

DIPLOMA IN DIALYSIS TECHNOLOGY**SECOND YEAR****PAPER I – INTRODUCTION TO DIALYSIS – PART - I***Q.P. Code: 842511***Time: Three Hours****Maximum : 100 Marks****Answer All questions****I. Elaborate on:****(3 x 10 = 30)**

1. Steps of water purification in a dialysis unit. Draw a line diagram to illustrate the process.
2. You are asked to provide haemodialysis to a 1 year old child with Stage 5 chronic kidney disease. Describe how you will decide vascular access, dialyzer size, tubing, anticoagulation, dialysis prescription and machine settings. What precautions are to be taken during dialysis?
3. What are the types of dialyzer reactions, why do they occur, how will you distinguish between them and what is their management?

II. Write notes on:**(10 x 5 = 50)**

1. Precautions to be followed while dialyzing an HIV positive patient.
2. What are the records and reports that need to be maintained in a dialysis unit? What are the medicolegal aspects involved in maintaining these records?
3. A patient complains of recurrent cramps during dialysis. What are the causes of this phenomenon, what is the immediate treatment given and what measures can be taken to prevent this complication in the future?
4. Complications of CRRT.
5. Dialysis delivery systems: Definition and types.
6. What assessments are carried out prior to construction of an AV fistula?
7. Draw a dialyzer membrane and explain how it works.
8. Sodium profiling: What is it and what are its clinical uses?
9. Haemodiafiltration.
10. What buffers can be used in dialysate solutions? How do they differ in their properties?

III. Short answers on:**(10 x 2 = 20)**

1. What is the difference between High efficiency and high flux dialyzers?
2. Reasons for non maturation of an AV fistula.
3. You are called to cannulate a new AV fistula. After starting dialysis the patient complains of pain, tingling and numbness of the hand, which turns blue. What is your diagnosis? Why does this complication occur?
4. What are the signs and symptoms of a dialysis catheter infection?
5. Precautions to be followed to prevent dialysis catheter block.
6. What is Kt/V? What is the minimum Kt/V which should be achieved by a patient on thrice weekly haemodialysis?
7. Steps in collecting pre and post dialysis urea samples from an AV fistula for calculation of dialysis adequacy.
8. During a haemodialysis session you notice that the tubing shows “port wine” coloured blood. What is your diagnosis and what is the emergency management of this condition?
9. What anticoagulation options are available for someone with heparin induced thrombocytopenia?
10. Solutions that can be used for dialyzer disinfection.
