

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. Describe the methods used for monitoring water treatment systems in a dialysis unit.
2. What is Kt/V? What are the different types of Kt/V values that have been suggested and are currently in use and how do they differ from each other?
3. What are the methods used for cannulation of AV fistulas and grafts? Describe each with the help of a diagram. Also discuss the advantages and disadvantages of each.

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

1. What are the common complications encountered while dialyzing neonates and children and what steps can be taken to avoid them?
2. What are the principles in management of patients with intradialytic hypertension?
3. Machine specifications and settings in CRRT as compared to SLED.
4. List the types of equipment used in the standard low flux haemodialysis process via AV fistula.
5. Differences between AV fistula and AV graft.
6. What are the differences between Synthetic and cellulosic dialyzer membranes?
7. What is ultrafiltration profiling and what are its clinical uses?
8. What are the dialysis modalities available for management of acute renal failure? What dialysis modality would you choose, and why, in the following settings:
 - a) Patient with acute renal failure and haemodynamic instability in an urban hospital where all dialysis modalities are available?
 - b) Patient with acute renal failure in a rural hospital with unpredictable water and electricity supply.
9. Describe the composition of the dialysis team and the responsibilities of each member of the team.
10. Types of dialysis catheters, their respective advantages and disadvantages.

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

1. Clinical signs of AV fistula upstream venous stenosis.
2. Precautions to be followed to prevent dialysis catheter infections.
3. What is urea reduction ratio and how is it calculated? What is the minimum value which should be achieved in a haemodialysis patient?
4. What modifications can be made to dialysis prescription in order to increase Kt/V?
5. What are the steps you will follow to disinfect the skin overlying AV fistula, prior to cannulation?
6. What is dry weight and how can it be achieved?
7. What are the emergency indications to start dialysis in a patient with Stage 5 chronic kidney disease?
8. Causes of fever and chills during dialysis.
9. High venous pressure alarm: What does it indicate?
10. ISO norms for Indian dialysis units.
