SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

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

February – 2017 Examination

B.Sc. Renal Dialysis Technology (RDT)

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

Applied Anatomy and 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 Related to Dialysis Technology (50 Marks)

Q.P Code : AHS-134

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

1. Describe the left ureter under the following headings
   a) Parts b) Relations c) Blood supply
2. Define hernia. Enumerate the different types of abdominal hernia. Describe the direct inguinal hernia.

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

3. Histology of kidney.
4. Parts of the nephron.
5. Greater omentum
6. Arterial supply of the kidney.
7. Trigone of the bladder.

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

8. Epiploic foramen.
9. Horse shoe kidney.
10. Name the branches of the femoral artery.
11. Median cubital vein.
12. Carotid body.
13. Lineorenal ligament.
14. Renal angle.

Section – B

Applied Physiology Related to Dialysis Technology (50 Marks)

Q.P Code : AHS-135

(Use separate answer booklet for Section-B)

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

1. Discuss the mechanisms that normally prevent intravascular coagulation. Explain the anti-coagulant action of heparin and coumarin analogs.
2. Explain the role of kidneys in maintaining acid-base balance. Outline the changes in pH, plasma bicarbonate and PCO_2 in metabolic acidosis with respiratory compensation.

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

3. Explain the role of proximal convoluted tubule in reabsorption of essential substances during urine formation.
4. Describe the inulin clearance method for estimation of glomerular filtration.
5. Explain the role of tubuloglomerular feedback in the regulation of renal blood flow.
6. Discuss the role of source, actions and regulation of secretion of erythropoietin.
7. Explain the role of anti-diuretic hormone in the formation of concentrated urine.

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

8. List the layers that constitute the renal filtration membrane.
9. List three causes for hypokalemia.
10. State the normal ranges for serum sodium, potassium and magnesium.
11. State the normal ranges for 24 hours urine sodium, calcium and albumin excretion rates.
12. List three factors that affect renal calcium excretion.
13. Define "free water clearance".
14. List three dietary precautions for patients with chronic renal disease.

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Time : 2.30 Hrs. **[Max. Marks : 80]**

Paper - II
Pharmacology Related to Dialysis Technology

Q.P Code : AHS-136

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

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

1. Classify diuretic agents. Write the pharmacological actions and side effects of Thiazides.
2. Classify antihypertensive agents. Explain the pharmacological actions and side effects of Beta blockers.

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

3. Vasopressor agents.
4. Drugs used in hypotension.
5. IV fluids used during dialysis.
6. Folic acid.
7. Phosphate binders.
8. Erythropoietin.
9. Parenteral iron preparations.
10. Drugs used during dialysis.

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

11. Name three vitamin D analogues.
12. Name three calcium channel blockers.
13. Oral antihistaminics.
14. Mention three side effects of Furosemide.
15. Name three dialysable drugs.
16. Mention three nephrotoxic drugs.
17. Mention three vasopressin analogues.
18. Name three factors affecting drug dialyzability.
19. Vitamin B.
20. Mention three complications of IV fluid therapy.
21. Side effects of alpha blockers.
22. Complications seen during dialysis.

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February – 2017 Examination
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Time : 2.30 Hrs. **Paper - III** **[Max. Marks : 80]**

Concept of Renal Disease and its management

Q.P Code : AHS-137

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

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

1. Define CKD. Mention six causes. Discuss about bone mineral disease in CKD. Dieatary advice you will give in a patient with CKD on dialysis.
2. What is AKI? Write about classification of AKI. Write briefly about snake bite AKI and its management.

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

3. What is nephrotic syndrome? Write about diet advice and medical management in patients with nephrotic syndrome.
4. What is hypokalemia? Write about complications of hypokalemia and its management.
5. What is acute nephritic syndrome? Mention four causes of nephritic syndrome. Write about clinical features and treatment of nephritic syndrome.
6. Discuss about complications of nephrotic syndrome.
7. What is UTI? Write about anatomical classification of UTI. What is complicated UTI?
8. Write about hematuria under. Definition, classification, and mention six causes of hematuria.
9. What is subnephrotic proteinuria? Mention six causes of same.
10. What is erythropoietin? Write about causes and complications of anemia in renal disease and its management.

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

11. What are phosphate binders? Mention four phosphate binders.
12. Mention two drugs used to treat edema. What is the dietary advice given to a patient with edema?
13. How does diet and lifestyle cause/affect kidney disease?
14. What is hypertension? What are the Non medical measures adviced in the management of hypertension?
15. Mention two causes of hyperkalemia. What foods are avoided in patient with hyperkalemia?
16. Mention food habits and life style changes to adopt for healthy kidneys.
17. Write briefly about synthesis and actions of vitamin D.
18. What is obstructive uropathy? Mention four causes.
19. What is eGFR? Write about its role in management of patients with renal disease.
20. What is food adulteration? What is its impact on patients with renal disease?
21. Define oliguria and anuria.
22. Write briefly about smoking cigarette and kidney disease.

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