

**CHUKA**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**SECOND YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF  
SCIENCE IN NURSING**

**NURS 225: HUMAN PATHOLOGY**

**STREAMS: BSC NURSING Y2**

**TIME: 3 HOURS**

**DAY/DATE: THURSDAY 12/04/2018**

**11.30 A.M. – 2.30 P.M.**

**INSTRUCTIONS:**

- **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 answer for Part I (MCQs) should be on the first page of the answer Booklet.**
- **Number ALL your answer 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. Each of the following features are characteristic of the nephrotic syndrome EXCEPT:
  - (a) Marked proteinuria
  - (b) Hypoalbuminemia
  - (c) Edema
  - (d) Hypertension
  
2. The crystalloids that are major constituents in 75 – 85% of renal calculi are calcium plus:
  - (a) Cystine and oxalate
  - (b) Cystine and phosphate
  - (c) Oxalate and phosphate
  - (d) Oxalate and urate

3. A patient with hemoptysis and renal failure has a renal biopsy which reveals crescentic proliferative glomerulonephritis. Immunofluorescence reveals linear deposits of IgG and C3. The diagnosis is:
  - (a) Acute post-infectious glomerulonephritis
  - (b) Goodpasture's syndrome
  - (c) Membranous nephropathy
  - (d) Minimal change disease
  
4. Which of the following is true concerning hepatorenal syndrome:
  - (a) It is irreversible
  - (b) Only occurs in kidneys with existing disease
  - (c) Kidney maintain the ability to concentrate urine
  - (d) Urine has a high sodium concentration
  
5. Prerenal causes of kidney disease include:
  - (a) Hepatic cirrhosis
  - (b) Vasculitis
  - (c) Malignant hypertension
  - (d) Nephrosclerosis
  
6. The most common cause of intestinal obstruction is
  - (a) Neoplasms
  - (b) Intussusception
  - (c) Hernia
  - (d) Adhesions
  
7. Choose the best statement concerning the pathogenesis of peptic ulcer
  - (a) Acid must be present
  - (b) Acid must be increased
  - (c) Acid must be at least normal in amount
  - (d) Acid need not be present
  
8. An 11-month-old, previously healthy infant has not produced a stool for 1 day. The mother notices that the infant's abdomen is distended. On physical examination, the infant's abdomen is very tender, and bowel sounds are nearly absent. An abdominal plain film radiograph shows no free air, but there are distended loops of small bowel with air-fluid levels. Which of the following is most likely to produce these findings?
  - (a) Meckel diverticulum
  - (b) Duodenal atresia
  - (c) Hirschsprung disease
  - (d) Pyloric stenosis

9. The most common site of chronic gastric peptic ulcer is:
- (a) Lesser curvature at antral-body junction
  - (b) Anterior wall at duodenal verge
  - (c) Greater curvature in mid-antrum
  - (d) Esophago-gastric junction
10. The primary anatomic site of pressure regulation in the vascular system is:
- (a) Veins
  - (b) Arteries
  - (c) Arterioles
  - (d) Capillaries
11. The most common cause of aortic aneurysms is:
- (a) Syphilis
  - (b) Atherosclerosis
  - (c) Congenital weakness of the aortic wall
  - (d) Occlusion of the vasa vasorum
12. Following injury produced by cutting the toe nail too short, a 70-year-old diabetic woman developed infections that progressed to gangrene of the left great toe. The most likely vascular disease process is:
- (a) Thrombophlebitis
  - (b) Arteriosclerosis
  - (c) Phlebosclerosis
  - (d) Thromboangitis obliterans
13. The most common cause of pure aortic stenosis is:
- (a) Rheumatic fever
  - (b) Bacterial endocarditis
  - (c) Valve calcification
  - (d) Marfan's syndrome
14. Which of the following cardiomyopathy is classically characterized by four chamber dilatation
- (a) Idiopathic congestive cardiomyopathy
  - (b) Idiopathic hypertrophic cardiomyopathy
  - (c) Endomyocardial fibrosis
  - (d) Loeffler's endocarditis

15. All of the following are true concerning asthma **EXCEPT**:
- (a) People with asthma are also likely to suffer Eczema
  - (b) Usually associated with airway obstruction
  - (c) Responds well to inhaled beta agonists
  - (d) Has a paternal genetic link
16. Haemophilus influenza is associated with:
- (a) Hospital acquired pneumonia in children
  - (b) Community acquired pneumonia in children
  - (c) Hospital acquired pneumonia in the elderly
  - (d) Lobar pneumonia in male adults
17. Cigarette smoking contribute in the pathogenesis of emphysema by all of the following mechanisms **EXCEPT**:
- (a) Attracts neutrophil into the lungs
  - (b) Stimulates the release of neutrophil elastase
  - (c) Inhibits pulmonary neutrophil's ability to clear bacteria
  - (d) Directly inhibits alpha antitrypsin
18. Breakdown in self tolerance to thyroid auto-antigens is likely to result in which of the following disease:
- (a) Graves disease
  - (b) Hashimoto Thyroiditis
  - (c) Multinodular goiter
  - (d) Hypothyroidism
19. The parents of a 5-year-boy notice that he has developed features that suggest puberty over past 6 months. On physical examination, the boy has secondary sex characteristics, including pubic hair and enlargement of the penis. Which of the following morphologic features is most likely to be seen in his adrenal glands?
- (a) Bilateral adrenal cortical atrophy
  - (b) Nodule in the adrenal medulla
  - (c) Bilateral adrenal cortical hyperplasia
  - (d) Normal size and architecture
20. A 25-year-old woman has noted breast secretions for the past month. She is not breastfeeding and has never been pregnant. She has not menstruated for the past 5 months. Physical examination yields no abnormal findings. MRI of the brain shows a 0.7-cm mass in the adenohypophysis. Which of the following additional complications is most likely to be present in this patient?

- (a) Acromegaly
- (b) Cushing disease
- (c) Hyperthyroidism
- (d) Infertility

**SECTION B: SHORT ANSWER QUESTIONS (20 MARKS)**

1. State five (5) causes of cardiogenic pulmonary edema. (5 marks)
2. Outline five (5) clinical features of obstructive lung disease. (5 marks)
3. Enumerate five (5) possible causes of aortic aneurysms. (5 marks)
4. Explain two (2) features of right sided heart failure. (4 marks)
5. Outline five (5) differences between Crohn's disease and ulcerative colitis. (5 marks)
6. Describe three (3) possible complications of liver cirrhosis. (6 marks)
7. Describe the Pathophysiology of multi-nodular goiter. (5 marks)
8. State five (5) causes of Cushing's syndrome. (5 marks)

**SECTION C: LONG ANSWER QUESTIONS (40 MARKS)**

1. Mr. K, 40 years of age is admitted in the cardiology ward with complaints of profuse sweating and dyspnea. On examination, a rapid, weak pulse and mild cyanosis is noted. Laboratory investigations show elevated levels of troponin and creatine kinase. A diagnosis of myocardial infarction is made.
    - (a) Discuss four (4) causes of myocardial infarction indicating how each contributes. (10 marks)
    - (b) Discuss five (5) possible complications of myocardial infarction. (10 marks)
  2. Madam P, 50 years has just been brought to the emergency department by her daughter in coma. The daughter reports that before this state, the mother was taking too much water and passing urine excessively. Random blood sugar levels are 30 mmol/L
    - (a) What is the possible diagnosis for Madam P? Justify your answer. (2 marks)
    - (b) Compare and contrast type I and Type II Diabetes mellitus. (8 marks)
    - (c) Discuss four (4) possible complications of poorly controlled Diabetes Mellitus. (10 marks)
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