



**DR S PAWAR EDUCATIONAL SOCIETY**



**RV INSTITUTE 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 Boduppall  
Hyderabad Telangana State Pin Code : 500092**

**Email Id : [rvipsc@gmail.com](mailto:rvipsc@gmail.com) website : [www.rvpgroups.com](http://www.rvpgroups.com)**

**PH : 8074507008,9701270981,8008297414**

# RV INSTITUTE OF PARAMEDICAL SCIENCES COLLEGE



**BODUPPAL - HYDERABD**



**TELANGANA PARAMEDICAL BOARD**

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

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**DMST**

**DMIT**

**DMLT**

**DIPLOMA IN DIALYSIS**

**DR S PAWAR EDUCATIONAL SOCIETY**

**RV DIGONOSTIC AND RESEARCH CENTRE**





**DR S PAWAR EDUCATIONAL SOCIETY**



**RV INSTITUTE OF  
PARAMEDICAL SCIENCES COLLEGE**

**Address :- RV Institute of  
Paramedical Sciences College  
1-75/5/360A, Plot No - 8 Sai Bhavani Nagar  
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website [www.rvp groups.com](http://www.rvp groups.com)  
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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, Boduppall,  
Hyderabad, Telangana 500092**



**Provided By**

**TELANGANA PARAMEDICAL BOARD**

**HYDERABAD, TELANGANA**

# **SYLLABUS D-DIALYSIS**

**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 up 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 doctor alone.

In Fact it is necessary that every department in General Hospital . 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 grow in Laboratory & X-Ray field.

To fulfil the gap and to make the Para medical Board of India has realized the problems and start training course in Medical laboratory technology & X-ray E.CG Technician.

Dialysis technician are medical personnel who cleans the blood of metabolic waste products by the process hemodialysis do Hemodylysis, maintain and operate the equipment used for dialysis.

#### **PROGRAM HIGHLIGHTS:**

Dialysis is the artificial process of eliminating waste (diffusion) and unwanted water (ultra- filtration) from the blood. Our kidneys do this naturally, however some people may have failed or damaged kidneys which cannot carry out the function properly. They may need dialysis.

The three-year graduate program provide students with the opportunity to study the principles of Dialysis, basic medical science of the kidney, fluid and

electrolyte balance, hematologic aspects, infectious diseases, dialysis systems and equipment, vascular access to circulation, blood chemistry, complications of renal failure, psycho-social aspects and an overview of peritoneal dialysis and renal transplantation.

In short, students are trained to operate Dialysis equipment, inspect and maintain it. Other than technical training, subjects like human anatomy and physiology, renal diseases, other relevant diseases, blood chemistry etc. are also covered in this course.

On completion of the course of study and having successfully passed the examination, the candidate would be able to achieve a satisfactory level of efficiency:

- Graduates can expect to be employed in hospitals and private practices as Dialysis Therapists.
- A career in research, following the completion of a higher degree such as a Ph.D, is an option chosen by some graduates.
- Graduates are eligible for employment overseas where their qualifications, training and experience are highly regarded

**D - Dialysis - FIRST YEAR & SECOND YEAR**

Paper	SUBJECTS	(MAX. MARKS)		Total	Pass Marks	Practical Marks	Pass Marks
		INTERNAL	EXERNAL	100	40	60	24
I	A: Infectious & Communicable Diseases B: Diseases of GIT C: Diseases of Ear Nose & Throat D: General Surgery	20	80	100	40	60	24
II	A: BASICS OF PATHOLOGY B: BASICS OF BLOOD BANKING C: BAICS OF MICROBIOLOGY A: Clinical Nephrology B: Turbulo-Interstitial Disease C: Effect of the drugs on the Kidney Different Types of Dialyzer	20	80	100	40	60	24
III	A:HOSPITAL AWARENESS B: COMMUNICATI ON SKILLS C:PATIENT RELATED SERVICES D: BASICS OF CENTRAL STERILIZATION A: Haemodialysis B: Dialysis Equipment C: Re-Dialysis Assessment	20	80	100	40	60	24



## Dates and Schedule:

<b>1.</b>	Orientation Programme	June I/II year
<b>2.</b>	Training after Theory classes	6 <sup>th</sup> months
<b>3.</b>	Practical Examination	July II year
<b>4.</b>	Theory examination	Sept II year

- ✓ Sankranthi Holidays 10 Days
- ✓ Dasara and Batukamma holidays 15 days
- ✓ Summer Holidays 1 Month ( May )

## **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.) Skeletal system:

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

B: Physiology (Theory)

1. Introduction to Human Physiology

2. Digestive System (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. Respiratory System(a) Define-Respiratory Rate(b) Vital Capacity, Cyanosis (c)External & Internal Respiration (d) Transport of O<sub>2</sub> and CO<sub>2</sub> 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 A B C O 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, Electrocardiogram (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 Ova and 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 – Pinky Rajendra Wadiya
2. Anatomy & Physiology -Teena kumari
3. Anatomy & Physiology- Indu Khurana Arushi Khurana
4. Anatomy & Physiology- Gyton
5. Ross & Wilson Anatomy & Physiology in Health & Illness
6. BD Chaurasia Human Anatomy Vol-I

#### **C: BASICS OF BIO-CHEMISTRY**

Introduction to basics of Biochemistry including code of ethics for Medical Lab Technicians and Medical lab organization

Reception, Registration and Bio-Chemical parameters investigated. Glassware and Plastic ware used in Bio-Chemical Laboratory.

Glassware:

Types of glass and composition

Types of glassware used, their identification, application & uses.

Cleaning, Drying, Maintenance and storage of glassware Plastic ware : Brief outline

Instrumental methods of Bio-chemical analysis.

Colorimetry: Visual and Photoelectric methods,

Instrumentation, Principle & laws involved construction, operation, care and maintenance, applications.

Spectrophotometry: Principle and theory, types, construction & applications

Basic lab operations like Separation of solids from liquids

Centrifugation: Principle, Different types of centrifuges, care & maintenance, applications

Filtration using funnel

Weighing: Different types of balances used, care and maintenance.

Evaporation

Distillation

Refluxing

Drying different salts and desiccation

Water Chemicals and related substances

Purity of chemicals

Corrosives

Hygroscopic substances

Prevention, safety and FIRST AID in lab accidents.

Collection of Specimens.

Blood: Type of Specimens, collection, Precautions during collection, processing and preservation.

Urine: Types of Specimens, collection, precautions during collection, processing and preservation.

Urine Biochemical Parameters Units Of Measurements

Solutions: Types, based on solute & solvent, Types based on method of expressing concentration, calculations.

Carbohydrates: Definition, Biological Importance, Acid Value, Iodine Value, Saponification Value.

Amino acids & Proteins: Definition, Biological Importance, Classification, Qualitative Tests.

Diagnostic Tests: Blood Sugar, Glucose Tolerance Test, Blood Urea, Serum uric acid, Serum creatinine.

Vitamins & Minerals

Vitamins: Water Soluble Vitamins, Fat Soluble Vitamins, Sources, Daily Requirements, Deficiency Diseases.

Minerals: Sources, Daily Requirements, Deficiency Diseases.

#### REFERENCE BOOKS:

1. Text Book on Bio-Chemistry for DMLT & Paramedical courses – Dr . I Clement
2. Biochemistry - U satyanarayana
3. Concise Text Book of Biochemistry -DM Vasudevan
4. Basics of Clinical Biochemistry & Instrumentation For Para medical Students – Poonam Baccheti
5. A Text Book on Biochemistry for Paramedical Students -Dr. Kiran Dahiya
6. A Text Book of Medical Biochemistry – Dr. Rajagopal Ganapathy
7. Biochemistry & Clinical pathology 4th edition – VN Raje
8. Text Book of Biochemistry for Paramedical Students 2nd edition- PRamamoorthy
9. Biochemistry for Medical Laboratory Technology Students – Harbansand ashuma Sachdeva
10. Text Book of Applied Biochemistry and Nutrition & Dietetics – Harbans Lal

## **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, pie charts, line graphs)

### Reference Books:

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

## **Paper-I**

### **A: INFECTIOUS & COMMUNICABLE DISEASES**

Typhoid fever, Malaria, Tetanus, Diphtheria, Leprosy Mumps, Measles, Cholera, Rubella Gonorrhoea, Syphilis, AIDS Rheumatic fever

METABOLIC DISORDER-Diabetes, Obesity, Gout

DISEASES OF ENDOCRINE SYSTEM-Hyper & Hypo-secretion of Thyroid, Parathyroid Gland Hypo & hyper secretion of Pituitary & Adrenal Gland

DISEASES OF NERVOUS SYSTEM –Headache. Meningitis, Encephalitis, Poliomyelitis, Parkinsonism, Epilepsy, CVA Tumor

### **D: DISEASES OF GIT**

Gastric ulcer Peptic Ulcer, Gastritis Hiatus Hernia.. Hepatitis, Cirrhosis of liver, Hepatic coma Pancreatitis, Enteritis, Colitis, Splenomegaly Cholecystitis Cholelithiasis





4. Determination of clotting time
5. Determination of blood group
6. Determination of heart rate and pulse rate
7. Recording of blood pressure
8. Determination of ESR (erythrocytes sedimentation rate)
9. Qualitative analysis of carbohydrates (glucose, fructose, lactose, maltose, sucrose and starch)
10. Identification test for proteins (albumin and casein)
11. Quantitative analysis of reducing sugars DNS method and biuret method
12. Qualitative analysis of Urine for abnormal constituents
13. Determination of Blood Creatinine
14. Determination of Blood sugar
15. Determination of Serum Cholesterol
16. Preparation of Buffer solution and measurement of pH
17. Determination of enzymatic hydrolysis of starch
18. Determination of salivary amylase activity
19. WIDAL Test
20. RDT for Malaria
21. HIV Test
23. Diagnosis of cholera with Stool sample and the crystal VC dipstick rapid test
24. Determination of disorders – Diabetes, Obesity and Gout
25. GI Endoscopy with Biopsy

## **Paper-II**

### **Basics of Pathology**

Introduction to Pathology in brief

1. Urine – Analysis – a. Physical Examination – specific gravity, PH, reaction, Colour.  
b. Chemical Examination – Sugar, Albumin, 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 –Ramnik sood
3. Text Book of Pathology & genetics – Rimpi Bansal
4. Histopathology – Aruna Singh
5. Text Book of pathology for allied health sciences – Ramadas Nayak

**Part B : 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 antibodies in blood group systems & methods of screening antibodies
4. Various blood components and their functions , To have knowledge of blood components and their functions and uses
5. Coagulation and hemostasis , To know basics of coagulation pathways and hemostasis
6. Immune hemolytic anaemias and Hemolytic disease of newborn , To know types of hemolytic anaemias along with details of hemolytic disease of newborn
7. Cross matching & compatibility testing , To know major & minor cross 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 have complete knowledge of adverse blood transfusion reactions
12. Investigations of transfusion reactions , To know how to investigate a blood transfusion reaction
13. Apheresis , 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. Medicolegal 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 camp site
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 , Toper form MOCK conduction of blood donation camp & later attend a blood donation camp
26. Documentation in blood bank , To write down all the steps point wise on various documents required in blood bank and updation of these.

### **Reference Books:**

1. Essentials of blood banking – SR 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**

### Basics of Microbiology

1. Introduction to Microbiology in brief : Definition, History
2. Microscopya) 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). Transmision,  
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 autoclave,
- (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 Moist Heat-pasteurization, Inspissation, tyndalisation, autoclave.
- 2) Filtration Methods
- 3) Ionising 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 Glassware 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. of cell, 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-II**

#### **A: CLINICAL NEPHROLOGY**

Various diagnostic procedure of renal diseases. Manifestation of renal diseases. Renal vascular disease. Glomerular disease.

#### **B: TUBULO-INTERSTITIAL DISEASE**

Congenital abnormalities of kidneys.

Renal involvement in systemic diseases

Infectious conditions of Kidney & urinary tract

Obstruction of urinary tract



### **C: EFFECTS OF THE DRUGS ON THE KIDNEY**

Tumours of Kidney & urinary tract. Hard water syndrome ,Water fluid & electrolyte imbalance

### **D: DIFFERENT TYPES OF DIALYZER**

Description, reuse, indication, care, Factors improving performance. Choosing Dialyzer, Priming Sterility, Washing Formalin-Use, hemofiltration, haemoperfusion, aphresis, CAVH.CRRT

### **Reference Books:**

1. Comprehensive clinical nephrology – Johnson
2. Hand Book of Nephrology 2nd edition – David J Leehay
3. Current Progress in Nephrology vol I – R Kasi Visweswaran
4. Synopsis of Nephrology – Muhammad Rufiqul alam

### **Paper II- Practicals:**

1. Urine – Analysis – a. Physical Examination – specific gravity PH, reaction, Colour.
2. Chemical Examination – Sugar Albumin, Bile salts, Bile Pigments etc.
- c. Microscopic,
3. Sediment for RBC, WBC, Epithelial cells, Casts, Crystals,Parasites.
4. Sputum Analysis – Physical Examination, Preparation and staining smear For microscopic examination.
5. Semen Analysis – Physical Examination Microscopy – counting, Motility, Staining.Morphology. Abnormal and normal forms.
- 6.Body Fluids – Differential count of Peritoneal, pericardial, pleural fluids & CSF, Charging chamber , Identify and counting the cells
- 7.Blood Grouping and typing
- 8.Pre-transfusion serologic testing
- 9.Preparation and storage of blood components and their uses
- 10.Principles of sterilization methods ( Autoclave, Filtration , Hot air oven , Incineration, flaming & Radiation)

### **Paper-III**

#### **A:Hospital Awareness**

A brief idea of hospital as an organization management different units of a hospital effective communication skills, 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 in ward & 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. Preanesthetic preparation
3. Assisting in operation
4. Anaesthesia
5. CSSD

1. Recovery room
2. Movement of papers
3. Scheduling of theatres
4. Supplying of articles
- 5 Specific area practices

As scrub nurse, As circulating nurse

Communication and Computer Skills, Audio & Visual Aids

**COMMUNICATION**

Process, Types of communication, Strategies for effective  
Communication

Barriers of communication

**SOFT SKILLS**

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 Paint, Browsing, Down-Loading, Use Projector of Slide Projector

**Reference Books:**

1. Hospital administration and management – joyfeep Das Gupta
2. Hospital administration – DC Joshi

3. A handbook 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 – P Srinivasulu Reddy
2. Patient care technician – kimberly townsend little
3. Hospital supporting 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. Hand book of biomedical instrumentation – R S Khandpur
4. Biomedical waste disposal – jaypee
5. Sterile processing – karen davis

## **PAPER\_III**

### **A: HAEMODIALYSIS**

Function of semi permeable membrane in haemodialysis Waste product removed by haemodialysis transport Rate of mass transfer-Solute flux. Diffusive transport & its importance. Clearance. Ultra filtration & hydrostatic gradient, TMP Water for Dialysis procedure. Filtration Decantation Distillation Softener, Deionizer , Reverse osmosis, Different impurities. Role of charcoal, RO Plant. , Water used in Dialysis. Compare RO with DI.

### **B: DIALYSIS EQUIPMENT**

Accessory equipments & functions.. Blood pump, Monitors of Temp., Flow Pressure Monitors of Dialysate concentration ,PH Chemicals used in dialysate- advantages & disadvantages delivery system .

### **CARE ASSESSMENT PREPARATION**

Pre-Dialysis assessment, preparation & care , Procedure & care for HD & PD , Post Dialysis care.

**COMPLICATION** –Complications during & after dialysis, its management.

Potential problems during Dialysis Prevention, Hypovolaemia& its management

**PERITONIAL DIALYSIS** ,Indication, Dialysate preparation, Procedure. Types ,

Care, complication-management, Toxic substances added

**C: RE-DIALYSIS ASSESSMENT** Cannulas shunt, AV fistulas internal graft

,Catheter-subclavian Jugular, Femoral, Blood line etc. Temporary vascular access

Goal of Dialysis ,Anticoagulant Drug added in PD \* Emergency drugs & injections

Disinfection procedure of machines & instrument ,Clinical basics of IV Fluid,

creatinin clearance. ,Role of dialysis technician Communication & Computer

Skills, Audio and Visual Aids.

**COMMUNICATION** Process ,Types of communication Strategies for effective

Communication Barriers of communication ,**SOFT SKILLS** 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** ,Computer basic ,MS-Office ,MS-

Word ,MS-Excel ,MS- Power Point ,**INTERNET CONCEPTS** ,Browsing ,Down-

Loading ,Use of Slide Projector. Reference Books:

1. Hand Book of Dialysis technology – Narayen

2. Hand Book for dialysis technician – Fawal pichan

3. Oxford Handbook of dialysis – Lawrence

4. Text Book for Dialysis Technician for Paramedical Students – Dr . Amrohit

5. Text Book of Dialysis therapy – Dr . Jigar Shrimali

## **PRACTICALS**

1. Assists the Anesthetist
2. Monitoring of vital signs. Spo2
3. Conducts ABG analysis
4. Has knowledge of types of Anesthesia required for different types of surgeries
5. Does a regular check of cannula and drains
6. Maintain records and reports
7. Transportation of patient to SICU
8. Suctioning of Endotracheal tube/ Tracheostomy tube
9. After care of equipment
- 10 Mechanical ventilation Settings and modes

### **Lab equipment:**

#### **Complete Dialysis setup**









# RV Institute of Paramedical Sciences College

**Chairman/Director  
Correspondent & Secretary**

**Dr. Sangeetha Pawar  
W/o Dr. Subhash Pawar**

**1-75/5/360A Plot No 8**

**Sai Bhavani Nagar Boduppall**

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

3. Route Map :-

