

CHUKA



UNIVERSITY

**THIRD YEAR EXAMINATIONS FOR THE AWARD OF DEGREE OF
BACHELOR OF SCIENCE (NURSING)**

NURS 225: HUMAN PATHOPHYSIOLOGY**STREAMS: Bsc Nursing (Y2T2)****TIME: 3 HOURS****DAY/ DATE: TUESDAY 14/04/2020****2.30 PM – 4.30 PM****INSTRUCTIONS TO CANDIDATES**

- Do not write anything on the question paper.
- Mobile phones and any other reference materials are **NOT** allowed in the examination room.
- The paper has three (3) Sections. **ALL** the questions are compulsory
- Your answers for Section A (MCQs) should be on the first page of the answer Booklet.
- Number **ALL** your answers and indicate the order of appearance in the space provided in the cover page of the examination answer booklet.

SECTION A: MULTIPLE CHOICE QUESTIONS (20 Marks)

1. Which of the following is a feature of chronic renal failure:
 - a) Low serum calcium
 - b) Broad waxy casts found during urinalysis
 - c) Protein detected by urinalysis
 - d) Elevated serum phosphorus

2. A middle aged male patient comes to the clinic because of swelling of the lower limbs. Urinalysis shows 4+protein and a 24 hr urine specimen confirms that he is spilling 10 g of protein per day. Other expected findings include:
 - a) Elevated cholesterol levels
 - b) Elevated prothrombin time
 - c) Macrocytosis
 - d) Elevated TSH levels

3. A high fraction excretion of sodium is typically found in :
 - a) Heart failure
 - b) Acute glomerulonephritis
 - c) Acute tubular necrosis
 - d) Hepatorenal syndrome

4. Renal biopsy of a middle aged woman submitted for immunofluorescence showed “linear staining of the glomerulus”. This condition is likely to be:
 - a) ANCA- associated renal disease
 - b) Anti-GBM disease
 - c) Lupus nephritis
 - d) Systemic vasculitis

5. The most common cause of calcium stones is:
 - a) Hypercalcuria without hypercalcemia
 - b) Hyper calcuria with hypercalcemia
 - c) Hyperuricosuria
 - d) Hyperoxaluria

6. Which of the following statement is True concerning a patient with cardiogenic shock:
 - a) Patient usually has a normal cardiac output
 - b) Case fatality is greater than 70%
 - c) The patient is hypertensive
 - d) Revascularizing procedures do not change the mortality

7. A 50-year-old male presents with recurrent chest pain that develops abruptly that is not related to heart rate or physical activity. He states that the pain is relieved by nitroglycerin. What is the correct diagnosis for this patient?
 - a) Stable angina
 - b) Prinzmetal’s angina
 - c) unstable angina
 - d) Myocardial infarction

8. Which of the following lipid abnormality is associated with increased risk of atherosclerosis
 - a) Decreased LDL cholesterol levels
 - b) Increased HDL cholesterol levels
 - c) Decreased triglyceride levels
 - d) Increased levels of the abnormal lipoprotein (a)

9. Thoracic Aortic aneurysm is mostly associated with:
 - a) A congenital defect
 - b) Atherosclerosis
 - c) Hypertension
 - d) A previous syphilitic infection

10. Which of the following is True concerning Type I DeBakey aortic dissection:
 - a) Lesions mainly involve the ascending aorta
 - b) The condition is usually painless
 - c) Lesions are distal to the subclavian artery
 - d) Results from atherosclerosis

11. Features of ulcerative colitis include:
 - a) Involves mainly the terminal ileum

- b) The lesion is transmural
 - c) Bowel mucosa atrophy
 - d) Formation of pseudopolyps
12. The leading cause of small bowel obstruction is:
- a) Adhesions, hernia
 - b) Adhesions, neoplasms
 - c) Neoplasms, fecal impaction
 - d) Hernias, paralytic ileus
13. Which of the following is likely to occur in duodenal than in gastric ulceration:
- a) Hemorrhage
 - b) Perforation
 - c) Malignancy
 - d) Vomiting
14. The most common cause of cardiogenic pulmonary edema is:
- a) Mitral valve stenosis
 - b) Hypoalbuminemia
 - c) Left sided heart failure
 - d) Lung resection
15. 50-year-old man comes to the physician with gradually increasing dyspnea and a 4-kg. weight loss over the past 2 years. He admits to smoking two packs of cigarettes per day for 20 years. Physical examination shows an increase in the anteroposterior diameter of the chest (“barrel chest”). Which of the following is most likely to contribute to the pathogenesis of his disease?
- a) Impaired hepatic release of α 1-antitrypsin
 - b) Release of elastase from neutrophils
 - c) Decreased ciliary motility with irregular dynein arms
 - d) Macrophage recruitment and release of interferon- γ
16. An antagonist of which of the following mediators is most likely to be effective in the early, acute phase of bronchial asthma?
- a) Interleukin-5
 - b) Leukotriene B4
 - c) Platelet activating factor
 - d) Prostaglandins D2
17. In primary hyperthyroidism:
- a) TSH is decreased, Thyroxine is decreased
 - b) TSH is decreased, Thyroxine is increased
 - c) TSH is increased, Thyroxine is increased
 - d) TSH is increased, Thyroxine is decreased
18. Which of the following best describes diabetes Insipidus:
- a) Passage of large volume of concentrated urine
 - b) Passage of small volume of concentrated urine
 - c) Passage of large volume of dilute urine
 - d) Passage of small volume of dilute urine

19. Pheochromocytoma is mostly characterized by which of the following clinical manifestation:
- Cardiomegally
 - Pupillary dilation
 - Weight loss
 - Hypertension
20. The initial evaluation of a 28 -year -old woman with a 6- month history of ammenorrhea includes measurement of levels of:
- Prolactin
 - Estradiol
 - Testosterone
 - Progesterone

SECTION B: SHORT ANSWER QUESTIONS(40 Marks)

1. Explain three(3) primary glomerular diseases that can result in nephrotic syndrome [6 marks]
2. Explain two (2) types of rapidly progressive (Crescentic) glomerulonephritis[4 marks]
3. When cardiac function is impaired or the workload increases, several physiologic mechanisms maintain the arterial pressure and perfusion of vital organs. Explain three of these mechanisms [6 marks]
4. Describe briefly two types of cardiomyopathies [4 marks]
5. Enumerate five(5) differences between pan acinar and centriacinar emphysema [5 marks]
6. Outline five (5) features of restrictive lung diseases [5 marks]
7. Describe the pathophysiology of gastroesophageal reflux disease [6 marks]
8. Explain two (2) types of diarrhea[4 marks]

SECTION C: LONG ANSWER QUESTIONS(40 Marks)

1. Diabetes Mellitus is an endocrine disorder resulting from impaired glucose metabolism. If left unchecked, it may result in severe and life threatening complications.
 - a) Compare and contrast type I and type II Diabetes Mellitus [8 marks]
 - b) Discuss the pathogenesis of complications of diabetes Mellitus giving appropriate examples [12 marks]

2. One of the most common chronic disease is liver cirrhosis where normal liver tissue is replaced with diffuse fibrosis that disrupts the structure and function of the liver

a) Explain three(3) types of liver cirrhosis [6 marks]

b) Discuss five(5) features of Liver cirrhosis [14 marks]
