



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF REHABILITATIVE MEDICINE
BACHELOR OF SCIENCE IN PHYSIOTHERAPY

END OF TRIMESTER EXAMINATIONS JANUARY TO APRIL 2024

UNIT CODE: PHT 212:
UNIT NAME: GENERAL PATHOLOGY

DATE: 17TH APRIL 2024

TIME: 6PM-8PM

INSTRUCTIONS

1. All students will have two (2) hours to complete the examination
2. This is an **online exam**, 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 7 including the cover.
6. Read through the paper quickly before you start.
7. Upon finishing the exam paper, on submission, the message 'Your examination has been submitted' will appear.

All the Best!!

TOTAL: _____/70

PERCENT: _____/100%

POINTS EARNED TOWARDS FINAL GRADE _____/70

SECTION A (1 mrk for each answer)

1. Which of the following best describes oedema?
 - a) Increased blood pressure in the arteries
 - b) Excessive sweating due to heat
 - c) Abnormal accumulation of fluid in tissues
 - d) Decreased blood flow to the heart
2. Which of the following is not a stage of inflammation?
 - a) Resolution
 - b) Proliferation
 - c) Repair
 - d) Exacerbation
3. What is the name of the process by which white blood cells migrate to the site of inflammation?
 - a) Diapedesis
 - b) Apoptosis
 - c) Phagocytosis
 - d) Exocytosis
4. Which of the following is an example of a chronic inflammatory disease?
 - a) Acne
 - b) Eczema
 - c) Rheumatoid arthritis
 - d) Acute bronchitis
5. Which is the characteristic feature of apoptosis when viewed under a microscope?
 - a) Nuclear fragmentation
 - b) Cell swelling
 - c) Loss of plasma membrane integrity
 - d) Cellular blebbing
6. Which enzyme family is responsible for carrying out apoptosis?
 - a) Proteases
 - b) Lipase
 - c) Kinases
 - d) Phosphatases
7. Which of the following is NOT a type of programmed cell death?

- a) Apoptosis
- b) Necrosis
- c) Autophagy
- d) Senescence

8. What type of necrosis is associated with tissue breakdown and formation of cavities?

- a) caseous necrosis
- b) Liquefactive necrosis
- c) Coagulative necrosis
- d) Fat necrosis

9. Lipid accumulation within hepatocytes is commonly observed in?

- a) Non-alcoholic fatty liver disease (NAFLD)
- b) Hepatitis B
- c) Pancreatitis
- d) Cirrhosis

10. Lipid accumulation within arterial walls is a hallmark feature of?

- a) Diabetes mellitus
- b) Hypertension
- c) Atherosclerosis
- d) Congestive heart failure

11. In which of the following conditions does melanin accumulations occur within cells?

- a) Albinism
- b) Addison's disease
- c) Hemochromatosis
- d) Vitiligo

12. Extracellular accumulation refers to the buildup of substances:

- a) Inside the cell
- b) Outside the cell
- c) Within the nucleus
- d) Within the mitochondria

13. Extracellular accumulations of which substance is characteristic of xanthomas?

- a) Glycogen
- b) Lipids
- c) Iron
- d) Bilirubin

14. Which of the following is a characteristic feature of amyloidosis?

- a) Intracellular accumulation of lipids
- b) Extracellular deposition of amyloid proteins
- c) Accumulation of glycogen within lysosomes
- d) Increased mitochondrial activity

15. Which of the following factors can impair wound healing?

- a) Smoking
- b) Obesity
- c) Diabetes mellitus
- d) All of the above

16. What is the main function of myofibroblasts during wound healing?

- a) Phagocytosis
- b) Collagen synthesis
- c) Contraction
- d) Angiogenesis

17. Which growth factor stimulates angiogenesis during wound healing?

- a) Transforming growth factor-beta (TGF- β)
- b) Platelet-derived growth factor (PDGF)
- c) Vascular endothelial growth factor (VEGF)
- d) Fibroblast growth factor (FGF)

18. Which of the following is NOT a risk factor for thrombotic disorders?

- a) Smoking
- b) Obesity
- b) Regular exercise
- d) Prolonged immobility

19. What is the most common cause of cardiogenic shock?

- a) Severe dehydration
- b) Myocardial infarction
- c) Pulmonary embolism
- d) Hypovolemia

20. Which of the following statements regarding thrombocytopenia is true?

- a) It is characterized by an abnormally high platelet count
- b) It increases the risk of bleeding.
- c) It is caused by excesses blood clotting.

d) It is not associated with any symptoms.

21. _____ has an oral and enteric clinical presentation and its manifestations include pyogenesis (pus formation)

- a) Staphylococcus
- b) Streptococcus
- c) Planococcus
- d) Stomatococcus

22. Kaposi's sarcoma is linked with which of the following virus?

- a) Human Herpes virus 6
- b) Human herpes virus 8
- c) Herpes simplex Type 1
- d) Herpes simplex Type

23. Anaplasia means?

- a) Lack of dedifferentiation
- b) Increase in number of cells
- c) Disordered cellular development
- d) Lack of differentiation

24. Grading of cancer is based on which of the following statement

- a) Spread of cancer cells to region lymph nodes.
- b) Presence of capsular invasion by tumor cells.
- c) Degree of differentiation of tumor cells, anaplasia, no of mitosis.
- d) Size of primary tumor.

25. Which of the following malignancy is associated with exposure to Vinyl Chloride?

- a) Lung carcinoma
- b) Hepatic angiosarcoma
- c) Prostatic carcinoma
- d) Acute myeloid leukemia

26. The marker CA- 15- 3 is associated with?

- a) Breast carcinoma
- b) Ovarian carcinoma
- C) Colon Carcinoma
- d) Prostate carcinoma

27. Which of the following is not a character of inflammatory fluid exudates?

- a) High protein content
- b) High specific gravity
- c) Absence of inflammatory cells
- d) Clots on standing

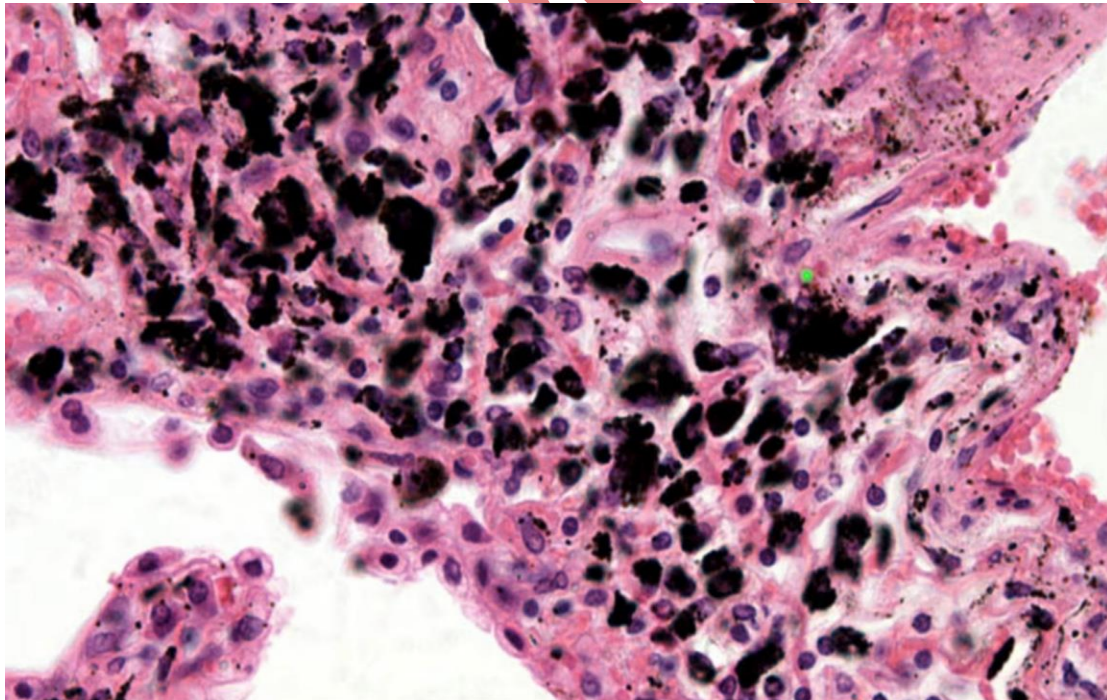
28. Signs of acute inflammation are explained by:

- a) Presence of bacteria
- b) Patient's immune response
- c) Vascular phenomenon
- d) None of the above

29. How may smoking adversely affect wound healing? Choose 2 answers

- a) By reducing protein catabolism.
- b) By increasing the amount of carboxyhaemoglobin in the blood
- c) By increasing the amount of oxyhaemoglobin in the blood
- d) By interfering with normal vitamin c metabolism

SECTION B



- 1 a. Describe the histologic features seen in this image (2 mrk)
- b. What type of exogenous pigment accumulation is seen from this image? (1 mrk)
- C. In which tissue of the body is this type of accumulation seen? 1 mrk)

d. Name any other type of exogenous pigment known. (1 mrk)

2. Name 2 disorders of platelet function (1 mrk)

3. What is the role of the cell membrane? (1 mrk)

4. What is malnutrition? (1 mrk)

5. What are the 4 steps of haemostasis (2 mrk)

ANSWER EACH OF THE FOLLOWING QUESTIONS WITH TRUE OR FALSE (1 mrk for each question)

6. Thrombosis occurs when blood clots form from inside the blood vessels

7. Thrombosis only occurs in arteries, not veins

8. Edema is the accumulation of excess fluid within the interstitial spaces of tissues

9. Hypoalbuminemia can lead to edema by reducing the osmotic pressure in the blood vessels

10. Edema can be localized or generalized throughout the body

11. Malignant tumors are not encapsulated and well-defined

12. Angiogenesis is the process of forming new blood vessels, often seen in tumors to provide them with nutrients

13. HIV/AIDS is an example of an immunodeficiency disorder

14. Immunodeficiency disorders result in an overactive immune response

15. Hypovolemic shock is characterized by excessive fluid volume in the bloodstream

SECTION C (5 mrk for each question)

1. Name 5 extrinsic factors delaying the wound healing process

2. What are the main histological features used to classify tumors?

3. Explain the Starling principle

4. Explain the components of Virchow's Triad and their role in thrombosis