

Diploma in Dialysis Technicians

Course duration 2 years

-It is the best implicated method of management in renal failure patient

Eligibility

* Intrested candidate must have passed 10+2 with physics chemistry biology or math with 40% marks by state board or any recognised board/ university.

Detail of subjects

Subjects (first year)

- 1- Human anatomy
- 2- Human physiology
- 3- General microbiology
- 4- General pathology
- 5- General Pharmacology
- 6- Basic of dialysis technique
- 7- Practical

Second year

- 1- General medicine
- 2- General surgery
- 3- Clinical nephrology
- 4- Dialysis management
- 5- Practical

Scheme of examination

First year

First paper

Subject

Human anatomy .physiology microbiology

75

marks Internal assessment

25

Second paper

Pathology pharmacology and basic of dialysis

75 marks

internal assessment

25 marks

Passed marks 50

Third paper

Oral and practical

75 marks

internal assessment

25 marks

Pass Marks

25 marks

Second year

Paper first

General medicine general surgery

75 marks

internal assessment

25 marks

pass marks 50

Paper second

Clinical nephrology and dialysis management	75 marks
internal assessment	25 marks
pass marks	50 Marks

Third paper

Oral and practical	75 marks
INTERNAL assessment	25 marks
pass mark	50 marks

Human anatomy

Lesion no 1-

- * Definition and branches of anatomy
- * Introduction of anatomical terms
- * Organization of cell. Tissue organ and system

Lesion no 2-

- * Skeletal system
- Bones: Definition structure function and types
- * Detail study of structure of regional bone
 - * Joint: Definition classification structure movement

Lesson3

Muscular system:
Definition structure function and type
Different muscular position and action

Lesion 4-

Cardiovascular system

heart its position structure conduction system nerve supply and blood supply

Blood vessels : structure differences position of chief vessels function

Circulation of blood : systemic pulmonary portal

Lesion no 5:

*- Respiratory system:

Structure position function of respiratory organs

Lesion no 6-

Digestive system

Structure position and function of digestive organs

Lesion no 7-

Urinary system:-

Position structure of organ of urinary system

Lesion no 8-

Nervous system:

Introduction classification structure of nervous system

Lesion no 5-

Sense organs

Structure of Ear Eye Nose Tongue Skin

Lesion no 10-

Female reproductive system:

External and internal organs

Male reproductive system:

Internal and external organs

Human physiology

Lesion no 1:-

- * Definition and introduction of physiology
- * Organization of cell. Tissue organ and system

Lesion no 2-

Connective tissue its types function

Lesion no 3-

Muscular system:
Definition structure function and types

Lesion no 4-

Cardiovascular system:-
Heart its position structure nerve supply and blood supply
Blood vessels:- structure differences position of chief vessels function
Lymphatic system
Circulation of blood:- systemic pulmonary portal
Cardiac output stroke volume blood pressure pulse rate cardiac rate cardiac cycle
Blood:- detail description blood group rh factor

Lesion 5

Respiratory system:- respiration physiology lung volume and lung capacity

Lesion 6

Digestive system:- process of mastication deglutition digestion and absorption
Metabolism of blood constituents

Lesion 7

Urinary system:-

Physiology of blood filtration micturition

Regulation of blood temperature

Fluid and electrolyte balances

Lesion 8

Nervous system:-

Introduction classification structure and function of nervous system

Lesion 9

Sense organs:- ear eye nose skin tongue structure and function of ear eye nose skin and tongue

Lesion 10

Female reproductive system:

Menstrual cycle function

Male reproductive system:

External and internal organs

Lesion 11

Endocrine system:- structure and function of pituitary pancreas gland thyroid parathyroid gland thymus and suprarenal gland

General microbiology

- 1- Definition role scope and branch of microbiology
- 2- Bacteriology: - shape size and structure of bacteria
- 3:- Infection : - definition source and mode of transmission of infection
- 4:- Immunith: - types in detail immunization schedule
- 5:- Sterilization and disinfectant

Papper-2

General pathology pharmacology and dialysis management

General pathology

- 1:- Definition role scope and branch of pathology
- 2:- Inflammation its stage and sign
- 3 Derangement of body fluid
- 4:- Shock
- 5:- Introduction of hemorrhage thrombosis embolism

General pharmacology

- 1:- Definition role scope of pharmacology
- 2:- General pharmacokinetics and pharmacodynamics
- 3:- Diuretics
- 4:- Antjdiuretics
- 5:- Antibiotics

Basic of dialysis management

- 1:- Function of kidney nephron glmeruls tubules GFR urinary bladder Urethra
- 2:- Basic chemistry of body fluid and electrolytes metric system aton compound molecules atonics weight and molecular weight ion ionic bonding solution concentration of solution electrolyte conductivity moles (s i unit) morality normality osmolality hydrogen ion conc. ph acids buffer
- 3:- body fluids fluids balances
- 4:- Types of dialysis
Haemodialysis peritoneal dialysis
Role of dialysis technician

Second year

Paper 1

General medicines and general surgery

Lesion 1

Infection and communicable diseases

Lesion 2-

Metabolic disorder:- diabetes obesity gout

Lesion 3:-

Diseases of endocrine system

Lesion 4:-

Diseases of nervous system

Lesion 5:-

Diseases of G I T

Lesion 6:-

Disease of blood

Lesion 7:-

Diseases of cardiovascular system

Lesion 8:-Disease of ear nose and throat

Lesion 9:-

Disease of respiratory system

Lesion 10:-

Diseases of eye

2:-general surgery

- 1-Wound
- 2- Ulcer
- 3- Skin graft
- 4- Burn
- 5- Orthopedic conditions
- 6- Gynecological and obstetrics conditions
- 7-other surgical conditions

Paper-2

Clinical nephrology and Dialysis management

Clinical nephrology

- #- Various diagnostic procedures of renal diseases
- #- Manifestation of renal diseases
- #- Renal vascular diseases
- #- Renal involvement in systemic diseases
- #- Infection conditions of kidney and urinary tract
- #- Obstruction of urinary tract
- #- Effects of the drugs on the kidney
- #- Tumors of kidney and urinary tract
- #- Hard water syndrome

- #- Water fluid and electrolyte imbalance

Dialysis management

- 1- Concept of dialysis
 - 2- Haemo dialysis
 - 3- Water for dialysis procedure
 - 4- Filtration decantation distillation
 - 5- Softener deionizer
 - 6- Reverse osmosis different in purities
 - 8 Water used in dialysis compare ro with d i
 - 9- Different types of dialyzer
- description reuse indication care factors improving performance choosing dialyzer priming sterility washing formalin use hemofiltration haemoperfusion

10- Dialysis equipment:-

Accessory equipment and functions blood pump monitors of temp. Flow pressure monitors of daily sate concentration ph

- 11- Chemicals used in daily sate advantages and disadvantages
- 12- Delivery system
- 13 Care assessment preparations
- 15 Complications:-
Complication during and after dialysis. If management potential problems during dialysis prevention hypovolacmia and its management
- 18- Peritoneal dialysis
Indication.daily sate preparation procedure types care complication- management. toxic substances added
- 19- Re- Dialysis assessment
- 20- Temporary vascular access
- 23- Goal of dialysis
- 24- Anti coagulant drug added in PD
- 25- Emergency drugs and injections
- 24- Disinfection procedure of machines and instruments
- 25- Clinical basics of i v fluid creatinin clearance
- 26 Role of dialysis technician.