



NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

**Faculty of Health, Natural
Resources and Applied
Sciences**

School of Health Sciences

Department of Preventative
Health Sciences

13 Jackson Kaujeua Street T: +264 61 207 2970
Private Bag 13388 F: +264 61 207 9970
Windhoek E: dphs@nust.na
NAMIBIA W: www.nust.na

QUALIFICATION : BACHELOR OF SCIENCE IN HEALTH INFORMATION SYSTEMS MANAGEMENT	
QUALIFICATION CODE: 07BSHM	LEVEL: 5
COURSE: BASIC PATHOPHYSIOLOGY	COURSE CODE: BPP521S
DATE: NOVEMBER 2024	SESSION: 1
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY: EXAMINATION QUESTION PAPER

EXAMINER: DR ROSWITHA MAHALIE

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 6 pages including this front page.

QUESTION 1: FILL IN THE BLANKS

(20 MARKS)

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

- 1.1.1 _____ is a condition caused by abnormal accumulation of cerebrospinal fluid (CSF) in the cerebral ventricular system.
- 1.1.2 _____ is when the roof of the mouth develops in two separate halves (before birth).
- 1.1.3 _____ refers to a disease that resulted from an unintended or unwanted medical intervention.
- 1.1.4 _____ refers to the movement and accumulation of leukocytes to the area of injury.
- 1.1.5 _____ is defined as bleeding from the nose usually due to rupture of small blood vessels in the anterior part of the nasal septum.
- 1.1.6 _____ are painless, cystic masses containing sperm.
- 1.1.7 _____ refers to a loss of lung volume caused by inadequate expansion of air spaces.
- 1.1.8 _____ is a condition in which pigment disappears from a patch of skin and may be associated with pernicious anaemia, hyperthyroidism, and diabetes mellitus.
- 1.1.9 _____ refers to decreased bone mass.
- 1.1.10 _____ are malignant tumours that produce cartilage which commonly arise in the axial skeleton, the pelvis, shoulder, and ribs.
- 1.1.11 The _____ begins when light strikes photoreceptors (rod cells and cone cells) in the retina.
- 1.1.12 _____ are hard granules made of calcium, phosphate, uric acid, and protein formed within the urinary tract.
- 1.1.13 _____ arises from injury to the abdominal wall, the parietal peritoneum, the root of the mesentery, or the diaphragm.
- 1.1.14 _____ occurs when oesophageal motility is slowed or disorganized.
- 1.1.15 _____ receive stimuli from inside the body.
- 1.1.16 _____ x-ray pictures taken to determine the blood flow through the vein.
- 1.1.17 _____ is the formation of a thrombus/clot in the veins when the flow of blood is reduced.
- 1.1.18 _____ respond to the stretching of muscle fibers, tendons, joints, and ligaments.
- 1.1.19 _____ is the collection of signs and symptoms that occur together in response to a certain condition
- 1.1.20 _____ is a syndrome characterized by progressive deterioration and continuing decline of memory and other cognitive changes.

Model Answers

QUESTION 2 CHOOSING APPROPRIATE CONCEPTS

(10 MARKS)

2.0 Evaluate the statements in each numbered section and select the most appropriate answer or phrase from the given possibilities. Each question carries 1 – mark.

2.1 Unusual turbulence in the blood flow due to defective valves that leak or do not open completely is called:

- A. Dyspnoea.
- B. Bradycardia.
- C. Cardiac murmurs.
- D. Stroke.

2.2 The presence of many microorganisms in health facilities is referred to as:

- A. Subclinical Infection.
- B. Nosocomial infections.
- C. In-hospital infections.
- D. Clinical Infection.

2.3 Examples of genetic de-arrangement includes the following except:

- A. Down Syndrome (trisomy 21).
- B. Haemophilia.
- C. Paget Disease.
- D. Sickle cell Anaemia.

2.4 Small ulcers that occur singly or in groups on the inside of the cheek, lip or underneath the tongue are called:

- A. Mumps.
- B. Aphthae.
- C. Vincent Disease.
- D. Aphthous stomatitis.

2.5 An overactive thyroid gland is referred to as:

- A. Graves disease.
- B. Cretinism.
- C. Myxoedema.
- D. Diabetes Insipidus.

2.6 A replacement of a mature cell type by a different mature cell type, is called:

- A. Dysplasia.
- B. Hyperplasia.
- C. Hypertrophy.
- D. Metaplasia.

2.7 Inflammation of the testis caused by trauma or the reflux of sterile urine up the vas deferens is called:

- A. Cryptorchidism.
- B. Epididymitis.
- C. Epididymosis.

D. Fournier gangrene.

2.8 Increased amount and duration of menstrual flow, is called:

- A. Oligomenorrhea.
- B. Menorrhagia.
- C. Metrorrhagia.
- D. Polymenorrhagia.

2.9 Which of the following is known as a short episode of pain:

- A. Referred pain.
- B. Acute pain.
- C. Transient pain.
- D. Phantom pain.

2.10 _____ occurs when the placenta is implanted over the cervical os is called:

- A. Abruptio placentae.
- B. Placenta absentia.
- C. Placenta previa.
- D. Placentalrhagia.

QUESTION 3 MATCHING QUESTIONS /DEFINITION OF CONCEPTS

(25 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.

(20)

Nr	Item A		Item B
3.1.1	Fomites	A.	An adaptation to nutrient deprivation in which cells digest their own organelles and recycle them to provide energy and substrates.
3.1.2	Vitamin A	B.	Tear in the tendon/overuse or stretching of a muscle or tendon.
3.1.3	Vitamin K	C.	A build-up of fatty deposits on the walls of the coronary arteries.
3.1.4	Vitamin B12	D.	Signs and symptoms are usually mild and nonspecific
3.1.5	Autophagy	E.	Any inanimate object capable of being an intermediate in the indirect transmission of an infectious agent.
3.1.6	Allostasis	F.	A component of visual pigment
3.1.7	Rheumatic Heart disease	G.	Scurvy
3.1.8	Prodromal period	H.	Required for normal folate metabolism and DNA synthesis.

3.1.9	Zinc	I.	Component of enzymes, principally oxidases
3.1.10	Vitamin C	J.	Acute, post-streptococcal, immune mediated, multisystem inflammatory disease
3.1.11	Atherosclerosis	K.	Hardening and narrowing of the arteries (silently and slowly blocks arteries, putting blood flow at risk).
3.1.12	Rhabdomyosarcoma	L.	Is a malignant mesenchymal tumour with skeletal muscle differentiation.
3.1.13	Strains	M.	dynamic process that supports and helps the body achieve a steady state.
3.1.14	Mumps	N.	Complications include pancreatitis, orchitis, infertility
3.1.15	Cataracts	O.	Inability to empty the bladder.
3.1.16	Nystagmus	P.	Need for urination during sleep period.
3.1.17	Psoriasis	Q.	Chronic inflammatory skin disorder which presents with a red raised demarcation of skin patches with silvery whitish scales.
3.1.18	Retention	R.	Develop when the lens of the eye becomes cloudy and light does not pass through easily.
3.1.19	Nocturia	S.	Involuntary abnormal movement of one or both eyes.
3.1.20	Atheroma	T.	Bleeding diathesis
		U.	infection which is localized in the urethra
		V.	Abnormal sound on auscultation of the heart

3.2 Define the following terms: (5)

3.2.1 Glasgow Coma Scale (2)

3.2.2 Otitis Media (1)

3.2.3 Keloid (2)

SECTION B SHORT/LONG ANSWER QUESTIONS [45 MARKS]

QUESTION 4 SHORT/LONG ANSWER QUESTIONS (32 MARKS)

4.1 Fractures is a break in the rigid structure and continuity of a bone as a result of direct, indirect trauma, underlying disease or repeated stress on a bone. Outline the inflammatory and remodelling phases and the bone activity that takes place during the

healing process. (11)

4.2 Enumerate the any three (3) clinical manifestations of the following pathological conditions. (9)

- 4.2.1 Type 1 diabetes-Insulin-dependent diabetes mellitus (IDDM)
- 4.2.2 Hypercortisolism
- 4.2.3 Myocardial Infraction

4.3 Figure 1 below illustrates a pathological condition. Write the correct answers for the following questions in your ANSWER SHEET: (12)

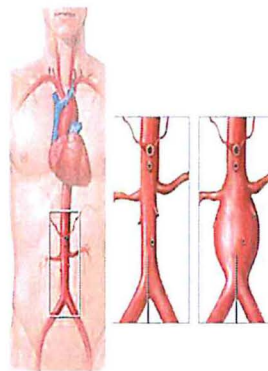


Figure 1 Pathological condition

- 4.3.1 Identify the condition (2)
- 4.3.2 Define the condition (3)
- 4.3.3 Write seven (7) clinical manifestations of the condition. (7)

QUESTION 5 SHORT/LONG ANSWER QUESTIONS (13 MARKS)

5.1 A 60-year-old man was hospitalized with pneumonia. At the time of admission, he had a high fever, shortness of breath and tachycardia. It was later discovered that his urine output has decreased (oliguria). Explain homeostasis in the kidneys through the process of excretion. (6)

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

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 hands and face. It was determined by the paramedics that she had full-thickness burns:

- 5.2.1 Using the rules-of-nines, calculate the approximate area of full-thickness burns on her both legs, chest and left arm (7)

END OF EXAMINATION QUESTION PAPER