SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

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

April 2023 Examination

Examination

B.Sc. Renal Dialysis Technology

Time: 3 Hrs. **Paper – I** **[Max. Marks: 100]**

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 (50 Marks)

Q.P Code : J3475

LONG ESSAY **2 x 10 = 20 Marks**

1. Describe the Urinary bladder under following headings:
   a) External features b) Ligaments c) Blood supply d) Nerve supply (3+3+2+2)
2. Describe Kidney under following headings
   a) External features b) coverings c) Interior d) blood supply (3+2+3+2)

SHORT ESSAY (Answer any three) **3x5=15 Marks**

3. Describe the gross structure of Prostate
4. Describe the attachment and function of Greater omentum
5. Discuss the development of Mesonephros
6. Illustrate the microscopic structure of Ureter and mention its salient features.
7. Describe the origin, course and branches of Axillary artery

SHORT ANSWERS (Answer any five) **5x3=15 Marks**

8. Mention the nerve supply to sphincters of urethra
9. Mention the constrictions of Ureter
10. Enumerate any 3 branches of Femoral artery
11. Draw a labelled diagram of microscopic structure of Ureter
12. What is Horse-shoe kidney?
13. Development of Ureteric bud
14. List the parts of male urethra

Section – B

Applied Physiology (50 Marks)

Q.P Code : J3476

(Use separate answer booklet for Section-B)

LONG ESSAY **2 X 10 = 20 Marks**

1. Draw a neat labeled diagram of glomerular filtration membrane and explain the factors influencing filtration.
2. Describe the role of counter current exchange mechanism in kidney.

SHORT ESSAY (Answer any three) **3 X 5 = 15 Marks**

3. Define hemotasis. List the steps involved in hemostasis
4. Describe the significance of creatinine clearance.
5. Describe the various factors regulating renal blood flow.
6. Describe obligatory reabsorption of water.
7. Describe renal handling of glucose in the proximal tubule of the nephron.

SHORT ANSWERS (Answer any five) **5 X 3 = 15 Marks**

8. List the non excretory functions of kidney.
9. List functions of juxta glomerular apparatus.
10. Give the effects of ADH on renal tubules and the sites of action
11. Give the normal pH of blood.List the body's major buffer system.
12. Describe the role of vasa recta in renal function.
13. List the functions of DCT
14. Define renal failure.

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April 2023 Examination
B.Sc. Renal Dialysis Technology

Time : 2 Hrs. **[Max. Marks : 40]**

Paper-II

PHARMACOLOGY RELATED TO DIALYSIS TECHNOLOGY

Q.P Code : J3480

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

Long essay **1 × 10 = 10 Marks**

1. Classify diuretics. Explain mechanism of action and uses of hydrochlorthiazide and mannitol (4+3+3)

Short essay (Answer any **three**) **3 × 5 = 15 Marks**

2. Mention crystalloids with their advantages and disadvantages (2+3)
3. Explain mechanism of action, uses and adverse effects of amlodipine (2+2+1)
4. Mention drugs used in anaphylactic shock with rationale for their use (2+3)
5. Explain factors affecting drugs used in dialysis

Short answer (Answer any **five**) **5 × 3 = 15 Marks**

6. Mention **three** drugs contraindicated in pregnancy induced hypertension
7. Mention **three** dialyzable drugs
8. Mention **three** parentaral iron preparations with their indications (1.5+1.5)
9. Explain mechanism of action and **two** uses of vitamin D (1+2)
10. Mention **three** drugs contraindicated during dialysis
11. Mention **two** phosphate binders with their use (2+1)

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

April 2023 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. Mention the extension, level of constrictions and blood supply of ureter

SHORT ESSAY **3×5=15 Marks**

2. Describe the external features and lobes of prostate gland
3. Mention origin, course and branches of axillary artery
4. Describe the subdivisions of male urethra

SHORT ANSWERS **5×3=15 Marks**

5. Tributaries of great saphenous vein
6. Posterior relations of right kidney
7. Draw the microscopic structure of prostate
8. List the coverings of kidney
9. Femoral hernia

Section – B

Applied Physiology (40 Marks)

Q.P Code : K3456

(Use separate answer booklet for Section-B)

LONG ESSAY **1×10=10 Marks**

1. Define GFR give is the normal value and name the substance used to measure it ? List five factors influencing GFR and explain any 2

SHORT ESSAY **3×5=15 Marks**

2. List the differences between the cortical and juxta glomerular nephron

3. How much is the normal blood flow to the kidneys and mention the peculiarities of renal circulation

4. Define and classify the renal failure

SHORT ANSWERS **5×3=15 Marks**

5. Name the three hormones produced by the kidneys

6. Define clotting time bleeding time and the prothrombin time

7. What is PAH Clearance? What is its clinical application

8. Give the normal P^H of blood. List the major buffer system of the body

9. List the non-excretory function of the kidney

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Time : 2 Hrs. **[Max. Marks : 40]**

Paper-II

PHARMACOLOGY RELATED TO DIALYSIS TECHNOLOGY

Q.P Code : K3460

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

Long essay **1x10=10 Marks**

1. Classify drugs used in hypertension, Explain mechanism of action, uses and adverse effects angiotensin converting enzyme (ACE) inhibitors**.**

Short essay **3 x 5 = 15 Marks**

2. Explain mechanism of action, uses and adverse effects of propranolol.
3. Explain mechanism of action, uses and adverse effects of morphine.
4. List the crystalloids and colloids. Write their uses and disadvantages.

Short answer **5 x 3 = 15 Marks**

5. Rationale of combining Lignocaine and Adrenaline**.**
6. Mention three anticholinergic drugs and three uses
7. Mention three uses and three adverse effects of Morphine.
8. Mention three uses of nitrates.
9. Mention three Nephrotoxic drugs

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

April 2023 Examination

B.Sc. Renal Dialysis Technology (RDT)

Time: 2.30 Hrs. **Paper – III** **[Max. Marks : 80]**

Subject: 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. Discuss the etiopathogenesis and treatment of Urinary tract infection in a female.
2. Define Acute Kidney Injury (AKI). Write about the classification and pathophysiology of AKI

SHORT ESSAY **6 X 5 = 30 Marks**

3. Acute nephritic Syndrome
4. Diet in CKD Stage 1-4
5. Treatment modalities for CKD Stage 5
6. Food and Obesity
7. Nephrotic syndrome- Pathophysiology
8. Secondary Nephrotic Syndrome

SHORT ANSWERS **10 X 3 = 30 Marks**

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

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