

Enrolment Number

Total No. of printed pages = 05

Winter, 2023

B. Pharm 2<sup>nd</sup> Semester Examination

Pathophysiology- Theory

Course Code: BP204T

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Full Marks – 75

Time – 3 hours

*The figure in the margin indicates full marks for the questions.*

1. Multiple choice questions (MCQ) (Answer all questions): (20 X 1 = 20)
- i. Which organelle is primarily affected in cell injury leading to mitochondrial damage?
- Golgi apparatus
  - Endoplasmic reticulum
  - Mitochondria
  - Lysosomes
- ii. Which term refers to a reversible decrease in cell size due to loss of cell substance?
- Hypertrophy
  - Hyperplasia
  - Atrophy
  - Metaplasia
- iii. Cell swelling is primarily caused by:
- Accumulation of intracellular calcium
  - Accumulation of intracellular proteins
  - Loss of intracellular water
  - Disruption of the cell membrane
- iv. Which of the following is NOT a clinical sign of inflammation?
- Redness (Rubor)
  - Heat (Calor)
  - Coldness (Frigor)

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- d. Swelling (Tumor)
- v. Which condition is characterized by persistent elevation of blood pressure above normal levels?
- a. Atherosclerosis
  - b. Hypertension
  - c. Myocardial infarction
  - d. Angina
- vi. Ischemia is \_\_\_\_\_
- a. Overflow of blood to tissues
  - b. Restriction of blood supply to tissues
  - c. Inadequate deoxygenated blood-carrying veins
  - d. Shortness of breath
- vii. Which condition involves chronic inflammation and narrowing of the airways, leading to recurrent episodes of wheezing, breathlessness, and chest tightness?
- a. Asthma
  - b. Chronic obstructive pulmonary disease (COPD)
  - c. Pneumonia
  - d. Bronchitis
- viii. Hemophilia is \_\_\_\_\_
- a. Y-linked disorder
  - b. X-linked disorder
  - c. Z-linked disorder
  - d. Autosomal
- ix. Which term describes a condition characterized by chest pain or discomfort due to reduced blood flow to the heart muscle?
- a. Hypertension
  - b. Angina
  - c. Myocardial infarction
  - d. Arteriosclerosis
- x. Rheumatoid arthritis primarily affects which type of tissue?



- a. Bone
  - b. Cartilage
  - c. Muscle
  - d. Ligament
- xi. Gout is caused by the deposition of:
- a. Uric acid crystals in the joints
  - b. Calcium crystals in the joints
  - c. Cholesterol crystals in the joints
  - d. Sodium crystals in the joints
- xii. Which type of viral hepatitis is primarily transmitted through contaminated food and water?
- a. Hepatitis A
  - b. Hepatitis B
  - c. Hepatitis C
  - d. Hepatitis D
- xiii. Which of the following foods is known to exacerbate gout symptoms due to its high purine content?
- a. Fruits
  - b. Vegetables
  - c. Red meat
  - d. Whole grains
- xiv. Meningitis is an infection characterized by inflammation of the:
- a. Liver
  - b. Brain and spinal cord membranes
  - c. Lungs
  - d. Kidneys
- xv. Which bacterium is responsible for causing typhoid fever?
- a. *Salmonella typhi*
  - b. *Mycobacterium tuberculosis*
  - c. *Treponema pallidum*

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d. *Leptospira* spp.

xvi. AIDS is caused by the human immunodeficiency virus (HIV), which primarily targets:

- a. Muscle tissue
- b. Bone marrow
- c. The immune system
- d. Nervous tissue

xvii. Which bacterium is responsible for causing gonorrhea?

- a. *Chlamydia trachomatis*
- b. *Neisseria gonorrhoeae*
- c. *Treponema pallidum*
- d. *Haemophilus ducreyi*

xviii. Which of the following is NOT considered a risk factor for cancer development?

- a. Tobacco use
- b. Obesity
- c. Regular exercise
- d. Ultraviolet radiation exposure.

xix. HIV is \_\_\_\_\_

- a. Capripoxvirus
- b. Gallivirus
- c. Lentivirus
- d. Papillomavirus

xx. Iron deficiency anemia is characterized by a deficiency in which essential mineral?

- a. Magnesium
- b. Iron
- c. Calcium
- d. Potassium.

2. Short answers (Answer any seven) (word limit: 250 words)

(7 X 5 = 35)

(i). Explain the phases involved in wound healing of the skin.



- (ii). Discuss the different hematological-related disorders.
  - (iii). Describe the types of ischemic heart disease. Write a note on acute and chronic renal failure.
  - (iv). Explain the types of diabetes mellitus. Briefly explain the disorders of sex hormones.
  - (v). Explain the pathogenesis and clinical presentation of rheumatoid arthritis.
  - (vi). Mention the different sexually transmitted diseases. Explain the pathogenesis of Gonorrhea.
  - (vii). Describe the role vitamin B12 and folic acid play in the production of red blood cells? Explain how their deficiency leads to megaloblastic anaemia.
  - (viii). Define peptic ulcer. Write a note on the pathophysiology of peptic ulcer disease.
  - (ix). Explain the etiology, pathogenesis, signs and symptoms of tuberculosis.
3. Long answers (Answer any two): (word limit: 1000 words) (2 X 10 = 20)
- (i). (a) Define Parkinson's disease. Write a note on the pathogenesis and clinical symptoms of Parkinson's disease. (5)  
(b) Elaborate on the different types of adaptive changes in a cell. Explain the process of calcification and enzyme leakage in cell death. (5)
  - (ii). Define the term 'Neoplasm'. Classify tumors. Write a note on the etiology and pathogenesis of cancer. (1+4+5)
  - (iii). (a) Define the term 'atherosclerosis'. Elaborate on the pathophysiology of atherosclerosis. (1+4)  
(b) Write a note on alcoholic liver disease. (5)