SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

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

March 2022 Examination

B.Sc. Renal Dialysis Technology

Time: 3 Hrs. **[Max. Marks: 100]**

Applied Anatomy & Physiology related to Dialysis technology Paper – I

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 location, external features and anterior relations of right and left Kidney. (2+3+5)
2. Describe the Urinary bladder under following headings:
   a) External features b) Ligaments c) Trigone d) Nerve supply (3+3+2+2)

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

3. Describe the origin, course and branches of Femoral artery
4. Describe the attachment and contents of Mesentery
5. Discuss the development of Kidney
6. Illustrate the microscopic structure of Ureter and mention its salient features.
7. Describe the gross structure of Prostate

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

8. Juxta glomerular apparatus
9. Mention the constrictions of Ureter
10. Enumerate any 3 branches of Axillary artery
11. Draw a labelled diagram of microscopic structure of Prostate
12. List the coverings of Kidney
13. List the parts of male urethra
14. Dorsalis pedis artery

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. Explain the mechanism of absorption of bicarbonate in renal tubules.
2. Explain the mechanism by which glucose is reabsorbed in Nephron. Mention one cause for glycosuria.

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

3. Describe tubular handling of Sodium by the kidney.
4. Give the cause, features and treatment of haemophilia.
5. Explain the function of filtration membrane
6. Describe renal handling of glucose in the proximal tubule of the nephron.
7. List the Difference between cortical & juxtamedullary Nephron.

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

8. Classify diuretics
9. List the functions of loop of henle
10. List the functions of platelets.
11. Give the effects of ADH on renal tubules and the sites of action
12. Define renal failure.
13. Describe the role of vasa recta in renal function.
14. Mention the cause for albuminuria in renal disease

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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 drugs used in hypertension. Explain mechanism of action, uses and adverse effects of losartan (4+2+2+2)

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

2. Explain differences between crystalloids and colloids (2.5+2.5)
3. Explain mechanism of action, uses and adverse effects of spiranolactone (2+2+1)
4. Mention drugs used in hypovolaemic 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** uses of frusemide
7. Mention **three** dialyzable drugs
8. List **three** differences between iron dextran and iron sorbitol citric acid
9. Explain mechanism of action and **one** use and **one** adverse effect of erythropoietin (1+1+1)
10. Mention **three** phosphate binders with their advantages (1.5+1.5)
11. List **three** indications for folic acid

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

Concept of Renal Disease and its Management

Q.P Code: J3490

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

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

1. Define Acute Kidney Injury (AKI). Write about Classification and pathophysiology of AKI.
2. Define CKD. Mention the Stages of CKD and pathophysiology calcium and Phosphorous.

SHORT ESSAY (Answer any Six) **6X 5 = 30 Marks**

3. Asymptomatic Urinary abnormalities
4. Nephrotic syndrome- Pathophysiology
5. Secondary Nephrotic Syndrome
6. Urinary Tract Infections – causes and treatment
7. Acute nephritic Syndrome
8. Diet in CKD Stage 1-4
9. Treatment modalities for CKD Stage 5
10. Food and Obesity

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

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

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