

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

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

NUMS 821: ADVANCED PATHOPHYSIOLOGY I

STREAMS: MS.c NURSING (Y1T2)

TIME: 3 HOURS

DAY/DATE: FRIDAY 9/8/2019

2.30 P.M - 5.30 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
- This paper has five 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 your answer booklet.

QUESTION ONE

Miss T, 18 years of age is admitted in the medical ward with severe respiratory distress. Her blood gas analysis indicates that she had developed respiratory acidosis.

- (a) Discuss three (3) types of chemical buffers indicating how each operates. [12 Marks]
(b) Giving an example, explain four (4) possible causes of respiratory acidosis. [8 Marks]

QUESTION TWO

When a cell is subjected to a stressful stimulus, it adapts. Failure to adapt results in injury and eventually death.

- (a) Describe how mitochondrial damage causes cell injury. [12 Marks]
(b) Describe four (4) types of necrosis clearly indicating the cause and pathologic features. [8 Marks]

QUESTION THREE

Madam X, who is now 6 weeks pregnant has just reported to the ANC clinic. You have done a thorough head to toe examination. You have noted that since, she is pale and has pitting oedema of the lower limbs as well as difficulty in breathing.

- (a) Explain four factors that influence the movement of fluid between the different fluid compartments. [10 Marks]
- (b) Discuss five (5) causes of hypertonic fluid imbalances in the body. [10 Marks]

QUESTION FOUR

Cardio-metabolic/metabolic syndrome is a new disease entity that increases the likelihood of developing coronary artery disease (CAD) and stroke.

- (a) Describe the five (5) features of this syndrome. [10 Marks]
- (b) Discuss five (5) measures that can be undertaken to reduce the risk of cardiovascular disease in patient with cardio-metabolic syndrome. [10 Marks]

QUESTION FIVE

Mr. M, aged 24 years developed anaphylactic shock after receiving an injection of crystalline penicillin. He is currently admitted under intensive care in your ward.

- (a) Describe four (4) other types of shock other than anaphylactic shock. [12 Marks]
 - (b) Anaphylactic shock is one of the hypersensitivity reactions that can occur in an individual. Describe two (2) other types of hypersensitivity reactions giving appropriate examples. [8 Marks]
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