

## CO2.1 HEMODIALYSIS

S.N O	TOPIC	OUTCOME
2.1.1	<b>A. HEMODIALYSIS APPARATUS</b>	<ul style="list-style-type: none"> <li>➤ After the completion of this topic student will be able to identify the apparatus or equipments which are used in Hemodialysis.</li> <li>➤ Student will be able to understand the use of each equipment or apparatus of hemodialysis</li> <li>➤ Student will be able to understand the principles and support the senior technician in procedure.</li> <li>➤ Student will be able to handling the dialysis machine in supervision of senior staff.</li> <li>➤ Student will be able to operate the dialysis machine with all guidelines.</li> </ul>
2.1.2	<b>VASCULAR ACCESS FOR HEMODIALYSIS</b>	<ul style="list-style-type: none"> <li>➤ After the completion of this topic student is able to identify that which kind of vascular access patient have.</li> <li>➤ Student shall be able to manage and take care of vascular access of patient.</li> <li>➤ Student shall be able to use the access in dialysis and take the assessment of access.</li> <li>➤ Student shall be able to understand the different types of vascular access and how to use it.</li> </ul>
2.1.3	<b>HEMODIALYSIS : WORKING PRINCIPLES AND MAINTANANCE-</b>	<ul style="list-style-type: none"> <li>➤ After the topic will be completed student will be able to understand the introduction of dialysis and its working.</li> <li>➤ Student will be able to do work on dialysis machine with full</li> </ul>

		<p>care and terms.</p> <ul style="list-style-type: none"> <li>➤ Student will be able to understand the principles of hemodialysis theoretically and practically.</li> <li>➤ Student will be able to maintain the whole dialysis procedure with guidelines.</li> </ul>
2.1.4	<b>EMERGENCIES IN HEMODIALYSIS</b>	<ul style="list-style-type: none"> <li>➤ After the topic will be completed student shall be able to understand the different kind of emergencies in process of Hemodialysis.</li> <li>➤ Student shall be able to understand that how to diagnose the emergency and to manage it during or after the dialysis.</li> <li>➤ Student shall be able to manage the problem medically or to solve it how to handle the patient with different kind of emergencies.</li> </ul>
2.1.5	<b>INITIATION OF HEMODIALYSIS</b>	<ul style="list-style-type: none"> <li>➤ After the topic will be completed student will be able to understand the initiations of hemodialysis.</li> <li>➤ Student will be able to understand that how to diagnose the initiation coming from patient.</li> <li>➤ Student will be able to understand the signs and symptoms by which senior technician decided that which types of dialysis is suitable for patient.</li> </ul>

<p><b>2.1.6</b></p>	<p><b>COMPLICATIONS AND ITS MANAGEMENT DURING HEMODIALYSIS</b></p>	<ul style="list-style-type: none"> <li>➤ After the completion of this topic student will be able to identify the different complications.</li> <li>➤ Student will be able to understand the complications and how to manage it.</li> <li>➤ Student will be able to treat the patient on dialysis will different complications.</li> <li>➤ Student will be able to manage the complication medically or in different ways.</li> </ul>
<p><b>2.1.7</b></p>	<p><b>STERILE TECHNIQUES IN DIALYSIS</b></p>	<ul style="list-style-type: none"> <li>➤ After the topic will be completed student will be able to understand and follow the different techniques of sterilization.</li> <li>➤ Student shall be able to taking great care to fistula and catheter to avoid infection.</li> <li>➤ Student shall be able to maintain the sterilization in dialysis unit and use health practices.</li> <li>➤ Student shall be able to maintain the catheter fistulas tray and their sterilization techniques.</li> <li>➤ Student shall be able to follow the guidelines of infection control unit.</li> </ul>
<p><b>2.1.8</b></p>	<p><b>WATER TREATMENT PLANT : WORKING PRINCIPLES AND MAINTENANCE</b></p>	<ul style="list-style-type: none"> <li>➤ After the completion of this topic student will be able to understand the water treatment plant.</li> <li>➤ Student will be introduce to the working and principles of water treatment plant.</li> <li>➤ Student will be able to understand the importance of water treatment plant.</li> </ul>

		<ul style="list-style-type: none"> <li>➤ Student will be able to understand the importance of water treatment plant.</li> <li>➤ Student will be able to understand the difference in RO and RAW water and importance of RO water in dialysis.</li> </ul>
<b>2.1.8</b>	<b>ANTICOAGULATION</b>	<ul style="list-style-type: none"> <li>➤ After the completion of this topic student should be able to understand introduction of anticoagulation and storage of blood and its components.</li> <li>➤ Student shall be able to understand the types of anticoagulants and their principles and relatively problems.</li> </ul>
<b>2.1.9</b>		
	<b>HEMODIALYSIS PREREQUISITES ASSESSMENT OF ADEQUACY OF HEMODIALYSIS</b>	<ul style="list-style-type: none"> <li>➤ Student shall be able to understand that how to use the anticoagulants in dialysis in which proportion.</li> <li>➤ Student shall be able to know the levels /limits and duration of anticoagulant use in dialysis.</li> <li>➤ After the completion of this topic student will be able to understand the introduction of prerequisites.</li> <li>➤ Student will be able to know the use of prerequisites and its importance.</li> <li>➤ Prerequisites is a thing that is required as a prior condition to perform dialysis.</li> <li>➤ Student will be able to understand the preparations of all prerequisites and their uses.</li> <li>➤ After the topic will be completed student will be able to understand the meaning of introduction of adequacy of hemodialysis.</li> </ul>

		<ul style="list-style-type: none"> <li>➤ Student will be able to do the assessment of adequacy of hemodialysis.</li> <li>➤ Student will be able to understand the clearance targets and measurement of clearance done in hemodialysis.</li> <li>➤ Student will be able to understand the nutritional issues in hemodialysis.</li> </ul>
<p><b>B.</b></p>	<p><b>DIALYZER REUSE</b></p>	<ul style="list-style-type: none"> <li>➤ After the topic will be completed student will be able to understand the condition of Dialyzer Reuse.</li> <li>➤ Student will be able to know the technique of reprocessing of dialyzer.</li> <li>➤ Dialyzers are of different sizes and Bundle volumes, student will be able to know the description of dialyzer.</li> <li>➤ Student will be able to understand the process of sterilization and cleaning of Dialyzer.</li> </ul>

## CO2.2PERITONEAL DIALYSIS

<b>S.NO</b>	<b>TOPIC</b>	<b>OUTCOME</b>
1	PHYSIOLOGY OF PERITONEAL DIALYSIS	<ul style="list-style-type: none"> <li>➤ After the completion of this topic student will be able to understand the physiology of peritoneum and peritoneal Dialysis.</li> </ul>
		<ul style="list-style-type: none"> <li>➤ Student will be able to know the evaluation and selection of patients for peritoneal dialysis.</li> </ul>
		<ul style="list-style-type: none"> <li>➤ Student will be able to understand the fluid transportation which comprises three processes that takes place which are Diffusion, Ultrafiltration, &amp; Fluid Absorption.</li> </ul>
		<ul style="list-style-type: none"> <li>➤ Student will be able to understand the functional anatomy of Peritoneum.</li> </ul>
2.2.2	APPARATUS FOR PERITONEAL DIALYSIS	<ul style="list-style-type: none"> <li>➤ 1. After the completion of this topic student will be able to understand and having knowledge of all the apparatus which are used in Peritoneal Dialysis.</li> </ul>
		<ul style="list-style-type: none"> <li>➤ Student will be able to understand the volume, glucose level, PH, electrolyte concentration, sterility and temperature of Dialysis Solution.</li> </ul>
		<ul style="list-style-type: none"> <li>➤ Student will be able to having knowledge of different kinds of transfer sets, their designs and their exchange procedures.</li> </ul>
		<ul style="list-style-type: none"> <li>➤ Students have knowledge of various kinds of connectors which are used in Peritoneal Dialysis.</li> </ul>
2.2.3	PERITONEAL ACCESS DEVICES	<ul style="list-style-type: none"> <li>➤ After the successful completion of this topic student will be able to understand all the devices which are used in Peritoneal</li> </ul>

		Dialysis.
		➤ Student will be able to having knowledge about the both Acute & Chronic Catheters used in Peritoneal Dialysis.
		➤ Student will be able to understand the design of different types of catheters.
		➤ Student will be able to understand the catheter placement procedures in patients Peritoneum to perform procedure of Peritoneal Dialysis.
2.2.4	<b>ASSESSMENT OF ADEQUACY OF PERITONEAL DIALYSIS</b>	➤ After the completion of this topic student will be able to take the assessment of adequacy of Peritoneal Dialysis.
		➤ Student will be able to having knowledge of primary stages that is the choice selection of Peritoneal Dialysis treatment modality.
		➤ Student will be able to understand the nutritional issues in peritoneal Dialysis.
		➤ A student has knowledge of clearance targets and the measurement of clearance and determinates of clearance.
2.2.5	<b>SOLUTE TRANSPORT &amp; FLUID STATUS</b>	➤ After the completion of this topic student will be able to having knowledge about transportation of solutes in Peritoneal Dialysis.
		➤ Student will be able to determine the status of volumes in patient's body.
		➤ Student will be able to understand the assessment of fluid status, Mechanisms of Fluid Overload, Diagnosis of Peritoneal membrane dysfunction and ultrafiltration Failure and prevention & management of Fluid Overload.
		➤ Student will be able to know about that how the solute transports and on which purpose.

2.2.6	STERILE TECHNIQUES IN PERITONEAL DIALYSIS	➤ After the topic will be completed student will be able to understand and follow the different techniques of sterilization.
		➤ Student shall be able to taking great care to catheter to avoid infection.
		➤ Stuent shall be able to maintain the sterilization in dialysis room and use healthy practices.
		➤ Student shall be able to maintain the catheter sterilization techniques.
		➤ Student shall be able to follow the guidelines of infection control unit.
2.2.7	PERITONEAL DIALYSIS PREREQUISITES	➤ After the completion of this topic student will be able to understand the introduction of prerequisites.
		➤ Student will be able to know the use of prerequisites and its importance.
		➤ A prerequisite is a thing that is required as a prior condition to perform dialysis.
		➤ Student will be able to understand the preparations of all prerequisites and their uses.
2.2.8	EMERGENCIES IN PERITONEAL DIALYSIS	➤ After the topic will be completed student shall be able to understand the different kind of emergencies in process of peritoneal dialysis.
		➤ Student shall be able to understand that how to diagnose the emergency and to manage it during or after the peritoneal dialysis.
		➤ Student shall be able to manage the problem medically or to solve it how to handle the patient with different kind of emergencies.
2.2.9	COMPLICATION IN PERITONEAL	➤ After the completion of this topic student will be able to identify



	<b>DIALYSIS</b>	the different complications.
		➤ Student will be able to understand the complications and how to manage it.
		➤ Student will be able to treat the patient on dialysis will different complications.
		➤ Student will be able to manage the complication medically or in different ways.
2.2.10	<b>PERITONITIS &amp; EXIT SITE INFECTION</b>	➤ After the completion of this topic student will be able to know the introduction of peritonitis & exit site infection.
		➤ Student will be able to know about the incidence, pathogenesis, etiology & diagnosis of peritonitis & exit site infection.
		➤ Student will be able to know about the cause & treatment of peritonitis & exit site infection.
		➤ Student will be able to manage the problems practically.