



மனோன்மணியம் சுந்தரனார் பல்கலைக்கழகம்

MANONMANIAM SUNDARANAR UNIVERSITY

**SYLLABUS FOR ADVANCED DIPLOMA IN DIALYSIS TECHNOLOGY
PROGRAM OFFERED THROUGH DIRECTORATE OF VOCATIONAL
EDUCATION (COMMUNITY COLLEGES AND VOCATIONAL SKILL DEVELOPMENT
CENTRES) FROM 2019 - 2020**



கல்விசார் நிலைக்குழுக் கூட்டம்

**MEETING OF THE STANDING COMMITTEE ON
ACADEMIC AFFAIRS HELD ON FRIDAY
THE 28th JUNE 2019**

ADVANCED DIPLOMA IN DIALYSIS TECHNOLOGY

மேம்பட்ட இரத்த சுத்திகரிப்பு தொழில்நுட்பப் பட்டயம்

SCHEME OF EXAMINATION

Subject code	Title of the Course	Credit	Hours	Passing Minimum
Semester I				
C19DT11/E19DT01	Anatomy & Physiology	6	90	40/100
C19DT12/E19DT02	Nutrition and Dietics	6	90	40/100
C19DT13/E19DT03	Immunohaematology	6	90	40/100
C19CE10/E19CE10	Communicative English	6	90	40/100
C19DTP1/E19DTP1	Practical I	4	120	40/100
Semester II				
C19DT21/E19DT04	Microbiology	6	90	40/100
C19DT22/E19DT05	Biochemistry	6	90	40/100
C19LS23/E19LS05	Life Skill	6	90	40/100
C19DTIP/E19DTIP	Internship	10	150	40/100
C19DTP2/E19DTP2	Practical II	4	120	40/100
Semester III				
C19DT31/E19DT06	Applied Pathology	6	90	40/100
C19DT32/E19DT07	Concept of Renal Disease, Dialysis and Nutrition	6	90	40/100
C19DT33/E19DT08	Fundamentals of Health	6	90	40/100
C19DTP3/E19DTP3	Practical III	4	120	40/100
C19DT34/E19DT09	Applied Pharmacology	6	90	40/100
Semester IV				
C19DT41/E19DT10	Applied Dialysis Technology -I	6	90	40/100
C19DT42/E19DT11	Applied Dialysis II	6	90	40/100
C19DT43/E19DT12	Continuous Dialysis	6	90	40/100
C19DTP4/E19DTP4	Practical IV	4	120	40/100
C19DTPW/E19DTPW	Project Work	10	150	40/100

Eligibility for admission: Pass in 12th std examination conducted by the Govt. of Tamil Nadu Board of Secondary Education, Government of Tamil Nadu or any other equivalent examination.

Examination: Passing Minimum for each Course is 40%. Classification will be done on the basis of percentage marks of the total marks obtained in all the Courses and as given below:

- 40 % but less than 50 % - Third class
- 50 % but less than 60 % - Second class
- 60 % and above - First class

Theory Paper

Internal Marks-25

External Marks-75

SYLLABUS

Semester I

Course I	:	Anatomy & Physiology
Course II	:	Nutrition and Dietics
Course III	:	Immunohaematology
Course IV	:	Communicative English
Course V	:	Practical I

Semester II

Course VI	:	Microbiology
Course VII	:	Biochemistry
Course VIII	:	Life Skill
Course IX	:	Internship
Course X	:	Practical II

Semester III

Course XI	:	Applied Pathology
Course XII	:	Concept of Renal Disease, Dialysis and Nutrition
Course XIII	:	Fundamentals of Health
Course XIV	:	Practical III
Course XV	:	Applied Pharmacology

Semester IV

Course XVI	:	Applied Dialysis Technology –I
Course XVII	:	Applied Dialysis II
Course XVIII	:	Continuous Dialysis
Course XIX	:	Practical IV
Course XX	:	Project Work

***(Semester Pattern for Community College Only)**

Semester I
Course I
(C19DT11/E19DT01)**Anatomy and Physiology**

Unit I Introduction to Anatomical Terms **18 Hrs**

Organization of body -cells, tissues, organs, systems, membranes and glands-
Anatomical positions, cell divisions and organelles.

Unit II Skeletal and Muscular System **18 Hrs**

Bones-types, structure functions, axial skeleton, appendicular skeleton, joints-
classification, structure and functions- Types, structure, functions of muscles,
position and action of chief muscles of the body - Joints and types, functions.

Unit III Cardio-Vascular System **18 Hrs**

Blood –composition, clotting and group- Heart: position, structure, condition
system; functions and cardiac cycle-Blood vessels, structural difference and
positions of chief vessels- Circulation of blood-systemic, pulmonary, and
portal- blood pressure and pulse.

Unit IV Respiratory System **18 Hrs**

Structure and function of organs of digestion and accessory organs- Process of
digestion and absorption-Metabolism-the meaning- Metabolism of food
constituents.

Unit V Excretory System **18 Hrs**

Structure and function of organs of urinary system- Structure and function of
skin-Regulation of body temperature-Fluid and electrolyte balance.

Reproductive System

Female reproductive system- Structure and functions of reproductive and
accessory organs- Menstrual cycle, menopause and process of reproduction-
Male reproductive system- Structure and functions.

References

1. Text book of physiology Author; Guyton [Arthor C] Prism publishers Bangalore.
2. Human physiology. Author; Chaterjee[CC].Medical allied agency.
3. Review Medical Physiology. Author; Ganang Application and Lange.

Course II

(C19DT12/E19DT02)Nutrition and Dietics

Unit I

18 Hrs

Classification and functions of food nutrients- carbohydrates- protein- fat- vitamins- minerals- water and cellulose- good nutrients- mal nutrition

Unit II

18 Hrs

Nutritive value of foodstuffs- the balanced diet- food groups for the family- cultural factors- food fads and habits- calorie intake for the venerable groups- sample balanced diet- special diet for the patients.

Unit III

18 Hrs

Protein energy malnutrition- vitamins deficiencies- mineral deficiencies- anemia in women- Health worker role in prevention of deficiencies and malnutrition

Unit IV

18 Hrs

Food adulteration- selection – storage – preparation of foods – methods of cooking – preservation of foods

Unit V

18 Hrs

Nutrition education – principles of nutrition education – methods and media used for nutrition education – types of diets – diets in special condition – preparation of special diets

Reference Books

1. Text Book for health workers- A.M Chalkey Vols I & II
2. Manual for Health worker- Ministry of Health and Family welfare.

Course III

(C19DT13/E19DT03)Immunohaematology

Unit I

18 Hrs

Basic principles of immuno hematology, Application of Blood groups; Population Genetics, Forensic medicine, Transfusion medicine.

Unit II

18 Hrs

ABO Blood of Group system; History, Genetics, ABH Antigens, Biochemical Synthesis of blood groups antigens, Antigenic sites, weaker variants, Bombay Phenotype, ABO antibodies.

Unit III

18 Hrs

RH Blood Group System; History, Genetics, Molecular Genetics, Nature of RH Antigens, Partial D, other variants of RH, RH Null, RH antibodies, factors influencing RH immunization, Functional role of RH antigens.

Unit IV

18 Hrs

Other Blood group system: Lewis, P, Ii, MNSs, Kell, Duffy, Celano, In, Private antigens, Public antigens

Unit V

18 Hrs

Principles of Direct and indirect antiglobulin test, enzyme technique, albumins technique, Detection of blood groups antibodies, identification of their specificity, clinical significance of antibody detection, differentiation between auto and allo-antibodies.

References

1. Blood transfusion clinical medicine. PL Mollison CP Engelfriet and Marcela Contreras. 10thed. Blackwell science London, 1997.
2. Procedures in blood banking and immunohaematology. HM Bhatia, BGRC, ICMR Publication, Bombay, 1977.
3. Modern Blood Banking and Transfusion practices. Denise M Harmening, First Indian Edition, FA Davis Company, 1998.

Course IV

(E19CE10/C19CE10)Communicative English

1. **Basic Grammar:**

- a. Review of grammar
- b. Remedial study of grammar
- c. Simple sentence
- d. Word passive voice etc.

2. **Bubbling Vocabulary:**

- a. Synonyms
- b. Antonyms
- c. One – work Institution

3. **Reading and Understanding English**

- a. Comprehension passage
- b. Précis – writing
- c. Developing a story from hints.

4. **Writing English**

- a. Writing Business letters.
- b. Paragraph writing
- c. Essay writing
- d. Dialogue writing

5. **Speaking English**

- a. Expressions used under different circumstances
- b. Phonetics

Reference

1. V.H.Baskaran – “English Made Easy”
2. V.H.Baskaran – “English Composition Made Easy”
(Shakespeare Institute of English Studies, Chennai)
3. N.Krishnaswamy – “Teaching English Grammar”
(T.R.Publication, Chennai)
4. “Life Skill” – P.Ravi, S.Prabakar and T.Tamzil Chelvam,
M.S.University, Tirunelveli.

Course V

(C19DTP1/E19DTP1)Practical I

1. Blood circulation
2. Blood grouping- RH blood group system
3. Hb estimation – Sahli’s method
4. Estimation of blood sugar, blood urea and electrolytes.
5. Demonstration of strips, demonstration of glucometer.
6. Health Education
7. Care of sick patients.
8. Eliminational Needs
9. RBC count, WBC count, Platelet count
10. ESR
11. Urine- physical examination, chemical examination
12. Sputum analysis

References

1. Varley; Clinical chemistry.
2. Ramakrishna S,Prasanna KG, Rajna; Text book of Medical Biochemistry. Latest Ed.Orient longman Bombay-1980.
3. Vasudevan DM, Sreekumari, S; Text book of Biochemistry for Medical students, Latest Ed

Semester II
Course VI
(C19DT21/E19DT04)**Microbiology**

Unit I **18 Hrs**

Morphology

Classification of microorganisms- size, shape and structure of bacteria, Use of microscope in the study of bacteria.

Unit II **18 Hrs**

Growth and Nutrition

Nutrition, growth and multiplications of bacteria, use of culture media in diagnostic bacteriology.

Unit III **18 Hrs**

Sterilization and Disinfection

Principles and use of equipments of sterilization namely hot air oven, autoclave and serum inspissator, pasteurization, antiseptic and disinfectants.

Unit IV **18 Hrs**

Immunology

Immunity, vaccines, types of vaccine and immunization schedule, Principles and interpretation of common serological tests namely Widal, VDRL, ASLO, CRP, RF and ELISA-Rapid tests for HIV and HBs Ag [excluding technical details].

Unit V **18 Hrs**

Systematic Bacteriology

Morphology, Cultivation, Disease caused, Laboratory Diagnosis including specimen collection of the following bacteria [excluding classification, antigen structure and pathogenicity], staphylococci, Pneumococci, Gonococci, Meningococci, C.

References

1. Anathanarayana and Panikar; Medical Microbiology-Revised 8th Edition University Press.
2. Robert Cruickshank; Medical Microbiology-The Practice of Medical Microbiology.
3. Chatterjee; Parasitology-Interpretation to Clinical medicine.

Course VII
(C19DT22/E19DT05)Biochemistry

Unit I

18 Hrs

Specimen Collection

Pre-analytica variables, Collection of blood, Collection of CSF other fluids, Urine collection, Use of preservatives, Anticoagulants.

Unit II

18 Hrs

Introduction to Laboratory Apparatus

Pipettes; different types [graduated, volumetric, Pasteur, automatic etc]- Calibration of glass pipettes-burettes, beakers, etri dishes, depression plates. Flasks; different type [volumetric, round bottomed, Erle Meyer conical etc]- Funnels; different types [conical Buchner etc] - Bottles; reagent bottles- graduated and common, wash bottles-different types specimen bottles.

Unit III

18 Hrs

Instruments [Theory and Demonstration] Diagrams To Be Drawn

Use, care and maintenance of; water bath, oven and incubators, water distillation plant, water De-ionizers, refrigerators, cold box, deep freezers, reflux condenser, centrifuge, balances, colorimeter, spectrophotometer, Ph meter and electrodes.

Unit IV

18 Hrs

Acid-Base Indicators [Theory And Practical's]

Definition, concepts, mechanism of dissociation of an indicator, color change of an indicator in acidic and basic conditions, use of standard buffer solution and indicators of pH determinations, preparation and its application, list of commonly used indicators and their pH range, suitable pH indicators used in different titrations, universal indicators.

Unit V

18 Hrs

Special Investigations

Metabolic alkalosis, respiratory acidosis, respiratory alkalosis, basic principles and estimation of blood gases and Ph, basic principles.

References

1. Varley; Clinical chemistry
2. Teitz; Clinical chemistry
3. Kaplan; Clinical chemistry

Course VIII

(C19LS23/E19LS05)Life Skill

I Life Coping or adjustment

- (a) External and internal influence in one's life
- (b) Process of coping or adjustment
- (c) Coping with physical change and sexuality
- (d) Coping with stress, shyness, fear, anger far live and criticism.

II Attitude

- (a) Attitude
- (b) Self acceptance, self – esteem and self actualization
- (c) Positive thinking

III Problem Solving

- (a) Goal Setting
- (b) Decision Making
- (c) Time Management and stress Management.

IV Computers

- (a) Introduction to Computers
- (b) M.S.Office
- (c) Power Point

V Internet

- (a) Introduction to internet
- (b) E – mail
- (c) Browsing

References

- 1) Life Skill Programme course I & II by Dr. Xavier Alphona MCRDCE Publications. R.K.Mutt Road, Chennai – 28
- 2) ஆளுமை பண்பு வளர்த்தல் மற்றும் தகவல் தொடர்பு by M.Selvaraj Community College, Palayamkottai
- 3) “Life Skill” –P.Ravi, S.Prabahar & T.Tamil Chelvam, M.S. University, Tirunelveli.

Course IX

(C19DTIP/E19DTIP) **Internship**

Course X

(C19DTP2/E19DTP2)**Practical II**

List of Exercises

1. Vital signs.
2. Sphygmomanometer.
3. Composition of Urine
4. Maintaining of haemodialysis apparatus.
5. Urine examination for detection of abnormal constituents.
6. Estimation of blood sugar, blood urea and electrolytes.
7. Demonstration of strips, demonstration of glucometer.
8. Liver function test
9. Lipid Profile
10. Renal Function Test
11. Estimation of blood sugar, blood urea and electrolytes
12. Various urine analysis
13. Microscopes
14. Sterilization
15. WIDAL
16. Eliza

REFERENCES

1. Kaplan; Clinical chemistry
2. Vasudevan DM, Sreekumari, S; Text book of biochemistry for Medical students, Latest Ed
3. Rajagopal G and Ramakrishna,1983;Practical Biochemistry for Medical Students Oriental Blackswan Pvt.Ltd.

Semester III

Course XI

(C19DT31/E19DT06)Applied Pathology

Unit I

18 Hrs

Congenital abnormalities of urinary system- Classification of renal diseases- Glomerular diseases: causes, types & pathology

Unit II

18 Hrs

Tubulo-interstitial diseases-Renal vascular disorders- End stage renal diseases: causes & pathology

Unit III

18 Hrs

Pathology of kidney in hypertension, diabetes mellitus, pregnancy.

Unit IV

18 Hrs

Pathology of peritoneum, peritonitis, bacterial, tubular & sclerosing peritonitis, dialysis induced changes

Unit V

18 Hrs

Pathology of Urinary Tract Infections- Pyelonephritis & tuberculous pyelonephritis

Reference Books

1. Satish gupta: Short text book of Medical Laboratory for technicians J.P Bros, New Delhi1998.
2. Sachdev K.N: Clinical Pathology and Bacteriology 8th ED,J.P.Bros, New Delhi-1991
3. Culling: Histopathology techniques
4. Bancroft: Histopathology techniques

Course XII

(C19DT32/E19DT07)Concept of Renal Disease, Dialysis and Nutrition

Unit I

18 Hrs

Basic concepts of Renal diseases: 1) Actual renal failure 2) Nephrotic syndrome- primary & secondary 3) Nephritic syndrome 4) UTI (Urinary Tract Infection) 5) Asymptomatic urinary abnormalities

Unit II

18 Hrs

Classification of renal diseases: Define renal disorders, introduction to the classification of the various types of renal disorder – Glomerular diseases- causes, types & pathology definition, etiology, types of pathophysiology, medical and surgical management. Tubulointerstitial diseases & Renal vascular disorders definition, etiology, types of pathophysiology, medical surgical management.

Unit III

18 Hrs

Pathology of kidney in hypertension, diabetes mellitus, pregnancy definition, etiology, types pathophysiology, medical and surgical management, pathology of peritoneum- peritonitis- bacterial, tubercular & sclerosing peritonitis definition, etiology, types pathophysiology, medical and surgical management

Unit IV

18 Hrs

Pathology of Urinary Tract Infection definitions of UTI's, common organism involved, etiology, pathophysiology of UTI, medical and surgical management – Pyelonephritis & tuberculous pyelonephritis definition, etiology, types pathophysiology, medical and surgical management

Unit V

18 Hrs

Dialysis in the intensive care setting emergency care & intensive care of a dialysis patient, Principles of Extracorporeal short wave Lithotripsy, Plasmapheresis, CRRT & SLED, common Urosurgical procedures & instruments and their maintenance, Preparation of dialysis patients for various surgical procedure and post operative dialysis support, Basic and advanced cardiac life support.

References:

1. Davison A.M., (2010) Oxford textbook of Nephrology Volume 4 Oxford University Press
2. Brenner B.M., et al. (2011) Brenner and Rector's The Kidney 9th Ed, Elsevier Health Sciences
3. Schrier R.W., (2006) Diseases of the Kidney and the urinary tract (Vol I, II, & III) 8th Ed, Lippincott Williams & Wilkins
4. Claude Jacobs (1996) Replacement of Renal Function by Dialysis Springer
5. Nissenson, A. R., Fine R.N. (2002) Textbook of Dialysis therapy 3rd Ed Hanley & Belfus.
6. Khanna, R., Krediet R.T., (2009) Nolph and Gokal's Textbook of Peritoneal Dialysis, 3rd Ed Springer
7. Feehally J., Floege, J., Johnson R.J. (2007) Comprehensive Clinical Nephrology 3rd Ed Mosby 8. Daugirdas J.T., Blake P.J., Todd S., (2000), Handbook of Dialysis, Volume 236 Lippincott Williams & Wilkins

Course XIII

(C19DT33/E19DT08)Fundamental of Health

Unit I

18 Hrs

Introduction to Nursing

Hospital-Its set up and functions and the health team-Patient-As an individual the reaction of the patient and his family to illness- Nursing-Basic nursing principles, Concepts of nursing- Nursing-as a community service- Nursing and scope of nursing- History and development of nursing in ancient times, early Christian era, Middle Ages and modern nursing- Nurse-Qualities-Professional and ethical behavior expected-Role and responsibilities of a nurse in the health team- Health agencies-Hospital and community-Holistic approach to nursing.

Unit II

18 Hrs

The Patient and His Illness

Admission of a patient-Admission procedure and reception of patient-Care of patients belongings-Maintaining therapeutic environment-Temperature-Discharging a patient-Preparation of the patient-physically and mentally-Discharge procedure-Hospital policies.

Unit III

18 Hrs

Basic Nursing Care Needs of the Patient

Hygienic needs-Importance of maintaining good personal hygiene in health and disease-Nurses role in maintaining good personal hygiene- Physical comforts-Meaning and its importance in health and disease-Factors promoting and inhibiting physical comforts-Comfort devices and their uses-Position for comfort and positioning-Beds and bed making-Factors to be considered in selecting and making bed –different types of beds and their uses-Principles of lifting and moving patients in bed.

Unit IV

18 Hrs

Observation and Assessment of Patient

Principles, process and importance of observation and developing skill in observation- Observation of physical and physiological state, height, weight, posture, speech and level of consciousness, observation of common signs and symptoms-Psychological observation-Mood, intelligence and emotion-Characteristics of normal behavior and deviation- Physical examination and nurse's role-Body discharges-Urine and stool-Normal and abnormal characteristics-Sputum and vomit-Collection of specimens-routine and culture examination-Vital signs-Temperature, pulse, respiration-Blood pressure-Characteristics of normal and abnormal and factors influencing the variation-Recording and Reporting-Types and important record and reports and nurse role.

First Aid and Emergency Nursing

Introduction-Importance of first aid and rules of first aid-Concepts of emergency-First Aid in emergencies -Fire, burns, fractures, accidents, poisoning, drowning, haemorrhages, insect bites, foreign bodies-Transportation of the injured-Bandaging and splinting-Community emergencies and resources-Community emergencies-Fire explosions, floods, earthquakes, famine-Immediate and later role of nurse-Need for rehabilitation-Community resources-Police assistance-Voluntary agencies, local, national and international agencies-Ambulance service-their function in relation to emergencies.

References

1. Text Book for health workers-A.M Chalkey Vols I and II
2. Introduction to patients' care-Dugas
3. Manual for nursing procedures-Teluram

Course XIV

(C19DTP3/E19DTP3)**Practical III**

List of Exercises

1. Dialyzer reuse
2. Maintaining of hemodialysis apparatus
3. Water treatment system
4. Types of stain and action
5. Laboratory instruments: Principles and working of centrifuge, incubator and calorimeter
6. Hypertension
7. Diabetes mellitus

References

1. Rajagopal : practical biochemistry for medical students, orient longman Pvt. Ltd
2. Modern Blood banking and transfusion practices. Denise M Harmening, First Indian edition, FA Davis Company, 1998
3. Haematology today.M.B Agarwal, Ashirwad haematology center Mumbai,2007

Course XV

(C19DT34/E19DT09)Applied Pharmacology

Unit I

18 Hrs

IV Fluid therapy with special emphasis in renal diseases- Neuretics: classification, actions, dosage, side effects & contradictions- Anti hypertensive: classification, actions, dosage, side effects & contraindications, special reference during dialysis, vasopressors, drugs used in hypotension,

Unit II

18 Hrs

Drugs & dialysis: dose & duration of administration of drugs- Dialyzable drugs: Phenobarbitone, lithium, methanol etc.

Unit III

18 Hrs

Vitamin D & its analogues, phosphate binders, iron folic acid & other vitamins of therapeutic value

Unit IV

18 Hrs

Erythropoietin in detail- Heparin including low molecular weight heparin- Protamine sulphate – Formalin, sodium hypochlorite, hydrogen peroxide: role as disinfectants & adverse effects of residual particles applicable to formalin

Unit V

18 Hrs

Haemo Dialysis concentrates: composition & dilution (acetate & bicarbonates) - peritoneal dialysis fluid in particular hypertonic solution: composition- potassium exchange resins with special emphasis on mode of administration

References

1. Tripathi K.D. (2008) Essentials of Pharmacology 6th Ed, Jaypee Brothers medical publishers: New Delhi
2. Rang H.P., (1995) Pharmacology 3rd Ed, and Churchill Livingstone: Michigan
3. Himmelfarb, J., Savegh, M. H., (2010) Chronic Kidney disease, Dialysis, transplantation: Companion to Brenner & Rector's Kidney 3rd Ed, Elsevier: St Louis
4. Tripathi, K.D., (2010). Pharmacological Classification of drugs, doses and Preparations 4th Ed, Jaypee Brothers medical publishers: New Delhi
5. Ajay, P., Medhi -Bikash (2010). Pharmacology, Jaypee Brothers medical publishers: New Delhi

Semester IV

Course XVI

(C19DT41/E19DT10)Applied Dialysis Technology -I

Unit I

18 Hrs

Applied Dialysis – History & types of dialysis- Theory of haemodialysis: diffusion, osmosis, ultrafiltration & solvent drag – Haemodialysis apparatus: types of dialyzer & membrane, dialysate- physiology of peritoneal dialysis.

Unit II

18 Hrs

Dialysis machines: mechanism of functioning & management: a) Haemodialysis machine. b) Peritoneal dialysis machine – biochemical investigations required for renal dialysis-Adequacy of dialysis: a) Haemodialysis b) peritoneal dialysis c) Peritoneal equilibrium test (PET)

Unit III

18 Hrs

Complication and management of complication during dialysis- assessment of adequacy of dialysis

Unit IV

18 Hrs

Anti coagulation- Withdrawal of dialysis criteria: a) Acute dialysis b) Chronic dialysis. – Dialyzer reuse- water treatment system

References

1. Davison A.M., (2010) Oxford textbook of Nephrology Volume 4 Oxford University Press
2. Brenner B.M., et al. (2011) Brenner and Rector's The Kidney 9th Ed, Elsevier Health Sciences
3. Schrier R.W., (2006) Diseases of the Kidney and the urinary tract (Vol I, II, & III) 8th Ed, Lippincott Williams & Wilkins
4. Claude Jacobs (1996) Replacement of Renal Function by Dialysis Springer
5. Nissenson, A. R., Fine R.N. (2002) Textbook of Dialysis therapy 3rd Ed Hanley & Belfus

COURSE XVII

(C19DT42/E19DT11)Applied Dialysis II

Unit I

18 Hrs

Dialysis in special situations: a) Patients with congestive cardiac failure b) Advanced liver disease c) Patients positive for HIV, HBSAg & HCV d) Failed transplant e) Poisoning cases f) Pregnancy

Unit II

18 Hrs

Dialysis in infants & children- Special dialysis procedures: a) Continuous therapies in haemodialysis. b) Different modalities of peritoneal dialysis. c) Haemodiafiltration. d) Haemoperfusion e) SLED f) MARS

Unit III

18 Hrs

Plasmapheresis – Special problems in dialysis in patients: a) Psychology & rehabilitation b) Diabetes c) Hypertension d) Infections e) Bone diseases f) Aluminium toxicity – Renal anaemia management : chronic dialysis

Unit IV

18 Hrs

Vascular access for haemodialysis & associated complications- Peritoneal access devices: types of catheter, insertion techniques & associated complications of dialysis: a) Haemodialysis: acute & long term complications. b) Peritoneal dialysis: mechanical & metabolic complications

Unit V

18 hrs

Peritonitis & exit site infection- Recent advances in haemodialysis a) Nocturnal dialysis b) Online dialysis c) Daily dialysis- Telemedicine in dialysis practice

References

1. Davison A.M., (2010) Oxford textbook of Nephrology Volume 4 Oxford University Press
2. Brenner B.M., et al. (2011) Brenner and Rector's The Kidney 9th Ed, Elsevier Health Sciences
3. Schrier R.W., (2006) Diseases of the Kidney and the urinary tract (Vol I, II, & III) 8th Ed, Lippincott Williams & Wilkins
4. Claude Jacobs (1996) Replacement of Renal Function by Dialysis Springer
5. Nissenson, A. R., Fine R.N. (2002) Textbook of Dialysis therapy 3rd Ed Hanley & Belfus

Course XVIII

(C19DT43/E19DT12)Continuous Dialysis

Unit I

18 Hrs

Hemodialysis Apparatus- vascular access for haemodialysis & associated complications

Unit II

18 Hrs

Complications of dialysis:- Haemodialysis: acute & long term complications

-Peritoneal Dialysis: mechanical & metabolic complications

Unit III

18 Hrs

Peritonitis & exit site infection.

Unit IV

18 Hrs

Recent advances in hemodialysis : Nocturnal dialysis-Online dialysis-Daily dialysis

Unit V

18 Hrs

Telemedicine in dialysis practice- preparing Diet chart for different kidney Diseases.

References

1. Davison A.M., (2010) Oxford textbook of Nephrology Volume 4 Oxford University Press
2. Brenner B.M., et al. (2011) Brenner and Rector's The Kidney 9th Ed, Elsevier Health Sciences
3. Schrier R.W., (2006) Diseases of the Kidney and the urinary tract (Vol I, II, & III) 8th Ed, Lippincott Williams & Wilkins
4. Claude Jacobs (1996) Replacement of Renal Function by Dialysis Springer
5. Nissenson, A. R., Fine R.N. (2002) Textbook of Dialysis therapy 3rd Ed Hanley & Belfus.

Course XIX

(C19DTP4/E19DTP4)**Practical IV**

List of Exercises

1. Enema
2. Sterilization and disinfection
3. Potassium exchange resins
4. Types of dialysis
5. Biomedical investigation
6. Hemodialysis machine
7. Hemodialysis apparatus
8. Patients positive for HIV Ag & HCV
9. Failed transplant
10. Hemodia filtration
11. Hypertension
12. Complication of dialysis
13. Vascular access
14. Peritoneal dialysis

References

1. Todd & Sanford, clinical diagnosis & Management by Laboratory methods: John Bernard Henry- All India travel bookseller, New Delhi
2. Hand Book for blood transfusion therapy: J.A.F.Napier John Wiley & Sons Chichester, England.
3. Text book of Blood transfusion Banking & transfusion medicine : Sally V.Rudman- W.B Saunders company, Philadelphia

Course XX

(C19DTPW/E19DTPW)**Project Work**
