CHUKA  **UNIVERSITY**

UNIVERSITY EXAMINATION

RESIT/SUPPLEMENTARY / SPECIAL EXAMINATIONS EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE (NURSING)

NURS 225: HUMAN PATHOPHYSIOLOGY

STREAMS: BSc. Nursing (Y2S2) **TIME: 2 HOURS**

DAY/DATE: WEDNESDAY 5/5/2021 **2.30 P.M - 4.30 P.M.**

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. A factor that stimulates the proliferation of smooth-muscle cells and also relates to the pathogenesis of atherosclerosis is:
   a) Platelet-derived growth factor
   b) Beta-Transforming growth factor
   c) Interleukin 1
   d) Tumor necrosis factor
2. During a routine physical examination, a 60-year-old male is found to have a 5-cm pulsatile mass in his abdomen. Angiography reveals a marked dilation of his aorta distal to his renal arteries. This aneurysm is most likely the result of:
   a) A congenital defect

b) Atherosclerosis
c) Hypertension
d) A previous syphilitic infection

3. Examples of acyanotic congenital heart disease include:
   a) Fallots tetralogy
   b) Tricuspid atresia
   c) Coarctation of the aorta
   d) Truncus arteriosus
4. Which off 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
5. Features of right sided heart failure:
   a) Heavy wet lungs
   b) Hypertrophy of left ventricle
   c) Hypertrophic osteoarthropathy
   d) Congestive hepatoslenomegally
6. The most characteristic and frequent feature of chronic rheumatic heart disease is the development of:
   a) Vegetations on the endocardium
   b) Aschoff bodies within the myocardium
   c) Stenosis of the mitral valve
   d) Fibrin deposits within the pericardium
7. Histological features of bronchial asthma include:
   a) Calcification of bronchial cartilage
   b) Goblet cell metaplasia
   c) Smooth muscle hypertrophy
   d) Squamous metaplasia of respiratory epithelium
8. Lobar pneumonia is mainly caused by:
   a) M. pneumonia

b) P. carinii
c) S. pneumonia
d) klebsiella ssp.

9. The most common location for intussusception is:
   a) Terminal ileum
   b) Rectum
   c) Colon
   d) Esophagus
10. The basic abnormality involved in the pathophysiology of Crigler-Najjar syndrome is:
   a) Excess bilirubin production
   b) Reduced hepatic uptake of bilirubin
   c) Impaired conjugation of bilirubin
   d) Extrahepatic biliary obstruction
11. A 62- year old male with hepatic failure develops gynecomastia, ascites and asterexis. Gynecomastia is as a result of:
   a) Reduced synthesis of albumin I
   b) Impaired estrogen metabolism
   c) Deranged bilirubin metabolism
   d) Defects in the urea cycle
12. Treatment with corticosteroids would most likely produce a beneficial effect in a young child with:
   a) Focal segmental glomerulosclerosis
   b) Rapidly progressive glomerulonephritis
   c) Acute pyelonephritis
   d) Minimal change disease
13. Rapidly progressive glomerulonephritis is characterized histologically by:
   a) Crescents in the glomeruli
   b) Fibrinoid necrosis of the afferent arterioles
   c) Fibromuscular hyperplasia of renal artery
   d) Neutrophils in the interstitium

14. Features of nephrotic syndrome include:
    a) Hypolilidemia
    b) Hypertension
    c) Hyperalbuminemia
    d) Massive proteinuria
15. Grave's disease is characterized clinically by finding:
    a) Central obesity, "moon face"
    b) Hyperthyroidism, pretibial myxedema
    c) Polyuria, polydipsia
    d) Polyuria, central obesity
16. Lactic acidosis is commonly encountered in patients with hyperglycemia. This is mainly due to
    a) Production of ketone bodies
    b) Accumulation of sorbital
    c) Reduced tissue perfusion
    d) Increased blood sugars
17. Which of the following combination of findings is most likely to present in an individual with primary hyperaldosteronism:
    a) Reduced serum renin, increased aldosterone
    b) Reduced serum renin, reduced aldosterone
    c) Increased serum renin, increased aldosterone
    d) Increased serum renin, reduced aldosterone
18. The clinical effects of excess serum cortisol are referred to as:
    a) Addisson's disease
    b) Cushing's syndrome
    c) Conn's syndrome
    d) Schimdt's syndrome
19. A 42-year-old man presents because recently he has had to change his shoe size from 9 to 10 ½. He also says that his hands and jaw are now larger. The disorder is most likely mediated through the actions of excess
    a) Prolactin

b) ACTH
c) Somatotropin
d) somatostatin

20. The initial evaluation of a 28 -year -old woman with a 6- month history of ammenorrhea includes measurement of levels of:
    a) Prolactin
    b) Estradiol
    c) Testosterone
    d) Progesterone

SECTION B: SHORT ANSWER QUESTIONS (40 Marks)

1. State five (5) causes of non- cardiogenic pulmonary edema (5 marks)
2. Explain five (5) causes of esophageal obstruction (5 marks)
3. Outline five(5) causes of hypothyroidism (5 marks)
4. State five (5) differences between type I and Type II Diabetes mellitus (5 marks)
5. Explain three(3) types of angina pectoris (6 marks)
6. State four (4) causes of ischemic heart disease (4 marks)
7. Enumerate five (5) factors that may predispose to the development of kidney stones (5 marks)
8. Outline five (5) pre-renal causes of kidney disease (5 marks)

SECTIONC: LONG ANSWER QUESTIONS (40 Marks)

1. Mr. T a 50- year old male is admitted in the medical ward with a diagnosis of Emphysema.
    a) Explain five(5) features of obstructive lung disease (10 marks)
    b) Decribe two(20 types of emphysema (10 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 (5 marks)
    Discuss five(5) features of Liver cirrhosis (14 marks)

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