Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Renal Dialysis Technology Degree Examination – 05-Jul-2022

Time: Three Hours | Max. Marks: 100 Marks

APPLIED RENAL DIALYSIS TECHNOLOGY – I (RS2)
Q.P. CODE: 2918

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) 2 x 10 = 20 Marks

1. Mention the various vascular access used for Haemodialysis. Enumerate the complications of arteriovenous vascular access
2. Write about adequacy of dialysis
3. Mention the absolute contraindication of PD. Explain peritonitis and its management

SHORT ESSAYS (Answer any Ten) 10 x 5 = 50 Marks

4. Explain all monitoring devices in HD machines
5. Write the causes, management and prevention of hypotension during dialysis
6. Explain in detail about Peritoneal Equilibration Test
7. Discuss about anticoagulation techniques used during dialysis
8. Dialysis disequilibrium syndrome – indication and management
9. Explain about Principles of Haemodialysis and how to increase solute clearance in hemodialysis
10. Mechanical complications of PD
11. Write the causes, management and prevention of Cramps during HD
12. What is current recommendation for dialysis withdrawal?
13. Write the causes, management and prevention of anaphylactic reactions during HD
14. Write brief history of dialysis
15. Explain different types of dialysis solutions used during hemodialysis

SHORT ANSWERS (Answer any Ten) 10 x 3 = 30 Marks

16. Indications of Haemodialysis
17. Pseudoaneurysm
18. Define KoA
19. Acute complications of Haemodialysis
20. Heparin induced thrombocytopenia
21. Write two techniques of AV fistula cannulation
22. Different types of dialyzer membranes
23. What is “Three pore model” of peritoneal dialysis membrane
24. Define conductivity with normal value
25. Molecular weight of Urea, Creatinine and Vitamin B12.
26. What is the ideal weight or target weight?
27. Causes of air embolism during dialysis

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Renal Dialysis Technology Degree Examination – 07-Jul-2022

Time: Three Hours | Max. Marks: 100 Marks

APPLIED RENAL DIALYSIS TECHNOLOGY – II (RS2)

Q.P. CODE: 2919

Your answer should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) 2 x 10 = 20 Marks

1. Discuss about Dialysis in Infants and Children.
2. Draw a neatly labeled diagram of water treatment plant used in hemodialysis unit and explain the components.
3. What s SLED? How is it performed in ICU? Writ the typical prescription of a SLED in ICU.

SHORT ESSAYS (Answer any Ten) 10 x 5 = 50 Marks

4. Nocturnal Dialysis
5. Dialysis in pregnancy
6. CVVHDF
7. Dialyzer reuse-advantages and disadvantages
8. Aluminum Toxicity
9. Automated peritoneal Dialysis
10. Precautions while dialyzing a post operative patient
11. Home Hemodialysis
12. AAMI Microbiological Criteria for water used in Hemodialysis
13. Haemoperfusion
14. Daily Dialysis
15. Plasmapheresis

SHORT ANSWERS (Answer any Ten) 10 x 3 = 30 Marks

16. Online HDF
17. Telemedicine in Dialysis practice
18. Causes of Amyloidosis
19. Sorbent dialysis
20. Tidal PD
21. What is CAPD and CCPD
22. Middle Molecules
23. Icodextrin in peritoneal dialysis
24. MARS
25. Air embolism
26. Define Kuf of a dialyzer
27. Sodium and UF Modeling

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Renal Dialysis Technology Degree Examination – 12-Dec-2022

Time: Three Hours Max. Marks: 100 Marks

APPLIED RENAL DIALYSIS TECHNOLOGY – I (RS2)

Q.P. CODE: 2918

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) 2 x 10 = 20 Marks

1. Describe hemodialysis apparatus in detail with diagram
2. Describe in brief about anatomy and physiology of peritoneal dialysis
3. Explain complications of Venous access. Explain management and prevention of catheter infections.

SHORT ESSAYS (Answer any Ten) 10 x 5 = 50 Marks

4. What is co-current flow? When it is indicated?
5. Explain various types of PD catheters with diagram
6. Adequacy of PD
7. Complications of Arterio-Venous access.
8. Explain in detail about Peritoneal Equilibration Test
9. Discuss the various acute complications of hemodialysis with their management
10. Explain the compositions of dialysis solutions used in haemodialysis and peritoneal dialysis.
11. Explain the types of Ultrafiltration failure in peritoneal dialysis
12. Explain key factors that affect the solute clearance of a haemodialysis
13. What are the routine blood tests done in dialysis patients? Significance and target value.
14. Precautions during first cannulation.
15. Briefly mention metabolic complications of CAPD.

SHORT ANSWERS (Answer any Ten) 10 x 3 = 30 Marks

16. Define Ultrafiltration coefficient
17. Name three emergency indications of haemodialysis
18. What are ECG changes of hyperkalemia?
19. Explain URR
20. Name common organism causing peritonitis
21. What is low molecular weight heparin? Give two examples
22. Common causes of seizures during HD
23. Examples of synthetic Dialyzer Membranes
24. Indications of Isolated ultrafiltration
25. Write molecular weight of urea, creatinine and albumin
26. Diet in patients on haemodialysis
27. Absolute contraindications for CAPD

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Renal Dialysis Technology Degree Examination – 14-Dec-2022

Time: Three Hours | Max. Marks: 100 Marks

APPLIED RENAL DIALYSIS TECHNOLOGY – II (RS2)

Q.P. CODE: 2919

Your answer should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) 2 x 10 = 20 Marks

1. Write in detail about dialyzer reuse
2. What is hyperphosphatemia? Write in detail how to manage hyperphosphatemia?
3. Write in detail about psychological issues faced by dialysis patients

SHORT ESSAYS (Answer any Ten) 10 x 5 = 50 Marks

4. Clinical benefits of online HDF compare to hemodialysis
5. What is aluminum toxicity and management?
6. What are the indications for CRRT, write about different treatment modalities in CRRT
7. Write about different treatment modalities in peritoneal dialysis
8. What are the advantages and disadvantages of daily HD?
9. What is regional citrate anticoagulation in CRRT
10. Write a note on hemoperfusion
11. Write about Dialysis in Children.
12. Write universal precautions and infection control practices in dialysis
13. Indications of plasmapheresis
14. Write note on MARS
15. Write about carbon filter used in water pretreatment system

SHORT ANSWERS (Answer any Ten) 10 x 3 = 30 Marks

16. What is osteomalacia?
17. Write about water line disinfection methods
18. What are the factors favoring clotting in extracorporeal?
19. Advantages of Reverse Osmosis (RO) system
20. What in filtration fraction in CRRT and its importance
21. Role of telemedicine in dialysis practice
22. What is isolated ultrafiltration?
23. Hepatitis B vaccine dosage in dialysis patients
24. Write two examples of low volume dialyzers used for pediatric patients
25. What is SCUF and its indications
26. Replacement fluids used in plasmapheresis (TPE)
27. Normal serum levels for albumin, potassium and calcium

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Renal Dialysis Technology Degree Examination – 12-Dec-2022

Time: Three Hours Max. Marks: 100 Marks

APPLIED DIALYSIS TECHNOLOGY – PAPER I (RS-3)
Q.P. CODE: 3305

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) 2 x 10 = 20 Marks

1. Sites of AV fistula creation its advantages and complications
2. Define anticoagulation. Mention the importance of anticoagulation in HD. Also explain rigid Heparinization
   OR
   Write in brief about infections in CAPD

SHORT ESSAYS (Question No 5 & 10 choice) 10 x 5 = 50 Marks

3. Explain pulse augmentation and arm elevation test
4. Automated dialyzer reuse
5. Exit-site tunnel infection
   OR
   Methods of AV fistula cannulation
6. Chronic dialysis withdrawal criteria
7. SLED and its advantages and disadvantages.
8. What is peri-catheter leak in CAPD and its complications?
9. PET
10. **Write a short note on Dialysis Disequilibrium Syndrome**
    OR
    How do you manage patients with fluid overload in CAPD?
11. Dialysis fluid circuit in HD apparatus
12. Tidal Peritoneal dialysis

SHORT ANSWER (Question No. 15 & 20 choice) 10 x 3 = 30 Marks

13. Stages of AKI
14. Mention the levels of potassium, calcium and phosphorous in HD solution
15. Management of catheter infection in PD
    OR
    Mention any three indications for dialysis
16. Mention any three complications during haemodialysis
17. What is Acute PD?
18. Kindly mention the name of person who were associated with following:
    1) Rotating drum dialysis machine
    2) AV shunt
    3) A V fistula
19. Cardiopulmonary recirculation
20. Write the full forms of CAPD, NIPD and CCPD
    OR
    URR
21. Solvent drag
22. Rule of Six

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Renal Dialysis Technology Degree Examination – 14-Dec-2022

Time: Three Hours Max. Marks: 100 Marks

Applied Dialysis Technology – Paper -II (RS-3)

Q.P. CODE: 3306

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) 2 x 10 = 20 Marks

1. Complications of long term haemodialysis
2. Preparing dialysis patient for transplant
   OR
   Briefly explain both centrifugal apheresis and membrane plasmapheresis

SHORT ESSAYS (Question No 5 & 10 choice) 10 x 5 = 50 Marks

3. Catheter related blood stream infections and its management in HD patients
4. SLED
5. Management of sudden cardiac arrest in HD patient
   OR
   Universal precautions.
6. Ultrafiltration in HD patient and its clinical significance
7. Bone disease in dialysis patients
8. SCUF
9. Dialysis disequilibrium and its management
10. Complications in pediatric dialysis
    OR
    Practice of telemedicine in dialysis
11. Causes and management of Hemolysis in dialysis patients
12. Explain MARS circuit with neat labelled diagram

SHORT ANSWER (Question No. 15 & 20 choice) 10 x 3 = 30 Marks

13. What is dry weight and how do you assess it?
14. Give any three characteristics of dialyzable molecules
15. Regeneration of water softner
    OR
    Causes of epileptic seizures in dialysis patients
16. Dialysis solution composition in intensive HD
17. Which of the dialysis modality has high risk of diabetes? Give reasons
18. Mention any three medication given to HD patient in IV routed
19. Alarms in HD apparatus
20. Compare HDF and HF
    OR
    Dialysis solution composition for sorbent dialysis
21. Why is frequent dialysis better during pregnancy?
22. Mention any three kinds of food that has to be avoided by CKD patient

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