



**SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH**  
(A DEEMED TO BE UNIVERSITY)

**B.Sc. Renal Dialysis Technology (Semester-III) March 2024 Examination**  
**Applied Anatomy & Physiology related to Dialysis Technology**

**Time : 3 Hrs.**

**[Max. Marks :100]**

**Sec-A**

**Applied Anatomy (50 Marks)**

**Q.P Code: J3475**

*Your answers should be specific to the questions asked.*

*Draw neat labelled diagrams wherever necessary*

**LONG ESSAY**

**2×10=20 Marks**

1. Describe the kidney under following headings (3+2+3+2)  
a) External features b) coverings c) Internal features d) blood supply
2. Define hernia. Enumerate the different types of abdominal hernia. Describe the indirect inguinal hernia.

**SHORT ESSAY ( Answer any three)**

**3×5=15 Marks**

3. Explain detail about development of kidney
4. What is abdominal hernia. Explain in detail
5. Mention origin, course and branches of femoral artery
6. Supports of urinary bladder
7. Illustrate the microscopical structure of ureter

**SHORT ANSWERS ( Answer any five)**

**5×3=15 Marks**

8. Illustrate the microscopic structure of prostate
9. Name the sites of constrictions of ureter
10. Mention the blood supply of kidney
11. Branches of subclavian artery
12. Transitional epithelium
13. Structures passing through the hilum of kidney
14. Describe the female urethra

**Sec-B**

**Applied Physiology (50 Marks)**

**Q.P Code : J3476**

(Use separate answer booklet for section-B)

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Define Hemostasis and explain the extrinsic and intrinsic mechanism of blood coagulation in a flow chart (2+8)
2. Define GFR give its normal value and name the substance used to measure it ? List five factors influencing GFR and explain any 2 (3+7)

**SHORT ESSAY( Answer any three)**

**3 X5 =15Marks**

3. Explain the Tubular reabsorption of sodium in the nephron
4. Define and classify renal failure
5. Describe the mechanism of the tubuloglomerular feedback
6. Draw a neat, labelled diagram of the nephron and list the function of each component
7. Explain the role of Renin Angiotensin mechanism in regulation of blood pressure

**SHORT ESSAY ( Answer any five)**

**5×3=15 Marks**

8. What is Renal Glycosuria
9. Give a brief note on the Artificial Kidney
10. What is Inulin Clearance? What is its clinical application
11. Name three substances secreted in the DCT
12. List any three functions of the Kidney
13. What is the role of ADH in water reabsorption
14. List any three peculiarities of renal circulation



**SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH**

**(A DEEMED TO BE UNIVERSITY)**

**B.Sc. Allied Health Sciences Second Year (Semester-III)**

**March 2024 Examination**

**B.Sc. Renal Dialysis Technology**

**Time : 2 Hrs.**

**[Max. Marks : 40]**

**Pharmacology Related to Dialysis Technology**

**Q.P Code : J3480**

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. Classify the drugs used in hypertension. Write the pharmacological actions , mechanism of action, uses and adverse effects of ACE inhibitors

**SHORT ESSAY (Answer any three)**

**3 X 5 = 15 Marks**

2. Osmotic diuretics
3. Define and classify drugs used in hypotension
4. Explain mechanism of action , uses, adverse effects of morphine
5. Explain mechanism of action, uses and adverse effects of propranolol

**SHORT ANSWERS (Answer any five)**

**5 X 3 = 15 Marks**

6. Mention three uses of nephrotoxic drugs
7. Mention three uses and one adverse effects of vasopressin
8. Mention three uses of furosemide
9. List three indications of folic acid
10. Mention three drugs which are contraindicated in renal dialysis
11. Mention three uses of Vitamin D

**\* \* \***



**SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH  
(A DEEMED TO BE UNIVERSITY)**

**B.Sc. Allied Health Sciences Second Year Semester-III**

**March 2024 Examination**

**B.Sc. Renal Dialysis Technology**

**Time: 2.30 Hrs.**

**Paper – I**

**[Max. Marks: 80]**

**Applied Anatomy & Physiology related to Dialysis technology**

*Your answers should be specific to the questions asked.*

*Draw neat labelled diagrams wherever necessary.*

*(Use separate answer booklet for Section A & B)*

**Section – A**

**Applied Anatomy (40 Marks)**

**Q.P Code : K3455**

**LONG ESSAY**

**1×10=10 Marks**

1. Describe Urinary bladder under the following headings a) External and internal features b) Blood supply c) Nerve supply d) Applied anatomy

**SHORT ESSAY**

**3×5=15 Marks**

2. Describe the peritoneal folds
3. Venous drainage of lower limb
4. Draw a neat labelled diagram of microscopic structure of kidney.

**SHORT ANSWERS**

**5×3=15 Marks**

5. Juxtaglomerular apparatus
6. Name the branches of femoral artery
7. Name the types of abdominal hernia
8. Varicose veins
9. Genicular branches of popliteal artery

**Section – B**

**Applied Physiology (40 Marks)**

**Q.P Code : K3456**

*(Use separate answer booklet for Section-B)*

**LONG ESSAY**

**1×10=10 Marks**

1. Describe the urine formation steps and explain the function of the tubular reabsorption and secretion

**SHORT ESSAY**

**3×5=15 Marks**

2. Explain the Tubular reabsorption of sodium in the nephron
3. Describe the mechanism of the tubuloglomerular feedback
4. Draw a neat labelled diagram of the nephron and list the function of each component

**SHORT ANSWERS**

**5×3=15 Marks**

5. Name the three hormones produced by the kidneys
6. Explain the role of Aldosterone on kidney
7. What is PAH Clearance? What is its clinical application
8. Give the normal P<sup>H</sup> of blood. List the major buffer system of the body
9. List the non-excretory function of the kidney



**SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH**

**(A DEEMED TO BE UNIVERSITY)**

**B.Sc. Allied Health Sciences Second Year (Semester- III)**

**March 2024 Examination**

**B.Sc. Renal Dialysis Technology**

**Time : 2 Hrs.**

**Paper – III**

**[Max. Marks : 40]**

**Pharmacology Related Dialysis Technology**

**Q.P Code : K3460**

*Your answers should be specific to the questions asked.*

*Draw neat labelled diagrams wherever necessary.*

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. Classify drugs used in hypertension. Explain mechanism of action , uses and adverse effects of ramipril.

**SHORT ESSAY**

**3 X 5 = 15 Marks**

2. Explain mechanism of action , uses and adverse effects of hydrochlorthiazide and mannitol
3. Mention differences between crystalloids and colloids
4. Explain mechanism of action, uses and adverse effects of propranolol

**SHORT ANSWERS**

**5 X 3 = 15 Marks**

5. Mention three uses and adverse effects of morphine
6. Mention three dialyzable drugs
7. List three uses of folic acid
8. Mention three nephrotoxic drugs
9. Mention three drugs used in hypertensive emergency

**\* \* \***



**Concept of Renal Disease and its Management**

**Q.P Code: K3470**

*Your answers should be specific to the questions asked.*

*Draw neat, labelled diagrams wherever necessary.*

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Define Urinary Tract Infection. What are the risk factors of developing Urinary Tract infection? Write about management of Urinary Tract infection.
2. Define Acute Kidney Injury. Classify Acute Kidney Injury and list out the various causes of AKI and its management.

**SHORT ESSAY**

**6 X 5 = 30 Marks**

3. Treatment of Minimal change Disease
4. Diet in CKD Stage 5
5. Food and Obesity
6. Asymptomatic Urinary abnormalities
7. Nephritic syndrome
8. Nephrotic syndrome- Pathophysiology

**SHORT ANSWERS**

**10 X 3 = 30 Marks**

9. Mention three organisms causing UTI
10. Mention three causes of secondary Nephrotic syndrome
11. Renal osteodystrophy
12. Anemia of CKD
13. Mention the normal values of S Calcium , S Albumin & S Phosphorus
14. Mention three post renal causes of AKI
15. Mention three common causes of CKD
16. Treatment of Minimal change Disease
17. Acute interstitial Nephritis
18. Mention three drugs causing AKI

**\* \* \***