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| QUALIFICATION : BACHELOR OF SCIENCE IN HEALTH INFORMATION SYSTEMS MANAGEMENT | |
| QUALIFICATION CODE: 07BSHM | LEVEL: 5 |
| COURSE: BASIC PATHOPHYSIOLOGY | COURSE CODE: BPP521S |
| DATE: JANUARY 2025 | SESSION: 1 |
| DURATION: 3 HOURS | MARKS: 100 |

SECOND OPPORTUNITY/SUPPLEMENTARY: EXAMINATION QUESTION PAPER

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MODERATOR: MS ELIZABETH NDAKUKAMO-KASINO

INSTRUCTIONS:

1. Answer all questions on the separate answer sheet.
2. Please write neatly and legibly.
3. Do not use the left side margin of the exam paper. This must be allowed for the examiner.
4. No books, notes and other additional aids are allowed.
5. Mark all answers clearly with their respective question numbers.

PERMISSIBLE MATERIALS:

1. Non-programmable scientific calculator

ATTACHMENTS

1. None

This question paper consists of 5 pages including this front page.

QUESTION 1: TRUE AND FALSE

(20 MARKS)

1.1 Assess the following statements and indicate whether they are True or False. Write your answer next to each number in your ANSWER SHEET e.g. 1.1.1: True. Each question carries one (1) mark.

- 1.1.1 The type of necrosis seen in a myocardial infarction is caseous necrosis.
- 1.1.2 Autophagy is a process in which a cell eats its own contents.
- 1.1.3 Monoplegia is a type of paralysis that affects only one limb or one part of the body.
- 1.1.4 Encephalitis: an acute inflammation of the brain parenchyma, caused by viruses and bacteria only.
- 1.1.5 Diastolic blood pressure, refers to the higher number is the pressure exerted by blood when ejected from the left ventricle.
- 1.1.6 Cyanosis is referred to as the bluish coloration of the skin and mucosa caused by increased haemoglobin in arterial blood.
- 1.1.7 Development of whitish reddish appearance in pupil of the eye are part of Cancer's Warning Signs in Children.
- 1.1.8 The Universal precautions for control of infections is stipulated in the Bloodborne Pathogens Standard 39 CFR 1910.1030(b) definitions.
- 1.1.9 Guillain-Barré syndrome Alzheimer disease refers to an excessive neuronal degeneration in adulthood.
- 1.1.10 Increased movement of antibody proteins out of the blood stream is called transcytosis.
- 1.1.11 Bipolar disorder is characterized mood alternates between phases of intense excitement and depression.
- 1.1.12 Increased Intracranial Pressure (ICP) is the pressure exerted by the contents of the cranium, and it normally ranges from 0 to 50 mm Hg.
- 1.1.13 The clinical manifestation of Congestive heart failure is neck vein distention and restlessness.
- 1.1.14 An example of a bacilli or rod-shaped bacteria is *Treponema pallidum*.
- 1.1.15 The pineal gland produces calcitonin.
- 1.1.16 Vasopressin causes milk ejection and contraction of the uterus in labour.
- 1.1.17 Osteopetrosis, also known as marble bone disease, refers to a group of rare genetic diseases that are characterized by reduced bone resorption and diffuse symmetric skeletal sclerosis resulting from impaired formation or function of osteomyelitis.
- 1.1.18 Ectrodactyly is a rare condition in which the middle three toes are absent and the two outer ones are turned in (split hand/foot malformation (SHFM) type 1).
- 1.1.19 Hearing depends on the ear, the cochlear nerve, and the auditory areas of the cerebral cortex.
- 1.1.20 Hertz usually measures loudness of sound.

QUESTION 2: FILL IN THE BLANKS**(15 MARKS)**

2.0 Fill the missing words in the statements below. Each answer earns one (1) mark. (15)

- 2.1 _____ is an infection affecting the renal tubules, pelvis, and calices.
- 2.2 _____ is when the roof of the mouth develops in two separate halves (before birth).
- 2.3 _____ are disorders found in children, especially when there is an interference with the deposition of bone in the growth plates.
- 2.4 _____ is farsightedness that develops if the eyeball and the image is focussed behind the retina.
- 2.5 _____ is an infection of the larynx with accompanying hoarseness, leading to the inability to talk in an audible voice.
- 2.6 _____ syndrome is caused by inflammatory lesions of glomeruli.
- 2.7 _____ are reddish-brown insect 3 to 6 mm long that turn purple after feeding.
- 2.8 _____ fractures are when the bone is damaged with little or no soft tissue damage.
- 2.9 _____ is a sudden, violent, involuntary muscle contraction of a large group of muscles.
- 2.10 _____ refers to diseased endocrine gland secretes an abnormally high amount of its hormone resulting in excessive negative feedback.
- 2.11 _____ presents when the urethra opens on the dorsal aspect of the penis at a point proximal to the glans.
- 2.12 _____ means ultrasound of the heart.
- 2.13 _____ is an increased in the frequency and fluidity of bowel movements.
- 2.14 _____ refers to the swelling and infection of the peritoneum which is the lining that covers the abdominal viscera.
- 2.15 _____ are interoceptors that monitor the pH of the blood.

QUESTION 3 MATCHING QUESTIONS**(15 MARKS)**

3.1 Match the appropriate answer from Column A with a meaning in Column B. Write the appropriate letter next to the corresponding number on your ANSWER SHEET, e.g., 3.1.1 A. Each question earns 1 mark.

| Nr | Item A | | Item B |
|-------|-------------|----|--|
| 3.1.1 | Fomites | A. | Bleeding diathesis |
| 3.1.2 | Inspiration | B. | Is a malignant mesenchymal tumour with skeletal muscle differentiation. |
| | Chondromas | C. | Inability to empty the bladder. |
| 3.1.3 | Vitamin K | D. | Any inanimate object capable of being an intermediate in the indirect transmission of an infectious agent. |

| | | | |
|--------|----------------------|----|--|
| 3.1.4 | Zinc | E. | Congenital disorder of the large intestine in which the autonomic ganglia are reduced or absent. |
| 3.1.5 | Atherosclerosis | F. | Leukocyte redistribution. |
| 3.1.6 | Rhabdomyosarcoma | G. | Component of enzymes, principally oxidases |
| 3.1.7 | Aphthae | H. | Complications include pancreatitis, orchitis, infertility |
| 3.1.8 | Mumps | I. | Develop when the lens of the eye becomes cloudy and light does not pass through easily. |
| 3.1.9 | Cataracts | J. | Small ulcers that occur singly or in groups on the inside of the cheek, lip or underneath the tongue. |
| 3.1.10 | Nystagmus | K. | Air which is conducted from the atmosphere to the lungs by a series of cavities, tubes, and openings |
| 3.1.11 | Psoriasis | L. | Produce whole blood components. |
| 3.1.12 | Retention: | M. | Arise within the medullary cavity known as enchondroma |
| 3.1.13 | Margination: | N. | Hardening and narrowing of the arteries (silently and slowly blocks arteries, putting blood flow at risk). |
| 3.1.14 | Hirschsprung disease | O. | Involuntary abnormal movement of one or both eyes. |
| 3.1.15 | Bone marrow | P. | Chronic inflammatory skin disorder which presents with a red raised demarcation of skin patches with silvery whitish scales. |

SECTION B SHORT/LONG ANSWER QUESTIONS

[50 MARKS]

QUESTION 4 SHORT/LONG ANSWER QUESTIONS

(25 MARKS)

- 4.1 A 5-year-old girl was admitted with an acute respiratory tract infection. She presented with the following symptoms: audible wheezing sounds, breathlessness, a productive cough and a noticeable ballooning of the chest. The doctor requested the health workers to measure her respiratory volumes. Describe the different types of respiratory volumes. (10)
- 4.2 Briefly describe the stages of the General Adaptation Syndrome (GAS) which is caused by a general stress response. (7)
- 4.3 Enumerate the steps in the evolution of disease. (8)

QUESTION 5 SHORT/LONG ANSWER QUESTIONS

(25 MARKS)

5.1 Disease develops when cell structure and function change. Describe any four (4) types of cellular adaptation. (8)

5.2 Read the scenario below and respond to the questions that follow:

Mrs. Kamati, a 30-year-old mother of 2 children, was caught in a fire in her corrugated house whilst they were all asleep. The whole family was rescued from the house but she had mixed burns to most areas of her body except for her face. It was determined by the paramedics that she had full-thickness burns. Mrs Kamati's five-year old girl also sustained several burn wounds:

5.2.1 Explain to a group of grade 12 learners what measurement you will use to determine the percentage of burn wounds sustained by Mrs Kamati's five-year old girl. (2)

5.2.2 Describe the term full-thickness burns (7)

5.2.3 Using the rules-of-nines, calculate the approximate area of full-thickness burns on her both legs, chest and left arm. (8)

END OF EXAMINATION QUESTION PAPER