 F.Y. B.Pharma 13/8/2025

(Time: 3 Hours) Total Marks: 75

N.B.: All Questions are compulsory.

Q.1: Multiple choice questions. **20 Marks**

1. Which of the following is an early and reversible sign of cell injury?
   a) Karyorrhexis
   b) Cell swelling
   c) Apoptosis
   d) Coagulative necrosis

2. Which of the following types of damage is most likely to impair ATP production in a cell?
   a) Ribosomal damage
   b) Mitochondrial damage
   c) Nuclear damage
   d) Plasma membrane damage

3. Accumulation of calcium salts in injured tissues without changes in blood calcium levels is referred to as:
   a) Metastatic calcification
   b) Physiological calcification
   c) Dystrophic calcification
   d) Pathological ossification

4. Increased permeability of blood vessels results in leakage in plasma proteins and fluid into the tissue, results in _____.
   a) Angina
   b) Necrosis
   c) Apoptosis
   d) Edema

5. Leukocytes are attracted to the chemo attractance and travel to the site of inflammation. This process is called as_____.
   a) Pinocytosis
   b) Phagocytosis
   c) Chemotaxis
   d) Local invasion

6. Which condition is characterized by the irreversible death of heart muscle due to prolonged ischemia?
   a) Angina pectoris
   b) Myocardial infarction
   c) Congestive heart failure
   d) Atherosclerosis

7. Stable angina is typically triggered by which of the following?
   a) Severe allergic reactions
   b) Infection of the myocardium
   c) Complete coronary artery
   d) Emotional stress or physical exertion

8. In asthma, which cells are primarily involved in the inflammatory response?
   a) Neutrophils and macrophages
   b) Eosinophils and mast cells
   c) Red blood cells and lymphocytes
   d) Platelets and plasma cells

9. Chronic obstructive pulmonary disease (COPD) primarily includes:

a) Asthma and lung cancer
b) Emphysema and asthma
c) Emphysema and chronic bronchitis
d) Chronic bronchitis and lung cancer

10. Chronic kidney disease involves:

a) Temporary creatinine rise
b) Reversible kidney loss
c) Creatinine high > 3 months
d) Acute kidney inflammation

11. Megaloblastic anemia is commonly caused by deficiency of which vitamins?

a) Vitamin C and D
b) Vitamin A and K
c) Vitamin B6 and E
d) Vitamin B12 and Folic acid

12. The hormone that acts opposite to insulin in blood sugar regulation is _____.

a) Melatonin
b) Glucagon
c) Calcitonin
d) Oxytocin

13. Gynecomastia refers to the enlargement of _____ in males.

a) Testes
b) Prostate
c) Breast tissue
d) Thyroid gland

14. Parkinson's disease primarily affects which part of the brain?

a. Hippocampus
b) Cerebellum
c) Substantia nigra
d) Medulla oblongata

15. Helicobacter pylori is a common cause of _____.

a) Bicarbonate excess
b) Prostaglandin secretion
c) Mucosal blood flow increase
d) Peptic ulcer

16. Ulcerative colitis typically affects which part of the gastrointestinal tract?

a) Small intestine only
b) Esophagus and stomach
c) Colon and rectum
d) Liver and gall bladder.

17. A distinguishing feature of rheumatoid arthritis compared to osteoarthritis is _____.

a) Absence of inflammation
b) Morning stiffness lasting more than 1 hour
c) Involvement of weight-bearing joints only
d) Caused by age-related wear and tear

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18. Cancer cells are not recognized as foreign by the immune system because they do not have _____.

a) Signaling receptors
b) Chemical Mediators
c) A specific antigen
d) Cytokines release

19. The causative agent of typhoid fever is _____.

a) Shigella dysenteriae
b) Vibrio cholerae
c) Salmonella typhi
d) Clostridium tetani

20. A common symptom of gonorrhea in males is _____.

a) Genital warts
b) Painful ejaculation
c) Purulent urethral discharge
d) Genital ulceration

Q.2: Long answer question (attempt any TWO out of three) 20 Marks

1. Explain in detail causes of cell injury and mechanism involved in process of inflammation.
2. Give a note on etiology, causes, signs and symptoms, pathophysiology, diagnosis, and treatment of atherosclerosis.
3. Explain signs and symptoms, pathogenesis of peptic ulcer and diabetes mellitus.

Q.3: Short answer question (attempt any SEVEN out of nine) 35 Marks

1. Explain different types of inflammation and basic principles involved in wound healing in the skin.
2. Describe etiology and pathophysiology of chronic obstructive pulmonary disease.
3. Explain symptoms, pathogenesis, and treatment of Alzheimer's disease.
4. Define anemia. Enlist different types of anemia. Give a note on Sickle cell anemia.
5. What is Inflammatory bowel disease? Explain signs, symptoms, and pathophysiology of the same.
6. Explain pathophysiology of Rheumatoid arthritis in detail.
7. Discuss etiology and pathogenesis of cancer.
8. Give a note on pathophysiology of Typhoid and Tuberculosis.
9. Describe etiology, transmission, symptoms, diagnosis, and treatment of Syphilis

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