

DEPARTMENT OF PATHOLOGY

Syllabus for PhD (Pathology)

1. General Pathology:

- Normal cell and tissue structure and function.
 - The changes in cellular structure and function in disease.
 - Causes of disease and its pathogenesis.
 - Reaction of cells, tissues, organ systems and the body as a whole to various sublethal and lethal injuries.
- A. Applied Anatomy, Physiology, Biochemistry, Histology and Cytopathology in context to the subject of Pathology.
- B. Techniques in pathology pertaining to all the sub disciplines in the subject of pathology.
- C. Recent advances in pathology encompassing its sub disciplines.

2. Systemic Pathology:

- Normal structure and function of various organ systems.
 - Etiopathogenesis, gross features and microscopic alterations of structure of these organ systems in disease and functional correlation with clinical features.
 - Histogenetic and pathophysiologic process associated with various lesions.
- A. Applied Anatomy, Physiology, Biochemistry, Histology and Cytopathology in context to the subject of Pathology.
- B. Techniques in pathology pertaining to all the sub disciplines in the subject of pathology.
- C. Recent advances in pathology encompassing its sub disciplines.

3. Hematopathology:

- Principles of the practice of haematology for the planning of tests, interpretation and diagnosis of diseases of the blood and bone marrow.
 - Various equipments used in haematology.
 - Automation and quality assurance in Haematology
- A. Applied Anatomy, Physiology, Biochemistry, Histology and Cytopathology in context to the subject of Pathology.
- B. Techniques in pathology pertaining to all the sub disciplines in the subject of pathology.
- C. Recent advances in pathology encompassing its sub disciplines.

4. Transfusion Medicine AND Chemical Pathology:

- ABO, Rh blood groups and its significance.
 - Blood component therapy.
 - Transfusion therapy including the use of whole blood and RBC concentrates.
 - Rationale of pre transfusion testing.
 - Adverse reactions to transfusion of blood and components.
 - Quality control in Blood Bank.
 - Renal Function Test
 - Liver function test
 - Pancreatic function test
 - Endocrine function test
 - Tests for malabsorption
 - Gastric function tests
 - Tests for myocardial diseases.
- A. Applied Anatomy, Physiology, Biochemistry, Histology and Cytopathology in context to the subject of Pathology.
- B. Techniques in pathology pertaining to all the sub disciplines in the subject of pathology.
- C. Recent advances in pathology encompassing its sub disciplines.

5. Immunology & Immunodiagnostics AND Genetics & Molecular Genetics:

- Current concepts of structure and function of immune system, its aberrations and mechanisms involved.
 - Scope, principles, limitations and interpretation of the results of the procedures employed in clinical and experimental studies.
 - ELISA Techniques.
 - Principles of molecular biology related to the understanding of disease process and its use in various diagnostic tests.
 - Principles and steps of interpretation of polymerase chain reaction (PCR), Western blot test, Southern blot, Northern blot and hybridization process.
- A. Applied Anatomy, Physiology, Biochemistry, Histology and Cytopathology in context to the subject of Pathology.
- B. Techniques in pathology pertaining to all the sub disciplines in the subject of pathology.
- C. Recent advances in pathology encompassing its sub disciplines.
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- 50 MCQs per Theme

DISTRIBUTION OF MCQs:

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| LEVEL 3 | 20 |
| LEVEL 4 | 15 |
| LEVEL 5 | 10 |
| LEVEL 6 | 05 |

- Last date: 15 January 2021.