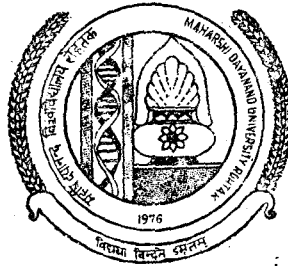


Maharshi Dayanand University Rohtak



Ordinances, Syllabus and Courses of Reading for P.G. Diploma in Medical Sciences Examination

Session—1999-2000

Available from :

Deputy Registrar (Publication)
Maharshi Dayanand University
Rohtak-124 001 (Haryana)

Price :

At the Counter : Rs. 50/-
By Regd. Parcel : Rs. 75/-
By Ordinary Post : Rs. 60/-

ORDINANCE- POST GRADUATE DIPLOMA IN THE FACULTY OF MEDICAL SCIENCES

1.1 The duration of the course of instruction for the following examinations shall be two academic year:-

- i) Diploma in Gynaecology and Obstetrics (D.G.O.)
- ii) Diploma in Anaesthesiology (D.A.)
- iii) Diploma in Child Health (D.C.H.)
- iv) Diploma in Tuberculosis and Chest Diseases (D.T.C.D.)
- v) Diploma in Dermatology, including Venereal Diseases & Leprosy (D.V.D.)
- vi) Diploma in Orthopaedics (D.Ortho.)
- vii)Diploma in Medical Radiology (Diagnosis) (D.M.R.D.)
- viii)Diploma in Laryngology and Otology (D.L.O.)
- ix) Diploma in Ophthalmology (D.O.) and
- x) Diploma in Radiotherapy (D.M.R.T.)

1.2 The examination should be held once a year, ordinarily at the end of the course, on such dates as may be fixed by the Vice-Chancellor.

1.3 The dates of examinations and the last dates for receipt of admission forms and fees for the examination without and with late fee of Rs105/- as fixed by the Vice-Chancellor shall be notified by the Controller of Examinations.

2.1 A person who possesses the following qualifications shall be eligible to join a course for any one of the Diplomae mentioned in clause 1.1:-

a)the M.B.B.S degree of the Maharshi Dayanand University;

OR

b) The M.B.B.S.degree of any other University recognised by the Medical Council of India.

3.1 A student who possesses the qualification laid down in clause 2 & produces the following certificates signed by the Principal/ Director of the Medical College recognised by the Maharshi Dayanand University and approved for the Diploma course concerned shall be eligible to appear in the examination for the diploma course:-

a) of good character;

- b) of having been enrolled in the college for one academic year.
- 3.2 A candidate who has completed prescribed course but does not appear in or fails in the examination may be allowed to appear in the subsequent examination without attending a fresh course as an ex-student.
4. The fee to be paid by a candidate for each Diploma examination shall be Rs. 200.
- 5.1 The medium of examination shall be English.
- 5.2 The examination shall be held in accordance with the scheme of examination and syllabus prescribed by the Academic Council.
- 5.3 The examination shall consist of three theory papers of 100 marks each and the clinical, oral and practical examination of 300 marks consisting of 180, 60 and 60 marks respectively.
6. The minimum number of marks required to pass the examination shall be 50% separately in:
- a) theory examination and
 - b) clinical, practical and oral examination.
- 7.1 A candidate who passes the examination at the first attempt and secures 80% of the aggregate marks shall be declared to have passed with 'distinction'.
- 7.2 The Controller of Examinations shall publish the result of the examination as soon as possible after the examination.
- 7.3 Each successful candidate shall be granted a Diploma in the subject concerned.

**Outlines of Tests, Syllabi and Courses of Reading
for Diploma in Ophthalmology (D.O.) and
Master of Surgery (M.S.)**

The Examination shall consist of Part-A and Part-B

Part-A: It includes three theory papers each of three hours duration.

Paper-I	: Anatomy of the Eye including Embryology & Physiology including optics100 marks
Paper-II	: Medical Ophthalmology including Pathology of the Eye100 marks
Paper-III	: General Ophthalmology including Surgery of the Eye100 marks

Total : 300 marks

Part-B: Consists of Practical :

Clinical : 180 marks

(Long case : one

Short cases : two

Fundus cases : two)

Practical : 60 marks

Refraction one case

Slides, Specimens &

X-ray

Oral : 60 marks

(Instrument &
equipment)

Total : 300 marks G.Total : 600 mark

COURSES OF READING

A. BASIC SCIENCES IN RELATION TO OPHTHALMOLOGY

1. Anatomy including Histology and Embryology of the Eye

Orbit, Adnexa and Anatomy of the diseases of the Central Nervous System, Ear, Nose and Throat & Paranasal sinuses in relation to Ophthalmology.

2. Physiology and Biochemistry of the Eye, Vision, sympathetic and para sympathetic system, Endocrines, Cardiovascular system Blood Lacrimal apparatus, Blood dyscrasies in relation to Ophthalmology.
3. Bacteriology including Mycoris & Virology of the Eye, its adnexa and Ear, Nose and Throat sinuses in relation to Ophthalmology.
4. Pathology of various diseases of the Eye and Adnexa.
5. Pharmacology: Mydriatics, Miotics, Muscle relaxants: Steroids Anaesthetics, Antibiotics and other therapeutics agents and radioisotops and other mediations in relation to Ophthalmology.
6. Optics : Elementary Optics, Optics of spherical, cylindrical glasses, prisms and optics of the Eye (Physiological and pathological conditions) glasses, contact lenses, intraocular lens implants, aids for the visually handicapped.

B. CLINICAL OPHTHALMOLOGY

1. General Ophthalmology : diseases of eye, orbit and its adnexa (b) diseases of the nose and throat and paranasal sinuses in relation to ophthalmology.
2. Medical Ophthalmology; with special reference to diseases of Central Nervous System, cardiovascular system Excretory system, Endocrines, Metabolic disorders etc.
-Genetics in relation to Ophthalmology.
3. Surgery of the Eye, Orbit and Adnexa including recent advances.
(a) Principles of Plastic Surgery and Plastic procedures on Eye, Orbit and Adnexa.

b) Principles of Surgical Management of diseases of Ear, Nose and Throat and paranasal sinuses in relation to diseases of the eye, orbit and adnexa.

c) Anaesthesia.

d) Radiology in relation to eye, ear, nose and throat sinuses.

-Applied Pathology of Eye diseases.

C National programme for control of blindness; Various components of National programme for control of blindness and their financial burden on society etc.

-Hygiene and care of the Eyes.

-Eye Health Education Various aspects of Eye Health Education like proper nutrition, protection of eyes at Festival solar eclipse & various games like bow and arrow etc.

-Rehabilitation of the blind; Various stages in the rehabilitation scheme Education of the blind (Braille system) and modern methods of teaching to blind persons.

-Preventive and Community Ophthalmology.

Books Recommended for D.O. & M.S.

Anatomy: The Anatomy of the Eye and orbits.

i) Eugene Wolff ii) Duke Elder.

Ophthalmology : i) By Duke Elder ii) Davson iii) Adler

Optics: Clinical practice of refraction by Duke Alder.

Bacteriology: By Fair Brother.

Surgery: i) H.B. Stallard ii) Alvis iii) Philips iv) Spaeth

v) Arruge

Ophthalmology: Text book of Ophthalmology-System of Ophthalmology

i) Sorsby all the volumes ii) Bersons iii) Traver Roper iv) Duke Elder v) Parsons vi) Peymen's Text Book of Ophthalmology three volumes.

Neurology: i) Kesten Balm ii) Lyle iii) Walsh

**Outlines of Tests, Syllabi and Courses of Reading for
Diploma in Gynaecology & Obstetrics
(D.G.O.) Examination**

The examination shall consist of Part -A and Part-B

Part-A: It includes three theory papers each of three hours duration

Paper I : Basic Sciences, as related to Obst. & Gynae.100marks
Paper-II: Obst.& Neonatology100marks
Paper-III: Gynaecology including Family Planning & Contraception100 marks
Total:300marks

Part-B: Practical Examination:

Clinical	: 180 marks
Viva	: 60 marks
Practical	: 60 marks
Total	: 300 marks

Grand Total : 600marks

Courses of Reading

Paper-I: Basic Sciences as related to Obst. & Gynaecology.

1. Anatomy of female reproductive organs & developmental abnormalities.
2. Physiology of female reproductive organs and Physiological changes during pregnancy & puerperium.
3. Pathology of female reproductive organs during pregnancy puerperium & Pathology as related to Gynaecology.
4. Pharmacology in relation to various diseases in pregnancy and normal pregnancy puerperium and Gynaecology.
5. Pharmacology related to Gynaecology.

Paper-II : Obstetric and Neonatology

1. Diagnosis of Pregnancy and Ante-Natal care.
2. Physiology of Pregnancy Labour.
3. Nutrition in Pregnancy Lactation.

ABNORMAL PREGNANCY

4. Malpresentations.
5. Disorders of first trimester pregnancy.
 - Hyperemesis gravidarum
 - Abortions
 - Hydatidiform mole
 - Ectopic Pregnancy
6. Hydramnios, Multiple Pregnancy, Cord prolapse.
7. Hypertensive disorders of pregnancy.
8. Anaemia in Pregnancy
9. Medical and surgical conditions complicating pregnancy.
10. Contracted pelvis and disproportion.
11. Dystocia.
12. High risk pregnancy.
13. B.O.H. drug hazards during pregnancy
14. Rh Incompatibility.
15. Placenta insufficiency. Small for date pregnancy.
16. Postmaturity, prematurity.
17. Viral infections during pregnancy.
18. Acute renal failure in Obstetrics, Obstetric shock.
19. Induction of Labour. Fetal distress.
20. Operative obstetrics.
21. Maternal and Perinatal mortality.
22. Normal and abnormal Puerperium.
23. Physiology of Lactations, Disorders of breast.
24. Endocrinology of pregnancy.
25. Ultra-sound in Obstetrics.
26. Radiology in Obstetrics.
27. Social Obstetrics.
28. Medical Terminations of pregnancy.
 - Rules & Regulations. Methods for 1st & 2nd Trimester abortions. Complications concomitant contraceptions.
29. I.U.G.S.
30. Recent advances in Obstetrics.

NEONATOLOGY

1. Intrapartum and neonatal foetal monitoring
2. Care of New-born-full term premature infant.
3. Care of high risk baby.
4. Birth injuries.
5. Prematurity and low birth weight baby.
6. Congenital malformations.
7. Hoemolytic diseases in new born.
8. Diseases of the new born.
9. Neonatal Pharmacology.
10. Neonatal feeding of infants: breast feeding artificial and supplement feeding.
11. Recent advances in Neonatolmology.

Paper : III : Gynaecology including Family Planning & Contraception.

1. Anatomy of female Genital organs.
2. Development and congenital Malformations of female genital tract.
3. Sex and inter sexuality.
4. Disorders of female genital tract; Infections, Injuries Benign Lesions, Epithetical dystrochies of valve, sexually transmitted diseases.
5. Displacement of Uterus.
6. Genital Tuberculosis.
7. Contraception.
8. Benign Lesions of genital tract.
9. Malignant lesions of genital tract.
10. Menstural disorders.
11. Infertility.
12. Induction of evaluation, Physiölogy of contraceptions.
13. Pathology of conception.
14. Endometriosis.
15. Diseases of urinary system especially Vaginal fistulae.
16. Injuries of the urinary system during Gynaecological surgery.

18. Recent advances in Gynaecological diagnosis and management.
19. Radiotherapy in Gynaecological diagnosis and management.
20. Chemotherapy of Gynaecological malignancy.
21. Operative Gynaecology.
22. Contraception sterilization.
23. Fluid and electrolyte therapy in Gynaecology.
24. Social Gynaecology.
25. Paediatric Gynaecology.
26. Genetic Counselling.
27. Genetic disorders.
28. Menopause and its disorders
29. Physiology of Menstruation, Puberty & Menopause.

Books Recommended

OBSTETRICS

1. Text Book of Obstetrics by Dr. K.N. Masani.
2. Text Book of Obstetrics by Dr. Clayton & Frasar.
3. Text Book of Obstetrics by Dr. C.S. Dawn.
4. Text Book of Obstetrics by Dr. Bholu Nath Banerjee.
5. Obstetrics by Williams.
6. Antenatal and Post-natal care by F.S. Browne & Medure Brown.
7. Practical Obstetric problems by Dr. Ian Donald.
8. Operative Obstetrics by Munro-Kerr.
9. Manual of obstetrics by Holland & Brews.

GYNACEOLOGY

1. Text Book of Gynaecology by Clayton & Frasar.
2. Text Book of Gynaecology by W. Shaw.
3. Text Book of Gynaecology by C.S. Dawn.
4. Principles of Gynaecology by N.N. Dutta.
5. Principles of Gynaecology by Roy, Chaudhry.
6. Novak's Text Book of Gynaecology.
7. Principles of Gynaecology : T.N.A. Jeffcoate.
8. Text Book of Gynaecology by Kostnee.
9. Operative Gynaecology by Shaw.
10. Operative Gynaecology by Te-linde.

Outlines of tests, syllabi and courses of reading for Diploma in Laryngology and Otology (D.L.O.) Examination

The examination shall consist of Part-A and Part-B

Part-A : It includes three theory papers each of three hours duration.

Paper-I : Basic Sciences (Anatomy Embryology, Physiology of Ear, Nose and Throat & elementary acoustics)	100 marks
Paper-II : Medicine of Ear, Nose and Throat including Pathology and Bacterio- logy	100 marks
Paper-III : Surgery of Ear, Nose And Throat including allied subjects	100 marks

TOTAL 300 marks

Part-B Practical :

Clinical	180 marks
Practical	60 marks
Oral	60 marks
TOTAL	300 marks

Grand Total (Theory & Practical) 600 Marks

Courses of Reading

ANATOMY:

1. Gross Anatomy, Histology and Embryology of Ear(Exter-
nal), Middle, Inner Ear Eustachian Tube Facial Nerve.
2. Nose.
3. Paranasal sinuses
4. Oral Cavity including Tongue and floor of mouth.
5. Pharynx (Nasopharynx)
(Oropharynx)
6. Pharyngoal spaces (Laryngopharynx)

7. Oesophagus
8. Larynx
9. Trachobronchial tree
10. Thyroid
11. Anatomy of Head & Neck as applied to E.N.T.
12. Anatomy of Structures of brain as related to E.N.T.
13. Anatomy of various venous sinuses.

PHYSIOLOGY :

1. Acoustics, Basic Principles of Acoustics, frequency, pitch, Noise, masking, recruitment etc.
2. Mechanics of hearing and various theories of hearing.
3. Intra-Tympanic Muscles and their Physiology
4. Physiology of equilibrium and Vestibular system
5. Physiology of Nose and Paranasal sinuses
6. Physiology of Olfaction
7. Physiology of Taste and its central connection
8. Physiology of Deglutition
9. Mechanism of speech and phonation
10. Physiology of Larynx
11. Physiological functions of brain as related to E.N.T.
12. Neuro-otology
13. Physiology of salivation and its control connection
14. Etio-Pathogenesis, Pathology, Diagnosis, differential, diagnosis and management of diseases of :-
Ear, facial nerve, Eustachian tube
Nose and para-nasal sinuses
Oral-cavity including tongue, floor of mouth, salivary glands
Pharynx and pharyngeal spaces

Desophagus

Larynx

Tracheo Bronchian tree

Thyroid and Head and Neck as applied to E.N.T.

Intra- Cranial complications due to diseases of these organs.

Audiological Rehabilitation of Deaf and Dumb and Common speech disorders.

General surgical principles and allied subjects pertaining to E.N.T. Diseases.

Anaesthesia and Radiology as related to E.N.T.

Diseases of CNS, CVS and respiratory system as applied to E.N.T.

Books Recommended

Diseases of Ear, Nose and Throat	Scott Drown 4 Vols.
Diseases of the Ear	Mawson
Surgery of the Ear	Shambaugh
Diseases of E.N.T.	Logan Turner

**Outlines of tests, syllabi and courses of reading for
Diploma in Orthopaedics (D. Ortho.)**

The examination shall consist of Part-A and Part-B

Part-A : It includes three theory papers each of three hours duration

Paper-I : Basic Sciences as related to Orthopaedics (including Anatomy, Physiology, Pathology & Pharmacology-
100 Marks

Paper II :Principles & practice of Orthopaedic (including operative Orthopaedics, Surgical-Pathology & Physical Medicine)
100 Marks

Paper-III : Principle & Practice of Traumatic Orthopaedic Surgery & General Surgery as related to Orthopaedics
100Marks

TOTAL=300 Marks

Part- B : Practical

Clinical	180 marks
Practical	60 marks
Oral	60 marks
TOTAL	300 Marks

G. Total : 600 marks

COURSES OF READING

Paper-1: Basic Sciences as related to Orthopaedics (including Anatomy, Physiology, Pathology & Pharmacology)

- a) Anatomy, Physiology, General Pathology, Pharmacology and Microbiology as related to Orthopaedic Surgery with special reference to Locomotor system.
- b) Deformities and diseases of Locomotor system with special reference to development anomalies:

Paper-II:Principle & practice of Orthopaedic (including Operative, Orthopaedics, Surgical Pathology & Physical Medicine.

- a) Principle of treatment in Orthopaedic Surgery & recent advances in Orthopaedic Surgery.
- b) Physical Medicine, Physio Occupational Therapy in relation to Orthopaedic conditions and applied electrical treatment & Radiological diagnosis.

Paper-III : Principle and practice of Traumatic Orthopaedic Surgery & General Surgery as related to Orthopaedics

- a) Traumatology in general with special reference to Locomotor system and Organisation of First-aid and plaster techniques.
- b) Broad outline of General Surgery, as related to Orthopaedics.

Books Recommended

1. Campbell's Operative Orthopaedics Vol. I & II (latest edition).
2. Tureck : Orthopaedics : Principles and their application (latest Asian edition)
3. Waston Jones :Fracture and joint injuries Vol.I&II.
4. Mercer's Orthopaedic Surgery: Latest Edition..
- 5 K-Dass-Clinical methods in Surgery.
- 6 Bailey & Love's Short Practice of Surgery.
- 7 Muller, Allgower and Willonger: Mannual of Internal.Fixation.
- 8 Philip, I.Salid-Plaster Casting.
- 9 James Cyriar: Text book of Orthopaedic Medicine Latest Vol. I, II.
- 10 Jorden Orthopaedic Appliances Latest Edition.
- 11 Jafee and Lichtenstein: Bono Tumours.
- 12 Mc. Kibbin-Recent advances in Orthopaedics..
- 13 A Leo Mocgrager : A synopsis of Surgical Anatomy: Latest edition.
- 14 Apley-system of Orthopaedic and Fratures-5th Edition.
- 15 Physical Medicine & Rehabilitation by HOWARD RUSK.
- 16 Physical Medicine & Rehabilitation by BASIL KIERNANDER.

**Outlines of Test, Syllabi and courses of reading for
Diploma in Anaesthesiology (D.A. Examination)**

The Examination shall consist of Part-A and Part-B

Part-A: It includes three theory papers each of three hours duration.

Paper-I	Basic Sciences, Like Anatomy Physiology, Pharmacology and Physics as related to Anaesthesia	100 marks
Paper-II	Principles and practice of Anaes- thesia.	100 marks
Paper-III	Clinical Sciences related to Ana- esthesia and recent advances in Anaesthesia	100 marks
	Total	300 marks

<i>Part-B</i>	<i>Practical</i>	
	Clinical	180 marks
	Practical	60 marks
	Oral	60 marks
	TOTAL	300 marks

Grand Total 600 Marks

COURSES OF READING

Paper-I: Basic Sciences like Anatomy, Physiology, Pharmacology and Physics related to Anaesthesia.

- A. Physiology & Biochemistry:
 Physiology of Respiratory system
 Cardiovascular System
 Nervous System
 Autonomic Nervous System
 Liver
 Urine formation and role of Kidney in maintainance of fluid, pH & electrolytes.

- Blood Coagulation.
- Temperature regulation
- Maintenance of fluid, electrolytes & acid base status and its alterations.
- Endocrinology (Renal, Adrenals Thyroid, Thymus pancreas and pituitary)

B. ANATOMY

- Respiratory System.
- Nervous system (C.N.S., peripheral N.S. & Autonomic N.S.)
- Cardiovascular system as applied to Anaesthesia

C. PHARMACOLOGY

- Drug acting on autonomic N.S. (Sympathomimetic, sympatholytic, para-sympathomimetic & para-sympatholytics.)
- CNS stimulant & antagonists.
- Analgesics, Narcotics, Sedatives and tranquilisers
- I.V. anaesthetic agents.
- Cardio glycoside.
- Anti diabetics & Anti hypertensives.
- Histamines and Anti histamines.
- Steroids.
- Coagulants & anticoagulants
- Diuretics agents.
- Mucolytic agents

D. PHYSICS AND EQUIPMENT

- Gas laws
- Flow of gases & flow meters
- Storage and supply of gases and Physical principles involved in it.
- Pressure & monitoring.
- Flow measurements.

- Doppler's effect.
- Principles of Transducers.
- Fires and explosions.
- Respirators-basic principles.
- Boyle's machine--all models and its evolution.
- Vaporisers for inhalation agents ordinary type & temperature compensated including fluotoc (marks 1,2,3,4, emotril, cyprano inhalor, E.M.C. system).
- Laryngoscopes, endotracheal tubes including double lumen tubes and bronchial blockers.
- Airways, Ambu bags, Masks.
- Humidification of gases.
- Sterilization of Anaesthetic equipment.

Paper-I Principles and practice of Anaesthesia

- History of Anaesthesia.
- Pre-Operative assessment, preparation of patient for Surgery & Anaesthesia including respiratory physiotherapy.
- Premedication.
- Anaesthetic techniques-for O.P.D. Surgery
 - inhalation anaesthesia
 - various circuits
 - I.V. Anaesthesia
 - Hypotension, Hypothermia & extracorporeal circulation
 - Regional Analgesia-including spinal epidural brachial blocks other nerve blocks,
 - Neuroleptanaesthesia.
- Anaesthesia for emergency surgery.
- Anaesthesia for specialities like gynae. & obstet.; Neuro
- Surgery cardiothoracic Paediatrics E.N.T Ophthalmology.
- Dental, Geriatric, plastic-Surgery & orthopaedic surgery and family welfare programme.
- Post operative complication and care.
- I.V. infusion of fluids and electrolytes.
- Blood and plasma transfusion.
- Anaesthesia for patient with medical diseases.

- Controlled respiration O₂ therapy hyperbaric O₂ ,
- Anaesthesia at high altitudes.
- Cardio pulmonary resuscitation.

Paper-III : Clinical Sciences related to Anaesthesia-and Recent advances in Anaesthesia

- Clinical Sciences applied to Anaesthesia
- E. C.G.
- Respiratory, Cardiovascular and endocrinal disorders.
- Hepatic & Renal failure & its bearings on anaesthesia.
- Management of critically ill patients.
 - Long term ventilation.
 - I.V. Alimentionation
 - Management of Respiratory failure, chest injury.
 - Spinal & Head injury & Neurological disorders.
 - Managements of chronic pain including nerve blocks- regional blocks, hypnosis, Acupuncture. Tens & use of neurolytic agents.
 - Recent advances in Anaesthesia.

Books Recommended

- Synopsis of Anaesthesia J. Alfredloob & R. S Atkinson
- A Practice of Anaesthesia-Churchile Davidson & Wyllic
- General Anaesthesia Grey & Nunn
- Physiology Guyton
- Physics for Anaesthetists - Sykes. INTOSH MC
- Understanding Anaesthetic equipment DORCH
- Anaesthesia-MILLER

**Outlines of Tests, Syllabi and Courses of Reading for
Diploma in Medical Radiology (Diagnosis)
(D.M.R.D.) Examination**

The examination shall consist of Part-A and Part-B.

Part-A It includes three theory papers each of three hours duration:-

Paper-I: Radiation Physics and basic sciences including pathology as applied to Radio-diagnosis -----100 marks

Paper-II: Principles of Radio-diagnosis & Imaging --100 marks

Paper -III: Practice of Radio-diagnosis & Imaging ---100 marks

Total : 300 marks

Part-B Practical examination :

1. Clinical : 180 marks

2. Oral : 60 marks

3. Practical : 60 marks

Total : 300 marks

Grand Total 600 Marks

COURSES OF READING

D.M.R.D. (Physics)

A course of General Physics including elements of nuclear Physics, structure of matter, production of isotopes, Radioactivity. Interaction of Radiation with matter and Radiation Units, passage of charged particles through matter, biological effects of Radiation and the terminology used (linear energy transfer, Relative biological effectiveness, quality factor etc.) including operational limits of Radiation exposure and protection with various recommendations of International Commission on Radiation protection, Radiation detector and modern Radiation measuring instruments.

Production of x-rays from low to high voltage range
brief account of electrical circuits and basic principles of mod-

ern x-rays apparatus, usual as well as for special procedures including Computerised tomography, scanning etc.

Physical principles of diagnostic radiology including dark room techniques, Geometric factors influencing the radiographic image, effects and control of scattered radiation Radiographic exposure. Use of intensifying screens. Various techniques like mass miniature Radiography, tomography, fluoroscopy including image intensifying units, Television mass miniature Radiography, tomography, fluoroscopy including image intensifying units, television cine radiography etc. including recent advances in each of the above.

Nuclear magnetic Resonance, ultra sound and any other technique finding use in medical diagnosis. Physical principles and instrumentation of Nuclear Medicine (both therapeutic and diagnostic). Recent advances in each of the above.

D.M.R.D.(Radiodiagnosis)

1 Bones and Joints

Anatomical physiological, Biochemical, Pathological and clinical aspect in relation to Radiological diagnosis of various diseases affecting bones and joints.

Congenital skeletal Disorders skeletal dysplasia, chromosomal disorders etc.

Bone Infections Tuberculosis, Syphilis, Sarcoidosis etc. Avascular Necrosis of Bone Osteochondritis, Miscellaneous Bone Lesions.

Diseases of joints, arthrography.

Tumours and tumour like lesions of bone.

Reticulosis and other Haemopoietic disorders.

Skeletal disorders of Metabolic and Endocrine.

Origin.

Skeletal Trauma general considerations: Regional etc.etc.
Application of different Radiological techniques.
and special investigation Procedures including Recent
advances in Radiology and imaging techniques in diseases
of Bones & Joints.

2. The Chest

Anatomical, Physiological, Biochemical, Pathological and
clinical aspects in relation to Radiological diagnosis of various
diseases affecting chest e.g.:-

The normal chest Techniques.

The chest wall, Diaphragm and pleura.

Patterns of collapse and consolidation.

Inflammatory Diseases of Lung-chronic Bronchitis, Emphysema
etc.

Tumours of Lung

Pulmonary diseases of unknown aetiology.

Pulmonary diseases with an immunological basis-collagen dis-
eases:

Mediastinal Lesion.

Chest Trauma-Irradiation, the post operative chest. The
chest in children congenital abnormalities. Some differential-di-
agnosis. Application of different Radiological techniques and
special investigation procedures including recent advances in
Radiology imaging Technique etc. in diseases of chest.

3. The Cardiovascular System

Anatomical, Physiological, Biochemical, Pathological and
clinical aspects in relation to Radiological, diagnosis of various
diseases effecting the Cardiovascular system e.g.:-

The heart techniques and normal appearances

Radiology of pulmonary circulation

The pericardium

Acquired heart diseases.

The embryology and Anatomy of the heart.

Congenital heart disease

Arteriography, Phlebography, Lymphography

Application of different Radiological techniques and special investigation procedures including recent advances in Radiology imaging Techniques etc. in diseases and cardiovascular system.

4. The Gastro-intestinal Tract and Abdomen

Anatomical, Physiological, Biochemical, Pathological and clinical aspects in relation to Radiological diagnosis of various diseases affecting Gastro-intestinal tract and Abdomen e.g:-

The salivary glands

Pharynx and oesophagus

The stomach and duodenum

The small Bowel

The colon

The Biliary tract

Pancreas

Liver and spleen

The adrenal glands

Application of different Radiological Techniques and special investigation procedures including recent advances in Radiology and imaging techniques in diseases of Gastro-intestinal tract and abdomen.

5. The Urogenital Tracts

Anatomical, Physiological, Biochemical, Pathological and clinical aspects in relation to Radiological diagnosis of various diseases affecting Urogenital tracts e.g.

Methods of Examination

Congenital lesions

Tumours of the Kidney & Ureter

Cystic diseases of the kidney

Renal calculi & Nephrocalcinosis

Urinary infection

Renal Vascular Diseases

Miscellaneous Lesions

The Bladder and Prostate

Lower urinary tract obstruction

Stress incontinence

Obstetric Radiology

Gynaecological Radiology

Application of different Radiological techniques and special investigation procedures including recent advances in Radiology and imaging techniques in diseases of Urogenital tract.

6. E.N.T. Eyes, Teeth, Soft Tissues

Anatomical, Physiological, Biochemical, Pathological and clinical aspects in relation to Radiological diagnosis of various diseases affecting E.N.T. Eyes, Teeth, Soft Tissues:

The Pharynx and Larynx

The paranasal Sinuses

The temporal bone

The orbit and eye

Teeth

The soft tissues

Mammography

Application of different Radiological techniques and special investigation procedures including recent advances in Radiology and imaging techniques in diseases of E.N.T. Eyes, Teeth, Soft tissues.

7. The Central Nervous System

Anatomical, Physiological, Biochemical, Pathological and clinical aspects in relation to Radiological diagnosis of various diseases affecting Central Nervous System e.g.:-

Pathology and methods of examination

The normal skull

The abnormal skull

The spine and Myelography

Encephalography

Ventriculography**Angiography in Neuroradiology**

Application of different Radiological Techniques and special investigation procedures including recent advances in Radiology and imaging techniques in diseases of the Central Nervous System.

8. Imaging

C.T. Scanning-CNS

C.T. Scanning - The body

Radio-isotopes imaging

Ultra Sound principles-General Cardiac & Obst. & Gynae.

Books Recommended

1. Fundamental Physics of Radiology-I By W.J. Maridith & J.B. Massey. Year Book Medical Publishers - Chicago (latest edition).
2. The Physics of Radiology : By H.E. Johns & JR. Counughani Charles C. Thomas, Spring Field, Illinious (latest edition)
3. Medical Physics, John Wiley-New York. By J.R. Cameron & J.G. Skofrenick.
4. Text book of X-rays. Diagnosis. By British Authors (All Volumes) latest edition.
5. Text Book of Radiology 'Medical Imaging' by David Sutton latest edition.
6. Recent advances in Radiology.
7. Clarks book of positioning of Radiography
8. Text book of Pathology : by Boyd.
9. Text book of Pathology : by Robins.
10. Latest journals of last five years :
 - Indian Journal of Radiology.
 - British Journal of Radiology
 - American Journal of Radiology.
 - Radiological clinics of North America.

Outlines of Tests, Syllabi and Courses of Reading for Diploma in Child Health (D.CH.) Examination.

The Examination shall consist of Part-A and Part-B.

Part-A: It includes three theory papers each of three hours duration :

Paper -I : Basic Sciences as related to Paediatrics	100marks
Paper-II : Diseases of Infancy & Childhood	100marks
Paper-III : Neonatology and Social and Preventive Paediatric	100marks
Total	: 300 marks

Part-B: Consist of

Clinical	180 marks
Oral	60 marks
Practical	60 marks
Total	: 300 marks

Grand Total : 600 marks

COURSES OF READING

The course of studies shall include lecture demonstrations Seminars, clinical workshop, visits to peripheral centres and shall be conducted by the department of Paediatrics, Medical College & Hospital, Rohtak. The syllabus of the course is as follows:-

1. Applied Anatomy including embryology and development anomalies.
Applied Physiology of children.
Growth and development from birth to adolescence & disorders of growth & development .
Assessment of physical and mental development.
Psychological development of child, psychological disorders and their prevention. Drug abuse by adolescent.
Normal Nutrition and nutritional disorders. Nutritional assessment and management. Vitamins, Infant feeding including breast feeding, formula feeding and other foods Feeding problems in infancy. Diet of a normal and sick child.
Normal water, electrolytes and pH, balance of body and related disorders.
2. Preventive Paediatrics-Child health including care of normal infants and children. Preventive measures at different age periods, delivery of health care to children to develop-

ing countries.

Function and working of ICDS.

Other national child welfare programmes.

Immunization.

Vital Statistics.

Care of handicapped child

3. Therapeutics in paediatrics: Applied Pharmacology, Drugs, Dosages and uses. Fluids and electrolyte therapy including oral rehydration, Drug toxicity, Physiotherapy.
4. Antenatal and neonatal paediatrics.
5. Systemic diseases in children.
6. Poisoning from food, drugs and chemicals and their prevention child and law including child welfare and protection, adoption laws, juvenile delinquency, Abuse and neglect of child illegitimacy, foster homes.
7. Medical problems of Anaesthesia in children.
8. Communicable diseases including immunology, nosocomial infections. Infections in Hospital & nurseries. Prophylactic measures.
9. Radiological; examination of children.
10. Paediatric Surgery & Orthopaedics as related to medical problems.
11. Common side-rooms Laboratory investigation techniques including:-
 - Urine and stools examination.
 - Basic hematological techniques.
 - Staining techniques for common bacterial infections.

C.S.F. EXAMINATION

Collection of material for various biochemical, Pathological and microbiology investigation.

12. Paediatric procedures including :-Collection of blood samples : venous blood, arterial blood, capillary blood. Umbilical cathetrization . Intravenous infusion. Exchange transfusion and other neonatal procedures like use of phototherapy etc.

Venous cut down	Paracentesis
Thoracentesis	Pericardiocentesis
Lumber puncture	Ventricular puncture
Subdural tap	Gastric intubation
Liver biopsy	Kidney biopsy
Bone Marrow aspiration	Endotracheal Intubation
Immunization techniques and intradermal tests like tuberculing test.	

Books Recommended

1. Nelsons text books of Paediatric -W.B.Sauonders Company.
Richard & Behrman Victor & Vaughan 1983
2. Jellife's diseases of children in the sub-tropics & tropics. -ELBS London.
D.B.Jelliff J.P.Standfield
3rd Edition 1978.
3. Normal child Ronald & Illingworth 1983 -Churchill Livingston
4. The development of the Infant and young child normal & abnormal Ronald S.Illingworth 1983 -Churchill Livingston
5. Common symptoms of diseases in childhood. -Blackwell Scientific Publ.
Ronald S. Illingworth 1982
7th Edition.
6. Text book of preventive and social medicine. -M/s Banarsi Dass Bhanot Jabalpur pin 482001.
J.E. Park & K. Park 9th Edition, 1983
7. Manual of Paediatric Physical Diagnosis Barnersmlewis A 4th Publisher -Chicago Yen Book
Edition 1972
8. Feeding and care of the Infants -Voluntary Health Associa-
Dr. Shantt Ghosh. 4th Edition - tion of India, New
1981 Delhi
9. Care of the New born -Sagar Publications, 72,
Dr.Meharban Singh Janpath, New Delhi.

**Outlines of Tests, Syllabi and Courses of Reading for
Diploma in Dermatology including Venereal Diseases and
Leprosy (D.V.D.) Examination**

The examination shall consist of Part-A and Part-B.

Part-A : It includes three theory papers each of three hours duration:-

Paper-I	Basic Sciences in relation with Dermatology, Venereology and Leprosy	100 marks
Paper-II	Principles and Practice of Dermatology, Venereology and Leprosy	100 marks
Paper-III	Medicines and recent advances in relation with Dermatology, Venereology & Leprosy.	100 marks

Total 300 marks

Part-B : Practical Exam.:-

Clinical	180 marks
Practical	60 marks
Oral	60 marks
TOTAL	300 marks

Grand Total 600 marks

Courses of Reading

- 1 Structure and function of Skin (Physiology, Anatomy and Embryology).
- 2 Principles of Diagnosis.
- 3 Immunology in relation to Dermatology and disorders thereof.
- 4 Skin as a barrier.
- 5 Eczema and dermatitis.
- 6 Bacterial Infections in relation to Skin.
- 7 Viral Infections in relation to skin.
- 8 Tuberculosis of skin.
- 9 Cutaneous mycology.

- 10 Skin diseases of the Peripheral vessels and their contents.
- 11 Skin diseases caused by arthropods.
- 12 Superficial cutaneous-vasculitis.
- 13 Drug reactions.
- 14 Autoimmune disorders and autoimmunity.
- 15 Ker atinization and disorders.
- 16 Bullous diseases of the skin.
- 17 Melanogenesis and disorder.
- 18 Histocytic Proliferative disorders.
- 19 Sarcoidosis.
- 20 Metabolic and nutritional disorders of skin.
- 21 Reticulosis.
- 22 Anatomy, Embryology and Physiology of hair and its disorders.
- 23 Anatomy, Embryology and Physiology of sweat glands and its disorders.
- 24 Anatomy, Physiology and embryology of apocrine and Ecrine sweat glands and their disorders.
- 25 Anatomy of nail and its disorders..
26. Tumours of skin & benign Reticuloen do the lial diseases.
- 27 Skin in systemic disorders.
- 28 Topical and systemic therapy
- 29 Anatomy Physiology and function of cutaneous nervous system and pruritis.
- 30 Photobiology and cutaneous reactions.
- 31 Papulosquamous eruptions and exfoliative dermatitis.
- 32 Hereditary cutaneous disorders.
- 33 Acne and Acneform dermatoses.
- 34 Lymphoma, Multiple Myeloma, Leukaemia cutis and Mycosis fungoides.
35. Reaction of Physical agents.

- 36 Parasitology and Tropical Dermatology.
- 37 Dermatological Surgery including cryo Surgery & Chemical Surgery.
- 38 U.V. & Radiotherapy in Dermatology.
- 39 Psychogenic and neurogenic skin diseases.
- 40 Industrial dermatosis.
- 41 Cosmatology in Dermatology

LEPROSY :

1. Infectivity of Leprosy (Epidemiology).
2. Classification of Leprosy.
3. Management of Leprosy.
4. Reactions in Leprosy and its management.
5. Eye changes in Leprosy and its management.
6. Bone changes in Leprosy and its management.
7. Clinical varieties of Leprosy in the spectrum.
8. Immunology of Leprosy.
9. Control of Leprosy.

S.T.D.

1. Clinical manifestation of early syphilis. Diagnosis and treatment.
2. Latent syphilis and late benign syphilis. Diagnosis and treatment.
3. Cardiovascular and Neurosyphilis.
4. Serology in Syphilis.
5. Immunology in Syphilis.
6. Pregnancy and Syphilis.
7. Congenital Syphilis- Clinical manifestations, complications and treatment.
8. Clinical, manifestations, Signs, symptoms and complications of Genorrhoea.

- Diagnosis and management of Genorrhoea.
9. Non. specific Uretheritis , its classification and management.
 10. Donovanosis, Diagnosis and management.
 11. Reiter's Diseases. Diagnosis and management.
 12. D/D of Genital Uloorations and management.

 13. Lymphogranulome Venereum. Anatomy and drainage of Lymphatics of Genitals.
 14. Anatomy and Physiology of Genitals male and female.
 15. Control of S.T.D. Diseases.
 16. Other S.T.D.'s
 17. Herpes progenitalis clinical diagnosis, investigation and treatment.
 18. Non-venereal treponemal infections.

Books Recommended

1. Text book of Dermatology by Arthur Roeck.
2. Text book of Dermatology by Pilsbury.
3. Text book of Dermatology by Andrew 's.
4. Text book of venereal Diseases by King & Nicol.
5. Text book of Leprosy (Jopling).
6. Text book of Leprosy (Dharmendra).

7. Current Journals pertaining to Dermatology, Venereology & Leprosy.

**Outlines of Tests, Syllabi & Courses of Reading for
Diploma in Tuberculosis and Chest Diseases (D.T.C.D.)
Examination**

The examination shall consist of Part -A and Part -B

Part -A Theory - Total marks 300

Time three hours(each paper)

Paper -I Tuberculosis basic including
Epidemiology, Pathology, Bac-
teriology, B.C.G.Tuberculine
Prevention and control

-----100marks

Paper-II Respiratory diseases-basic including applied anatomy,
Physiology Epidemiology Pathology, Bacteriology,
Preventive and control

-- 100marks

Paper -III Tuberculosis and chest diseases clinical -100marks

Part -B Practical

Clinical -180 marks

Oral - 60 marks

Practical -60 marks

TOTAL 300 MARKS G. Total : 600 Marks

Courses of Reading

1. Tuberculosis and Chest diseases basic including Epide-
miology Pathology, Bacteriology, B.C.G. Tuberculine, Preven-
tion and Control.

A Applied anatomy of thorex including pleura, lungs, tracheo-
bronchial tree and Dipharagm: Pulmonary circulation and
Lymphatic drainage of Lung and pleura.

B Applied Physiology & Biochemistry in relation to respira-
tory system mechanics of breathing, pulmonary gas
exchange ventilatory tests, perfusion studies, blood gases
and non-ventilatory function of the lungs.

- C. Pathology and Microbiology in relation to respiratory system both tuberculous and non tuberculous lesions. Pathology bacteriology and diseases of respiratory system, both Tuberculous and non-tuberculous; Microbiology of Respiratory Tract air born infections, classification of Mycobacteria, their morphological aspects, growth requirements, Virulence; Anonymous mycobacteria, Immunity in Tuberculosis drug resistance. Pathology of tuberculosis Early tissue changes: caseation Necrosis, Cavity formation Fibrosis and classification. Healing process including cavity healing.
- D. Epidemiology of Tuberculosis, Tuberculin testing Epidemiological techniques, Surveys, case finding prevention of tuberculosis B.C.G. vaccine, National T.B control programme

TUBERCULOSIS AND CHEST DISEASES CLINICAL

- E. Tuberculosis including extra, pulmonary tuberculosis. Koch's phenomenon, Primary infection, and post primary infection. Exogenous and endogenous infection, clinical aspects of pulmonary tuberculosis diagnosis, differential diagnosis. Anti microbial Treatment of Tuberculosis, complications of Pulmonary Tuberculosis and their management, Role of surgery in the management of pulmonary tuberculosis after care and rehabilitation.
- F. Extra pulmonary tuberculosis-bones and joints, eye, skin, central nervous system, G.I.T., Lymph gland & genitourinary systems.
- G. NON TUBERCULOSIS DISEASES OF THE CHEST:
Acute infection of upper respiratory tract pneumonia, Bronchitis with Emphysema, pulmonary suppuration and empyema thoracis, Bronchial obstruction and atelectasis. Pulmonary eosinophilia, Sarcoidosis of lungs, chronic

obstructive lungs diseases, disorder of pulmonary circulation pulmonary manifestation collagen diseases, parasitic infections of lungs fungus diseases of lungs, inhalation diseases of lungs. Rares pulmonary diseases. Pulmonary manifestation of heart diseases, Neoplastic diseases, Air pollution and smoking. Introgenic diseases including post-operative complications. Adult Respiratory distress syndrome (A.R.D.S.), Pulmonary manifestation of systemic diseases-including connective tissue and Haematologic disorders. Genetic and congestial disorders of the respiratory system. Hypersensitivity respiratory diseases including Bronchial Asthma and Allergi Alveolitis, Poulmotrauma (i.e. occupational, Ratiation, aspiration). Acute and chronic respiratory failure emphasizing disorders of Acid Base balance, and penetrating thoracic trauma.

H. Radiology of Tuberculosis and Chest Diseases.

ESSENTIAL SKILLS TO BE DEVELOPED INCLUDED:

1. Radiology : Interpretation of Chest Recent -genegrams, Tomograms, Bronchograms, Pulmonary Angiograms and CAT Scans.
2. Smear of the soutum and other fluids interpretation of smear for bacteriam fungi and non malignant cells.
3. Pulmonary function testing.
4. Respiratory care-competenced in Respiratory-therapy.
5. Procedures - performance of theracentisis pleural and other biopsy procedures. Endotracheal and pleural intubation, Fluoroscopy.
6. Addition recommended but not mandatory skills including close lung biopsy, tissue aspiration, Bronchography and Ratiation Bronchoscopy of the lung. The students should

have the continuing intellectual curiosity to remain at the informational forefront of the field.

Books Recommended

TUBERCULOSIS

1. Text book of Tuberculosis- by K.N. Rao etal.
2. Pulmonary Tuberculosis-by Walter Page], FAH Sinmanels, Normal, Macdonal E Nassen.
- 3 The Chemistry and Chemotherapy of Tuberculosis- Esmond Rlarj.
- 4 Pulmonary Tuberculosis by M.P.S.Menon.

RESPIRATORY DISEASES

1. Respiratory Diseases- By John Croften and Andres Douglas.
2. Pathology of the lung by H. Spencer and A.A.Ciebaw, Vol.-I, vol. II.
3. Principles of chest X-ray diagnosis by George Simen.
4. Diseases of the chest by H.C. Hishaw.
5. The lung-clinical Physiology and pulmonary Function test-by Forestéan, Dubois, Briscoe, Clarsen.