Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Renal Dialysis Technology Degree Examination – APRIL 2015

Time: Three Hours | Max. Marks: 80 Marks

CONCEPT OF RENAL DISEASES – (RS)

Q.P. CODE: 1247

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. Define Acute Kidney Injury. Describe various phases of Acute Kidney Injury. Mention a few causes of Acute Kidney Injury.
2. Describe the clinical features of chronic kidney disease and write in brief about various modalities of renal replacement therapy.
3. Define Acute Nephritic Syndrome. Briefly describe pathogenesis and clinical features of post streptococcal glomerulonephritis.

SHORT ESSAYS (Answer any Six) 6 x 5 = 30 Marks

4. Dialysis disequilibrium
5. Anemia and Chronic Kidney disease
6. Complicated urinary tract infection
7. Causes of secondary hypertension
8. Uric acid stones – etiology and prevention
9. Renal osteodystrophy
10. Complications of nephrotic syndrome
11. Physiological changes in kidney during pregnancy

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

12. Treatment of Hyperkalemia
13. What is normal amount of urinary protein loss per day and what is nephrotic range proteinuria?
14. Name the ‘hormones’ produced by the kidney.
15. Name few nephrotoxic drugs.
16. Mention a few tumors of the kidney.
17. Mention a few causes of Hematuria.
18. What is Staghorn calculus?
19. Asymptomatic bacteriuria
20. Name a few ‘viral infections’ which spread by needle stick injury in hemodialysis.
21. Write the normal values of the following in an adult:
    Serum creatinine
    Serum phosphorus
    Serum potassium
22. Name few organisms causing urinary tract infection.
23. Name few food items high in phosphorous.

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Renal Dialysis Technology Degree Examination – SEPTEMBER 2015

Time: Three Hours Max. Marks: 80 Marks

CONCEPT OF RENAL DISEASES – (RS)

Q.P. CODE: 1247

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. Write "RIFLE" classification of Acute Kidney Injury. How do you manage a case of acute kidney injury?
2. Name the primary glomerular diseases causing nephrotic syndrome. Write in brief the pathogenesis of edema in nephrotic syndrome.
3. What are the causes of chronic kidney disease? Classify the stages of chronic kidney disease according to glomerular filtration rate.

SHORT ESSAYS (Answer any Six) 6 x 5 = 30 Marks

4. Investigations in a suspected case of post infectious glomerulonephritis
5. Renal changes in pregnancy
6. Autosomal recessive polycystic kidney disease
7. Chronic kidney disease – mineral bone disease
8. Asymptomatic bacteriuria
9. Causes of obstructive uropathy
10. Triple phosphate stones
11. Uremic pericarditis

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

12. Hepatitis B virus in hemodialysis – prevention
13. Mention clinical features of Alport's syndrome.
14. Wilm's tumor
15. Phosphate binders in chronic kidney disease
16. Complications seen in untreated nephrotic syndrome
17. Why high protein diet is restricted in chronic kidney disease – stage II-IV?
18. Management of Hyperkalemia
19. Uremic bleed – what are the causes?
20. What are the symptoms of lower urinary tract obstruction?
21. Name a few causes of proteinuria.
22. Name a few causes of secondary hypertension.
23. Procedure to collect 24 hours urine protein

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Renal Dialysis Technology Degree Examination – APRIL 2015

Time: Three Hours | Max. Marks: 80 Marks

PHARMACOLOGY RELATED TO HAEMO AND PERITONEAL DIALYSIS – (RS)
Q.P. CODE: 1248

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. Classify diuretics. Write therapeutic uses and adverse effects of Thiazide diuretics.
2. Classify Beta blockers. Write the therapeutic uses and adverse effects of Propranolol.
3. Classify anticoagulants. Write the mechanism of action, uses and adverse effects of Heparin.

SHORT ESSAYS (Answer any Six) 6 x 5 = 30 Marks

4. Erythropoietin
5. Vitamin D
6. Verapamil
7. Ramipril
8. Phosphate binders
9. Dobutamine
10. Potassium exchange resins
11. Sodium hypochloride

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

12. Name two Haemodialysis concentrates.
13. Mention three adverse effects of Furosemide.
14. Write three adverse effects of oral Iron.
15. Name three drugs contraindicated in patient with renal failure.
16. Write the uses of Folic acid.
17. Name two water soluble vitamins and mention their uses.
18. Write three uses of Prazosin.
19. Treatment of Barbiturate Poisoning
20. Name two drugs used in hypertensive emergencies.
21. Write two advantages of low molecular weight heparins.
22. Name three intravenous fluids (IV fluids) and mention their indications.
23. Write three uses of vitamin K.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Renal Dialysis Technology Degree Examination – SEPTEMBER 2015

Time: Three Hours Max. Marks: 80 Marks

PHARMACOLOGY RELATED TO HAEMO AND PERITONEAL DIALYSIS – (RS)

Q.P. CODE: 1248

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. Classify Antihypertensives. Write the mechanism of action, therapeutic uses and adverse effects of ACE inhibitors.
2. Classify Anticoagulants. Write the therapeutic uses and adverse effects of Heparin.
3. Enumerate four disinfections. Explain the role of formalin as a disinfectant and write its adverse effects.

SHORT ESSAYS (Answer any Six) 6 x 5 = 30 Marks

4. Adverse effects of Loop diuretics
5. Oral Iron preparations
6. Lithium
7. Mannitol
8. Calcium Channel Blockers
9. Treatment of Barbiturate poisoning
10. Erythropoietin
11. Vitamin D

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

12. Folic Acid
13. Treatment of Hypotension
14. Name three carbonic anhydrase inhibitors.
15. Mention three uses of β-blocker.
16. Mention three advantages of LMWH over Heparin.
17. Name three potassium sparing diuretics.
18. Bicarbonates
19. Name three vasodilators used in Hypertension.
20. Vitamin K
21. Potassium exchange resins
22. Name three dialyzable drugs.
23. Protamine sulphate

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Rajiv Gandhi University of Health Sciences, Karnataka

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II Year B.Sc. Renal Dialysis Technology Degree Examination – APRIL - 2015

Time: 3 Hours Max. Marks: 40 Marks

Applied Anatomy

Q.P. Code : 1249

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

(Note : Both QP Codes 1249 and 1250 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) 1 x 10 = 10 Marks

1. Describe the male urethra under the following headings:
   Different parts, sphincters, histological aspects, applied anatomy.
2. Which are the main veins of the upper limb? Write on the course communications and applied aspects of the median cubital vein.

SHORT ESSAYS (Answer any Three) 3 x 5 = 15 Marks

3. Macroscopic structure of kidney, seen as in coronal section
4. Arterial system of kidney
5. Anomalies of kidney in relation to its development
6. Lesser sac of peritoneum

SHORT ANSWERS (Answer any Five) 5 x 3 = 15 Marks

7. Urinary bladder innervation
8. Abdominal hernia
9. Coverings of kidney
10. Any three branches of External Carotid Artery
11. Deep Palmar Arch
12. Venous thrombosis

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Renal Dialysis Technology Degree Examination – SEPTEMBER 2015

Time: 3 Hours Max. Marks: 40 Marks

Applied Anatomy

Q.P. Code : 1249

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

(Note : Both QP Codes 1249 and 1250 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) 1 x 10 = 10 Marks

1. Describe the urinary bladder under the following headings: Gross features, interior of the bladder, nerve supply and applied anatomy.
2. Write on femoral artery under the mentioned subheadings - Course, relations, branches, applied anatomy.

SHORT ESSAYS (Answer any Three) 3 x 5 = 15 Marks

3. Structure of a nephron
4. Difference in the microscopic structure of proximal and distal convoluted tubule
5. Horse shoe kidney
6. Pouch of Douglas

SHORT ANSWERS (Answer any Five) 5 x 3 = 15 Marks

7. Juxta glomerular apparatus
8. Urethral sphincters
9. Formative branches of superficial Palmar Arch.
10. Three branches of femoral artery.
11. Deep Vein Thrombosis
12. Jugular Vein and its importance

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Renal Dialysis Technology Degree Examination – SEPTEMBER 2015

Time: 3 Hours Max. Marks: 40 Marks

Physiology

Q.P. Code: 1250

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 1249 and 1250 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) 1 x 10 = 10 Marks

1. Describe the role of kidney in long term regulation of Blood Pressure.
2. Describe in detail the mechanism of urine formation.

SHORT ESSAYS (Answer any Three) 3 x 5 = 15 Marks

3. Discuss the Renal function tests.
4. Explain how kidney handles Sodium.
5. Explain the functions of Distal convoluted tubule with the help of a diagram.
6. Explain the effects of diuretics on electrolyte excretion.

SHORT ANSWERS (Answer any Five) 5 x 3 = 15 Marks

7. Draw a neat labelled diagram of Juxta Glomerular apparatus.
8. What is the action of Parathormone on the kidney?
9. Define splay. Explain Tubular maximum of Glucose.
10. Define plasma clearance. Name two clearance tests.
11. Name all the food substances which have to be avoided in renal failure.
12. What are the abnormal constituents of urine?

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Renal Dialysis Technology Degree Examination – APRIL - 2015

Time: 3 Hours Max. Marks: 40 Marks

Physiology

Q.P. Code: 1250

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary

(Note: Both QP Codes 1249 and 1250 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) 1 x 10 = 10 Marks

1. Describe the innervation of the Urinary bladder and explain the micturition reflex.
2. Explain the counter current mechanism.

SHORT ESSAYS (Answer any Three) 3 x 5 = 15 Marks

3. Describe the mode of Glucose reabsorption in the proximal convoluted tubule of the nephron and TmG.
4. Renal dialysis
5. Define GFR. What are the factors affecting it?
6. Renal regulation of H^+ ion

SHORT ANSWERS (Answer any Five) 5 x 3 = 15 Marks

7. Sodium reabsorption in proximal convoluted tubules
8. Laplace's Law
9. Automatic bladder
10. Juxta Glomerular Apparatus
11. Inulin clearance
12. Structure of Juxta Glomerular apparatus

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (Renal Dialysis Technology) Degree Examination – SEPTEMBER 2015

Time: 3 Hours | Max. Marks: 50 Marks

Applied Pathology

Q.P. Code : 1351

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

(Note : Both QP Codes 1351 and 1352 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) 1 x 10 = 10 Marks

1. Describe the pathology of the peritoneum in patients undergoing peritoneal dialysis.
2. What are the causes of chronic renal failure? Add a note on the clinical manifestations.

SHORT ESSAYS (Answer any Five) 5 x 5 = 25 Marks

3. Chronic pyelonephritis
4. Pregnancy induced renal pathology
5. Renal pathology in Hypertension
6. Causes of glomerulonephritis
7. Tuberculosis of the urinary tract
8. Components of nephrotic syndrome

SHORT ANSWERS (Answer any Five) 5 x 3 = 15 Marks

9. Renal agenesis
10. Reflux nephropathy
11. Kidney pathology due to analgesics
12. Acute tubular necrosis
13. Polycystic kidney
14. Hydronephrosis

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (Renal Dialysis Technology) Degree Examination – APRIL 2015

Time: 3 Hours Max. Marks: 50 Marks

Applied Pathology

Q.P. Code: 1351

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary

(Note: Both QP Codes 1351 and 1352 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) 1 x 10 = 10 Marks

1. Discuss the causes and pathology of chronic pyelonephritis. Write a note on urinary findings in chronic pyelonephritis.
2. Discuss the causes, pathogenesis and laboratory diagnosis of Chronic Renal Failure.

SHORT ESSAYS (Answer any Five) 5 x 5 = 25 Marks

3. Laboratory diagnosis of acute glomerulonephritis
4. Congenital anomalies of urinary system
5. Bacterial peritonitis
6. Causes of urinary tract infection
7. Pathology of kidney in hypertension
8. Dialysis induced changes in kidney

SHORT ANSWERS (Answer any Five) 5 x 3 = 15 Marks

9. Types of renal calculi
10. Causes of granular contracted kidney
11. Urinary findings in nephrotic syndrome
12. Causes of Hydronephrosis
13. List the renal diseases associated with pregnancy.
14. Three causes of acute renal failure

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (Renal Dialysis Technology) Degree Examination – APRIL 2015

Time: 3 Hours | Max. Marks: 50 Marks

Microbiology

Q.P. Code : 1352

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

(Note : Both QP Codes 1351 and 1352 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) 1 x 10 = 10 Marks

1. List the opportunistic infections commonly affecting dialysis patients. How do you prevent them.
2. List the agents causing UTI. How is the infection diagnosed? Add a note on the prevention of these infection in patients.

SHORT ESSAYS (Answer any Five) 5 x 5 = 25 Marks

3. Care of needle stick injuries in health care workers.
4. Waste disposal in health care settings
5. Prevention of HIV infection in Health Care Workers
6. Cultures to be sent in cases of respiratory tract infection. Add a note on prevention of the same.
7. Hepatitis B vaccine in dialysed patients
8. Care of Dialysis machines.

SHORT ANSWERS (Answer any Five) 5 x 3 = 15 Marks

9. Hepatitis C virus
10. Steps in Hand washing
11. Management of spills and splashes in a dialysis unit
12. List 3 fungi causing opportunistic infections in dialysed patients.
13. Infections that spread by contaminated food and water
14. List the different classes of biomedical waste.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (Renal Dialysis Technology) Degree Examination – SEPTEMBER 2015

Time: 3 Hours Max. Marks: 50 Marks

Microbiology

Q.P. Code: 1352

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary

(Note: Both QP Codes 1351 and 1352 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) 1 x 10 = 10 Marks

1. Describe the morphology, mode of transmission and universal precautions of HIV virus.
2. Explain parasites which cause Opportunistic infections.

SHORT ESSAYS (Answer any Five) 5 x 5 = 25 Marks

3. Hepatitis A virus
4. Candidiasis
5. Blood culture
6. Gram stain
7. Tuberculosis in Dialysis patients
8. Hepatitis B virus – morphology and route of transmission

SHORT ANSWERS (Answer any Five) 5 x 3 = 15 Marks

9. Biomedical waste management
10. Name three live attenuated vaccines.
11. Name three sexually transmitted diseases.
12. Herpes simplex virus infections
13. Name three Universal precautions used in Hospital.
14. Name three fungus causing opportunistic infections.

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