

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE IN
NURSING

NUMS 825: ADVANCED PATHOPHYSIOLOGY II

STREAMS: MSC NURSING (Y1T3)

TIME: 3

HOURS

DAY/DATE: WEDNESDAY 29/09/2021

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 five (5) questions. **ALL** the questions are compulsory
- Number **ALL** your answers and indicate the order of appearance in the space provided in the cover page of the examination answer booklet.

QUESTION ONE

Common disorders of the respiratory system impair oxygen delivery to the lungs or exchange of oxygen between the alveoli and the capillary blood.

- a) Explain four(4) factors that influence airflow to the lungs (8 marks)
- b) Explain six(6) clinical features of atopic asthma indicating the pathophysiology of each (12 marks)

QUESTION TWO

Ninety- five percent of nephrotic syndrome in adults and 60% in children results from primary glomerular disease. If not adequately managed, this condition predisposes to chronic renal failure.

- a) Explain three(3) types of antibody mediated injury to the glomerulus that result in glomerulonephritis (6 marks)
- b) Explain three(3) histologic alterations that occur in glomerulopathies (9 marks)
- c) State five(5) clinical manifestations of nephrotic syndrome (5 marks)

QUESTION THREE

Hyperthyroidism is a hypermetabolic state caused by elevated circulating levels of free T₃ and T₄ due to hyperfunction of the thyroid gland. The main cause of this condition is Graves disease.

- a) Explain four(4) metabolic effects of thyroid hormones (8 marks)
- b) Describe the pathophysiology of Graves disease (9 marks)
- c) Outline three(3) other causes of hyperthyroidism other than Graves disease (3 marks)

QUESTION FOUR

Hemoglobin which constitutes 33% of the cell volume is an iron containing pigment responsible of carrying oxygen in the blood. A decrease in its quality or quantity results in anemia.

- a) Explain five(5) clinical features of anemia (10 marks)
- b) Describe the pathophysiology of sickle cell anemia (10 marks)

QUESTION FIVE

Most cases of intestinal obstruction affect the small intestines because of its relatively narrow lumen. Only about 15% occur in the large bowel and mostly in the sigmoid colon.

- a) Explain four(4) mechanical causes of intestinal obstruction (10 marks)
 - b) Describe the histologic features of Crohn's disease (10 marks)
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