

**UNIVERSITY OF ESWATINI (UNESWA)**  
**FACULTY OF HEALTH SCIENCES**  
**GENERAL NURSING DEPARTMENT**  
**FINAL EXAMINATIONS, DECEMBER, 2019**

**COURSE TITLE: RENAL FUNCTION AND FAILURE**

**COURSE CODE: GNS 471**

**TIME: 2HOURS**

**MARKS: 75**

**INSTRUCTIONS:**

- **Answer all questions in the provided examination sheet**
- **Remember to write your examination number on the answer sheet**
- **Read all questions carefully before you answer**
- **Section A is a Multiple Choice**
- **Section B is essay questions**

**Do not open the question paper until you are told to do so!!!!**

**SECTION A ONE MULTIPLE CHOICE QUESTIONS:-**

**Choose the most correct answer and write in your answer sheet.**

1. The primary function(s) of the kidney is....
  - a. Urine formation
  - b. To filter the blood and maintain the body's internal homeostasis
  - c. Reabsorption and secretion
  - d. Regulation of water and acid based balance
  
2. The loop of Henle is important in
  - a. The reabsorption of essential materials
  - b. The excretion of nonessential materials
  - c. The permeability of water and moderately permeability of sodium, urea and other solutes
  - d. Conserving water and thus concentrating the filtrate
  
3. In the proximal convoluted tubule about \_\_\_\_\_ of the electrolytes are absorbed
  - a. 30%
  - b. 50%
  - c. 100%
  - d. 80%
  
4. The minor calyces widen and merge to form major calyces called the
  - a. renal pelvis
  - b. medulla
  - c. Papillae
  - d. Hilus
  
5. A nephron is composed of ....
  - a. The loop of Henle and the collecting tubules
  - b. Proximal convoluted tubule, the loop of Henle and the collecting tubule
  - c. Glomerulus, Bowman's' capsule and the tubular system
  - d. 800.000 to 1.2 million Nephrons
  
6. A renal stone in the pelvis of the kidney will alter the function of the kidney by interfering with
  - a. The structural support of the kidney
  - b. Regulation of the concentration of urine
  - c. The entry and exit of blood vessels at the kidney
  - d. Collection and drainage of urine from the kidney
  
7. A patient with renal disease has oliguria and a creatinine clearance of 40ml/min. You recognize that these findings most directly reflect the abnormal function of
  - a. Tubular secretion
  - b. Glomerular filtration
  - c. Capillary permeability

- d. Concentration of filtrate
8. During physical assessment of the urinary system, you will
    - a. Palpate an empty bladder as a small nodule
    - b. Uses auscultation over each CVA to detect impaired renal blood flow
    - c. Find a dull percussion sound when 100ml of urine is present in the bladder
    - d. Palpate above the symphysis pubis to determine the level of urine in the bladder
  9. Normal findings expected by you on physical assessment of the urinary system include
    - a. Nonpalpable left kidney
    - b. Auscultation of renal artery bruit
    - c. CVA tenderness elicited by a kidney punch
    - d. Palpable bladder to the level of the pubic symphysis
  10. A diagnostic study that indicates renal blood flow, glomerular filtration, tubular function and excretion is a(n)
    - a. IVP
    - b. VCUG
    - c. Renal scan
    - d. Loopogram
  11. On reading the urinalysis results of a dehydrated patient, you would expect to find
    - a. a pH of 8.4
    - b. RBC of 4/hpf.
    - c. Colour: yellow, cloudy
    - d. Specific gravity of 1.035
  12. Diminished ability to concentrate urine, associated with aging of the urinary system, is attributed to
    - a. a decreased bladder sensory receptors
    - b. a decreased in the number of functioning Nephrons
    - c. decreased function of the loop of Henle and tubules
    - d. thickening of the basement membrane of the Bowman's capsule
  13. A patient is admitted into the hospital with chronic kidney disease. You understand that this condition is characterised by
    - a. progressive irreversible destruction of the kidneys
    - b. a rapid decrease in urinary output with elevated BUN
    - c. an increasing creatinine clearance with a decrease in urinary output
    - d. prostration, somnolence and confusion with coma and imminent death
  14. Prerenal causes of ARF include
    - a. Prostate cancer and calculi formation
    - b. Hypovolemia and myocardial infarction
    - c. Acute glomerulonephritis and neoplasms
    - d. Septic shock and nephrotoxic injury from drugs
  15. During the oliguric phase of ARF, the nurse monitors the patient for
    - a. Hypernatremia and CNS depression
    - b. Pulmonary oedema and ECG changes
    - c. Kussmaul respirations and hypertension
    - d. Urine with high specific gravity and low sodium concentration

16. If a patient is in the diuretic phase of ARF, you must monitor for which serum electrolyte imbalance?
- Hyperkalemia and hyponatremia
  - Hyperkalemia and Hypernatremia
  - Hypokalemia and hyponatremia
  - Hypokalemia and Hypernatremia
17. A systemic effect of chronic kidney disease that usually is reversible by the initiation of dialysis is
- Anaemia
  - Hyperlipidemia
  - Psychologic changes
  - Nausea and vomiting
18. Measures indicated in the conservative therapy of chronic kidney disease include
- Decreased fluid intake, carbohydrate intake and protein intake
  - Increased fluid intake, decrease carbohydrate intake and protein intake
  - Decreased fluid intake and protein intake, increased carbohydrate intake
  - Decreased fluid intake and carbohydrate intake and increased protein intake
19. In educating the female patient who has frequent UTIs one aspect to include is that
- She should take tub baths with bubble bath
  - Urinate before and after sexual intercourse
  - Take prophylactic sulphonamides for the rest of her life
  - Restrict fluid intake to prevent the need for frequency
20. In planning nursing interventions to increase bladder control in the patient with urinary incontinence, you will include
- Teaching the patient to use Kegel exercises
  - Clamping and releasing a catheter to increase bladder tone
  - Teaching the patient biofeedback mechanisms to suppress the urge to void
  - Counselling the patient concerning choice of incontinence containment device
21. To assess the patency of a newly placed arteriovenous graft for dialysis, you should
- Irrigate the graft daily with low-dose heparin
  - Monitor for any increase in blood pressure in the affected arm
  - Listen with a stethoscope over the graft for presence of a bruit
  - Frequently monitor the pulses and neurovascular status distal to the graft
22. One of the major disadvantages of peritoneal dialysis is that
- Hypotension is a constant problem because of continuous fluid removal
  - Blood loss can be extensive because of the use of heparin to keep the catheter patent
  - Solutes are removed more rapidly from the blood than from the CNS, causing disequilibrium
  - High glucose concentrations of the dialysate necessary for ultrafiltration cause carbohydrate and lipid abnormalities
23. You will encourage strict diabetic control in the patient prone to diabetic nephropathy knowing that the renal tissue changes that may occur in this condition include
- Uric acid calculi and nephrolithiasis
  - Renal sugar-crystal calculi and cysts

- c. Lipid deposit in the glomeruli and nephrons
  - d. Thickening of the GBM and glomerulosclerosis
24. Following kidney transplantation, you will teach the patient that signs of rejection include
- a. Fever, weight loss, increased urinary output, increased BP
  - b. Fever, weight gain, increased urinary output, increased BP
  - c. Fever, weight loss, increased urinary output and decreased BP
  - d. Fever, weight gain, decrease urinary output, increased BP
25. Most of the long-term problems that occur in the patient with kidney transplant are a result of .....
- a. Chronic rejection
  - b. Immunosuppressive therapy
  - c. Recurrence of the original renal disease
  - d. Failure of the patient to follow the prescribed regimen

(25)

## SECTION B

### Question 1

- a) Describe the physiology of urine formation (10)
- b) Describe the functional health patterns which could contribute to renal infection, calculi as well as kidney failure, that you would include in the assessment of the patients who come in with any urinary systems problems in your hospital (10)

### Question 2

You admit Mr Mathonsi a 56 male with a history of oedema, hypertension, bounding pulse, weight gain, shortness of breath and pulmonary oedema. His diagnosis is end-stage kidney disease and he is already booked for dialysis.

- a) Discuss the clinical manifestations that Mr. Mathonsi is likely to present with (20)
- b) His diet would need certain restrictions: Describe what he would need to restrict (10)