DR S PAWAR EDUCATIONAL SOCIETY

RV INSITITUTE OF PARAMEDICAL SCIENCES COLLEGE

AFFILIATED TO TELANGANA PARAMEDICAL BOARD

(Recognition Certificate. No. 138/17/05/TSPMB/2023

CURRICULUM

Address :- RV Institute of Paramedical Sciences College
1-75/5/360A, Plot No - 8 Sai Bhavani Nagar Boduppal
Hyderabad Telangana State Pin Code : 500092
Email Id : rvipsc@gmail.com website : www.rvpgroups.com
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RV INSTITUTE OF PARAMEDICAL SCIENCES COLLEGE

BODUPPAL - HYDERABD

TELANGANA PARAMEDICAL BOARD

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DMST **DMIT** **DMLT** **DIPLOMA IN DIALYSIS**

DR S PAWAR EDUCATIONAL SOCIETY

RV DIGONOSTIC AND RESEARCH CENTRE

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Estd.2023

Dr. S Pawar Educational Society
RV INSTITUTE OF PARAMEDICAL SCIENCE COLLEGE

Affiliated to TS Para Medical Board,
Hyderabad, Telangana

College Adress: 1-75/5/360A, Plot # 8,
Sai BhavaniNagar, Surya Hills, Boduppal,
Hyderabad, Telangana 500092

Provided By
TELANGANA PARAMEDICAL BOARD
HYDERABAD, TELANGANA

SYLLABUS
DMIT

Theory Papers 3 + practical papers 3
6 Months Internship Training
followed by 100% Jobplacement assurance
Sub Topics (Part - A,B,C& D) of all papers I, II & III Three Hoursof theory , two hours of tutorial and weekly practical sessions for a duration of 2 years diploma 30 - 36 weeks

INTRODUCTION

Medical Imaging Technology

"The Science is devolving different branches of specialization and Medical Sciences are closely linked with each other scientific Medicine has been nurtured and grown to the present form in the laboratory. It is the knowledge gained in the technology that makes diagnosis of disease feasible, their treatment and subsequent follow us success. Sometime it can harm the patient seriously; mainly the diagnosis depends upon the report of investigation done in the Laboratory by the Medical laboratory technology.

Thus the Laboratory Technician plays a vital role in the Medicine field. It is difficult for the doctoral one.

In Fact it is necessary that every department in General Hospital Primary health centre at Taluk level, every Hospital belonging to state / Centre Govt. and all clinics & Nursing Homes & Practitioners should have the assistance of trained technician.

So a gap has been developed between the requirement and the availability of trained lab Technician due to the fast growing Laboratory & X-Ray field.
To fulfil the gap and to make the Paramedical Board of India has realized the problems and start training course in Medical laboratory technology &X-ray E.CG Technician.

Radiology and Imaging technology is one of the allied healthcare fields that carry out numerous healthcare activities. Diploma in X-Ray Technology is a UG radiology program. Radiology refers to the electromagnetic radiation that penetrates with in the body and produces an image of inner structures on a photographic film. The production of those medical image, popularly known as X-rays is radiological technology. During this 2-yearcourse, candidates learn how to prepare patients undergoing electrocardiogram procedures and X-rays. They accomplish veni puncture and injections and conduct various laboratory tests.

DMIT-FIRST YEAR

Paper	SUBJECTS	(MAX.MARKS)		TOTAL	PASS MARKS	PRACTICAL MARKS	PASS MARKS
		INTERNAL	EXERNAL	100	40	60	24
I	A & B :ANATOMY& PHYSIOLOGY C:BASICSOF BIOCHEMISTRY D: BASICS OF BIOSTATISTICS A: Physics of Radiography B: Regional Radiography	20	80	100	40	60	24
II	A:BASICS OF PATHOLOGY B: BASICS OF BLOOD BANKING C: BAICS OF MICROBIOLOGY A: Dark Room Radiographic Techniques B: Fundamentals of X-Ray Equipments	20	80	100	40	60	24
III	A:HOSPITAL AWARENESS B:COMMUNICATION SKILLS C:PATIENT RELATED SERVICES D:BASICS OF CENTRAL STERILIZATION A: Radiation Hazards & Protection	20	80	100	40	60	24

PAPER-1

ANATOMY & PHYSIOLOGY

A:Anatomy (Theory):-

1.Introduction:-

(a).Common Anatomical terms & Anatomical Positions. Different parts of the human body (b)Tissue with Function & Classification (c)Cell & Animal Cell

(2.)Skeletalsystem:

(a)Bones, joint ,& Movement (b)Muscles

(3) Genito-Urinary System:(a) Male & Female

Reproductive Organic System (b) Urinary bladder ,Kidney and Ureter (C).Uterus & Urethra

(4) Respiratory System (a) Lungs & Thoracic Cavity (b) Pleura (c) Surface marking of lungs

(5) Gastro- Intestinal System:-(a) Mouth (b) Pharynx & Salivary gland and Tonsils (c) Oesophagus &stomach (d)Spleen & Pancreas (e) GallBladder & Liver (f) Surface making of Abdomen (g) Structure of Digestive Tract

(6) Movement of the body(a)Upper Limb –Bones, Important Vessels
(b)Lower Limb–Bones Important Vessels

(7) Nerves System (a) C.S.F & Spinal Card (b)Nerves & Brain (c)Sympathetic And Sympathetic (d)Cranial and Spinal Nerves

(8) Vascular System (a) Arterial System (b) Lymphatic and Venous System
(c) Heart (d) Surface Making ,Important Blood Vessels &Muscles
(e)Pericardium

(9) Cardio

<u>B: Physiology (Theory)</u>

1. Introduction to Human Physiology
2. <u>Digestive System</u>
   (a)Mastication deglutition
   (b)Function and Composition Saliva
   (c)Function of Stomach (d)Function and Composition of gastric juice

(e)Function of Pancreatic Juice (f)Function of Bile

3. RespiratorySystem(a)Define-Respiratory Rate (b)Vital Capacity , Cyanosis (c) External& Internal Respiration (d) Transport of O2 and CO2 in the Blood (e)Function of Respiration its structure

4. Blood(a) Function of Blood (b) Composition of Blood (c) Anti-Coagulants(c)Description of Blood Cells (e) Blood Group of ABCO and Rh Factor (f)Function of Lymph (g)anaemia and its Type

5. Cardio-Vascular System(a)Define of Cardio output (b)Define the blood pressure, Electro cardiogram (e) Circulation (Systematic and Pulmonary) (f)Function of Heart (g)Function of Blood vessels (h)Cardio Cycle
6. Excretory System (a)Kidney (Function) (b) Formation of Urine (Normal and abnormal) (c)Composition of Urine
7. ENDOCRINE GLAND(a)Define- Name and hormones Secreted by than (b) Action of Hormones in our body
8. Reproductive System(a)Male female Genital System(b) Function of Ovary (c) Formation of Ovaand Their action of ovarian Hormones (d)Function of Testis- Their action Testosterone(e) Mensuration Cycle and Fertilization (f)Progesterone and Oestrogen Hormones
9. Skin (a)Define the Skin (b) Function of Skin
10. Formation, Function & Composition of C.S.F
11. Special Senses-Smell ,Taste, Touch, Hearing

REFERENCE BOOKS:

1. Anatomy & Physiology for Paramedical students–Pin ky Rajendra Wadiya
2. Anatomy & Physiology-Teena kumara
3. Anatomy & Physiology-Indu Khurana Arushi Khurana
4. Anatomy &Physiology-Gyton
5. Ross & Wilson Anatomy & Physiology in Health & Illness
6. BD Chaurasias Human Anatomy Vol-I

C: BASICS OF BIO-CHEMISRY

1. Introduction to basics of Biochemistry including code of ethics for Medical Lab Technicians and Medical lab organization
2. Reception, Registration and Bio-Chemical parameters investigated.
3. Glassware and Plastic ware used in Bio-Chemical Laboratory.

a. Glassware:
1. Types of glass and composition
2. Types of glass ware used ,their identification ,application &uses.
3. Cleaning, Drying, Maintenance and storage of glassware
b. Plastic ware: Brief out line

4. Instrumental methods of Bio-chemical analysis.
   a. Colorimetric: Visual and Photoelectric methods, Instrumentation, Principle & laws involved construction ,operation, care and maintenance ,applications.
   b. Spectro photometry :Principle and theory, types, construction & applications
5. Basic lab operations like
   a. Separation of solids from liquids
   1. Centrifugation :Principle, Different types of centrifuges, care & maintenance, applicions
   2. Filtration using funnel
   3. Weighing: Different types of balances used, care and maintenance.
   4. Evaporation
   5. Distillation
   6. Refluxing
   7. Drying different salts and desiccation
6. Water Chemicals and related substances
   a. Purity of chemicals
   b. Corrosives
   c. Hygroscopic substances
7. Prevention ,safety and FIRSTAID in lab accidents.

8. Collection of Specimens.

   a. Blood: Type of Specimens, collection, Precautions during collection, processing and preservation.
   b. Urine: Types of Specimens ,collection, precautions during collection, processing and preservation.
9. Urine Biochemical Parameters Units Of Measurements
10. Solutions: Types, based on solute & solvent, Types based on method of expressing concentration ,calculations.
11. Carbohydrates:Definition,BiologicalImportance,AcidValue,IodineValue,SaponificationValue.
12. Amino acids & Proteins: Definition, Biological Importance ,Classification ,Qualitative Tests.

13. Diagnostic Tests: Blood Sugar, Glucose Tolerance Test, Blood Urea, Serumuric acid ,Serum creatinne.
14. Vitamins & Minerals
    a. Vitamins: Water Soluble Vitamins, Fat Soluble Vitamins, Sources, Daily Requirements ,Deficiency Diseases.
    b. Minerals: Sources, Daily Requirements ,Deficiency Diseases.

REFERENCEBOOKS:

1. Text Book on Bio-Chemistry for DMLT & Paramedical courses– Dr. I Clement
2. Biochemistry-U satyanarayana
3. Concise Text Book of Biochemistry-D M Vasudevan
4. Basics of Clinical Biochemistry & Instrumentation For Paramedical Students–Poonam Baccheti
5. A Text Book on Biochemistry for Paramedical Students-Dr.Kiran Dahiya
6. A Text Book of Medical Biochemistry–Dr.Raja gopal Ganapathy
7. Biochemsry & Clinical pathology 4th edition– VN Raje
8. Text Book of Biochemistry for Paramedical Students 2nd edition-P Ramamoorthy
9. Biochemistry for Medical Laboratory Technology Students – Harbans and ashuma Sachdeva
10. Text Book of Applied Biochemistry and Nutrition & Dietetics– Harbanslal

Part D: Basics Of Bio-Statistics

1. Introduction & Branches of Biostatistics
2. Types of variables ,Measurements and measurement scales
3. Fundamentals of Biostatistics (Sample,Population,Variable)
4. Importance of Biostatistics in paramedical sciences
5. Methods of statistical analysis
6. Basics statistical concepts and data interpretation are discussed in the subject (Mean, Mode & Median)
7. The characteristics of Biostatistics & its importance
8. Measurement of Distribution(Range, Variance & Standard Distribution)
9. Graphical methods to depict Data(histograms, bar-plots, piecharts, line graphs)

Reference Books:

1. Biostatistics for medical & nursing students–C.S.Agrawal
2. A textbook of biostatistics–Vinod Kumar
3. Research methodology 7 Biostatistics–Vinod kumar
4. Biomedical Statistics–a beginners Guide–shaktikumar Yadav
5. Fundamentals of biostatistics–khan & Khanum

Paper-Il

Basics of Pathology

Introduction to Pathology in brief

1. Urine – Analysis –
   a. Physical Examination – specific gravity PH, reaction, Colour.
   b. Chemical Examination–Sugar Album in, Bile salts, Bile Pigments etc.
   c. Microscopic, d. Sediment for RBC, WBC, Epithelial cells, Casts, Crystals, Parasites. Preparation of Reagents, procedure and principle of tests.
2. Sputum Analysis–Physical Examination, Preparation and staining smear for Microscopic Examination.
3. Semen Analysis – Physical Examination Microscopy – counting, Motility, Staining. Morphology. Abnormal and normal forms.
4. Body Fluids – Differential count of Peritoneal, pericardial, pleural fluids & CSF, charging chamber, Identifying and counting the cells.

Reference Books:

1. Text Book on Pathology– Dr. I Clement
2. Pathology for paramedical students & health sciences-Ramniksood
3. Text Book of Pathology & genetics –RimpiBansal
4. Histopathology– Aruna Singh
5. Text Book of pathology for allied health sciences– Ramadas Nayak

PartB: Basic Of Blood Banking

1. History of blood banking, To study evolution of different blood groups.
2. Blood grouping, typing and complement system , To study basics of different blood groups & complement system
3. Identification of antibodies and antibody screening, To identify various anti bodies in blood group systems & methods of screening anti bodies

4. Various blood components and their functions, To have knowledge of blood components and their functions and uses.

5. Coagulation and homeostasis , To know basics of coagulation pathways and homeostasis

6. Immune hemolytic anaemias and Hemolytic disease of new born, To know types of hemolytic anaemias along with details of hemolytic disease of new born

7. Cross matching & compatibility testing , To know major & minorcross matching and compatibility testing

8. Donor selection, To know criteria of selection of donor

9. Pre-transfusion serologic testing , To know different tests used for pre transfusion serologic testing

10. Donor recruitment, phlebotomy and Donor reactions, To know how to perform phlebotomy and different donor reactions

11. Adverse blood transfusion reactions ,To 1 have complete knowledge of adverse blood transfusion reactions

12. Investigations of transfusion reactions, To know how to investigate a blood transfusion reaction

13. Aphaeresis, To know what is apheresis & its importance

14. Preparation and storage of blood components and their uses, To know procedure of preparation of blood components & their uses

15. Record keeping, quality control and blood bank Inspections , To know importance of record keeping & preparation for inspection of blood banks according to the protocol

16. Guidelines for safe blood transfusion, To know the guidelines for safe blood transfusions

17. Safety procedures in blood banking, To know the safety procedures in blood banking to avoid serious hazards

18. Safe storage and transportation of blood and its components, To know how to store components, procedure for transportation of blood components

19. Safe disposal of lab waste in blood bank, To know in detail how to dispose lab waste in blood bank and its importance

20. Medico legal aspects of blood banking, To know the importance of blood banking from medico –legal point of view

21. Administration of blood bank, To know different ways of administration in a blood bank,

22. Management of donor reactions in Blood donation camp, To enumerate steps in management of reactions in donor at campsite

23. Component preparation , To observe various steps in procedure for component preparation & enumerate them

24. Investigating a transfusion reaction, To enumerate various steps in investigating a transfusion, reaction

25. Conduction of blood donation camp, To perform MOCK conduction of blood donation camp & later attend a blood donation camp

26. Documentation in blood bank, To write down all the steps pointwise on various documents required in bloodbank and updation of these.

Reference Books:

1. Essentials of blood banking–S R Mehdi
2. Standard operating procedures and regulatory guidelines blood banking – Singal
3. Blood banking and transfusion practices– Paula R. Howard
4. Blood banking and transfusion medicine basic principles & Practice–Hillyer
5. Essentials of blood banking and transfusion medicine–Ganga S Pilli

Part C:Basics Of Microbiology

1. Introduction to Microbiology in brief: Definition, History

2. Microscopy

a) Principle working and maintenance of compound Microscope.

b) Principle of Flourescent microscope, Electron Microscope, Dark Ground Microscope.

History: Types of Microscope: (a) Light Microscope, (b)DGI, (c)Fluroscent, (d)Phase contrast. (e) Electron Microscope: a). Transmission, b) Scanning, Principles of operational mechanisms of various types of Microscopes.

3. Sterilization and disinfection - classification and Methods of sterilization. Sterilization :Definition, types and principles of sterilization methods: (a)Heat (dry heat, moist heat with special reference to auto clave, (b)Radiation, (c)Filtration, efficiency testing to various sterilizers.

Antiseptics and Disinfectants: Definition, types and properties, mode of action, uses of various disinfectants, precautions while using the disinfectants, qualities of a good disinfectants, testing efficiency of various disinfectants.1) Principle and Methods of sterilization by heat

a) By Dry Heat, flaming, Red Heat, Hot air oven, incineration.

b) By Merit Heat- pasteurization, Inspissations, tyndalisation, auto clave.

2) Filtration Methods

3) ionizing Radiation - Disinfection, Mode of action and uses of important chemical disinfections-Phenol and Phenolic compounds, alcohols, halogens, dyes and acids and alkalies.

4) Gaseous Methods of sterilization.

IV. Cleaning, drying & Sterilization of Glass ware disposal of contaminated material i.e.

clinical infective material inoculated culture media. Handling and Disposal of Biomedical waste.

V. Biomedical waste management in a Microbiology Laboratory: types of the waste generated ,segregation, treatment, disposal.

VI. Morphology and classification of Bacteria Sp.ofcell, capsule, flagella, spore, Anaerobic Methods of cultivation of Bacteria.

Reference Books:

1. Text Book Of Microbiology for paramedical students–Auju Dhir
2. Text Book of Microbiology for DMLT Students & Paramedical students – Dr.I Clement
3. Text Book of Microbiology–Dr. Arora

Paper-III

A. Hospital Awareness

A brief idea of hospital as on organization management different units of a hospital effective communications kills, communication channel Maintenance of records Effective leadership General patient care Medical terminologies Vital signs Unit preparation Transporting & Transferring patients Sterilization Techniques Control of infection Medication-Oral & parenteral Admission-Discharge procedure Bandages.

Practicals : Posted inward & taught clinically

A. Surgical Department Familiarization of different tubes

1. Drainage tube
2. Post Operative Exercises
3. Post OP Management of Patient
4. Shock of Management
5. Changing Surgical Dressing.

1. Preoperative preparation of patient
2. Pre anesthetic preparation
3. Assisting in operation
4. Anesthesia
5. CSSD

1. Recovery room
2. Movement of papers

3. Scheduling of theatres
4. Supplying of articles
5. 5Specific area practices Asscrub nurse, As circulating nurse Communication and Computer Skills, Audio & Visual Aids COMMUNICATION Process,
Types of communication, Strategies for effective Communication Barriers of communication

SOFTSKILLS

Presentation with the use of visual aids such as power point Conversation Extempore speech, usage of effective language for communication of health work. Case studies and situational analysis, Survey and Reporting

COMPUTER

INTERNET CONCEPTS: Computer: basic MS-Office MS-Word, MS-Excel, MS-Power Point, Browsing, Down- Loading, Use Projector of Slide Projector

Reference Books:

1. Hospital administration and management–joy feep Das Gupta
2. Hospital administration–D C Joshi
3. A hand book for understanding hospital services–mishra &kaushik
4. Hospital and patient care management–Dr. Vidhta srinivasan
5. Principles of hospital administration &planning

Part-C:Patient Related Services

1. Patient Care System
2. Information Management in Patient Care.
3. Concept of Patient Care.
4. Information to Support Patient Care.
5. Historical Evolution
6. Society and Influences
7. Professional practice model
8. Techniques of Patient Care.
9. Development & Innovative implementation of patient Care.
10. Types, functions, Uses pr Patients & Hospitals

Reference Books:

1. Principles of hospital practice and patient care–PSrinivasulu Reddy
2. Patient care technician–Kimberly town send little
3. Hospitals up porting services and systems-Dr.M.A.George

Part D: Basics of central sterilization

1. Introduction of sterilization
2. Functions of Sterilization
3. Types of Sterilization
4. Classification of Sterilization
5. Advantages & Disadvantages
6. Details of CSSD & its function & activity
7. Activities of CCSSD

Reference Books:

1. Disinfection, sterilization and preservation
2. Instrumentation and control systems–Y J Reddy
3. Handbook of biomedical instrumentation–R S Khandpur
4. Biomedical waste disposal–jay pee
5. Sterile processing–Karen davis

DMIT II Year Syllabus

Paper-I

A) Physics of Radiography:

Fundamentals of electricity, Static/ Current electricity. Conductors & Insulators. The current, Electrical potential difference. Resistance Units of measurements, volt, ohm, ampere Resistances in electrical circuits. Resistors, Specific resistance. Power measurements. Magnetism, Magnetic induction, Generator and dynamo, Alternating current generator, Direct current generator. Motor, Induction coil, Transformer, Rectification, Capacitors & Conductors. Principles electrical circuits, Constant potential circuits, Electrical measuring instruments. X-Rays, Fluorescent screens. Structure of atom, Characteristic radiation. Inverse square law. Interaction of X-Rays on matter. Absorption coefficient. Half value layer. Filter & filtrations, Measurements of X-Rays. GM counters. Ionization chamber measurements. Measuring device in use presently, Radioactivity.

B) Regional Radiography General:

Head & neck, Spine, Chest, Abdomen, Pelvis, Upper limbs, Lower limbs Special:

Macro-radiography Xero-radiography Mammo graphy Dental radiography Ortho pantomogram High KV technique Substration technique Special diagnostic procedures GUT-IVP,RGP,RGU,MEUG, Cystography, AGPHSG,GIT – Sialography, Barium swallow, BM study, BMFT, S Benema, Baenema, SPVGBiliary system–PTC, T tubechalangiogram, OCG. Respiration– Bronchography Vascular – Angiography of limbs, aorta, carotid vessels. Contrast media – Type ,reaction, treatment.

A) Dark Room-Radiographic Techniques, Role of Radiographer.

B) Electrostatics, magnetism & Electricity, OHMS law Definition, Capacitance, Resistance, Electromagnetic radiation, Electrical circuits Semi conductors, Types.

C) Clinical radiation generators, Radioactive Isotopes.

D) Radio activity and systems of dosimetry calculations.

A) Ultra Sonography, Color Doppler, Conventional & Spiral CT Techniques, Modalities of Basic Principles of CT Scans, Equipment disruption, Image Quality in Radiology,

Radiographic Films, X and Gama Rays, production of X-Rays, quality of X-Ray beams. Absorption of X and Gamma Rays. X-ray tubes, X-ray equipments, components & control sin X-ray, Modified X-ray - equipment for special purpose. Fundamentals of X-Ray, GAMA Rays,X-Ray Beam, Physics of Radiography, Dark Room Procedures & Techniques, Accessories Construction,

B) Regional Radiography in General and Special.

C) Radiography procedures, Employing Contrast, contrast Medical, Excretory system,

D) Perchtaneous Trans epic, Oral Choleostography, Percutaneous Transepic Cholecotography.

A) MRI Techniques and Nuclear Medicine Technology

B) Radiation, Radiation Hazards, Measures for protection from radiation.

C) Preventive Maintenance, General Care of the Patient Emergencies in Radiology Department, Life Saving Accessories in Radiology Department, Quality Assurance

in Radiotherapy. Regulatory requirement Imaging Equipment, Accessories, maintenance &Quality Assurance, circuit procedure for Fluoroscopic Radiography. Digital Radiography Unit, General Features and Mobile equipments.

D) Instrumentation Study, Instrument Measurement & Critical Care equipment.

Reference Books:

1. Dark Room and Image Processing–Yogesh Kumar
2. Text Book for Operation room Techniques 3rd edition–Dr. Pramila Bhalla
3. Medical Radiographic Techniques & Dark Room Practices–Jaypee
4. Dark Room and Image Processing–Yogesh Kumar
5. Text Book for Operation room Techniques 3rdedition–Dr.PramilaBhalla
6. Medical Radiographic Techniques & Dark Room Practices –Jaypee

II. **B: Fundamentals of X-Ray Equipments:**

Dark Room Construction , List of dark room accessories. Radiographic film. Handling of X-Ray films, types of films, Processing of X-Ray films. Methods of processing. Mixing of processing solutions, Chemistry of processing solutions, Maintenance of processing solutions. Safe light. The radiographic image, Film Density, Film contrast. The characteristic curve. Control of radiographic image definition. Latitude of exposure, Variation of exposure time, Intensifying screens/ fluorescent screens ,Cassettes. Faults in Radiography, CR. Computer Radiography

DR. Digital Radiography, Pass box. Fundamentals of X-Ray Equipments: Fundamentals of X-Ray Equipments :X-Ray equipments and power mains, Control of Kilo-voltage, Mains voltage compensator. Components & Control in X-Ray circuit, HT generators. HT generator circuit, Constant potential circuits. Filament circuit, Fuses, Swiches & circuit breakers, interlocking circuits, Exposure switches & timrs,Timer systems, Time xray tube, Rotating anode-duaifocus x-ray tube. Xray tube glass envelop & vaccum, Tube shield, Shock proofing.H.T.Cables, Cooling mechanism. Filtration in xray tube New Developments in xray tube. Details of xray beam, Anodeheeleffect, Filtered radiation Scattered radiation, Control of secondary radiation, Grids. Tube stand, ceiling–tube support, Tube

stand parts, Tube brakes, Tube suspension and counter-weight Ceiling tube hanging Tube movements & their controls Multi purpose tables for radiography/ fluoroscopy Genereal features of radiographic tables .Table–drive and table movements Fluroscopic screen holder on assembly. Serials port-film device Remote controls on fluoro scopic assembly Procedure for fluoroscopic radiography Indications for fluoroscopy examination The bucky assembly, The bucky circuitary Resiprocating &oscillating grids

A.ModifiedX-rayequipment'sforspecialpurpose Portable&MobilexrayequipmentforOY&andbedsideradiography.Specialskullradiography unit Tomographic equipment Mammography equipment Massminiature radiography(MMR) unit Dental radiography unit Orthopantomography dental unit (OPG)X ray image intensifier/ radiography unit

C-ARM image intensifier/ radiography unit Cine fluoroscopic-radiography unit & video recorder AOT rapid film changer for serial radiography Digital radiography unit

Paper-III

A. Radiation hazards and protections. During radiography During fluoroscopy

Effects of radiation on human tissues Permissible doses Measurement of radiation doses Dosages in diagnostic radiology Protective gadgets in RD Department R.safety duties of radiologist, radiographer & patient. Preventive maintenance. General care Maintenance of log book Practical precautions Brakes & locks HT cables care, Care of meters & controls Care of tube stands &tracks Care of accessory equipments Functional tests for any faults Failure of xray tubes Failure of FIT cables ,Common trouble shooting & remedies.

B. General Care

Emergencies in Radiology Department Resuscitation of patients, emergency drugs Anesthesiain Radiology Department Life saving accessories for RD departments

C. Newer Imaging Modalities Computed to mography(CT)n, Multi Detector CT. Magnetic resonance imaging (MRI) Radio nuclide imaging Digital subtraction angiography. Mammography

Reference Books:

1. Medical X-ray Film Processing–K Thayalan
2. Chest X-rays for medical students–Satyam Chaurasia
3. Test Book of Radiology–Sachin Khanduri
4. Basic Fundamentals of X-Ray Physics In Radiology
5. Fundamentals of Skeletal Radiology-Helns
6. X-Ray Procedures-Malik
7. Chest X-ray 2nd edition–Deepachegu
8. The Radiography-concise text book of x-ray imaging by Malik
9. The Chest X-ray A Survival Guide–Berman
10. A Practical Guide to Surgical Instruments X-rays and Operative Interventions-Agrawal

PRACTICALS:

1. Monitoring of vital signs,Spo2
2. AB Ganalysis
3. Types of Anesthesia required for different types of surgeries
4. A regular check of cannula and drains
5. Maintain records and reports
6. Transportation of patient to SICU
7. Suctioning of Endotracheal tube/ Tracheostomy tube
8. After care of equipment
9. Mechanical ventilation- Settings and modes

Lab equipment:

150 Bedded Hospital, Full Fledged Dark Room, With Accessories, Auto Film Processor, Mobile X-ray Machine, X-ray machine-200 mAs, X-ray machine with II TV, C-arm X-ray machine Ultra sound Machine, Mammography machine OPG machine, Multi slice CT sscan, MRI Machine-1Tels

RV Institute of Paramedical Sciences College

Chairman/Director
Correspondent & Secretary

Dr. Sangeetha Pawar
W/o Dr. Subhash Pawar

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E-mial:- rvipsc@gmail.com website : www.rvpgroups.com

2. Admission Helpline - 040 49534410,8074507008,8008297414,9701270981

3. Route Map :-