AMREF INTERNATIONAL UNIVERSITY

SCHOOL OF MEDICAL SCIENCES

DEPARTMENT OF REHABILIATIVE MEDICINE

BACHELOR OF SCIENCE IN PHYSIOTHERAPY

END OF TRIMESTER EXAMINATIONS JANUARY TO APRIL 2023

UNIT CODE: PHT 212

UNIT NAME: GENERAL PATHOLOGY

DATE: 9TH APRIL 2024 **TIME: 9AM-11AM**

INSTRUCTIONS

1. **All students will have two (2) hours to complete the examination**
2. **Attempt all questions as per the instruction**
3. **It is the student's responsibility to report any page and number missing in this paper.**
4. **Check that the paper is complete**
5. **Total number of pages is 6 including the cover.**

MULTPLE CHOICE QUESTIONS (40 MARKS)

1. What primary characteristic of necrosis is relevant to physiotherapy practice?

A. Programmed cell death

B. Inflammation

C. Cellular shrinkage

D. Absence of membrane damage

2. How does knowledge of different types of necrosis influence physiotherapy interventions?

A. It guides rehabilitation exercises.

B. It helps in selecting appropriate modalities for pain management.

C. It informs about the duration of rest needed for tissue healing.

D. It aids in assessing the need for surgical intervention.

3. In physiotherapy practice, which cellular adaptation may be observed in response to muscle hypertrophy due to resistance training?

A. Atrophy

B. Hypertrophy

C. Hyperplasia

D. Metaplasia

4. What physiological mechanism may contribute to reversible cell injury during the rest period between physiotherapy sessions?

A. Severe membrane damage

B. Oxidative stress

C. Mitochondrial dysfunction

D. Mild and transient insult

5. In the context of physiotherapy, which type of inflammation is commonly associated with acute musculoskeletal injuries?

A. Acute inflammation

B. Chronic inflammation

C. Subacute inflammation

D. Granulomatous inflammation

6. Which cellular adaptation may be observed in response to prolonged immobilization during rehabilitation?

A. Atrophy

B. Hypertrophy

C. Hyperplasia

D. Metaplasia

7. Which immune cells are primarily responsible for releasing toxic substances to kill microbes but can also contribute to tissue damage?

A. Macrophages

B. Dendritic Cells

C. Neutrophils

D. Mast Cells

8. Which cell type is not typically involved in allergic responses?

A. Basophils

B. Neutrophils

C. Mast Cells

D. Eosinophils

9. What role do regulatory T cells (Tregs) play in the immune system?

A. Coordinating immune responses

B. Killing infected cells

C. Preventing excessive inflammation

D. Producing antibodies

10. Which immune cells are cytotoxic lymphocytes that recognize and destroy infected or cancerous cells without prior sensitization?

A. Eosinophils

B. Natural Killer (NK) Cells

C. Monocytes

D. Basophils

11. What is the primary role of B lymphocytes (B cells) in the immune system?

A. Presenting antigens to T cells

B. Killing infected cells

C. Producing antibodies

D. Regulating inflammation

12. What is the primary function of mast cells in the immune system?

A. Engulfing pathogens

B. Coordinating immune responses

C. Releasing histamine and other mediators

D. Producing antibodies

13. Which immune cells are involved in defense against parasitic infections and allergic reactions, releasing cytotoxic granules to combat parasites?

A. T Lymphocytes (T Cells)

B. Mast Cells

C. Eosinophils

D. Neutrophils

14. What term describes a benign tumor originating from hyaline cartilage?

A. Osteoma

B. Chondroma

C. Fibroma

D. Leiomyoma

15. Which of the following is a characteristic feature of multiple sclerosis (MS)?

A. Demyelination of the central nervous system

B. Autoimmune destruction of acetylcholine receptors

C. Presence of Lewy bodies in neurons

D. Hypopigmented macules on the skin

16. Which type of hypersensitivity reaction is mediated by IgE antibodies?

A. Type I

B. Type II

C. Type III

D. Type IV

17. Contact dermatitis is an example of which type of hypersensitivity reaction?

A. Type I

B. Type II

C. Type III

D. Type IV

18. Which interleukin is primarily secreted by macrophages and plays a role in fever induction?

A. IL-1

B. IL-2

C. IL-6

D. IL-10

19. Which of the following diseases is associated with Type II hypersensitivity reaction against acetylcholine receptors?

A. Myasthenia gravis

B. Rheumatoid arthritis

C. Systemic lupus erythematosus

D. Hashimoto's thyroiditis

20.What is the term for cellular adaptation characterized by the replacement of one adult cell type with another adult cell type?

A. Hypertrophy

B. Hyperplasia

C. Metaplasia

D. Atrophy

SECTION B SHORT ANSWER QUESTIONS

1. Whats the differences between benign and malignant

tumours (5 Marks)

2. Describe principles of cellular injury (10Marks)

SECTION C LONG ANSWER QUESTION

"A patient with a history of chronic kidney disease presents with an enlarged heart detected during a routine check-up" Explain the concept of hyperplasia, dysplasia and hypertrophy in tissue growth (15 Marks)