemotherapy of Tuberculosis and Leprosy
5. Chemotherapy of Malignant Bone tumours, Myeloma and secondary deposits.
6. Calcium, Phosphorus, Parathyroid, Vitamin D

GENERAL SURGERY

1. Haemorrhage, Shock, Blood Transfusion
2. Fluid, Electrolytes, acid base balance
3. Bone grafting
4. Tumours, Cysts, Sinus
5. Gangrene
6. Wound infection
7. Venous Thrombosis
8. Lymphatics and Lymph Nodes

I - TRAUMATOLOGY :

Fractures and dislocations. This shall include the mechanism of violence causing the injury, pathology of fracture healing - signs and symptoms - the mechanics of displacement of fragments - reduction - maintenance of reduction of fractures and dislocations by various methods - study of complications of osteoarticular injuries and their treatment and rehabilitation.

They shall work in the orthopaedic out - patient department and 24 hours Fracture service and obtain proficiency in First Aid, emergency management of fractures and dislocation - Resuscitation and management of multiple injuries. They also be made conversant with various splints and their uses.

2. Contusions and other soft tissue injuries - sprains of ligaments of various joints - mechanism of production, their pathology symptomatology and management.

3. Peripheral nerve injuries and spinal cord injuries - mechanism of production - Symptomatology - pathophysiology investigation including electrodiagnosis - Physiotherapeutic

management - surgical treatment - splinting and bracing - rehabilitation.

II. GENERAL ORTHOPEDICS

The study of general orthopaedic shall include all the diseases that affect the locomotor system including :

(a) Deformities - Congenital and acquired - Pathomechanics - Clinical features - manipulative treatment - surgical correction - maintenance of correction - by braces and splints - rehabilitation.

(b) Osteoarticular tuberculosis - Incidence - Bacteriology - Pathology - Symptomatology - Investigations and management both conservative and surgical.

(c) Infections - Bacteriology - pathology - Clinical features and management in acute subacute and chronic infections of bone.

(d) Arthritis : Includes the study of various types of arthritis including infective, rheumatoid, metabolic and degenerative - pathophysiology investigations and management.

(e) Tumours include the study of benign and malignant osseous and soft tissue tumours - pathogenesis investigation - histopathology - management.

(f) Neuromuscular disorders include the study of Anterior poliomyelitis, Cerebral palsy, obstetrical palsies, muscular dystrophies - incidence Bacteriology - pathophysiology - Symptomatology - management - rehabilitation. Cerebral Palsy - incidence - etiology - pathophysiology - various clinical types -

physiotherapy - Splinting and bracing surgical management - rehabilitation - obstetrical paralysis incidence - pathomechanics - clinical features electro diagnosis splinting and bracing - physiotherapy and management.

- (g) Metabolic disorders involving the skeletal system.

The course requires the candidates to attend the orthopaedic Wards and out - patient department and shall have performed the common orthopaedic during the period of study and learn Principles of all traction procedures.

III. PHYSICAL MEDICINE AND REHABILITATION :

- (a) Principles of Physical therapy including exercise therapy and electrotherapy examination and prescription for splints and braces.
- (b) Principles of Occupational Therapy.
- (c) Principles of electro diagnosis.

IV. PROSTHETICS AND ORTHOTICS

Principles of amputation surgery - rehabilitation of the amputee - examination and prescription for Orthosis and prosthesis - check up to fittings.

V. The concept of Total Rehabilitation including medical, educational, vocational and Social Rehabilitation.

PRACTICALS :

1. Techniques of application of plaster of paris - casts, jackets,

physiotherapy - Splinting and bracing surgical management - rehabilitation - obstetrical paralysis incidence - pathomechanics - clinical features electro diagnosis splinting and bracing - physiotherapy and management.

- (g) Metabolic disorders involving the skeletal system.

The course requires the candidates to attend the orthopaedic Wards and out - patient department and shall have performed the common orthopaedic during the period of study and learn Principles of all traction procedures.

III. PHYSICAL MEDICINE AND REHABILITATION :

- (a) Principles of Physical therapy including exercise therapy and electrotherapy examination and prescription for splints and braces.
- (b) Principles of Occupational Therapy.
- (c) Principles of electro diagnosis.

IV. PROSTHETICS AND ORTHOTICS

Principles of amputation surgery - rehabilitation of the amputee - examination and prescription for Orthosis and prosthesis - check up to fittings.

V. The concept of Total Rehabilitation including medical, educational, vocational and Social Rehabilitation.

PRACTICALS :

1. Techniques of application of plaster of paris - casts, jackets,

shells, and corrective plasters.

2. Techniques of manipulations for fractures, dislocations and deformities.
3. Techniques of Traction procedures, Skin traction, Sling traction, Skeletal traction.
4. Operative techniques for common Orthopaedic operations.
5. Prescription of Braces, Calipers, Splints and other Orthopaedic appliances.

Post Graduate Diploma in Clinical Pathology (D.C.P.)

Details of Training:-

FIRST YEAR:

Clinical Pathology	... 2 Months
Hematology	... 3 Months
Microbiology	... 2 Months
Bio-Chemistry	... 2 Months
Surgical Pathology	... 3 Months
Total	12 months

SECOND YEAR:

Clinical Pathaology	... 3 Months
Haematology	... 3 Months
Microbiology	... 1 Month
Bio-Chemistry	... 1 Month
Surgical Pathology	... 4 Months
Total	12 months

**Post Graduate Diploma in Clinical Pathology
(D.C.P.)**

SCHEME OF EXAMINATION

Distribution of Marks:

Theory	Title	Duration in hours	Max. Marks
Paper-I	General & Systemic Pathology	3	100
Paper-II	Bio-chemistry and Microbiology	3	100
Paper-III	Haematology, Clinical Pathology and Cytology	3	100
Total			300

Clinical Examinations:

	No. of cases	Duration	Marks
1. Long Case	One	45 Mts.	80
2. Short Cases	Two	30 Mts.	70
Total			150

**Practicals:-
Spotting**

Slide/Specimens	(5 x 2)	
(3) (2)	:	10
Orals	:	40
Total		50

Details of Practical / Clinical Examination:-

- Day 1 a.m. a) Microbiology
b) Clinical Pathology & Haematology
(case work up)
p.m. a) Slides: Haematology & Cytology
b) Histo Technology

- Day 2 a.m. a) Slides: Histopathology
b) Microbiology
p.m. a) Biochemistry
b) Oral

Marks Qualifying for a pass:

50% of marks in the University Theory Examination : 150/300

50% of marks in the University Clinical Examination : 75/150

50% of marks in the aggregate of Theory/Clinical/
Practical/Oral Examinations : 250/500

Maximum number of candidates to be examined per day : 8

Post Graduate M.D. Degree in Pathology Branch - III

RECOMMENDED LIST OF BOOKS AND JOURNALS

TEXT BOOKS AND REFERENCE BOOKS:

1. Pathology, Edby E. Rubin and J.L. Farber. — Lippincott.
2. Anderson's Pathology, (Latest ED) Edby Kibsane. — C.V. Mosby.
3. Robbin's Pathologic basis of diseases Edby Cotran. — W.B. Saunders
4. Clinical diagnosis and Management by laboratory methods 18th Ed. Edby Henry. — W.B. Saunders
5. Haematology by J.H. Jandi. — Little Brown and co.
6. Cell, tissue and diseases, 2nd Ed. Neville Woolf. — Bailiere Tindall.
7. Practical haematology, 7th Ed, Dacie and Lewis — Churchill-living stone.
8. Comprehensive cytopathology, Bibbe. — W.B. Saunders.

9. Pathology of gastro intestinal tract, Edby Ming. — W.B. Saunders.
10. Symmer's systemic pathology Various volumes. third Ed. — Churchill-Living stone.
11. Oxford text book of pathology —
12. Lymph node biopsy interpretation 2nd Ed Stansfield. — Churchill-Living stone.
13. Pathology of the liver, Mascswen. — Churchill-living stone.
14. Blauestein's pathology of female Cenital-Tract. Edby kurman 3rd Ed — Springer-Verlag
15. AFIP Fascicies on various tumours — Armed forces institute of Pathology, Washington Dc.
16. Soft tissue tumours Enzinger and Weiss — C.V. Mosby.
17. Ackerman's surgical pathology Rosai — C.V. Mosby.
18. Ackerman's surgical patholgoy Rosai — Little, Brown

19. Problems in breast pathology,
Azooopaedi. — W.B. Saunders.
20. Biopsy pathology series — Chapman Hall.
21. Greenfields neuropathology —
22. Recent advances in histo-
pathology (Last three in the series) — Churchill-
Livingstone
23. Blood, Atlas and source book
of Haematology kapff and
Jandi — Little, Brown
and co.
24. Urological pathology Edby Murphy
25. Bone diseases including tumours
Edby mirra. — Lippincott.
26. Manual and Atlas of fine
needle aspiration cytology,
Edby Grell 2nd Ed., — W.B. Saunders
27. Pediatric surgical pathology — Williams and
2nd Ed. Edby Dehner Wilkins.
28. Handbook of practical immunology, — Vikas publishing
B.P. Talwar. House.
29. Theory and practise of historical
techniques 3rd Ed. Edby Bancroft — Churchill-
and Stevens. Lwingstone

30. Clinical Haematology, A.V. Hoffer — Gower medical
and Pettit. Sandoz Atlas. Publishing.
31. Diagnostic surgical pathology — Raven press
Edby Sternberg.
32. Pathology Annual. (yearly) — Appleton,
Century-crofts.
33. Year book of pathology and — Year book
clinical pathology. Publishers,
Chicago.
34. WHO classification of tumors — WHO
(second series) publication.

JOURNALS:

1. American Journal of surgical pathology.
2. Histopathology.
3. American Journal of clinical pathology.
4. Journal of Clinical pathology.
5. Human Pathology.
6. Clinics in Laboratory Medicine.
7. Clinics in Haematology and oncology.
8. Cancer.
9. Pathology.
10. New England Journal of Medicine.
11. Lancer.
12. A.M.A. Archives of Pathology and Laboratory Medicine.
13. Diagnostic histopathology.
14. Journal of Pathology.

Post Graduate Diploma in Ophthalmology (D.O.)

Details of Training:-

FIRST YEAR:

Out Patients and Casualty	— 3 Months
Inpatients and O.T.	— 6 Months
Refraction Room	— 3 Months
Total	12 months

SECOND YEAR:

Cornea Clinic	— 15 Days
Glaucoma Clinic	— 15 Days
Neura Ophthalmic Clinic	— 15 Days
Orbit Clinic	— 15 Days
Orthopedic Clinic	— 15 Days
Retina Clinic	— 15 Days
Urea Clinic	— 15 Days
Eye camps and community Ophthalmology	— 45 Days
Inpatients and O.T.	— 7 Months
Total	12 months

Post Graduate Diploma in Ophthalmology (D.O.)

SCHEME OF EXAMINATION

Distribution of Marks:

Theory	Title	Duration in hours	Max. Marks
Part-I Paper-I	Ophthalmology including Microbiology, Anatomy, Physiology and Pathology of the Eye. Marks qualifying for a pass in Part I in DO 50% marks in this University Theory Examination 50/100	3	100
Part-II Paper-I	Refraction Principle of Orthopedics and community Ophthalmology.	3	100
Paper-II	Ophthalmic Medicine and Surgery	3	100
Total			200

Clinical Examinations:

	No. of cases	Duration	Marks
1. Long Case	One	45 Mts.	80
2. Short Cases	Two	40 Mts.	40
3. Retinoscopy	One	30 Mts.	15

4. Funduscopy	Two	30 Mts.	15
		Total	150

Practicals:-
Spotting

Slide/Specimens/X-Rays/Field Chart

Scan Chart

Instruments

(2)	(1)	(1)	(Any One)	(5 x 2)	:	10
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Orals	:	40
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Total	:	50
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Marks Qualifying for a pass in Part II in D.O.

50% Marks in this University Theory Examination	:	50/100
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50% of marks in the University Theory Examination	:	150/300
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50% of marks in the University Clinical Examination	:	75/150
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50% of marks in the aggregate of Theory/Clinical/	:	250/500
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Practical/Oral Examinations

Maximum number of candidates to be examined per day	:	8
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Recommended List of Text Books & Journals

TEXT BOOKS

1. Arnold Sorsby - Modern Ophthalmology.
2. Principles and Practice of Ophthalmology by Peyman.
3. Prasons diseases of the Eye.
4. Clinical Ophthalmology - Kenski.
5. Becker-shaeffer's Diagnosis of Theraphy of the Glaucoma.

6. Clinical methods of Neuro-Ophthalmologic Exam.
A. Kestenbaum.
7. Diseases of the Eye - May and Worth's
8. Cattract Surgery & its Complications by Jaffe.
9. Stallard's Eye Surgery.
10. Practical Orthopedics in the treatment of squint - Kieth lyle.

REFERENCE BOOKS

1. The Cornea - H.E. Kaufman.
2. Retina - Stephan. J. Ryan.
3. Clinical Neuro - Ophthalmology - Walsh and Hoyt's.
4. System of Ophthalmology - Duke-Elder (15 Volumes).

JOURNALS

1. British Journal of Ophthalmology.
2. American Journal of Ophthalmology.
3. Indian Journal of Ophthalmology.
4. Eye Journal Ophthalmology.
5. Survey of Ophthalmology.
6. IOC.
7. Archives of Ophthalmology.
8. Ophthalmol.

**U-Dated Core Syllabus Diploma in Ophthalmology
(Basic Sciences - Applied)**

ANATOMY:

Anatomy of lids, Lacrimal passage, extra ocular muscles, Cornea, Angle of Anterior chamber, uveal tract, Lens, Vitreous, Retina, Optic nerve and visual pathway.

Development Anatomy of the Eye.

Bony orbit, spaces of orbit and cranial fossa, cavernous sinus - paranasal sinuses, Blood supply to eye and Adnexa; blood supply of visual pathway-circle of willis.

Cranial nerves, parasympathetic and sympathetic supply to the Eye-ventricles of the Brain.

PHYSIOLOGY:

Maintenance of corneal transparency Lacrimal secretion and tear film layer.

Formation and circulation of Intra ocular fluids, Maintenance of Intra ocular tension.

Pupillary reaction and their pathway.

Pupillary reflexes.

Theories of Accommodation.

Accommodation-Convergence-relationship.

Blood Aqueous Barrier.

Physiology of vision.

Theories of colour vision.

Binocular vision.

Blood Retinal Barrier.
 Electrophysiology.
 Axial transmission of impulses.
 Visual perception of cerebral cortex.

BIOCHEMISTRY:

Carbohydrate metabolism.
 Metabolic disorders of lipids
 Amino acid normal and Abnormal Metabolism
 Metabolism of cornea
 Metabolism of crystalline lens.
 Biochemical changes of lens leading to cataract.
 Metabolism of Retina.
 Photochemistry of vision.
 Structure and Metabolism of vitreous.

PHARMACOLOGY:

Miotics, Mydriatics-Cycloplegics
 Parasympatholytic drugs.
 Cholinergic drugs
 Sympathomimetic drugs
 Sympatholytic drugs
 Penetration of topically applied drugs
 ear replacement substances.
 Drug penetration of blood aqueous barrier.
 Principles of Cortisone and ACTH therapy
 Principles of Antibiotic Therapy
 Fluorescein Dye
 Anticoagulants
 Antiviral drugs
 Antifungal drugs
 Immunosuppressive drugs

Vasodilators.

Drugs used in Glaucoma

Antineoplastic agents

Preanaesthetic medication

Topical Anaesthesia

Local Anaesthesia

Anti Diabetic drugs

Anti hypertensive drugs

Shock therapy

Vitricous sulostitutes and acqeous sulostitute.

PATHOLOGY:

General consideration of inflammation of the Eye and Adnexa.

Vascular changes in Age, hypertension and Diabetes.

Behign and Malishant tumours of the Eye and Adnexa.

Dystrophy and Degeneration of the Conjunctiva

Cornea and Retina

Metabolic diseases.

Fungal Gramuloma

AIDS.

MICROBIOLOGY:

General Microbiological characters of Bacteria viruses and fungi and parasites

Resistance and Immunity, Antigen antibody reactions.

Toxigenicity and hypersensitivity reaction

GM POSITIVE GROUP:

Staphylococci, Streptococci, Pheumococci

Corynebacterium Diphtheria, C. Xerosis.

GM NEGATIVE GROUP:

Neisseria, Moraxella, Kock Weeks Bacillus Brucella,
Pseudomonas.

VIRUSES:

Trachoma and Inclusion Conjunctivitis adenoviruses
Herpes simplex
Herpes Zoster.
AIDS Viruses.

FUNGI:

Aspergillus
Fusarium
Candida
Dismented fungus.

PARASITES:

- Cysticercus
- Hydatid Cys.
- Loa loa
- Microfilanic
- Intestinal nematodes.

Post Graduate Diploma in Physchological Medicine (D.P.M.)

etails of Training:-

RST YEAR:

Neuro anatomy / Physchology	... 3 Months
Neurophysiology / Psychology	... 3 Months
Applied Biochemistry / Psychology	... 3 Months
Bio-statistics / Psychology	... 3 Months
Total	12 months

ECOND YEAR:

Neurology	... 3 Months
Psychiatry	... 9 Months
Total	12 months

Diploma in Psychological Medicine (D.P.M.)

SCHEME OF EXAMINATION

Part-I (At the end of I Year)

Theory	Title	Duration in hours	Max. Marks
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Part-I

Paper-I	Neuroanatomy and Neurophysiology	3	50
Paper-II	General psychology	3	50
Paper-III	Social Abnormal psychology	3	50

Oral Examination in Basic Sciences:

(Neuroanatomy, Neurophysiology and Psychology and Record Work)

50

Marks qualifying for a pass in I Year D.P.M.

50% Marks in the University Theory

Examination : 75/150

50% Marks in the aggregate of

Theory and Viva : 100/200

Part II

Theory Examination : Paper I, II & III

Paper-I	Neurology with Applied Biochemistry	3	50
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Paper-II	Psychiatry including Mental Health	3	50
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Paper-III	Psychiatry including Child psychiatry	3	50
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Clinical		Duration	Marks
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Clinical Neurology	Long Case - One	60 Minutes	50
-do-	Short Case - One	30 Minutes	

Clinical Psychiatry	Long Case - One	60 Minutes	
	Short Case - One	30 Minutes	50
	Spotter	15 Minutes	

ORAL:

Psychiatry 25	50
Neurology 25	

Marks Qualifying for a pass in II Year D.P.M.

50% of marks in the University Theory Examination	: 75/150
50% of marks in the University Clinical Examination	: 50/100
50% of marks in the aggregate of Theory/Clinical/Oral	: 150/300

Recommended List of Books / Journals Neurology

1. ADAMS. (RAYMOND D) & VICTOR (MAURICE) Ed.
"Principles of Neurology", 3rd edition - 1985 Mcgron Hill Book
Company, Newyork.

2. BICKERSTAFF (EDWIN R.)
"Neurological Examination in clinical practice" 4th Edition;
1983, P.G. Publishing Pt. Ltd., Singapore.
3. BANNISTER, (SR):
"Brain's Diseases Neurology" 5th Edition: 1978 ELBS, United Kingdom.
4. WALTON, (JOHN):
Brain's Diseases of the Nervous system; 9th Edition; 1985 -
Oxford University Press, Delhi.

PSYCHIATRY

5. MAYORGROSS:
"Clinical Psychiatry" - 3rd Edition; 1979 (Reprint) Bailliere Tindall, London.
6. NOVES & KOLB:
Modern Clinical Psychiatry: 9th Edition; 1977 W.B. Sanders Company, Philadelphia, U.S.A.
7. KALINOWSKY (LOTHAR) & HOCH (PAUL H):-
"Somatic Treatments in Psychiatry", 1961 Grune & Stratton. Newyork, U.S.A.
8. BATCHELOR (IVOR R)
"Henderson and Gillespie's Text Book of Psychiatry" 10th Edition, 1969 Oxford University Press, Newyork, U.S.A.
9. SARGANT (WILLIAM) & SLATER (ELIOT):
"An introduction to physical methods of treatment in

Psychiatry" 5th Edition, 1972 Churchill Livingstone. United Kingdom.

10. SIM (MYRE)
Guide to Psychiatry: 4th Edition, 1981: Churchill Livingstone. United Kingdom.
11. KENDELL, R.E. & ZEALLEY (A.K.) Ed.
Companion to Psychiatric Studies: 4th Edition - 1988; Churchill Livingstone, United Kingdom.
12. KAPLAR, (HAROLD) & SADOCK (BENJAMIN) Ed.
Comprehensive Text Book of Psychiatry, 2 Vols., 5th Edition, 1985, William, Baltimore, U.S.A.
13. GELDER, (MICHAEL) ET AL:
"Oxford Text Book of Psychiatry", 1983 Oxford University Press, United Kingdom.

MENTAL DEFICIENCY

14. TREDGOLD & SODDY:
Tredgold's Mental Deficiency; 11th Edition, 1971 Bailliere Tindall, London.
15. ZILBOORG. (GREGORY)
"A History of Medical Psychology", 1941, W.W. Norton & Company Inc., Newyork.
15. (a) PENNOSE (LIONOL. S)
Biology of mental Defoeel. Reg. Ed. London 1954.

CHILD PSYCHIATRY

16. RUTTER (MICHAEL & HERSOVE LIONEL)
"Child and Adolescent Psychiatry" 2nd Edition; 1985 Blackwell Scientific Publications, Oxford. Britain.

17. KANNER, (LEO)
"Child Psychiatry"; 4th Edition, 1972; Charlese Thomas,
Springfield, U.S.A.
18. BARKER, PHILIP
"Basic Child Psychiatry", 3rd Edition, 1979 Granada
Publishing Ltd., United Kingdom.

FORENSIC PSYCHIATRY

19. EAST, (NORWOOD)
"Society and the Criminal" Her Majesty's Stationary Office
1960 East, (Norwood)
"The adolescent criminal"; 1942; J.A. Churchill Ltd.

ANATOMY

20. GRAY'S ANATOMY: 35th EDITION.
1973, Longman, U.K.
21. 'Gunnighan's Manual of Practical Anatomy'; 13th Edition,
1971 ELBS, U.K.

NEUROANATOMY

1. CHUSID, (JOSEPH G)
"Correlative Neuroanatomy & Functional Neurology" 10th
Edition, 1985. Longs Publications, U.S.A.
2. KUNTZ
Neuroanatomy, 1950 Truex, (Raymond):-
3. STRONG & ELWYNS
Human Neuroanatomy 5th Edition 1964, Oxford Book
Company, U.K.

4. RANSON & CLARK:-
Anatomy of the Nervous System 9th Edition; 1953 Saunders & Co., U.S.A.
5. Hall (J.H.) Humbertson, (A.O.) "A Correlative Study Guide to Neuroanatomy" 2nd Edition, 1970, Harper & Row.
6. Matzke, (H.A.) & Foltz (F.M.) "Synopsis of Neuroanatomy": 2nd Edition 1972; Oxford University Press.

E.E.G.

1. Hill, (Denis & Parr, (Geoffery):
"EEG"; A Symposium on its various aspects, Macmillan Co., 1963.
2. KILOH:-
"Clinical EEG" 3rd Edition, 1972 Butterworths, London.
3. KOOL:-
Fundamentals of EEG 1971, Harper Row, London.

NEUROPHYSIOLOGY

2. Review of Medical Physiology - Ganong, 14th Edition
3. Sampson - Wright's Applied Physiology - 14th Edition.
4. Text Book of Neuro - Physiology - by Dr. Harihara Subramanian
5. Nervous System by Nobec.

Post Graduate Courses in Psychiatry**Syllabus**

1. General Psychiatry including History of Psychiatry, Classification and Adult Psychiatry.
2. Theories of Personality and Psychopathology.
3. Social Psychiatry.
4. Child and adolescent psychiatry including mental subnormality.
5. Organic mental syndromes and disorders.
6. Administrative and Forensic Psychiatry.
8. Psychopharmacology.
9. Psychophysiological Disorders.
10. Therapies in Psychiatry.
11. Consultation - Liaison Psychiatry.
12. Community Psychiatry
13. Geriatric Psychiatry.
14. Ethics in Psychiatry.
15. Research methods and new frontiers in Psychiatry.
16. Systematic Psychiatry.

17. Psychopathology
18. Psychotherapy
19. Social Psychiatry.
20. Child Psychiatry.
21. Mental Deficiency
22. Epileptic disorders and other organic states.
23. Mental health.
24. Administration and Forensic Psychiatry.
25. Therapeutics.
26. Neuropsychiatric genetics
27. Psychosomatics.
28. Psychological aspects of general medical surgical and public health. Moral and educational problems.

B. NEUROLOGY;

1. Fundamentals of Clinical Neurology.
2. Diagnostic Techniques
3. Electro Physiological techniques and research
4. Psychosurgery, Stereotaxic surgery.

C. GENERAL MEDICINE:

1. Fundamentals of General Medicine.
2. General Medical and Surgical Pathology.
3. Diagnostic Procedures.

D. PSYCHOLOGY:

1. General Psychology.
2. Social Psychology
3. Abnormal Psychology
4. Development Psychology
5. Psychodiagnostics

E. ELEMENTARY STATISTICS - RESEARCH METHODS

F. Applied Sociology and Anthropology.

G. Anatomy of Nervous System.

H. Physiology of Nervous System.

I. General Biochemistry.

J. Applied Biochemistry.

K. E.E.G.

Drugs and the lung.

Mediastinum (Anatomy, Cysts, Tumours and Mediastinitis).

Chest wall and Thoracic cage (Deformities, Tumours)

Diaphragm (Anatomy, Anomalies, Hiati, Paralysis).

Transplant lung. Bypass lung.

Pulmonary Heart Diseases (cor pulmonale).

Post Graduate Diploma in Psychological Medicine (D.P.M.)

Details of Training:-

1. Medical wards posting (infectious diseases) — 2 Weeks
2. Child Health — 2 Weeks
3. Dermatology/Venereology/HIV — 4 Weeks
4. Psychiatry — 2 Weeks
5. Obstetrics / Family Planning — 4 Weeks
6. (PHC) Primary Health Centre — 4 Weeks
7. Microbiology Entomology & Parasitology — 4+4 Weeks (192 Hours)
8. Blood Bank — 2 Weeks
9. Public Health Laboratory — 2 Weeks
10. Town Planning — 1 Week
11. M.H.O. / Corporation Medical Officers — 2 Weeks
12. Joint Director / District Level — 2 Weeks
13. D.T.O. — 1 Week
14. D.L.O. — 1 Week

- | | | |
|--------------------------------------|-----|-------|
| 15. NMEP | — 1 | Week |
| 16. NFCP | — 1 | Week |
| 17. NEWP | — 1 | Week |
| 18. UIP-Directorate of Public Health | | |
| 19. ICDS | | |
| 20. TINP | — 3 | Weeks |
| 21. IRDP | | |
| 22. Port Health | — 1 | Week |
| 23. ESI Hospital | — 1 | Week |
| 24. PHE & Occupational Health | — 3 | Weeks |
| 25. State Statistical Department | — 1 | Week |
| 26. HEB | — 1 | Week |
| | 48 | Weeks |

Each candidates shall work on a project and present a project report consisting of 40 pages at the end of the 3rd Semester.

The above postings for a total duration of 48 weeks will extend both during the 1st and the 2nd years.

In addition, there shall be a study tour covering various places of Public Health importance at the end of the third Semester. The visits will include such places as Neyveli Lignite Corporation, BHEL, disposal of waters and effluents in Hindustan Photo films, Mettur Chemicals Tanneries & etc.

Microbiology, Parasitology and Entomology will be for a total duration of 96 + 98 Hours spread in the whole of the DPH course.

Most of the evening sessions of the course in the 1st and 2nd years will be done in the Department of Community Medicine and will consist of class room lectures, Seminars and practicals. Morning sessions will similarly consist of hospital and field postings and exposure to actual implementation of National Health Programmes. University level theory and practical examinations shall be only at the end of the DPH, course with the Examination scheme as under:

PRACTICAL EXAMINATION:

Practical I

Theory	Title	Duration in hours	Max. Marks
Paper-I	Statistics, Occupational Health, MCH/FP & Demography & Public Health Engg.	3	100
Paper-II	Epidemiology, Monitoring and evaluation. Entomology Communicable & Non Communicable diseases	3	100
Paper-III	National Programmes, Health management, economic evaluation of programme, Health Education International Health, Public Health Acts	3	100
Total			300

PRACTICAL EXAMINATION:

Practical I

Practical	Session	Duration in Hours	Marks
1. Clinic social case discussion	FN	1½	50
2. Slides/Specimen microbiology, entomology	FN	¾	20
3. Hotel inspection/ Factory Inspection/ Lodging House Inspection	AN	1½	30
Total			100

PRACTICAL-II:

Practical	Session	Duration	Marks
Epidemiological Exercises	FN	1½	20
Biostatistics Interpretation of laboratory data /	FN	1½	20
& Water sample data	FN	¾	10
Oral	AN	3	50
Total			100

DETAILS OF PRACTICALS:

CLINIC SOCIAL CASE EXAMINATION:-

Identifying the clinical social and economic issues relating to the case in question. Application of levels of prevention on the management of the case. Community Health issues associated with the case. Relevant national programmes details about the case. Existing health care infrastructure available for management of the case.

HOTEL INSPECTION, LODGING HOUSE, FACTORY:

The conformity to the stipulated guidelines laid down by specific public health laws. Identify areas where legal action can be taken by the Health Officer.

SLIDES SPECIMENS:

Relating to Microbiology, Entomology, Family planning and nutrition.

EPIDEMIOLOGICAL EXERCISES:

Surveillance data in the form of descriptive or analytic nature is given with specific relevance to programme managers. The data can be form TB, Leprosy, UIP, Malaria, Filariasis etc. The ability is met as the programme manager should be assessed.

BIOSTATISTICS EXERCISES:

This involves statistical techniques for analysis.

LABORATORY DATA INTERPRETATION

The results of analysis of water, or other food articles are provided and candidate is advised to interpret the data and suggest remedial activities.

Marks Qualifying for a pass:

50% of marks in the University Theory Examination : 150/300
 50% of marks in the University Clinical Examination : 75/150
 50% of marks in the aggregate of Theory/Clinical/
 Practical/Oral Examinations : 250/500
 Maximum number of candidates to be examined per day : 8

POSTING - GENERAL OBJECTIVES:-

1. State details of operation of the health systems the candidate is practicing.
2. State the Administrative roles of each officer with whom candidate is posted.
3. State the methods used for implementation of public health laws in the area of posting.
4. Interpret epidemiological and bio-chemical data being monitored through the programme.
5. State the functioning of National Health Programmes through the administrative unit.
6. Apply levels of prevention relating to public health in the speciality of practice.

SPECIFIC OBJECTIVES:

1. Management of infections diseases. Clinical Examination of patient.
2. Clinical examination of children, management of common paediatric problems.

3. Clinical features of leprosy, management of common dermatological, STD problems and HIV/AIDS.
4. Psychiatric: Identification of priority psychiatric problems with a view for referral. Organization of community based psychiatry services.
5. Obstetric: High list pregnancy. Screening, Referral systems.
6. F.P. - Choice of women for family planning, incentives and disincentives targets:-
7. PHC: Organisation and functions, sub-centre and its role, budget of PHCs, monitoring and surveillance of PHC data.
8. Microbiology: Universal Precaution and hospital infection control, methods of sterilization and disinfection, coliform count, collection of samples for sterility checks. Regionalization of laboratories.
9. Blood bank: Screening donar, storage and transport of blood and blood products - screening for HIV / Hbs Ag.
10. Public Health Laboratory: Analysis of milk and other blood samples. Implementation of PFA, collection and transport of specimen for analysis.
11. Town Planning: Zoning and urban problems.
12. MHO: Role of MHO in implementing public health activities, PFA, rabies control, excreta disposal, safe water, infectious disease control, meat inspection hotel inspection, factory licensing and implementation of immoral traffic act.
13. Joint Director: District level health administration Monitoring and surveillance of programme.

14. DTO: Organisation of District Tuberculosis control programmes. Case finding, case holding, role of conventional regimens. Implementation of short term chemotherapy programme. Assessment of relapse, failure regimens. Mole of referral for admissions, monitoring of Epidemiological data.
15. NMEP: Techniques of blood exams, staining, identification techniques. Spraying technique - monitoring of data of district level
16. NFCD: Techniques of filariasis surveys. Treatment of carriers, anti larval methods.
17. UIP: Immunization criteria, target, groups, health education, surveillance of vaccine preventable diseases. Cold chain.
18. ICDS: Choice of beneficiaries for ICDS scheme. Assessment of Nutritional status, growth monitoring, data interpretation through ICDS programme.
19. TINP: Choice of beneficiaries for TINP scheme. Assessment of Nutritional status, growth monitoring, data interpretation through, TINP programme.
20. IRDP: Role of economic development in relation to health care. Economic evaluation of income generation programmes.
21. The role of BHO in Block level administration of health care.
22. The role of panchayat, in administration of health care.
23. Port health: Role of port Health organisation in isolation and quarantine. International travel.

**Diploma in Public Health
SYLLABUS**

Public Health Microbiology and Immunology

— 96 hours

MICROBIOLOGY

INTRODUCTION:

Classification, characters and life history of pathogenic and commoner non pathogenic bacteria and fungi, identification and classification of Bacteria. Culture media

VIROLOGY:

A detailed account of the biology of viruses.

SPECIAL TOPICS:

Bacteriology of water, air mail, food, sewage and soil food poisoning; Nitrogen cycle Bacteriology, Pathogenicity and virulence. Bacteriological investigations.

SPIROCHATES:

Structure and characteristics - A detailed account of important spirochaetes.

RICHETTSIAE:

Structure and characteristics - A list of important rickettsiae and diseases caused by them.

Antisepsis disinfection and sterilisation. Standardisation of disinfectants. Pasteurisation.

IMMUNOLOGY

Antigenic properly and antibodies. Rationale of immunological processes in the body. Classification of immunity. Tests for immunity. Vaccines and anti-sera their varieties and preparation specific protection methods and techniques of immunization and dosage.

PUBLIC HEALTH CHEMISTRY

INTRODUCTION:

The general principles of inorganic, organic and physical chemistry in relation to the methods and processes in common use in Public Health Chemistry.

The character and composition of air, water, soil and sewage, their impurities and the methods of detection.

The character, composition and adulteration of the more commonly used foods, condiments and beverages.

The character and composition of the important disinfectants and antiseptics their modes of action and standardisation. Methods of analysis commonly used in Public Health work, interpretation of results, in the framing of opinions and reports.

Laboratory work should consist of:

WATER:

Sampling, physical examination, qualitative, tests, quantitative determination of total solid residues, dissolved gases, carbonates, chlorides, sulphates, nitrites, nitrates, organic matter in terms of albuminoid ammonia, organic carbon and nitrogen and oxygen absorbed. Ammonia, Phosphates, lime magnesia, hardness poisonous metals. Microscopic examination of deposit.

SEWAGE:

Chemical and physical examination of sewage and effluent after treatment.

AIR:

Quantitative estimation of carbondioxide, detection of sulphurated hydrogen, nitric acid and nitric acid.

SOIL:

Determination of water capacity, porosity and permeability, determination of ammonia and organic nitrogen in the soil and of carbonic acid in the ground air.

FOOD:

Qualitative and quantitative chemical examination of milk, condensed and preserved milk powders, curds, butter, milk, butter, ghee and other animal fats, edible vegetable oils, cheese, confection and honey preserves, wheat flour and other cereal flour, bread, starch, tea, coffee, cocoa, vinegar, lime juice, aerated waters, alcoholic drinks, tinned and preserved foods, the detection and estimation of common adulterants in the above. Detection and estimation of the antiseptics, preservatives, coloring matters, poisonous and deleterious substances in the food.

DISINFECTANTS:

Chemical examination of important disinfectants eg. estimation of chlorine in bleaching powder and chlorine solutions; phenol and formaldehydes.

Climatology and meteorology and meteorology in relation to Public Health

The elements of climatology as applied to public health. Air pressure and its influence on health; barometers, corrections for barometers. Temperature, thermometers and their uses. Methods of making observations maximum and minimum thermometers, solar and terrestrial radiation thermometers, soil thermometers thermographs influence of temperature on health and ventilation.

HUMIDITY:

Hydrometers, direct and indirect determinations of humidity. Influence of humidity on health and ventilation, rainfalls rain gauges, influence of the configuration of a region on the rainfall, the influence of rainfall on health.

WINDS:

Estimation of the direction, velocity and pressure, determination of the direction and strength of air currents prevailing winds. Monsoons cyclone and anticyclone system, weather charts and weather forecast. Artificial rain, atmospheric electrically and thunder storms, floods.

Special consideration of meteorological conditions prevailing at the state, in the region and to India generally and their influence on the prevalence and spread of certain infections and epidemic diseases.

MEDICAL ENTOMOLOGY AND PARASITOLOGY

MEDICAL ENTOMOLOGY

INTRODUCTION:

Binomial nomenclature; definition and scope; classification economy of arthropods, morphology and metamorphosis, General principles vectors types of transmission, mouth parts and wing

rotation. Study of the morphology, life history, bionomics and public health importance and control of important diptera, hemiptera, orthoptera, Anoplura, mallophaga, Siphonaptera, Copepoda and Arachnida with particular emphasis on Culicidae, Archididae, Simuliidae, Tabanidae, Muscidae, Calliphoridae, Blattellidae, Cimicidae, Reduviidae, Pediculidae, Tungidae, Pulicidae, Ceratophyllidae, Cyclopidae, Argasidae, Ixodidae, Sarcoptidae and Culicidae. Poison apparatus of spider, Centipeds, scorpions, honeybee and snake. Role of arthropods in sustaining infection in natural reservoirs of human infections. Zoonoses, practical work consists of field visits, surveys, collections, preservations, dissections, colonisation of vectors and identification of species, up to study the working of control schemes in the field.

PARASITOLOGY

PROTOZOOLOGY:

Introduction, phylum protozoa general features, classification Rhizopoda. Detailed study of the protozoa of the intestinal and oral cavities mastigophora - Detailed account of *Leishmania* and *Trypanosoma*. Intestinal flagellates. Spermatozoa - Detailed account of *Plasmodium*, ciliata - Detailed account of *Balantidium*. Brief Introduction, Animal association and definition of parasite scope classification of parasites - study of the classification, structure, life history and control trematode, cestode and nematode parasites of man with particular reference to the families; Fasciolidae, Opisthorchidae, Treglotremaeidae, Schistosomatidae, Tachidae, Dilopidae, Hymonolepididae, Duphyllebothridae, Irrichinellidae, Trichidae, Strongyloididae, Anchostrongylidae - atidae, oxyuridae, ascarididae, Acanthocheilone matidae and Drecunculidae. Brief study of Acanthocephala and Hirudinea.

Practical work will consist of the study of various preparations of different stages of the parasites in the laboratory besides

examination of blood, and faces of men and animals on malaria filaria, guineaworm, foundworm, hookworm and other infections will also be undertaken.

Public Health including Sanitary Engineering, Biostatistics and Vital statistics.

PUBLIC HEALTH:

Definition of health - positive and negative aspect of health various factors on which health depends - influence habits superstitions, culture, religion, etc. on the health - various agencies responsible for the community health - by the individual / family community. Role of the different agencies and in particular that of a medical graduate with DPH practical sanitation - Public Health surveys. Village sanitation - sanitation of camps, improvised methods management of fairs and festivals, personal hygiene disposal of the dead, disinfection, disinfecting stations disinfection.

A Series of lecture on town planning by the Director of Town planning; medical inspection of school children, school hygiene, principles and methods of control of epidemics in schools; class rooms, school Buildings - hostels, play grounds, ventilation, lighting, heating, cooling, water supply, sanitary conveniences status of material and child health, perinatal, neonatal - infant, preschool child, school and material morbidity and mortality causes, preventive and promotive measures - The need to consider a child differently from that of an adults - Growth and developments (Infra and extra uterine) factors influencing, growth and development. Assessment of growth and development - Maternal and child health - Maternity and child welfare schemes. Occupational Health offensive and dangerous trades resulting nuisances, methods of control, industries and factories, industrial area and factory sites, smoke and dust nuisance, industrial poisoning, disabilities, occupational diseases due to industries and trades.

NUTRITION:

Classification of food nutritive functions and values of food, dietetics, Nutrition in health and disease. Nutritional need of growing children at various stages. Kinds of food, their nutritive value - balanced diet. Prepared and preserved foods - Nutritional deficiencies and consequences - Nutrition programmes.

Sanitary Engineering Biostatistics and Vital statistics. Public Health Engineering General principles, survey levelling and drawing, general nature of building materials, principles of construction. Temporary permanent and permanent. Water supply sources and characters. Impurities in water - physical chemical and biological water supply systems - conservation collection and storage. Distribution systems - basic design. Laying pipes, branch connections and house connection. Water requirements calculation of purification of water stream. Sanitation filtration and infiltration gallery. Air & Ventilation composition of air source Impurities. Air pollution and prevention. Standards and method of ventilation. Air conditioning cooling and heating. Meteorological factors. Katathermometer. Refuse and its disposal water collection and disposal, Excreta and its disposal latrines and urinals - types of detained account of types of detailed account of types of campositing. Septic tank designing disposal of effluent. Liquid fifth and its disposal. Plumbing and house fitting, types f traps - sewage system basic design sewage farms, oxidation ponds - building sanitation Residential houses - lodging house Hotels, restaurants theatres, godowns, workshops factories, markets, laundry, dhoby khanna, damn proofing, lighting rat prefig disposal of the dead methods burial grounds Radiation hazards.

BIOSTATISTICS:

Statistical concepts. Variation - confidence limits levels of significance. Standard deviation. Concomitant variation and trends.

Regression lines coefficient of correlation, errors estimation of errors, charting statistics; graphs; index chart, curve, logarithmic curve, cumulative curve, histogram, bar charts, scatter diagram, column charts, simple and deviation column, floating column, pictorial column, bars; flow maps cosmographs pictograph and pictogram.

VITAL STATISTICS:

Population, census, estimates of population, registration of births, deaths and marriages. Birth rate and death rate. Age specific rates. Standardised death rate. Calculation and correction of rates and causes of morbidity and mortality. Influence of race, age, sex, migration, occupation housing and sociological factors on the registration of and calculation of birth rates and death rates. Life table probability. Preventive medicine; Epidemiology and social medicine.

Preventive Medicine

INCLUDING HEALTH ADMINISTRATION 192 Hours

Introduction:- Historical concepts and methods.

Infection, Incubation period, Infectivity, Disease carriers Zoonosis - Routes of infection. Infectious diseases pathogenicity virulence - Susceptibility immunity and tolerance. Types of immunity malaria, Kalaazar Yellow fever, dengue fever, sandfly fever, relapsing fevers, typhus fever, dysentery, gastroenteritis, enteric fever, cholera, plague, diphtheria, tetanus, whooping cough measles, chicken pox, small pox, mumps, poliomyelitis, influenza pneumonia, tuberculosis, leprosy, rabies, anthrax, trachoma, venereal diseases, yaws, Non communicable disease Mental Health causation prevention and rehabilitation. Vaccination. Preparation testing and standardisation of vaccines.

Verification of vaccination.

EPIDEMIOLOGY:

Introduction: Concepts and methods. Disease patterns mortality rates and measurements of morbidity. Agents of infection. Causative and gravitative factors. Transmissions modes - Portals of entry.

Epidemiological investigations - Tools for epidemiological studies. Endemics, epidemics, pandemics - Enzootics epidemic cycles epidemics. Special epidemiological features of important communicable and non communicable diseases.

SOCIAL MEDICINE:

Introduction: Definition and scope of Social medicine. Effects of disease on the individual, on the family on the community and on nation. Sociology and social anthropology Ethnological and cultural factors and their effects on public health measures. Social economics definition, different branches of economics. National wealth and over population. Social welfare measures. Rehabilitation of the infirm and incurable. Health education. Genetics, Eugenics and Euthenics. Heredity and environment. Mendelism Weismanism. Mutation. Important factors in genetics. Statistical approach to genetics - cytegenetics gene action. Chromosome aberrations sex determination. Human ecology.

HEALTH LEGISLATION:

Constitutional provisions for health and social welfare. World Health Organisation. International health regulation. National and provincial Legislations. The laws in force in the state together with the rules and regulations made under them government orders departmental instructions, codes, etc. Detailed instruction in sanitary laws and practical application of these laws.

Health Administration

The Administration of Public Health:

Practice of Public Health in India and brief study of practices in other advanced countries. Health Administrative services Central and State Governments, local boards, Corporation Municipalities, Panchayat Union and Panchayats. The Public Health Board. Directories of Health Services. Detailed study of Health administration in the State. Relationship of the health officer with the local authority, the general practitioner. The routine duties of the health officer and special duties during epidemics, fairs and festivals, floods and other natural calamities. Detailed study of the National programmes for the control and eradication of communicable diseases the special state programme Material and child Health Services. Family Planning Programme school health, Nutrition. Small pox, Malaria. Yaws and guineaworm eradication programme. Plague, filaria, cholera, tuberculosis and other control programmes administration of laws relating to vital statistics. Delegation of work cost - benefit analysis.

PRACTICAL TRAINING

Practical training in Part II subjects will include.

1. Rural Health training at the Institute of Public Health, Poonamallee for one month (Internment).
2. Urban Health training at the Corporation of Chennai for 15 (Fifteen days).
3. Educational tour of 15 days duration to institutions, installations and places of public health importance including practical training in Municipal and district health administration.
4. There shall also be arranged special series of lectures by the concerned assistant Directors of Health Services at the State

Headquarters on topics like to nutrition, maternal and Child Health, National programmes for Control and Eradication of diseases.

5. Trainees will also attend special posting - Health administration. Health Education, Family Planning Applied - lectures arranged at Directories of Town Planning, infectious diseases hospital. Tuberculosis Institute, Port Health Department, leprosy teaching and Research Institute, Family Planning training centre, Institute of Child Health, Institute of Venereology and Mental Hospital.

LIST OF BOOKS

Sl. No.	Author/ Editor	Title of the books	Edition of Year	Price	Publishers
1.	Maxy & Rosenal	Public Health and Preventive Medicine	12th Edn.	Rs. 2125/-	Appleton - Century Crafts or Oxford University Press
2.	By Walter W. Hooland	The Oxford Text Books of Public Health	1985 Edn. Vol. I	£ 30/-	Oxford University Press Walton. St. Oxford 8X2 D.P. U.K.
		- do -	Vol. II	£ 30/-	- do -
		- do -	Vol. III	£ 35/-	- do -
		- do -	Vol. IV	£ 35/-	- do -
3.	By Hanton & Pickett	Public Health Administration and Practice	1983 Edn.	\$ 37.95	B.T Publication Pvt. Ltd.
4.	By Passmore & Eastwood	Davidson Human Nutrition and dietia	8th Edn.	£ 9.50	
5.	By Hobson	The theory and practice of Public Health	1980 Edn.		
6.	By DJP Barker & G. Rose	Epidemiology in Medical Practice	1975 Edn.		Churchill Livingstone Edinburgh London & New York
7.	By Abramson	Survey Methods in Community Medicine.	4th Edn.		
	By Judy Allsop	Health Policy and the National Health Service			
8.	By Leon and David Hull	Community Paediatrics			ELBS

JOURNALS

NAME OF THE JOURNAL	FREQUENCY OF ISSUE
ICMR Bulletin	Monthly
IJMR	Quarterly
Journal of Communicable diseases	Quarterly
Indian Journal of Public Health	Quarterly
Journal of Clinical Epidemiology	Monthly
Journal of Epidemiology and Community Medicine	Quarterly
Indian Journal of leprosy	Quarterly
A. Journal of Clinical Nutrition	Monthly
Indian journal of TB	Quarterly
W.H.O. Publications: Bulletin	Bi Monthly
World Health	Bi Monthly
World Health forum	Quarterly
Technical Report Series	
Public Health Papers	

**Post Graduate Diploma in Leprosy
(D.Lep)**

Details of Training:-

FIRST YEAR:

Leprosy O.P.D. and Wards	— 7 Months
Dermatology O.P.D. and Wards	— 1 Month
Pathology & Microbiology	— 1 Month
General Medicine	— 1 Month
Neuromedicine	— 1 Month
Plastic Reconstruction Surgery	— 1 Month
Total	— 12 months

SECOND YEAR:

Leprosy O.P.D. and Wards	— 11 Months
Dermatology O.P.D. and Wards	— 1 Month
Total	12 months

Post Graduate Diploma in Leprosy (D.Lep.)

SCHEME OF EXAMINATION

Distribution of Marks:

Theory	Title	Duration in hours	Max. Marks
Paper-I	Epidemiology, Microbiology, Pathology and immunology	3	100
Paper-II	Clinical aspects, complications Management, control rehabilitation	3	100
Paper-III	Recent Advances in LEPROSY / Health Education	3	100
Total			300

Clinical Examinations:

	No. of cases	Duration	Marks
1. Long Case	One	45 Mts.	80
2. Short Cases	Two	40 Mts.	70
Total			150

Practicals:-**Spotting**

Slide/Specimens	(5 X 2)	10
(3) (2)		

Orals		40
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Total	50
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Marks Qualifying for a pass:

50% of marks in the University Theory Examination	: 150/300
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50% of marks in the University Clinical Examination	: 75/150
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50% of marks in the aggregate of Theory/Clinical/	: 250/500
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Practical/Oral Examinations	
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Maximum number of candidates to be examined per day	: 8
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Post Graduate Diploma in Leprosy (D. Lep)**Recommended List of Books & Journals****TEXT BOOKS:**

1. Leprosy — Dharmendra Vol. I & II
2. Leprosy — Jopling
3. Leprosy — Bryceson
4. Leprosy — Thangaraj
5. Leprosy — Hastings

REFERENCE BOOKS:

1. Dermatology — Rooks
2. Histophythyology
of Skin — Lever and Lever
3. Reconstructive
Surgery — Eritchi's

JOURNALS:

1. Indian Journal of Leprosy
2. Indian Journal of Dermatology, Venereology and Leprology
3. International Journal of Leprosy
4. Leprosy Review.

Post Graduate Diploma in Leprosy (D. Lep)**Syllabus**

1. Historical account of Leprosy with special reference to India
2. Fundamentals of Microbiology and study of Mycobacteria Skin smear examination.
3. Histology of skin, Histopathology of leprosy and some common skin diseases resembling tests.
4. Fundamentals of immunology with special reference to Leprosy. Common immunological tests
5. Principles of Health Education - Health Education in Hospitals - Community Health Education.
6. Clinical Leprosy - Classification of Leprosy - Differential Diagnosis - Medical Management - Reactive states - Pathology, assessment and classification of deformities.
7. Physiotherapy of hands and feet - Management of ulcers and foot care - principles of surgical correction of deformity in leprosy.
8. Epidemiology of leprosy - concepts and methods - Disease patterns - Mortality and morbidity measurement - Transmission - Mode of entry and portal of entry - Tools for Epidemiological Studies - Epidemiologically features of communicable disease - Detailed planning and design of communicable disease control programme and their operation.

9. Fundamentals of bio-statistics - Levels of significance, Estimation of errors - Charting statistics.
10. Health Administration - Brief study of practice of public health in India - Health Administration of Centre of State Governments - Detailed study of National Programme for control and eradication of communicable diseases.

Post Graduate Diploma in Diabetology (Dip. Diabet)

FIRST YEAR:

Department of Diabetology — One Year

SECOND YEAR:

Department of Diabetology — 9 Months

Other Departments:

a) Neurology 15 Days

b) Nephrology 15 Days

c) Cardiology 15 Days

d) Endocrinology 15 Days 3 Months

e) Ophthalmology
Retine Clinic 15 Days

f) Maternity & Child
Welfare 15 Days

Total 3 months

Total 12 Months

**Post Graduate Diploma in Diabetology
(Dip. Diabet)**

Scheme of Examination

Distribution of Marks:

Theory	Title	Duration in hours	Max. Marks
Part-I			
Paper-I	Applied Basic Medical Sciences	3	100
	Marks qualifying for a pass in part I D.Diab		
	50% marks in this University Theory Examination 50/100		
Part-II			
Paper-I	Diabetology	3	100
Paper-II	Recent Advances in Diabetology	3	100
Total			200

Clinical Examinations:

	No. of cases	Duration	Marks
1. Long Case	One	45 Mts.	80

2. Short Cases	Two	40 Mts.	70
Total			150

Practicals:-

Spotting

Slide/Specimens	(5 X 2)	10
(3) (2)		

Orals	40
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Total 50

Marks Qualifying for a pass in Part II in D. Diab

50% Marks in this University Theory Examination	: 50/100
50% of marks in the University Theory Examination	: 150/30
50% of marks in the University Clinical Examination	: 75/150
50% of marks in the aggregate of Theory/Clinical/ Practical/Oral Examinations	: 250/50

Maximum number of candidates to be examined per day : 8

Recommended List of Text Books

TEXT BOOKS:

1. Joslin's Diabetes Mellitus
2. Oxford Text Book of Medicine
3. Diseases of Metabolism by Funcen

4. Biochemistry of Diseases by Pondanky
5. Physiology by Samson Wright
6. Monograms of Pancreatic diabetes by Dr. Gee Verghese
7. Clinical Diabetes Mellitus by Tetrosal
8. Diabetic Coma by David Shade
9. Diabetes Melitus by Prof. V. Seshish
10. Manual on Diabetes Mellitus by Joslin

Post Graduate Diploma in Diabetology (Dip. Diabet)

Syllabus

PAPER - I BASIC MEDICAL SCIENCES

Anatomy: Applied Anatomy of Gastrointestinal tract with special reference to pancreas and development. Anatomy of Hepatobiliary system, Other basic anatomical factors.

Physiology: of Gastrointestinal Harmones Examine and endocrine functions of pancreas. Other endocrines of clinical importance.

Biochemistry: Metabolism in general and carbohydrate metabolism in Particular. Useful and practical pancreatic functions tests, other endocrine function tests, hormonal assay and insulin and insulin assay in particular in born-errors of metabolism of clinical importance.

Microbiology: General revision of microbial agents and infections. Viral infections and their relationship to diabetes, serological tests, immunology and autoimmunity as a problem in disease.

Pathology: Tissue changes in diabetes, vasculopathies, tumours of pancreas islet cells, problem of pancreatitis and pancreolithiasis, secondary diabetes and its pathology, atherosclerosis and its application in disease.

Pharmacology: General mode of action of drugs, pharmacology of drugs used in diabetes and their side effects, toxicity at Vaccines and sera, animal experimentals and problems of islet transplant.

PAPER - II DIABETOLOGY

1. Actiopathogenesis of diabetes mellitus (D.M.)
2. Pathology of diabetes
3. Diabetic syndrome
4. Diagnostic criteria of D.M.
5. Clinical features - usual and unusual
6. Complications - Infections, Metabolic, Others
(CVS, CNS, Kidney, Eye etc.,)
7. Special types of diabetes - Juvenile, young, pancreatic.
8. Various dysfunctions of the islet cells.
9. Management of diabetes with emphasis on diet exercise and drugs.
10. Effect on Yoga on diabetes.
11. Nutritions and diatetics

**Post Graduate Diploma in Physical Medicine
and Rehabilitation
(Dip. Phy. Med.)**

FIRST YEAR:

Physical Medicine and Rehabilitation at Govt. Inst. of Rehab. Medicine, Chennai-83	— 6 Months
Department of Neuro Medicine, Govt. General Hospital, Chennai-3	— 2 Months
Department of Neuro Surgery, Govt. General Hospital, Chennai-3	— 2 Months
Department of Orthopaedics, Govt. General Hospital, Chennai-3	— 2 Months
Total	12 Months

SECOND YEAR:

Cardiology, Cardio thoracic Surgery	— 1 Month
Rheumatology	— 1 Month
Community Medicine	— 1 Week
Diabetology	— 1 Week
Skin and Leprosy	— 1 Week
Hand Rehabilitation and Burns	— 1 Week
Radiology, Radio Physics	— 1 Week
Urology, Geriatrics	— 1 Week
Ophthalmology - Orientation and Mobility Training	— 1 Week
ENT — Speech and Audiology	— 1 Week
Institutional Training	— 8 Months
Total	12 Months

**Post Graduate Diploma in Physical Medicine
and Rehabilitation
(Dip. Phy. Med.)**

Scheme of Examination

Distribution of Marks:

Theory	Title	Duration in hours	Max. Marks
Part-I Paper-I	Basic Sciences in relation to Physical Medical and Rehabili- tation	3	100
	Marks qualifying for a pass in Dip. Phy. Med. 50% marks in this University Theory Examination 50/100		
Part-II Paper-I	Physical Medicine and Rehabilitation of Neurological and Cardio Thoracic disorders	3	100
Paper-II	Physical Medicine and Rehabilitation of Musculo Skeletal Disorders and Amputation Surgery	3	100
Total			200

Clinical Examinations:

	No. of cases	Duration	Marks
1. Long Case	One	45 Mts.	80
2. Short Cases	Two	30 Mts.	70
		Total	150

Practicals:-
Spotting

Slide/Specimens (3) (2)	(5 X 2)	10
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Orals	40
Total	50

Marks Qualifying for a pass in Part II in Dip. Phy. Medi

50% Marks in this University Theory Examination	: 50/100
50% of marks in the University Theory Examination	: 150/300
50% of marks in the University Clinical Examination	: 75/150
50% of marks in the aggregate of Theory/Clinical/ Practical/Oral Examinations	: 250/500

Maximum number of candidates to be examined per day : 8

Recommended List of Text Books & Journals

TEXT BOOKS: (Latest Edition)

ANATOMY

1. Gray's Anatomy
2. Cunninghams - Manual of Practical Anatomy Volume I, II, III.
3. R.J. Last - Anatomy - Regional applied Atlas of Anatomy.

4. McGregor - Surgical Anatomy.

5. Sinclair - Functional Anatomy.

PHYSIOLOGY

1. Text Book of Medical Physiology - Guyton.

2. Applied Physiology - Samson Wright.

MICROBIOLOGY

1. Text Book of Microbiology - R. Ananthanarayanan.

2. Short Text Book of Medical Microbiology - Satish Gupta.

BIOCHEMISTRY

1. Fundamental of Biochemistry - Ambika Shanmugam

PHARMACOLOGY

Pharmacotherapeutics - Satoskar

PATHOLOGY

1. Pathological basis of diseases

2. Basic Pathology Robbins

PARASITOLOGY

1. Text book of Medical Parasitology - Panicker

MEDICINE

1. Text book of General Medicine - Davidson

SURGERY

1. Short practice of Surgery - Balley and Love

2. Clinical Surgery - Dass

SOCIAL AND PREVENTIVE MEDICINE

1. Text Book of Social Preventive Medicine - Park & Park

OBSTETRICS

1. Clinical Obstetric - A.L. Mudaliar

GYNECOLOGY

1. Text Book of Gynaecology - Shaw

ORTHOPAEDICS

1. System of Orthopaedics and Fractures - Graham Apley
2. Orthopaedics - Mercer
3. Fractures & Joint Injuries - Watson Jones
4. Orthopaedic Medicine - James Cyriax

DIABETOLOGY

1. Diabetes Mellitus - Alexander Marble

NEURO MEDICINE

1. Clinical Methods - Hutchinson
2. Text Book of Neurology - Brain

NEURO SURGERY

1. Text Book of Neuro Surgery Vol. I & II - Ramamoorthy

RHUEMATOLOGY

1. Text Book of Rheumatic Diseases - Hollander

PAEDIATRICS

1. Text Book of Paediatrics - Achar

SPORTS MEDICINE

- * Outline of Sports Medicine - Panda

DERMATOLOGY

1. Text Book of Dermatology - Rook Vol. I, II & III

CARDIOTHORACIC

1. Diagnosis of Chest - Vol. I to IV - Pare and Fraser

RADIOLOGY

1. Text Book of Radiology and Medical Imaging - Sutton

PLASTIC SURGERY

1. Hand - Wyna Party

LEPROSY

1. Leprosy - Joplin

VASCULAR SURGERY

1. Basic Principles of Vascular Surgery - M.T. Veera Reddy

PHYSICAL MEDICINE AND REHABILITATION

1. Handbook of Rehabilitation Medicine - Krusen
2. Rehabilitation Medicine - Joseph Goodgold

ELECTRODIAGNOSIS AND THERAPY

1. Principles and Practice of Electrotherapy - Kahn
2. Practical Electromyography - Johnson
3. Electrotherapy - Claytons.

EXERCISE THERAPY

1. Therapeutic Exercises - Basmajian

OCCUPATIONAL THERAPY

1. Occupational Therapy for Physical Dysfunction with study circle - Trombly

PROSTHETIC AND ORTHOTICS

1. Lower Limb Prosthetics
2. Lower Limb Orthotics NEW YEARK UNIVERSITY
3. Upper Limb Prosthetics PUBLICATIONS
4. Spinal Orthotics

5. Upper Extremities Orthotics - Miles H Anderson

6. Foot Orthosis - Kent K. Wu.

KINESIOLOGY

1. Scientific basis of Human Movement - Cownake

SOCIAL WORK AND SOCIOLOGY

1. Introduction to Social Work - Paul Chowdry

2. An Introduction to Sociology - Scahdeva

PSYCHOLOGY

1. Text Book of General Psychology - Prabu

REFERENCE BOOKS

ANATOMY

- Podder - Anatomy of Central Nervous System
- Omar - Human Radiological Anatomy
- Kaplan - Functional and Surgical anatomy of the hand
- Barr - Human Nervous System

PHYSIOLOGY

- Ganong - Review Medical Physiology
- William D. Moardie - Exercise physiology
- Bruce J. Noble - Physiology Of Exercise & Sports.

BIOCHEMISTRY

- Zilva - Clinical Chemistry
- A.C. Deb - Fundamentals of Biochemistry

PHARMACOLOGY

- Goodman & Gilman - Pharmacological basis of Therapeutics
- Laxrence - Clinical Pharmacology

PATHOLOGY

- Anderson - Text Book of Pathology

IMMUNOLOGY

Richard Hyde - Immunology

MEDICINE

Branwald - Principles of Internal Medicine

Harrison - Principles of Internal Medicine

DIABETOLOGY

Diabetic Neuropathy - Peter James Dyck

ORTHOPEDICS

Operative Orthopaedics - Campbell - Four Volumes

Orthopaedics Vol. I & II - Turek

Text Book of Orthopaedics & Traumatology - Natarajan

NEUROLOGY

Poliomyelitis - Huckstep

Neurological differential diagnosis - Pattern

Stroke Vol. I & II - Barnett

Spinal Cord Injuries - Block

Neurological Exam. Clinical Practice - Bickerstaff

Neurological in Clinical Practice Vol. I & II O Bradley
 Brains disease of the Nervous System - Walton

ENT

Logan Turner

REHABILITATION MEDICINE

Rehabilitation Medicine - Delisa

Early Stoke Patient - Darier

Muscles - Kendall

Physiology of Joints - Kapandji

Improving residential life for disabled - Tully

Motor Hearing Programme for stroke - Carr

Hip & its disorders - Steinberg

Therapeutic heat and cold - Lehmann

Manipulation, traction and massage - Basmajian

Low back pain - Cox

Rehabilitation technique to sports medicine - Prentice

Hydrotherapy in practice - Devis

Physiotherapy for amputees - Engstrom

- Occupational Therapy approach for stroke - Wilcock
- Ergonomics - Bullock
- Muscle strength testing - Amunsen
- Mobilisation techniques - Blackmann
- Restoration of motor function to the stroke patient - Johnson
- Biofeedback - Basmijian
- Functional assessment in Rehabilitation Medicine - Granger
- Rane Calliet Series
- RML Series
- Myology Vol . I & II
- Urodynamics - Mundy
- Electrodiagnosis - Kimora
- Willard and Spackman's Occupational Therapy
- Occupational Therapy in Rehabilitation - E.M. Macdondd
- Occupational Therapy for Children - Pat Nuse Clark and ann
Stren Allen
- Introduction to Occupational Therapy - Stella W Mounfold
- Orthotics Etcetra - Joha B. Redford Williams Wilkins
- Publications

Principles & Clinical Application - Williams Wilkins

Kinesiology - Cary L Soderberg

Application to Pathological Motion - Williams Wilkins

The Functional Foot Orthosis - J.W. Philips Churchill
Livingstone

LIST OF JOURNALS

1. Archives of Physical Medicine and Rehabilitation
2. American journal of Physical Medicine
- 2a. British journal of physical Medicine
3. Bone and Joint Surgery
4. The Lancet
5. Orthopaedics
6. Orthopaedic Review
7. Clinical Orthopaedics
8. American Journal of Orthopaedics
9. Arthritis and Physical Medicine
10. Brain
11. Journal of Neurology, Neuro surgery and Psychiatry

12. British Medical Journal
13. Rehabilitation
14. Journal of Chronic Disability
15. Journal of American Physical Therapy Association
16. Journal of Communication Disorder
17. Journal of Speech and Hearing Disorder
18. Journal of Consultant Clinical Psychology
19. Journal of Health and Social Behaviour
20. Scandinavian Journal of Work Environment and Health
21. Journal of Occupational Therapy
22. Geriatrics
23. American Journal of Sports Medicine
24. International Journal of Leprosy
25. Journal of Neurophysiology
26. Journal of the American Geriatric Society
27. Stoke
28. Physical Therapy

29. American Journal of Ophthalmology
30. Trauma
31. Journal of Urology
32. Pain
33. Orthotic & Prosthetic appliances journal
34. American journal of Cardiology
35. Paraplegia
36. Developmental Medicine and Child Neurology.

Diploma in Physical Medicine**Syllabus****ANATOMY**

HISTOLOGY : Structure of cell - Tissues or the body - Epithelium - Connective tissues - Cartilage - Bone - Muscular tissue - Nervous tissue - Bone marrow - Reticula endothelial system.

OSTEOLOGY : General frame work of the body the vertebral column - Cervical therapetic and lumber verte - bra Sacrum and coceyx - costal cartilages - Bones of the upper limb and the skeleton of the hand - Bones of the lower limb and the skeleton of the foot - intervertebral Disc.

ARTHROLOGY: Classification joints - Kinds of movements in joints - Mandibular joints of the vertebral column with the cranium - joints of pelvis - Arches of the foot - Joints of limbs.

MYOLOGY : Muscles of the neck - Vertebral Muscles - Muscles of the back - Muscles of the upper limb - Muscles of the lower limb - muscles of the pelvis.

NEUROLOGY: Spinal cord - internal structure and nerve tracts Gross anatomy of brain - cranial nerves - their courses - Spinal nerves - Cervical plexus, bractial plexus and lumber plexus - cutancous distribution of spinal nerves - Distribution of spinal nerves to the muscles of the body - gross anatomy of the autonomic nervous system.

Surgery.

Orthopaedic Surgery.

Physical Medicine.

(3) In Regulation 4, the following be added:

Candidates shall be examined in one of the following

Diplomas, add.

(14) Diploma in Physical Medicine and Rehabilitation

(D. Phys. Med.)

(4) Under Scheme of Examination in Regulation 7, the following be added :

(14) Diploma in Physical Medicine and Rehabilitation

(D.Phys. Med.)

(a) WRITTEN:

Marks

Paper I - Physical Medicine including

Basic Sciences

100

Paper II - Physical Medicine including

Rehabilitation

100

(b) CLINICAL :

Long and short Cases

150

(c) ORAL :

Pathology Specimens

Slides, Instruments.

Splints; Appliances and X - rays.

50

DUCTLESS GLANDS: Endocrine organ - structure of Thyroid, Parathyroid adrenals and thymus.

SENSE ORGANS : Structure and functions of skin - Dermatomes and myotomes.

2. PHYSIOLOGY

MUSCLE : Structure - Chemical composition - Properties - Changes during muscle contraction - Isometric and Isometric contraction - Heat Production - Fatigue.

NERVE : Structure - Properties of the nerve fibres - Nerve impulse - Membrane potential - action - Potentials - mode of conduction - Salutory conduction - All of none law - Changes in nerve during and after activity - Degeneration and regeneration in peripheral nerves - Transneuronal degeneration - Properties of the motor unit Effects of section of motor nerve - Chemical transmission - reflex action and reflex are Electrophysiological and histological studies of nerve fibres.

THE AFFERENT NERVOUS SYSTEM : Cutaneous receptors - Proprioceptors Joint receptors - Afferent paths in the spinal cord and brain stem Sensory disturbances in diseases of the spinal cord

muscle tone - Ischaemic Decerebration.

THE REGULATION OF POSTURE :

THE CEREBELLUM : Gross anatomy - functions.

THE CEREBRAL CARTEX : Structure - Pyramidal tracts
voluntary movements - speech - cerebrospinal fluid.

THE AUTONOMIC NERVOUS SYSTEM : General arrangement
and functions - the Adrenal Medulla. The Physiology of Micturition.

THE ENDORINES : The pituitary - the adernai cortex - the
thyroid - calcium and phosphorus Metabolism - the parathvroid glands
- Chemistry of Stereiods.

THE BLOOD : Composition - regulation of Erythropoesis - on
metabolism and Iron Deficiency Anaemias.

3. PHYSICS AND MEDICAL ELECTRONICS

1. **ELEMENTS OF PHYSICS :** Physics in Physical Medicine,
Physical agents, their properties - heat, light, electricity - sound
construction of electrical equipments - working and maintenance of
electrical equipment Newton's law of Motors - Levers. Dynamics
Centre of gravity - Dynamics of the motors.

2. **FUNDAMENTALS OF ELECTRICITY :** Basic principles of

electroplates, conductors and insulators - Ohm's law - Units of Measurement of potential difference, current, resistance and charge - cells, primary and secondary.

3. HEATING EFFECT OF CURRENT : Units of measurement 4 works, energy, power and heat - Mechanical equivalent of heat.

4. THE AMMETER: the voltmeter and the galvanometer.

5. THERMIONIC VALVES : Diode and triode metal rectifiers Principles of production of A.C and D.C.

4. PATHOLOGY

1. GENERAL: Degenerative process and disturbances of metabolism - circulatory disturbances - repair - infection and resistance.

2. SPECIAL: Pathology of rheumatoid arthritis and allied conditions - Organs affected in the disease - Pathology of these organ.

Pathology of cerebrovascular accidents - Pathology of nervous system.

1. INFECTION AND DISEASE : Infection diseases - Chemo therapy of infections.

2. DISEASE OF CARDIOVASCULAR SYSTEM : Examination
Electrocardiography Disorders of cardiac Conduction - Congestive
cardiac failure - Cardiac arrest - Vascular diseases of the heart
Rheumatic fever : Rheumatic Heart disease - Ischamic Heart
disease - Hypertension Congenital heart disease - diseases.
Peripheral vascular diseases - Vasomotor disorders.

3. DISEASE OF RESPIRATORY SYSTEM: Chronic Bronchitis
Bronchial asthma - Pneumonias Bronchogenic carcinoma - pneumo
- Komiasis - Emphyseme - Pleurisy and Pleral Infections.

4. NUTRITIONAL DISORDERS: Obesity - Water and Flectrolytes
- vitamin - Osteomalacia and Osteoporoses - Beriberi Nutritional
anamias.

5. DISORDERS OF BLOOD AND FORMING ORGANISATION:
Blood formation - Clinical features and classification of anaemias -
Leaukaemias - Bleeding diseases.

6. DISEASES OF ENDOCRINE SYSTEM: Pitutarp, thyroid,
parathyroid, adrenals, gonads - functions, structure and pathology -
Clinical features of hypo and hyper functioning - treatment -
Diabetes Mellitus Diagnosis and Management.

7. DISEASES OF THE KIDNEY AND URINARY SYSTEM:
Structure and functions of Kidney - Acute and Chronic replinti Renal
failure and uraemics Disturbances in water and Electrolyte balance
and Hydrogen concentration. Barrier mechanism - Alkalosis and
Acidosis.

8. DISEASES OF THE DIGESTIVE SYSTEM: Dysphagia causes, diagnosis and treatment - Peptic ulcer - Gastric carcinoma - Adenocarcinoma of the colon - Diverticulosis and Diverticular chronic diarrhoea

9. DISEASES OF LIVER AND BILIARY TRACT: Metabolic activities of liver - cholestasis.

10. DISEASES OF NERVOUS SYSTEM: Applied anatomy and physiology - pyramidal and Extrapyramidal systems - speech cranial nerves - coma - Epilepsy - Cerebral tumours - Cerebral Atherosclerosis.

6. ORTHOPAEDICS

1. INTRODUCTION: Scope of Orthopaedic Surgery - Examination of a case.

2. CONGENITAL DEFORMITIES: Club foot - cervical rib - the scalenus syndrome - Congenital dislocation of hip - Amelia - Hemimelia and Focomelia.

3. GENERAL AFFECTIONS OF SKELETON: Structure of Bone - Development of Bone - Osteoporosis - Development diseases of bone - chondroostrophy - Osteogenesis imperfecta - Rickets - Scurvy - Genu varum and Genu Valgum - Endocrinal disorders of the skeleton - Myositis ossificans - Osteitis deformans - Feticuloendothelial disturbances of bone - Gargoyism.

4. AFFECTIONS OF BONES: Osteomyelitis T.B. of bones and

joints diagnosis and management

5. ARTHRITIS: Pyogenic arthritis Haemophilic arthritis
Hypotrophic Arthritis - Gout.

6. AFFECTIONS OF EPIPHYSIS: Osteochondritis or Epophysitis
Osgood Schlatter's disease - ossificans.

7. SOME COMPLICATION OF TRAUMA: Volkmann's Ischaemic
contracture - Myositis ossificans - Delayed unions nonunion, malunion
- Post operative management of operated orthopaedic cases.

8. SURGERY: Common orthopaedic operations - a gross
knowledge pre - operative and post - operative management.

9. SOFT TISSUE LESION: Ganglion - Bursitis - Dupuytren's
contracture injuries of muscles and tendons - trigger - finger -
Dequervain's syndrome - Planter fasciitis - Tennis Elbow.

7. NEUROLOGY

1. DIVISIONS OF THE NERVOUS SYSTEM: Applied anatomy
and physiology - Pyramidal and Extrapyramidal systems - speech -
Cranial nerves - Coma - Epilepsy - Cerebral tumours - Cerebral
Atherosclerosis.

2. CEREBRAL INFARCTION: Thrombosis, Embolism and
Hemorrhages - Cerebral aneurysm - Subarachnoid haemorrhage.

3. CEREBROSPINAL FLUID: Meningitis - Encephalitis Meningo-vascular syphilis - General Paralysis of the Insane - Tabes Dorsalis - Infections like poliomyelitis, Herpes Zoster.

4. DEMYLINATING DISEASES - DISSEMINATED SCLEROSIS:

5. DISORDERS ON EXTRAPYRAMIDAL SYSTEM: Parkinson's disease Hepatolenticular degeneration - Chorea - Athetosis.

6. CONGENITAL AND DEGENERATIVE DISORDERS: Motor neuron disease Syngomyelitis - Neurofibromatosis Tabes Dorsalis.

7. SPINAL CORD COMPRESSION Oaraokegia B 12 neuropathy - Neuropathy - Notalgia - Cervical disc prolapse carpal tunnel syndrome.

8. INTERVERTEBRAL DISC, PROLAPSE: Myopathies - Progressive muscular dystrophy myasthenia gravis.

9. DISEASES OF MUSCLES - Myopathies - progressive muscular dystrophy myasthenia gravis.

10. Traumatic Paraplegia, quadriplegia management. Rehabilitation programme.

11. Head injuries - Immediate and delayed management - Rehabilitation programme.

8. REUMATOLOGY

1. **STUDY OF RHEUMATIC DISEASES:** Examination of Arthritic Patients Structure and functions of joints - Study of the connective tissue - the synovial fluid - the Rheumatoid factors L.E Phenomenon and antinuclear antibodies - Radiology in rheumatic disease.
2. **STUDY OF RHEUMATOID ARTHRITIS:** Etiology pathology clinical aspects - Juvenile and differential diagnosis of Rheumatoid Arthritis - Methods for evaluating Rheumatoid Arthritis.
3. **TREATMENT OF RHEUMATOID ARTHRITIS:** Conservative management - Gold therapy - Drugs - Corticosteroids and antirheumatics - Intra-articular Corticosteroid therapy - Prevention of deformities - correction of deformities - Physical therapy - Occupational therapy - rehabilitation.
4. **FACTORS INFLUENCING RHEUMATOID ARTHRITIS:** Epidemiology - Psychogenic factors - infections and immunological considerations - Climatic - role of endocrine glands - Diet and vitamins Stress and rheumatic disease.
5. **OTHER COLLAGEN DISEASES:** Systemic Lupus Erythematosus - Polyarteritis - Polymyositis and dermatomyositis Scleroderma - Calcinosi.
6. **OTHER RHEUMATIC DISEASES:** Ankylosing spondylitis Psoriatic Arthritis - Rheumatic fever - Palindromic rheumatism.

Intermittent hydrothrosis - Ribroisits Sundrome.

7. OSTEOARTHRITIS: Pathology Pathogenesis - Symptoms and Laboratory findings of osteoarthritis - treatment.

8. METABOLIC BONE AND JOINT DISEASES: Epidemiology - and Pathogenesis of Gout - Diagnosis and treatment of Gout - Pseudogout - Alkaptonuria. Ochronosis and Ochronotic arthritis Metabolic Bone diseases.

9. MISCELLANEOUS CONDITIONS: Amyloidosis - Sarcoidosis Arthritis accompanying haemophagocytosis and coagulopathy Neuropathic joint diseases - Hypertrophic osteoarthropathy and developmental connective tissue disorders - Tumors of synovial Joints, bursa and tendon sheaths.

10. ARTHRITIS WITH SPECIFIC INFECTIONS: Gonorrheal arthritis - Reiter's syndrome - Tuberculous arthritis - Syphilitic joint disease Other forms of infectious arthritis.

11. REGIONAL DISORDERS OF JOINTS AND RELATED STRUCTURES: Traumatic Arthritis and Allied conditions Internal derangement of knee joint - painful feet cervical nerve root compression - painful shoulder - Dupuytren's contracture - lumbago pain and sciatica.

12. PARALYSIS: Muscular dystrophies Myopathies - Friedreich's ataxia - Progressive muscular atrophy - Peroneal muscular atrophy -

syinagomyelia - poliomyelitis - Cerebral palsy.

13. AFFECTIONS OF NERVES: Lesions of the peripheral nerves
 - Median, Radial and ulnar nerve lesions - carpal tunnel syndrome -
 Lesion of the Brachial Plexus - Cervical Sympathetic Horner's
 syndrome - obstetrical paralysis - Lesion of lateral popliteal nerve.

14. CIRCULATORY DISTURBANCES: Raynaud's diseases
 Acrocyanosis Immersion foot - Embolism and Thrombosis - Thrombo
 angitis obliterans Treatment of Peripheral vascular diseases.

15. AFFECTION OF THE SPINE: Low Back pain - Congenital
 errors - Spondylolisthesis - Spondylosis deformans - Ankylosing
 spondylitis - Fibrositis - Sciatica - Prolapsed - intervertebral
 disc protrusion - Spina Bifida.

16. AFFECTION OF THE SHOULDER JOINT: Muscular strains
 AC. Synovitis - Supraspinatus Tendinitis - Classification - Rupture -
 recurrent dislocation of shoulder prolapsed cervical intervertebral disc
 - osteoarthritis of cervical spine (cervical spondylosis) painful
 shoulder.

17. AFFECTION OF THE KNEE JOINT: Injuries and displacement
 of semilunar cartilages internal derangement of knee - Osteo
 arthritis knee - Chondromelasia - patella - Loose bodies - Synovial
 chondromatosis - plegia - Stiles disease recurrent dislocation of
 patella.

18. AFFECTION OF THE FCOT: Statis disturbances of the foot - the Arches of the foot - Flat - Hallux valgus - Metatarasalgia Pain in the heal - Painful conditions of ankle - Athlcte's foot.

9. DERMATOLOGY

Skin - Histological structure - functions of the skin - common skin disorders - skin manifestation in Rhcmatoid arthritis and allied conditions - systemic lups Esythemators - Leprosy - Classfication of features , diagnosis and treatment.

10. SPORTS MEDICINE

SPORTS MEDICINE: Scope of sports medicine - Requistes of a good athlete - How an athlete differs from a normal person.

Common injuries during sports - First aid and further management - acute and chornic disabilities follosing sport injuries Diagnosis and Management - Stress fractrues.

11 - A. RHYSIOTHERAPY

1. Principles of Exercise Therapy - Mechanical Principlies - Movement Exercise therapy Exercise therapy - starting position - Active Movement - Relaxation - Passive movement.

2. Neuromusular facilitation - Prosprioceptive neuromusular facilitation - Functional Re - education.

3. Joint mobility - Technique of mobilising joints - crawling exercises.
4. Muscle strength - Technique of strengthening muscles.
5. Neuromuscular co-ordination - Posture.
6. Individual, group and mass treatment by exercise.
7. Electrotherapy: History of electrotherapy - Physics and radiant energy - Electrophysics - Generation, conversion and distribution of electricity - currents, apparatus and accession - the direct and alternating currents - ion transfers - High frequency and low frequency currents.
8. Currents Faradic - Galvanism - Uses and indication. Techniques of muscles stimulation - Electrical stimulators.
9. Heat therapy - Water therapy - Indication and contra indication.
10. Ultrasonics - Methods of production - Properties - Indications and contraindications.
11. Infrared - techniques of application radiant heat lamp - Ultraviolet Rays - Effects - Sources - Alpine sun lamp - Kromayer lamp - Mercury vapour lamp - Indication for U.V therapy and contraindication.
12. Short wave diathermy - Long wave diathermy - Microwave

2. **ARTIFICIAL LIMBS:** Different types available - Modern techniques of limb fitting - immediate postoperative limb fitting - check out of prosthesis - stump hygiene - Stump problems - Maintenance of artificial limbs - Prescription for artificial limbs.

3. **ORTHOPAEDIC APPLIANCE:** Poliomyelitis - Cerebral palsy other case of paralysis - Walking calipers and surgical boots Prescription, Check up and Check out of orthopaedic appliance Lower extremities orthotics - upper extremities orthotics - spinal orthotics.

4. **SPLINTS:** Static and Dynamic splint for nerve palsies - splints for contractures - Special splints for specific purpose.

14. PSYCHOLOGY

1. **PSYCHONERVOSES:** Anxiety neurosis - Hysteria - Obsessive compulsive neurosis - psychosomatic diseases - depressive illness.

2. Organic Mental syndromes Delirium - Dementia.

3. Definition and scope of psychology in rehabilitation.

4. Behaviour patterns of the disabled.

15. SOCIAL WORK

Social work as a profession - place of medical social work in the modern rehabilitation programme - Methods of social work in brief - psychosocial problems of the disabled - Duties and responsibilities of

medical social worker - facilities of social service to the disabled by (i)
Government (ii) Voluntary Organizations.

16. VOCATIONAL COUNSELLING AND GUIDANCE

Man and Work process of vocational rehabilitation - Vocational
Testing and Evaluation Evaluation training - job finding at & job
placement sheltered work shop.

17. Social aspects of Rehabilitation Legislation for welfare of the
Physically handicapped.