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**DEPARTMENT OF PATHOLOGY
GMERS MEDICAL COLLEGE-JUNAGADH**

2nd M.B.B.S. Pathology

SYLLABUS

(New Course)



**Professor & Head
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OBJECTIVES

A MBBS student at the end of training in Pathology will be able to:

1. Understand the concepts of cell injury and changes produced thereby in different tissues and organs and the body's capacity for healing.
2. Understand the normal homeostatic mechanisms, the derangements of these mechanism and the effects on human systems.
3. Understand the etiopathogenesis, the pathological effects and the clinico-pathological correlation of common infectious and non-infectious diseases.
4. Understand the concept of neoplasia with reference to the etiology, gross and microscopic features, diagnosis and prognosis in different tissues and organs of the body.
5. Correlate normal and altered morphology (gross and microscopic) of different organ systems in different diseases to the extent needed for understanding of disease processes and their clinical significance.
6. Have a knowledge of common immunological disorders and their resultant effects on the human body.
7. Have an understanding of the common haematological disorders and the investigations necessary to diagnose them and determine their prognosis.
8. Perform and interpret in a proper manner the basic clinico-pathological procedures.
9. Know the principles of collection, handling and dispatch of clinical samples from patients in a proper manner.

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Syllabus for Paper-1

General Pathology

Introduction to Pathology

- Role of a pathologist in diagnosis and management of disease
- Definitions and terms used in Pathology
- History and evolution of Pathology

Cell Injury and Adaptation

- Cell injury Causes, Mechanism, types & effects
- Intracellular accumulation
- Cell death, necrosis, apoptosis, autolysis
- Pathologic calcifications,
- Gangrene
- Cellular adaptations
- Cellular aging

Amyloidosis: Pathogenesis and pathology of amyloidosis

Inflammation

- Acute and chronic inflammation

Healing and repair:

- Process of repair and regeneration
- Wound healing and its types

Hemodynamic disorders

- Edema, hyperemia, congestion, hemorrhage
- Shock
- Haemostasis, thrombosis, embolism
- Ischaemia/infarction

Neoplastic disorders

- Define and classify neoplasia, characteristics of neoplasia, Difference between benign from Malignant neoplasm
- Molecular basis of cancer
- Carcinogens and carcinogenesis
- Effects of tumor on the host, paraneoplastic syndrome
- Immune response to cancer

Immunopathology and AIDS

- Principles and mechanisms involved in immunity
- Hypersensitivity reactions
- HLA system, transplants, transplant rejection
- Autoimmune disorders, SLE
- Pathogenesis and pathology of HIV and AIDS

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Infections and Infestations

- Pathogenesis and pathology of malaria, cysticercosis, leprosy
- Pathogenesis and pathology of common bacterial, viral, protozoal and helminthic diseases

Genetic and paediatric diseases

- Cytogenetic abnormalities and mutations in childhood
- Tumor and tumour- like conditions in infancy and childhood
- Storage disorders in infancy and childhood

Environmental and nutritional diseases

- Disorders caused by air pollution, tobacco and alcohol
- Protein caloric malnutrition and starvation
- Obesity and its consequences

Hematology

- Hematopoiesis
- Anticoagulants in hematology
- Anemia: Microcytic anemia, Macrocytic anemia, Hemolytic anemia, Aplastic anemia
- Leukocyte disorders: leucocytosis, leucopenia, lymphocytosis, leukemoid reactions, acute and chronic leukemia
- Plasma cell myeloma
- Hemostasis, platelet disorders including ITP, clotting disorders including haemophilia's, DIC

Blood banking and transfusion

- Blood group systems (ABO and RH)
- Compatibility testing
- Blood components and their clinical uses
- Infections transmitted by blood transfusion
- Transfusion reactions
- Autologous transfusion

AETCOM

- One short notes from AETCOM module

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Syllabus for Paper-2

Systemic Pathology

Lymph node and spleen

- Lymphadenopathy, tuberculous lymphadenitis
- Hodgkin's and non-Hodgkin's lymphoma
- Splenomegaly

Gastrointestinal tract

- Oral cancers
- Peptic ulcer disease
- Carcinoma of the stomach
- Tuberculosis of the intestine
- Inflammatory bowel disease
- Carcinoma of the colon

Hepatobiliary system

- Bilirubin metabolism, jaundice, hyperbilirubinemia
- Hepatic failure
- Viral and toxic hepatitis
- Alcoholic liver disease including cirrhosis
- Portal hypertension

Respiratory system

- Pneumonia
- Lung abscess
- Obstructive airway disease (OAD) and bronchiectasis
- Tuberculosis
- Occupational lung disease
- Tumors of the lung and pleura

Cardiovascular system

- Arteriosclerosis
- Aneurysms
- Heart failure
- Rheumatic fever and heart diseases
- Ischemic heart disease
- Infective endocarditis
- Pericarditis and pericardial effusion
- Cardiomyopathies
- Syphilis on the cardiovascular system

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Urinary Tract

- Acute and chronic renal failure
- Glomerular diseases, glomerulonephritis, IgA nephropathy, glomerular manifestations of systemic disease
- Acute tubular necrosis
- Acute and chronic pyelonephritis and reflux nephropathy
- Vascular disease of the kidney
- Cystic disease of the kidney
- Obstructive uropathy
- Renal tumors
- Thrombotic angiopathies
- Urothelial tumors

Male Genital Tract

- Testicular tumors
- Carcinoma of the penis
- Benign prostatic hyperplasia
- Carcinoma of the prostate
- Prostatitis

Female Genital Tract

- Carcinoma of the cervix
- Carcinoma of the endometrium
- Leiomyomas and leiomyosarcomas
- Ovarian tumors
- Gestational trophoblastic neoplasms
- Cervicitis, endometriosis, adenomyosis, endometrial hyperplasia

Breast

- Benign breast disease
- Carcinoma of the breast
- Gynecomastia

Endocrine system

- Thyroid swellings, thyrotoxicosis, hypothyroidism
- Diabetes mellitus
- Hyperparathyroidism
- Pancreatic cancer
- Adrenal insufficiency, Cushing's syndrome, adrenal neoplasms

Bone and soft tissue

- Osteomyelitis
- Bone tumors
- Soft tissue tumors
- Paget's disease of the bone
- Rheumatoid arthritis

Skin

- Squamous cell carcinoma of the skin
- Basal cell carcinoma of the skin
- Melanoma

Central Nervous System

- Meningitis
- CNS tumors

Eye

- Retinoblastoma

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Cytology

- Role and application of cytology in clinical care
- Exfoliative cytology
- Technique & stains used in cytology

Clinical Pathology

- Abnormal urinary findings in disease states
- Abnormal findings in body fluids in disease states
- CSF findings in meningitis
- Semen analysis
- Thyroid function tests
- Renal function tests
- Liver function tests
- Cardiac function tests



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DEPARTMENT OF PATHOLOGY ACORDING TO NMC.

Topic: Introduction to Pathology

PA1.1	Describe the role of a pathologist in diagnosis and management of disease
PA1.2	Enumerate common definitions and terms used in Pathology
PA1.3	Describe the history and evolution of Pathology

Topic: Cell Injury and Adaptation

PA2.1	Demonstrate knowledge of the causes, mechanisms, types and effects of cell injury and their clinical significance
PA2.2	Describe the etiology of cell injury. Distinguish between reversible-irreversible injury; mechanisms; morphology of cell injury
PA2.3	Intracellular accumulation of fats, proteins, carbohydrates, pigments
PA2.4	Describe and discuss Cell death- types, mechanisms, necrosis, apoptosis (basic as contrasted with necrosis), autolysis
PA2.5	Describe and discuss pathologic calcifications, gangrene
PA2.6	Describe and discuss cellular adaptations: atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia

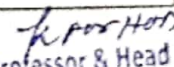
Number	COMPETENCY The student should be able to
PA2.7	Describe and discuss the mechanisms of cellular aging and apoptosis
PA2.8	Identify and describe various forms of cell injuries, their manifestations and consequences in gross and microscopic specimens

Topic: Amyloidosis

PA3.1	Describe the pathogenesis and pathology of amyloidosis
PA3.2	Identify and describe amyloidosis in a pathology specimen

Topic: Inflammation

PA4.1	Define and describe the general features of acute and chronic inflammation including stimuli, vascular and cellular events
PA4.2	Enumerate and describe the mediators of acute inflammation
PA4.3	Define and describe chronic inflammation including causes, TYPES, Non-specific and granulomatous; and enumerate examples of each


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Define and describe acute and chronic inflammation in gross and microscopic specimens

Topic: Healing and repair

Number	COMPETENCY The student should be able to
PA5.1	Define and describe the process of repair and regeneration including wound healing and its types

Topic: Hemodynamic disorders

PA6.1	Define and describe edema, its types, pathogenesis and clinical correlations
PA6.2	Define and describe hyperemia, congestion, hemorrhage
PA6.3	Define and describe shock, its pathogenesis and its stages
PA6.4	Define and describe normal haemostasis and the etiopathogenesis and consequences of thrombosis
PA6.5	Define and describe embolism and its causes and common types
PA6.6	Define and describe Ischaemia/infarction its types, etiology, morphologic changes and clinical effects
PA6.7	Identify and describe the gross and microscopic features of infarction in a pathologic specimen

Topic: Neoplastic disorders

PA7.1	Define and classify neoplasia. Describe the characteristics of neoplasia including gross, microscopy, biologic, behaviour and spread. Differentiate between benign from malignant neoplasms
PA7.2	Describe the molecular basis of cancer

Number	COMPETENCY The student should be able to
PA7.3	Enumerate carcinogens and describe the process of carcinogenesis
PA7.4	Describe the effects of tumor on the host including paraneoplastic syndrome
PA7.5	Describe immunology and the immune response to cancer

Topic: Basic diagnostic cytology

PA8.1	Describe the diagnostic role of cytology and its application in clinical care
PA8.2	Describe the basis of exfoliative cytology including the technique & stains used

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Topic: Immunopathology and AIDS

PA9.1	Describe the principles and mechanisms involved in immunity
PA9.2	Describe the mechanism of hypersensitivity reactions
PA9.3	Describe the HLA system and the immune principles involved in transplant and mechanism of transplant rejection
PA9.4	Define autoimmunity. Enumerate autoimmune disorders
PA9.5	Define and describe the pathogenesis of systemic Lupus Erythematosus

Number	COMPETENCY The student should be able to
PA9.6	Define and describe the pathogenesis and pathology of HIV and AIDS
PA9.7	Define and describe the pathogenesis of other common autoimmune diseases

Topic: Infactions and infesations

PA10.1	Define and describe the pathogenesis and pathology of malaria
PA10.2	Define and describe the pathogenesis and pathology of cysticercosis
PA10.3	Define and describe the pathogenesis and pathology of leprosy
PA10.4	Define and describe the pathogenesis and pathology of common bacterial, viral, protozoal and helminthic diseases

Topic: Genetic and paediatric diseases

PA11.1	Describe the pathogenesis and features of common cytogenetic abnormalities and mutations in childhood
PA11.2	Describe the pathogenesis and pathology of tumor and tumourlike conditions in infancy and childhood
PA11.3	Describe the pathogenesis of common storage disorders in infancy and childhood

Topic: Environmental and nutritional diseases

Number	COMPETENCY The student should be able to
PA12.1	Enumerate and describe the pathogenesis of disorders caused by air pollution, tobacco and alcohol
PA12.2	Describe the pathogenesis of disorders caused by protein calorie malnutrition and starvation
PA12.3	Describe the pathogenesis of obesity and its consequences

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Introduction to haematology	
PA13.1	Describe hematopoiesis and extramedullary hematopoiesis
PA13.2	Describe the role of anticoagulants in hematology
PA13.3	Define and classify anemia
PA13.4	Enumerate and describe the investigation of anemia
PA13.5	Perform, Identify and describe the peripheral blood picture in anemia

Topic: Microcytic anemia	
PA14.1	Describe iron metabolism
PA14.2	Describe the etiology, investigations and differential diagnosis of microcytic hypochromic anemia
PA14.3	Identify and describe the peripheral smear in microcytic anemia

Topic: Macrocytic anemia	
Number	COMPETENCY The student should be able to
PA15.1	Describe the metabolism of Vitamin B12 and the etiology and pathogenesis of B12 deficiency
PA15.2	Describe laboratory investigations of macrocytic anemia
PA15.3	Identify and describe the peripheral blood picture of macrocytic anemia
PA15.4	Enumerate the differences and describe the K KH N Lecture PA15.4 etiology and distinguishing features of megaloblastic and non-megaloblastic macrocytic anemia

Topic: Hemolytic anemia	
PA16.1	Define and classify hemolytic anemia
PA16.2	Describe the pathogenesis and clinical features and hematologic indices of hemolytic anemia
PA16.3	Describe the pathogenesis, features, hematologic indices and peripheral blood picture of sickle cell anemia and thalassemia
PA16.4	Describe the etiology pathogenesis, hematologic indices and peripheral blood picture of Acquired hemolytic anemia
PA16.5	Describe the peripheral blood picture in different hemolytic anaemias
PA16.6	Prepare a peripheral blood smear and identify hemolytic anaemia from it
PA16.7	Discribe the correct technique to perform a cross match

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Topic: Aplastic anemia

Number	COMPETENCY The student should be able to
PA17.1	Enumerate the etiology, pathogenesis and findings in aplastic anemia
PA17.2	Enumerate the indications and describe the findings in bone marrow aspiration and biopsy

Topic: Leukocyte disorders

PA18.1	Enumerate and describe the causes of leucocytosis leucopenia lymphocytosis and leukemoid reactions
PA18.2	Describe the etiology, genetics, pathogenesis classification, features, hematologic features of acute and chronic leukemia

Topic: Lymph node and spleen

PA19.1	Enumerate the causes and describe the differentiating features of lymphadenopathy
PA19.2	Describe the pathogenesis and pathology of tuberculous lymphadenitis
PA19.3	Identify and describe the features of tuberculous lymphadenitis in a gross and microscopic specimen
PA19.4	Describe and discuss the pathogenesis, pathology and the differentiating features of Hodgkin's and non-Hodgkin's lymphoma
PA19.5	Identify and describe the features of Hodgkin's lymphoma in a gross and microscopic specimen

Number	COMPETENCY The student should be able to
PA19.6	Enumerate and differentiate the causes of splenomegaly
PA19.7	Identify and describe the gross specimen of an enlarged spleen

Topic: Plasma cell disorders

PA20.1	Describe the features of plasma cell myeloma
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Topic: Hemorrhagic disorders

PA21.1	Describe normal hemostasis
PA21.2	Classify and describe the etiology, pathogenesis and pathology of vascular and platelet disorders including ITP and haemophilia's
PA21.3	Differentiate platelet from clotting disorders based on the clinical and hematologic features
PA21.4	Define and describe disseminated intravascular coagulation, its laboratory findings and diagnosis of disseminated intravascular coagulation
PA21.5	Define and describe disseminated intravascular coagulation, its laboratory findings and diagnosis of Vitamin K deficiency

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Topic: Her
PA23.1

Topic: Blood banking and transfusion	
PA22.1	Classify and describe blood group systems (ABO and RH)
PA22.2	Enumerate the indications, describe the principles, enumerate and demonstrate the steps of compatibility testing

Number	COMPETENCY The student should be able to
PA22.4	Enumerate blood components and describe their clinical uses
PA22.5	Enumerate and describe infections transmitted by blood transfusion
PA22.6	Describe transfusion reactions and enumerate the steps in the investigation of a transfusion reaction
PA22.7	Enumerate the indications and describe the principles and procedure of autologous transfusion

Topic: Clinical Pathology	
PA23.1	Describe abnormal urinary findings in disease states and identify and describe common urinary abnormalities in a clinical specimen
PA23.2	Describe abnormal findings in body fluids in various disease states
PA23.3	Describe and interpret the abnormalities in a panel containing semen analysis, thyroid function tests, renal function tests or liver function tests

Topic: Gastrointestinal tract	
PA24.1	Describe the etiology, pathogenesis, pathology and clinical features of oral cancers
PA24.2	Describe the etiology, pathogenesis, pathology, microbiology, clinical and microscopic features of peptic ulcer disease
PA24.3	Describe and identify the microscopic features of peptic ulcer

Number	COMPETENCY The student should be able to
PA24.4	Describe and etiology and pathogenesis and pathologic features of carcinoma of the stomach
PA24.5	Describe and etiology and pathogenesis and pathologic features of Tuberculosis of the intestine
PA24.6	Describe and etiology and pathogenesis and pathologic and distinguishing features of Inflammatory bowel disease
PA24.7	Describe the etiology, pathogenesis, pathology and distinguishing features of carcinoma of the colon

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Topic: Hepatobiliary system

PA25.1	Describe bilirubin metabolism, enumerate the etiology and pathogenesis of jaundice, distinguish between direct and indirect hyperbilirubinemia
PA25.2	Describe the pathophysiology and pathologic changes seen in hepatic failure and their clinical manifestations, complications and consequences
PA25.3	Describe the etiology and pathogenesis of viral and toxic hepatitis: distinguish the causes of hepatitis based on the clinical and laboratory features. Describe the pathology, complications and consequences of hepatitis
PA25.4	Describe the pathophysiology, pathology and progression of alcoholic liver disease including cirrhosis
PA25.5	Describe the etiology, pathogenesis and complications of portal hypertension
PA25.6	Interpret liver function and viral hepatitis serology panel. Distinguish obstructive from non-obstructive jaundice based on clinical features and liver function tests

Number	COMPETENCY The student should be able to
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Topic: Respiratory system

PA26.1	Define and describe the etiology, types, pathogenesis, stages, morphology and complications of pneumonia
PA26.2	Describe the etiology, gross and microscopic appearance and complications of lung abscess
PA26.3	Define and describe the etiology, types, pathogenesis, stages, morphology and complications and evaluation of Obstructive airway disease (OAD) and bronchiectasis
PA26.4	Define and describe the etiology, types, pathogenesis, stages, morphology microscopic appearance and complications of tuberculosis
PA26.5	Define and describe the etiology, types, exposure, environmental influence, pathogenesis, stages, morphology, microscopic appearance and complications of Occupational lung disease
PA26.6	Define and describe the etiology, types, exposure, genetics environmental influence, pathogenesis, stages, morphology, microscopic appearance, metastases and complications of tumors of the lung and pleura
PA26.7	Define and describe the etiology, types, exposure, genetics environmental influence, pathogenesis, morphology, microscopic appearance and complications of mesothelioma

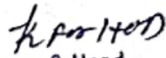
Topic: Cardiovascular system

PA27.1	Distinguish arteriosclerosis from atherosclerosis. Describe the pathogenesis and pathology of various causes and types of arteriosclerosis
PA27.2	Describe the etiology, dynamics, pathology types and complications of aneurysms including aortic aneurysms

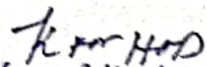
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Number	COMPETENCY The student should be able to
PA27.3	Describe the etiology, types, stages pathophysiology, pathology and complications of heart failure
PA27.4	Describe the etiology, pathophysiology, pathology, gross and microscopic features, criteria and complications of rheumatic fever
PA27.5	Describe the epidemiology, risk factors, etiology, pathophysiology, pathology, presentations, gross and microscopic features, diagnostic tests and complications of ischemic heart disease
PA27.6	Describe the etiology, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of infective endocarditis
PA27.7	Describe the etiology, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of pericarditis and pericardial effusion
PA27.8	Interpret abnormalities in cardiac function testing in acute coronary syndromes
PA27.9	Classify and describe the etiology, types, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of cardiomyopathies
PA27.10	Describe the etiology, pathophysiology, pathology features and complications of syphilis on the cardiovascular system

Topic: Urinary Tract	
PA28.1	Describe the normal histology of the kidney
PA28.2	Define, classify and distinguish the clinical syndromes and describe the etiology, pathogenesis, pathology, morphology, clinical and laboratory and urinary findings, complications of renal failure


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Number	COMPETENCY The student should be able to
PA28.3	Define and describe the etiology, precipitating factors, pathogenesis, pathology, laboratory urinary findings, progression and complications of acute renal failure
PA28.4	Define and describe the etiology, precipitating factors, pathogenesis, pathology, laboratory urinary findings progression and complications of chronic renal failure
PA28.5	Define and classify glomerular diseases. Enumerate and describe the etiology, pathogenesis, mechanisms of glomerular injury, pathology, distinguishing features and clinical manifestations of glomerulonephritis
PA28.6	Define and describe the etiology, pathogenesis, pathology, laboratory, urinary findings, progression and complications of IgA nephropathy
PA28.7	Enumerate and describe the findings in glomerular manifestations of systemic disease
PA28.8	Enumerate and classify diseases affecting the tubular interstitium
PA28.9	Define and describe the etiology, pathogenesis, pathology, laboratory, urinary findings, progression and complications of acute tubular necrosis
PA28.10	Describe the etiology, pathogenesis, pathology, laboratory Viva voce Human Anatomy findings, distinguishing features progression and complications of acute and chronic pyelonephritis and reflux nephropathy
PA28.11	Define classify and describe the etiology, pathogenesis pathology, laboratory, urinary findings, distinguishing features progression and complications of vascular disease of the kidney
Number	COMPETENCY The student should be able to
PA28.12	Define classify and describe the genetics, inheritance, etiology, pathogenesis, pathology, laboratory, urinary findings, distinguishing features, progression and complications of cystic disease of the kidney
PA28.13	Define classify and describe the etiology, pathogenesis, pathology, laboratory, urinary findings, distinguishing features progression and complications of renal stone disease and obstructive uropathy
PA28.14	Classify and describe the etiology, genetics, pathogenesis, pathology, presenting features, progression and spread of renal tumors
PA28.15	Describe the etiology, genetics, pathogenesis, pathology, presenting features and progression of thrombotic angiopathies
PA28.16	Describe the etiology, genetics, pathogenesis, pathology, presenting features and progression of urothelial tumors


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Topic: Male Genital Tract

PA29.1	Classify testicular tumors and describe the pathogenesis, pathology, presenting and distinguishing features, diagnostic tests, progression and spread of testicular tumors
PA29.2	Describe the pathogenesis, pathology, presenting and distinguishing features, diagnostic tests, progression and spread of carcinoma of the penis
PA29.3	Describe the pathogenesis, pathology, hormonal dependency presenting and distinguishing features, urologic findings & diagnostic tests of benign prostatic hyperplasia
PA29.4	Describe the pathogenesis, pathology, hormonal dependency presenting and distinguishing features, diagnostic tests, progression and spread of carcinoma of the prostate

Number	COMPETENCY The student should be able to
PA29.5	Describe the etiology, pathogenesis, pathology and progression of prostatitis

Topic: Female Genital Tract

PA30.1	Describe the epidemiology, pathogenesis, etiology, pathology, Screening, diagnosis and progression of carcinoma of the cervi
PA30.2	Describe the pathogenesis, etiology, pathology, diagnosis and progression and spread of carcinoma of the endometrium
PA30.3	Describe the pathogenesis, etiology, pathology, diagnosis and progression and spread of carcinoma of the leiomyomas and leiomyosarcomas
PA30.4	Classify and describe the etiology, pathogenesis, pathology, morphology, clinical course, spread and complications of ovarian tumors
PA30.5	Describe the etiology, pathogenesis, pathology, morphology, clinical course, spread and complications of gestational trophoblastic neoplasms
PA30.6	Describe the etiology and morphologic features of cervicitis
PA30.7	Describe the etiology, hormonal dependence, features and morphology of endometriosis
PA30.8	Describe the etiology and morphologic features of adenomyosis

Number	COMPETENCY The student should be able to
PA30.9	Describe the etiology, hormonal dependence and morphology of endometrial hyperplasia

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Topic: Breast

PA31.1	Classify and describe the types, etiology, pathogenesis, pathology and hormonal dependency of benign breast disease
PA31.2	Classify and describe the epidemiology, pathogenesis, classification, morphology, prognostic factors, hormonal dependency, staging and spread of carcinoma of the breast
PA31.3	Describe and identify the morphologic and microscopic features of carcinoma of the breast
PA31.4	Enumerate and describe the etiology, hormonal dependency and pathogenesis of gynecomastia

Topic: Endocrine system

PA32.1	Enumerate, classify and describe the etiology, pathogenesis, pathology and iodine dependency of thyroid swellings
PA32.2	Describe the etiology, cause, iodine dependency, pathogenesis, manifestations, laboratory and imaging features and course of thyrotoxicosis
PA32.3	Describe the etiology, pathogenesis, manifestations, laboratory and imaging features and course of thyrotoxicosis/ hypothyroidism

Number	COMPETENCY The student should be able to
PA32.4	Classify and describe the epidemiology, etiology, pathogenesis, pathology, clinical laboratory features, complications and progression of diabetes mellitus
PA32.5	Describe the etiology, genetics, pathogenesis, manifestations, laboratory and morphologic features of hyperparathyroidism
PA32.6	Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications and metastases of pancreatic cancer
PA32.7	Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications of adrenal insufficiency
PA32.8	Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications of Cushing's syndrome
PA32.9	Describe the etiology, pathogenesis, manifestations, laboratory and morphologic features of adrenal neoplasms

Topic: Bone and soft tissue

PA33.1	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications of osteomyelitis
PA33.2	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications and metastases of bone tumors
PA33.3	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications and metastases of soft tissue tumors

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Number	COMPETENCY The student should be able to
PA33.4	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications of Paget's disease of the bone
PA33.5	Classify and describe the etiology, immunology, pathogenesis, manifestations, radiologic and laboratory features, diagnostic criteria and complications of rheumatoid arthritis

Topic: Skin

PA34.1	Describe the risk factors pathogenesis, pathology and natural history of squamous cell carcinoma of the skin
PA34.2	Describe the risk factors pathogenesis, pathology and natural history of basal cell carcinoma of the skin
PA34.3	Describe the distinguishing features between a nevus and melanoma. Describe the etiology, pathogenesis, risk factors morphology clinical features and metastases of melanoma
PA34.4	Identify, distinguish and describe common tumors of the skin

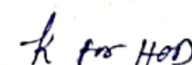
Topic: Central Nervous System

PA35.1	Describe the etiology, types and pathogenesis, differentiating factors, CSF findings in meningitis
PA35.2	Classify and describe the etiology, genetics, pathogenesis, pathology, presentation sequelae and complications of CNS tumors

Number	COMPETENCY The student should be able to
PA35.3	Identify the etiology of meningitis based on given CSF parameters

Topic: Eye

PA36.1	Describe the etiology, genetics, pathogenesis, pathology, presentation, sequelae and complications of retinoblastoma
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Second Year M. B. B. S. University Examination
(New Course)

Pathology: Paper-II

(Systemic Pathology, Cytopathology, Histopathology Techniques, Clinical Pathology)

Time: 3 Hours]

[Total Marks: 100

- Instructions:** (1) Write section-I and section-II in **separate** answer sheet.
(2) Figures to **right** indicate full marks.
(3) Write to the point and legibly.
(4) Draw neat & labeled diagrams wherever necessary.

SECTION-A

(Systemic Pathology, Clinical Pathology)

1. Answer **Any one** of the following: (Long Essay Type or Case Based Question) **10**
(a)
(b)
2. Write notes on the following. (Any six) **30**
(a)
(b)
(c)
(d)
(e)
(f)
(g)
3. Answer in brief: **10**
(a)
(b)
(c)
(d)
(e)

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SECTION-B

(Systemic Pathology, Cytopathology, Histopathology Techniques)

4. Answer **Any one** of the following: (Long Essay Type or Case Based Question) **10**

(a)

(b)

5. Write notes on the following: (Any six) **30**

(a)

(b)

(c)

(d)

(e)

(f)

(g)

6. Answer in brief: **10**

(a)

(b)

(c)

(d)

(e)


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Second Year M. B. B. S. University Examination
(New Course)

Pathology: Paper-I

(General Pathology including Neoplasia, Immunopathology & AIDS, Infectious disease,
Genetics and Pediatric Disease, Environmental and Nutritional Disease, Blood
Transfusion, Hematology)

Time: 3 Hours]

[Total Marks: 100

- Instructions:** (1) Write Section-I and section-II in **separate** answer sheet.
(2) Figures to **right** indicate full marks.
(3) Write to the point and legibly.
(4) Draw neat & labeled diagrams wherever necessary.

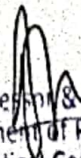
SECTION-A

(General Pathology including Neoplasia)

1. Write any **one** of the following: (Long Essay Type or Case Based Question) **10**
 - (a)
 - (b)

2. Write Notes on the following: (Any six) **30**
 - (a)
 - (b)
 - (c)
 - (d)
 - (e)
 - (f)
 - (g)

3. Answer in brief: **10**
 - (a)
 - (b)
 - (c)
 - (d)
 - (e)


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SECTION-B

(Hematology, Blood Transfusion, Immunopathology & AIDS, Infectious disease, Genetics and Pediatric Disease, Environmental and Nutritional Disease)

4. Write Any one of the following: (Long Essay Type or Case Based Question) 10

- (a)
- (b)

5. Write notes on the following: (Any six) 30

- (a)
- (b)
- (c)
- (d)
- (e)
- (f)
- (g)

6. Answer in brief: 10

- (a)
- (b)
- (c)
- (d)
- (e)

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DEPARTMENT OF PATHOLOGY
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EXAMINATION PATTERN ACCORDING TO (New) CBME BASED CURRICULUM

Examination	Theory		MCQs	Practical including viva	Total	Note: The internal assessment marks will be out of 100 for theory and out of 100 for practical. Internal assessment marks will reflect as a separate head of passing at the summative examination and will not be added to the University marks. Internal Assessment: 50%combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations
	Paper I	Paper II				
I Internal Assessment	80		20	100	200	
II Internal Assessment		80	20	100	200	
Preliminary Examination	Paper I	Paper II		100	300	
	100	100	-			
University Examination	100	100	-	100	300	

Note:- Syllabus & Paper pattern Attachment


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