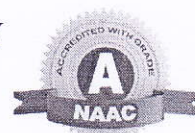




**OFFICE OF THE DEPARTMENT OF PATHOLOGY
SUBHARTI MEDICAL COLLEGE, MEERUT
SWAMI VIVEKANAND SUBHARTI UNIVERSITY**

SUBHARTI PURAM, N.H. 58, DELHI-HARIDWAR, BY PASS ROAD, MEERUT. PIN-250005
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No. /SMC /Patho./2025/305

Date: 12/11/2025

Notice

In reference to letter no. SMC/G/M-60/6367, dated 06.11.2025, a meeting of Board of studies (for undergraduate) is scheduled in department of pathology on 18/11/2025 at 11:30 am. in departmental seminar room.

The agenda of the meeting is as follows:

1. Confirmation of the minutes of the previous Faculty Board Meeting and ratification of the Action-Taken-Report.
2. Introduction of any new Value Added Courses.
3. To start Post-Doctoral Certificate Courses (PDCC).
4. Ratification of feedback on curriculum, classroom teaching and their Action Taken Report (ATR)
5. To review ongoing research activities.
6. To start any new certificate course for Undergraduates and Postgraduates.
7. Any change in CBME
8. Ratification of guidelines from medical college for Proctorial board
9. To Review MoUs
10. Any other item with the permission of the Chair.

Copy to:

1. The Principal, Subharti Medical College, Meerut – for information please
2. Dr. Shweta Grover, Professor, Department of Pathology, MMC, Muzaffarnagar
3. Dr. Neha Singh, Professor, Department of Pathology, LLRM Medical College, Meerut
4. Dr. Purva Sharma, Associate Professor, NCR Institute of Medical Sciences Nalpur Meerut
5. Dr. Surabhi Gupta, Professor & Head, Department of Pharmacology, Subharti Medical College, Meerut
6. All faculty members of Department of Pathology, Subharti Medical College, Meerut


**Dr. Anjali Khare
Prof & Head**



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No. /SMC /Patho./2025/

Date: 18.11.2025

Minutes of Meeting of Board of Studies held on 18-11-2025.

A meeting of Undergraduate (UG) Board of Studies was held on 18-11-2025 at 11:30 AM in Seminar Room of the Department of Pathology.

Following members attended the meeting.

Internal Members	
1. Dr. Anjali Khare, Prof. & Head	– Chairperson
2. Dr. Rani Bansal, Prof. & Advisor	– Member
3. Dr. Sangeeta Sharma, Professor	– Member
4. Dr. Davendra Swarup, Professor	– Member
5. Dr. Shubhangi Gupta, Professor	– Member
6. Dr. Archita Tiwari, Assoc. Prof.	– Member
7. Dr. Kavita Chauhan, Asst. Prof.	– Member
8. Dr. Dishant K. Malik, Asst. Prof.	– Member
9. Dr. Karishma Ranjan, Asst. Prof.	– Member
10. Dr. Abid Ashraf Sheikh, Asst. Prof.	– Member
11. Dr. Kanika Munish, Asst. Prof.	– Member
Internal Cognate Member	
12. Dr. Surabhi Gupta Professor & Head, Department of Pharmacology, SMC, Meerut	– Co-opted Member
External Members	
13. Dr. Shweta Chawla Professor, Deptt. of Pathology, MMC, Muzaffarnagar	– Subject expert- Academic
14. Dr. Neha Singh Professor, Deptt. of Pathology, LLRM Medical College, Meerut	– Senior Alumini
15. Dr. Purva Sharma Assoc. Prof., Deptt. of Pathology, NCR Institute of Medical Sciences, Nalpur Meerut	– Subject expert- R&D

At the onset, the Chairperson BoS welcomed all the members for sparing their time. The items were taken up as per agenda.

Agenda 1: Confirmation of the Minutes of the Previous Faculty Board Meeting and Ratification of the Action Taken Report

The minutes of the previous Faculty Board meeting were read and confirmed. The Action Taken Report (ATR) was reviewed and ratified.

Decision: Minutes confirmed and ATR ratified.

Agenda 2: Introduction of Any New Value-Added Courses

After discussing the feasibility of introduction of any new value-added course in the current session, it was proposed that a value added course in histopathology technique can be introduced for next session.

Decision: The proposal for value-added course in Histopathology technique (for undergraduates) was approved. Syllabus and duration to be framed and submitted for Academic Council approval.

Agenda 3: To Start Post-Doctoral Certificate Courses (PDCC)

The Board discussed that presently initiating Post-Doctoral Certificate Courses in Pathology is not feasible.

Agenda 4: Ratification of Feedback on Curriculum, Classroom Teaching and Their Action Taken Report (ATR)

Feedback from students & faculty on curriculum and teaching methodologies was reviewed. Key issue was the need for more interactive sessions.

Decision:

- Feedback and corresponding ATR were ratified.
- Faculty members to continue efforts to enhance student engagement through problem-based learning and integrated teaching.

Agenda 5: To Review Ongoing Research Activities

Ongoing departmental research projects were presented and reviewed. Presently 3 Undergraduate students are doing 3 STS projects of ICMR. Members appreciated the progress.

Decision:

- Research work to continue with periodic review.

Agenda 6: To Start Any New Certificate Course for Undergraduates and Postgraduates

The board discussed the feasibility of Proposals for new short-term certificate courses. It was decided that no certification course for Undergraduate will start in coming year.

Agenda 7: Any Change in CBME

The members discussed the current changes in Pathology CBME (Competency-Based Medical Education) curriculum. More OSPE sessions are to be incorporated for certifiable skills.

Decision: Minor proposed changes are to be communicated to Curriculum Committee.

Agenda 8: Ratification of Guidelines from Medical College for Proctorial Board

The guidelines issued by the Medical College regarding the functioning of the Proctorial Board were reviewed.

Decision: The Board unanimously ratified the guidelines and recommended their implementation in the department with immediate effect.

Agenda 9: To Review MoUs

Existing Memorandums of Understanding (MoUs) with collaborating institutions and organizations were reviewed.

Decision:

- NA.

Conclusion

The Chairperson thanked all members for their active participation and valuable suggestions. The meeting concluded with a vote of thanks.

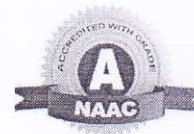
Action to be taken by	Concerned faculty member
Timeline to complete the assigned task	Within 6-9 months


Dr. Anjali Khare
Prof & Head



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No. /SMC /Patho./2025/

Date: 18.11.2025

Attendance of Board of Studies (UG) meeting held on 18/11/2025.

S. N.	Name of Faculty	Designation	Signature
Internal Members			
1	Dr. Anjali Khare (Chairperson BOS)	Prof. & Head, Department of Pathology, Subharti Medical College, Meerut	
2.	Dr. Rani Bansal (Member)	Professor & Advisor, Department of Pathology, Subharti Medical College, Meerut	
3	Dr. Sangeeta Sharma (Member)	Professor, Deptt. of Pathology, Subharti Medical College, Meerut	
4.	Dr. Davendra Swarup (Member)	Professor, Deptt. of Pathology, Subharti Medical College, Meerut	
5	Dr. Shubhangi Gupta (Member)	Professor, Deptt. of Pathology, Subharti Medical College, Meerut	
6	Dr. Archita Tiwari (Member)	Assoc. Prof., Deptt. of Pathology, Subharti Medical College, Meerut	
7	Dr. Kavita Chauhan (Member)	Asstt. Prof., Deptt. of Pathology, Subharti Medical College, Meerut	
8	Dr. Dishant K. Malik (Member)	Asstt. Prof., Deptt. of Pathology, Subharti Medical College, Meerut	
9	Dr. Karishma Ranjan (Member)	Asstt. Prof., Deptt. of Pathology, Subharti Medical College, Meerut	
10	Dr. Abid Ashraf Sheikh (Member)	Asstt. Prof., Deptt. of Pathology, Subharti Medical College, Meerut	
11	Dr. Kanika Munish (Member)	Asstt. Prof., Deptt. of Pathology, Subharti Medical College, Meerut	
External Members			
1	Dr. Shweta Chawla (Subject expert- Academic)	Professor, Deptt. of Pathology, MMC, Muzaffarnagar	
2	Dr. Neha Singh (Sr. Alumini)	Professor, Deptt. of Pathology, LLRM Medical College, Meerut	
3	Dr. Purva Sharma (Subject expert- R&D)	Assoc. Prof., Deptt. of Pathology, NCR Institute of Medical Sciences Nalpur Meerut	
Internal Cognate Member			
1	Dr. Surabhi Gupta (Co-opted Member)	Professor & Head, Department of Pharmacology, Subharti Medical College, Meerut	



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No. /SMC /Patho./2025/

Date: 18.11.2025

Action Taken Report on BOS meeting held on 12/03/2025

S. No.	Agenda Item	Resolution	Decision
Agenda-1	To confirm the minutes of the previous Board of studies	The members confirmed the minutes of the previous Board studies meeting	Confirmed
Agenda-2	To report action taken on the minutes of previous board of studies meeting	The members noted the action taken on the minutes of previous Board of studies meeting	Confirmed
Agenda-3	Any change in competency as per the CBME guidelines for upcoming sessions	More small group teaching sessions are incorporated in the schedule	Confirmed
Agenda-4	Discussion on ongoing research activities	Regular progress reviews are being held to provide feedback and support throughout the research process.	Confirmed
Agenda-5	Any other items with the permission of the Chairperson	No other agenda	NA

Copy to:-

1. The Principal SMC


Dr. Anjali Khare
Prof. & Head

FACULTY-WISE LIST OF UNDERGRADUATE (UG) BOARD OF STUDIES

FACULTY	UNDERGRADUATE BOARD OF STUDIES UNDER		
	Department	Composition of BoS-UG	Name, Designation & Address of Members
Faculty of Medicine	Pathology	Chairperson	Dr. Anjali Khare, Prof. & Head
		Professor/ Associate Professor/ Assistant Professor of Dept.	Dr. Rani Bansal, Prof. & Advisor Dr. Sangeeta Sharma, Professor Dr. Davendra Swarup, Professor Dr. Shubhangi Gupta, Professor Dr. Archita Tiwari, Assoc. Prof. Dr. Kavita Chauhan, Asst. Prof. Dr. Dishant K. Malik, Asst. Prof. Dr. Karishma Ranjan, Asst. Prof. Dr. Abid Ashraf Sheikh, Asst. Prof. Dr. Kanika Munish, Asst. Prof.
		One senior professor co-opted from other Dept.	Dr. Surabhi Gupta, Prof. & Head, Department of Pharmacology, SMC, Meerut
		One subject expert (Academic) – Expert should be from reputed Central/ State Govt. Universities/ Private Universities	Dr. Shweta Chawla Professor, Deptt. of Pathology, MMC, Muzaffarnagar
		One subject expert R&D/ Industry- Expert should be from Central/ State Govt. organization or from industry	Dr. Purva Sharma, Assoc. Prof., Deptt. of Pathology, NCR Institute of Medical Sciences, Nalpur Meerut
		Senior Alumni (Academic/ R&D/ Industry) – Alumni members should be at least 5 years of experience in the relevant field Universities	Dr. Neha Singh, Professor, Deptt. of Pathology, LLRM Medical College, Meerut

1
AE
Dr. Anjali Khare

Undergraduate Syllabus

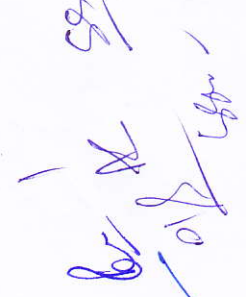
PATHOLOGY (CODE: PA)

112

[Handwritten signatures and names:]

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P
PA2.8	Identify and describe various forms of cell injuries with their manifestations and consequences in gross and microscopic specimens	S	SH	Y	DOAP	Viva voce	
Topic: 3 Inflammation							
PA3.1	Define and describe the general features of acute and chronic inflammation including stimuli, vascular and cellular events	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA3.2	Enumerate and describe the mediators of acute inflammation	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA3.3	Define and describe chronic inflammation including causes, types non-specific and granulomatous and enumerate examples of each	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA3.4	Identify and describe acute and chronic inflammation in gross and microscopic specimens	S	SH	Y	DOAP	Viva voce	
Topic 4: Healing and repair							
PA4.1	Define and describe the process of repair and regeneration including wound healing and its types	K	KH	Y	LGT, SGT	Written/ Viva voce	
Topic 5: Hemodynamic disorders							
PA5.1	Define and describe edema, its types, pathogenesis and clinical correlations	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA5.2	Define and describe hyperemia, congestion, hemorrhage	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA5.3	Define and describe shock, its pathogenesis and its stage	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA5.4	Define and describe normal haemostasis and the etiopathogenesis and consequences of thrombosis	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA5.5	Define and describe Ischemia/infarction, embolism its types, etiology, morphologic changes and clinical effects	K	KH	Y	LGT, SGT	Written/ Viva voce	

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify p
PA8.3	Describe the HLA system and the immune principles involved in transplant and mechanism of transplant rejection	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA8.4	Define autoimmunity. Enumerate autoimmune disorder and describe the pathogenesis of common autoimmune diseases	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA8.5	Define and describe the pathogenesis of systemic Lupus Erythematosus	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA8.6	Define and describe the pathogenesis and pathology of HIV and AIDS	K	KH	Y	LGT, SGT	Written/ Viva voce	
Topic 9: Amyloidosis		Number of competencies: (02)			Number of competencies that require certification: (NIL)		
PA9.1	Describe the pathogenesis and pathology of amyloidosis	K	KH	N	LGT, SGT	Written/ Viva voce	
PA9.2	Identify and describe various forms of amyloidosis with their manifestations and consequences in gross and microscopic specimens	S	SH	Y	DOAP	Viva voce	
Topic 10: Infections and Infestations		Number of competencies: (05)			Number of competencies that require certification: (NIL)		
PA10.1	Define and describe the pathogenesis and pathology of malaria	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA10.2	Define and describe the pathogenesis and pathology of cysticercosis	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA10.3	Define and describe the pathogenesis and pathology of leprosy	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA10.4	Define and describe the pathogenesis and pathology of common bacterial, viral, protozoal and helminthic diseases	K	KH	N	LGT, SGT	Written/ Viva voce	
PA10.5	Define and describe the pathogenesis and pathology and laboratory findings in COVID	K	KH	Y	LGT, SGT	Written/ Viva voce	
Topic 11: Genetic and pediatric diseases		Number of competencies: (03)			Number of competencies that require certification: (NIL)		
PA11.1	Describe the pathogenesis and features of common cytogenetic abnormalities and mutations in with diagnostic modalities in childhood	K	KH	N	LGT, SGT	Written/ Viva voce	
PA11.2	Describe the pathogenesis and pathology of tumor and tumor like conditions in infancy and childhood	K	KH	N	LGT, SGT	Written/ Viva voce	


Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P
A11.3	Describe the pathogenesis of common storage disorders in infancy and childhood	K	KH	N	LGT, SGT	Written/ Viva voce	
Topic 12: Environmental and nutritional diseases							
		Number of competencies: (03)			Number of competencies that require certification: (NIL)		
A12.1	Enumerate and describe the pathogenesis of disorders caused by air pollution, tobacco, alcohol and noise	K	KH	Y	LGT, SGT	Written/ Viva voce	
A12.2	Describe the pathogenesis of disorders caused by protein calorie malnutrition, vitamins and starvation	K	KH	Y	LGT, SGT	Written/ Viva voce	
A12.3	Describe the pathogenesis of obesity and its consequences with special emphasis on metabolic syndrome	K	KH	Y	LGT, SGT	Written/ Viva voce	
Topic 13: Introduction to hematology							
		Number of competencies: (04)			Number of competencies that require certification: (1)		
A13.1	Describe hematopoiesis and extra medullary hematopoiesis and the role of anticoagulants in hematology	K	KH	Y	LGT, SGT	Written/ Viva voce	
A13.2	Define and classify anemia Enumerate and describe the investigation of anemia	K	KH	Y	LGT, SGT	Written/ Viva voce	
A13.3	Describe collection of specimens and identify coagulants and anticoagulant bulbs, instruments	S	SH'	Y	DEMO	Viva voce / OSPE	
A13.4	Perform common haematological tests – Hb, RBC count, WBC count and DLC	S	SH'	Y	DEMO	Viva voce / OSPE	4
Topic 14: Microcytic anemia							
		Number of competencies: (02)			Number of competencies that require certification: (1)		
A14.1	Describe iron metabolism and Describe the etiology, investigations and differential diagnosis of microcytic hypochromic anemia	K	KH	Y	LGT, SGT	Written/ Viva voce	
A14.2	Identify and describe the peripheral smear in microcytic Anemia	S	SH'	Y	DEMO	Viva voce / OSPE	1
Topic 15: Macrocytic anemia							
		Number of competencies: (03)			Number of competencies that require certification: (1)		
A15.1	Describe the metabolism of Vitamin B12 and the etiology and pathogenesis of B12 deficiency and describe laboratory investigations of macrocytic anemia	K	KH	Y	LGT, SGT	Written/ Viva voce	

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P
A15.2	Enumerate the differences and describe the etiology, laboratory features of megaloblastic anemia and distinguishing features of megaloblastic and non-megaloblastic macrocytic anemia	K	KH	Y	LGT, SGT	Written/ Viva voce	
A15.3	Identify and describe the peripheral blood picture of macrocytic Anemia	S	SH	Y	DEMO	Viva voce / OSPE	1
Topic 16: Hemolytic anemia		Number of competencies: (03)			Number of competencies that require certification: (01)		
A16.1	Define and classify hemolytic anemia and describe the pathogenesis and clinical features and hematologic indices of hemolytic anemia	K	KH	Y	LGT, SGT	Written/ Viva voce	
A16.2	Describe the pathogenesis, features, hematologic indices and peripheral blood picture of sickle cell anemia and thalassemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce	1
A16.3	Describe the etiology, pathogenesis, hematologic indices and peripheral blood picture of Acquired hemolytic anemia and different hemolytic Anemia's	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce	
Topic 17: Aplastic anemia		Number of competencies: (01)			Number of competencies that require certification: (NIL)		
A 17.1	Describe the etiology, pathogenesis and findings in aplastic Anemia and Enumerate the indications and describe the findings in bone marrow aspiration and biopsy	K	K	N	LGT, SGT	Written/ Viva voce	
Topic 18: Leukocyte disorders		Number of competencies: (02)			Number of competencies that require certification: (NIL)		
A18.1	Enumerate and describe the causes of leukocytosis leucopenia lymphocytosis and leukemoid reactions	K	KH	Y	LGT, SGT	Written/ Viva voce	
A 18.2	Describe the etiology, genetics, pathogenesis classification, features, hematologic features of acute and chronic leukemia	K	KH	Y	LGT, SGT	Written/ Viva voce	
Topic 19: Lymph node and spleen		Number of competencies: (06)			Number of competencies that require certification: (NIL)		
A19.1	Enumerate the causes and describe the differentiating features of lymphadenopathy	K	KH	Y	LGT, SGT	Written/ Viva voce	
A19.2	Describe the pathogenesis and pathology of tuberculous Lymphadenitis	K	KH	Y	LGT, SGT	Written/ Viva voce	

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P
PA19.3	Describe and discuss the pathogenesis, pathology and the differentiating features of Hodgkin's and non-Hodgkin's lymphoma	S	SH	Y	DOAP	Skill assessment	
PA19.4	Enumerate and differentiate the causes of splenomegaly	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA19.5	Identify and describe the features of tuberculous lymphadenitis in a gross and microscopic specimen	S	SH	Y	DOAP	Viva voce	
PA19.6	Identify and describe the features of Hodgkin's lymphoma in a gross and microscopic specimen	S	SH	Y	DOAP	Viva voce	
Topic 20: Hemorrhagic disorders							
		Number of competencies: (03)			Number of competencies that require certification: (NIL)		
PA20.1	Describe normal hemostasis Classify and describe the etiology, pathogenesis and pathology of vascular and platelet disorders including ITP and hemophilia's	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA20.2	Define and describe disseminated intravascular coagulation, its laboratory findings and diagnosis of disseminated intravascular coagulation and diagnosis of Vitamin K deficiency	S	SH	Y	LGT, SGT	Written/ Viva voce	
PA20.3	Define and describe its laboratory findings and diagnosis of Multiple Myeloma	K	KH	Y	LGT, SGT	Written/ Viva voce	
Topic 21: Blood banking and transfusion							
		Number of competencies: (06)			Number of competencies that require certification: (1)		
PA21.1	Classify and describe blood group systems (ABO and RH)	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA21.2	Enumerate blood components and describe their clinical uses	S	SH	Y	LGT, SGT	Written/ Viva voce	
PA21.3	Enumerate and describe infections transmitted by blood transfusion	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA21.4	Describe transfusion reactions and enumerate the steps in the investigation of a transfusion reaction	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA21.5	Enumerate the indications and describe the principles and procedure of autologous transfusion	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA21.6	Describe the correct technique to perform blood grouping Describe the correct technique to perform a cross match	S	SH	Y	DEMO	Viva voce / OSPE	1

number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P
A24.9	Describe and identify the microscopic features of liver diseases and tumors	S	SH	Y	DOAP	Viva voce	
Topic 25: Respiratory system							
		Number of competencies: (07)			Number of competencies that require certification: (NIL)		
A25.1	Define and describe the etiology, types, pathogenesis, stages, morphology and complications of pneumonia	K	KH	Y	LGT, SGT	Written/ Viva voce	
A25.2	Describe the etiology, gross and microscopic appearance and complications of lung abscess	K	KH	Y	LGT, SGT	Written/ Viva voce	
A25.3	Define and describe the etiology, types, pathogenesis, stages morphology and complications and evaluation of Obstructive airway disease (OAD) and bronchiectasis	K	KH	Y	LGT, SGT	Written/ Viva voce	
A25.4	Define and describe the etiology, types, pathogenesis, stages, morphology microscopic appearance and complications of tuberculosis	K	KH	Y	LGT, SGT	Written/ Viva voce	
A25.5	Define and describe the etiology, types, exposure, environmental influence, pathogenesis, stages, morphology, microscopic appearance and complications of Occupational lung disease	K	KH	Y	LGT, SGT	Written / Viva voce	
A25.6	Define and describe the etiology, types, exposure, genetic environmental influence, pathogenesis, stages, morphology, microscopic appearance, metastases and complications of tumors of the lung and pleura including mesothelioma	K	KH	Y	LGT, SGT	Written/ Viva voce	
A25.7	Identify and describe the features of diseases and tumors of lung in a gross and microscopic specimen	S	SH	Y	DOAP	Viva voce	
Topic 26: Cardiovascular system							
		Number of competencies: (10)			Number of competencies that require certification: (NIL)		
A26.1	Distinguish arteriosclerosis from atherosclerosis. Describe the pathogenesis and pathology of various causes and types of atherosclerosis	K	KH	Y	LGT, SGT	Written/ Viva voce	

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P
PA26.2	Describe the etiology, dynamics, pathology types and complications of aneurysms including aortic aneurysms	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA26.3	Describe the etiology, types, stages pathophysiology, pathology and complications of heart failure	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA26.4	Describe the etiology, pathophysiology, pathology, gross and, complications of Congenital heart disease	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA26.5	Describe the etiology, pathophysiology, pathology, gross and microscopic features, criteria and complications of rheumatic fever	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA26.6	Describe the epidemiology, risk factors, etiology, pathophysiology, pathology, presentations, gross and microscopic features, diagnostic tests and complications of ischemic heart disease and Interpret abnormalities in cardiac function testing in acute coronary syndromes	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA26.7	Describe the etiology, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of infective endocarditis	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA26.8	Describe the etiology, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of pericarditis and pericardial effusion	S	SH	Y	DOAP	Skill Assessment	
PA26.9	Classify and describe the etiology, types, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of cardiomyopathies	K	KH	N	LGT, SGT	Written/ Viva voce	
PA26.10	Describe the etiology, pathophysiology, pathology features and complications of tumors of cardiovascular system.	K	KH	N	LGT, SGT	Written/ Viva voce	
Topic 27 : Urinary Tract					Number of competencies that require certification: (NIL)		
PA27.1	Describe the normal histology of the kidney	K	K	Y	LGT, SGT	Written/ Viva voce	
PA27.2	Define, classify and distinguish the clinical syndromes and describe the etiology, pathogenesis, pathology, morphology, clinical and laboratory and urinary findings, complications of renal failure	K	KH	Y	LGT, SGT	Written/ Viva voce	

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Learning method	Suggested Assessment method	Number required to certify P
PA27.13	Define classify and describe the etiology, pathogenesis, pathology, laboratory, urinary findings, distinguishing features progression and complications of renal stone disease and obstructive uropathy	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA27.14	Classify and describe the etiology, genetics, pathogenesis, pathology, presenting features, progression and spread of renal tumors	K	KH	N	LGT, SGT	Written/ Viva voce	
PA27.15	Describe the etiology, genetics, pathogenesis, pathology, presenting features and progression of thrombotic angiodysplasias	K	KH	N	LGT, SGT	Written/ Viva voce	
PA27.16	Describe the etiology, genetics, pathogenesis, pathology, presenting features and progression of urothelial tumors	K	KH	N	LGT, SGT	Written/ Viva voce	
PA27.17	Identify and describe the features of kidney diseases and tumors in a gross and microscopic specimen	S	SH	Y	DEMO	Viva voce / OSPE	
Topic 28: Male Genital Tract		Number of competencies: (06)			Number of competencies that require certification: (NIL)		
PA28.1	Classify testicular tumors and describe the pathogenesis, pathology, presenting and distinguishing features, diagnostic tests, progression and spread of testicular tumors	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA28.2	Describe the pathogenesis, pathology, presenting and distinguishing features, diagnostic tests, progression and spread of carcinoma of the penis	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA28.3	Describe the pathogenesis, pathology, hormonal dependency presenting and distinguishing features, urologic findings & diagnostic tests of benign prostatic hyperplasia	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA28.4	Describe the pathogenesis, pathology, hormonal dependency presenting and distinguishing features, diagnostic tests, progression and spread of carcinoma of the prostate	K	KH	Y	LGT, SGT	Written/ Viva voce	

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Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P
B31.7	Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications and metastases of pancreatic cancer	K	KH	N	LGT, SGT	Written/ Viva voce	
B31.8	Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications of adrenal insufficiency	K	KH	N	LGT, SGT	Written/ Viva voce	
B31.9	Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications of Cushing's syndrome	K	KH	N	LGT, SGT	Written/ Viva voce	
B31.10	Describe the etiology, pathogenesis, manifestations, laboratory and morphologic features of adrenal neoplasms	S	SH	Y	DOAP	Viva voce	
Topic 32: Bone and soft tissue							
Number of competencies: (07)							
32.1	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications of osteomyelitis	K	KH	Y	LGT, SGT	Written/ Viva voce	
32.2	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications and metastases of bone tumors	K	KH	Y	LGT, SGT	Written/ Viva voce	
32.3	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications and metastases of soft tissue tumors	K	KH	Y	LGT, SGT	Written/ Viva voce	
32.4	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications of Paget's disease of the bone	K	KH	N	LGT, SGT	Written/ Viva voce	
32.5	Classify and describe the etiology, immunology, pathogenesis, manifestations, radiologic and laboratory features, diagnostic criteria and complications of rheumatoid arthritis	K	KH	N	LGT, SGT	Written/ Viva voce	
32.6	Classify and describe the etiology, pathogenesis, manifestations, radiologic and laboratory features, diagnostic criteria and complications of Osteo arthritis and Gouty arthritis	K	KH	N	LGT, SGT	Written/ Viva voce	

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Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify p
PA32.7	Describe and identify the morphologic and microscopic features of diseases and tumors of bone	S	SH	Y	DOAP	Viva voce	
Topic 33: Skin							
Number of competencies that require certification: (04)							
PA33.1	Describe the risk factors pathogenesis, pathology and natural history of squamous cell carcinoma of the skin	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA33.2	Describe the risk factors pathogenesis, pathology and natural history of basal cell carcinoma of the skin	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA33.3	Describe the distinguishing features between a nevus and melanoma. Describe the etiology, pathogenesis, risk factors morphology clinical features and metastases of melanoma	K	KH	N	LGT, SGT	Written/ Viva voce	
PA33.4	Identify, distinguish and describe common tumors of the skin	S	SH	N	DOAP	Skill Assessment	
Topic 34: Central Nervous System							
Number of competencies that require certification: (01)							
PA34.1	Describe the etiology, types and pathogenesis, differentiating factors, CSF findings in meningitis	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA34.2	Classify and describe the etiology, genetics, pathogenesis, pathology, presentation sequelae and complications of CNS tumors	K	KH	Y	LGT, SGT	Written/ Viva voce	
PA34.3	Identify the etiology of meningitis based on given CSF parameters	S	P	Y	DOAP	Skill Assessment	1
Topic 35: Eye							
Number of competencies that require certification: (01)							
Number of competencies that require certification: (NIL)							

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P
PA35.1	Describe the etiology, genetics, pathogenesis, pathology, presentation, sequelae and complications of retinoblastoma	K	KH	N	LGT, SGT	Written/ Viva voce	

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**OFFICE OF THE DEPARTMENT OF PATHOLOGY
SUBHARTI MEDICAL COLLEGE, MEERUT
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No. /SMC /Patho./2025/305

Date: 12/11/2025

Notice

In reference to letter no. SMC/G/M-60/6367, dated 06.11.2025, a meeting of Board of studies (for postgraduate) is scheduled in department of pathology on 18/11/2025 at 11:30 am. in departmental seminar room.

The agenda of the meeting is as follows:

1. Confirmation of the minutes of the previous Faculty Board Meeting and ratification of the Action-Taken-Report.
2. Introduction of any new Value Added Courses.
3. To start Post-Doctoral Certificate Courses (PDCC).
4. Ratification of feedback on curriculum, classroom teaching and their Action Taken Report (ATR)
5. To review ongoing research activities.
6. To start any new certificate course for Undergraduates and Postgraduates.
7. Any change in CBME
8. Ratification of guidelines from medical college for Proctorial board
9. To Review MoUs
10. Any other item with the permission of the Chair.

Copy to:

1. The Principal, Subharti Medical College, Meerut – for information please
2. Dr. Shweta Grover, Professor, Department of Pathology, MMC, Muzaffarnagar
3. Dr. Neha Singh, Professor, Department of Pathology, LLRM Medical College, Meerut
4. Dr. Purva Sharma, Associate Professor, NCR Institute of Medical Sciences Nalpur Meerut
5. Dr. Surabhi Gupta, Professor & Head, Department of Pharmacology, Subharti Medical College, Meerut
6. All faculty members of Department of Pathology, Subharti Medical College, Meerut


Dr. Anjali Khare
Prof & Head



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No. /SMC /Patho./2025/

Date: 18.11.2025

Minutes of Meeting of Board of Studies held on 18-11-2025.

A meeting of Postgraduate (PG) Board of Studies was held on 18-11-2025 at 11:30 AM in Seminar Room of the Department of Pathology.

Following members attended the meeting.

Internal Members	
1. Dr. Anjali Khare, Prof. & Head	– Chairperson
2. Dr. Rani Bansal, Prof. & Advisor	– Member
3. Dr. Sangeeta Sharma, Professor	– Member
4. Dr. Davendra Swarup, Professor	– Member
5. Dr. Shubhangi Gupta, Professor	– Member
6. Dr. Archita Tiwari, Assoc. Prof.	– Member
7. Dr. Kavita Chauhan, Asst. Prof.	– Member
8. Dr. Dishant K. Malik, Asst. Prof.	– Member
9. Dr. Karishma Ranjan, Asst. Prof.	– Member
10. Dr. Abid Ashraf Sheikh, Asst. Prof.	– Member
11. Dr. Kanika Munish, Asst. Prof.	– Member
Internal Cognate Member	
12. Dr. Surabhi Gupta Professor & Head, Department of Pharmacology, SMC, Meerut	– Co-opted Member
External Members	
13. Dr. Shweta Chawla Professor, Deptt. of Pathology, MMC, Muzaffarnagar	– Subject expert- Academic
14. Dr. Neha Singh Professor, Deptt. of Pathology, LLRM Medical College, Meerut	– Senior Alumini
15. Dr. Purva Sharma Assoc. Prof., Deptt. of Pathology, NCR Institute of Medical Sciences, Nalpur Meerut	– Subject expert- R&D

At the onset, the Chairperson BoS welcomed all the members for sparing their time. The items were taken up as per agenda.

Agenda 1: Confirmation of the Minutes of the Previous Faculty Board Meeting and Ratification of the Action Taken Report

The minutes of the previous Faculty Board meeting were read and confirmed. The Action Taken Report (ATR) was reviewed and ratified.

Decision: Minutes confirmed and ATR ratified.

Agenda 2: Introduction of Any New Value-Added Courses

After discussing the feasibility of introduction of any new value-added course in the current session, it was proposed that a value added course in quality control in hematology can be introduced for next session.

Decision: The proposal for value-added course in quality control in hematology was approved. Syllabus and duration to be framed and submitted for Academic Council approval.

Agenda 3: To Start Post-Doctoral Certificate Courses (PDCC)

The Board discussed that presently initiating Post-Doctoral Certificate Courses in Pathology is not feasible.

Agenda 4: Ratification of Feedback on Curriculum, Classroom Teaching and Their Action Taken Report (ATR)

Feedback from students & faculty on curriculum and teaching methodologies was reviewed. Key issue was the need for more interactive sessions.

Decision:

- Feedback and corresponding ATR were ratified.
- Faculty members to continue efforts to enhance student engagement through problem-based learning and integrated teaching.

Agenda 5: To Review Ongoing Research Activities

Ongoing departmental research projects were presented and reviewed. 05 research projects were successfully completed by September 2025, with publications in indexed journal. Presently 09 postgraduate students are doing research projects. Members appreciated the progress and encouraged faculty and postgraduate students to publish in indexed journals and participate in conferences.

Key highlights : 03 research projects of MD 2024 residents have secured financial support under the ICMR-DHR MD/MS Thesis Support Program 2025.

Decision:

- Research work to continue with periodic review.
-

Agenda 6: To Start Any New Certificate Course for Undergraduates and Postgraduates

The board discussed the feasibility of Proposals for new short-term certificate courses. It was decided that no certification course for postgraduate will start in coming year.

Agenda 7: Any Change in CBME

The members discussed the current changes in Pathology CBME (Competency-Based Medical Education) curriculum.

Decision:

Minor proposed changes are to be communicated to Curriculum Committee.

Agenda 8: Ratification of Guidelines from Medical College for Proctorial Board

The guidelines issued by the Medical College regarding the functioning of the Proctorial Board were reviewed.

Decision: The Board unanimously ratified the guidelines and recommended their implementation in the department with immediate effect.

Agenda 9: To Review MoUs

Existing Memorandums of Understanding (MoUs) with collaborating institutions and organizations were reviewed.

Decision:

- NA.

Conclusion

The Chairperson thanked all members for their active participation and valuable suggestions. The meeting concluded with a vote of thanks.

Action to be taken by	Concerned faculty member
Timeline to complete the assigned task	Within 6-9 months


Dr. Anjali Khare
Prof & Head



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No. /SMC /Patho./2025/

Date: 18.11.2025

Attendance of Board of Studies (PG) meeting held on 18/11/2025.

S. N.	Name of Faculty	Designation	Signature
Internal Members			
1	Dr. Anjali Khare (Chairperson BOS)	Prof. & Head, Department of Pathology, Subharti Medical College, Meerut	
2.	Dr. Rani Bansal (Member)	Professor & Advisor, Department of Pathology, Subharti Medical College, Meerut	
3	Dr. Sangeeta Sharma (Member)	Professor, Deptt. of Pathology, Subharti Medical College, Meerut	
4.	Dr. Davendra Swarup (Member)	Professor, Deptt. of Pathology, Subharti Medical College, Meerut	
5	Dr. Shubhangi Gupta (Member)	Professor, Deptt. of Pathology, Subharti Medical College, Meerut	
6	Dr. Archita Tiwari (Member)	Assoc. Prof., Deptt. of Pathology, Subharti Medical College, Meerut	
7	Dr. Kavita Chauhan (Member)	Asstt. Prof., Deptt. of Pathology, Subharti Medical College, Meerut	
8	Dr. Dishant K. Malik (Member)	Asstt. Prof., Deptt. of Pathology, Subharti Medical College, Meerut	
9	Dr. Karishma Ranjan (Member)	Asstt. Prof., Deptt. of Pathology, Subharti Medical College, Meerut	
10	Dr. Abid Ashraf Sheikh (Member)	Asstt. Prof., Deptt. of Pathology, Subharti Medical College, Meerut	
11	Dr. Kanika Munish (Member)	Asstt. Prof., Deptt. of Pathology, Subharti Medical College, Meerut	
External Members			
1	Dr. Shweta Chawla (Subject expert- Academic)	Professor, Deptt. of Pathology, MMC, Muzaffarnagar	
2	Dr. Neha Singh (Sr. Alumini)	Professor, Deptt. of Pathology, LLRM Medical College, Meerut	
3	Dr. Purva Sharma (Subject expert- R&D)	Assoc. Prof., Deptt. of Pathology, NCR Institute of Medical Sciences Nalpur Meerut	
Internal Cognate Member			
1	Dr. Surabhi Gupta (Co-opted Member)	Professor & Head, Department of Pharmacology, Subharti Medical College, Meerut	



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No. /SMC /Patho./2025/

Date: 18.11.2025

Action Taken Report on BOS meeting held on 12/03/2025

S. No.	Agenda Item	Resolution	Decision
Agenda-1	To confirm the minutes of the previous Board of studies	The members confirmed the minutes of the previous Board studies meeting	Confirmed
Agenda-2	To report action taken on the minutes of previous board of studies meeting	The members noted the action taken on the minutes of previous Board of studies meeting	Confirmed
Agenda-3	Any change in competency as per the CBME guidelines for upcoming sessions	More small group teaching sessions are incorporated in the schedule	Confirmed
Agenda-4	Discussion on ongoing research activities	Regular progress reviews are being held to provide feedback and support throughout the research process.	Confirmed
Agenda-5	Any other items with the permission of the Chairperson	No other agenda	NA

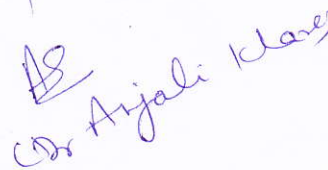
Copy to:-

1. The Principal SMC


Dr. Anjali Khare
Prof. & Head

FACULTY-WISE LIST OF POSTGRADUATE (PG) BOARD OF STUDIES

FACULTY	POSTGRADUATE BOARD OF STUDIES UNDER		
	Department	Composition of BoS-PG	Name, Designation & Address of Members
Faculty of Medicine	Pathology	Chairperson	Dr. Anjali Khare, Prof. & Head
		Professor/ Associate Professor/ Assistant Professor of Dept.	Dr. Rani Bansal, Prof. & Advisor Dr. Sangeeta Sharma, Professor Dr. Davendra Swarup, Professor Dr. Shubhangi Gupta, Professor Dr. Archita Tiwari, Assoc. Prof. Dr. Kavita Chauhan, Asst. Prof. Dr. Dishant K. Malik, Asst. Prof. Dr. Karishma Ranjan, Asst. Prof. Dr. Abid Ashraf Sheikh, Asst. Prof. Dr. Kanika Munish, Asst. Prof.
		One senior professor co-opted from other Dept.	Dr. Surabhi Gupta, Prof. & Head, Department of Pharmacology, SMC, Meerut
		One subject expert (Academic) – Expert should be from reputed Central/ State Govt. Universities/ Private Universities	Dr. Shweta Chawla Professor, Deptt. of Pathology, MMC, Muzaffarnagar
		One subject expert R&D/ Industry- Expert should be from Central/ State Govt. organization or from industry	Dr. Purva Sharma, Assoc. Prof., Deptt. of Pathology, NCR Institute of Medical Sciences, Nalpur Meerut
		Senior Alumni (Academic/ R&D/ Industry) – Alumni members should be at least 5 years of experience in the relevant field Universities	Dr. Neha Singh, Professor, Deptt. of Pathology, LLRM Medical College, Meerut


 Dr. Anjali Khare

PATHOLOGY PG Syllabus

- ABO and Rh grouping.
- Demonstrate familiarity with Antenatal and Neonatal work up.
 - (i) Direct antiglobulin test
 - (ii) Antibody screening and titre
 - (iii) Selection of blood for exchange transfusion
- Demonstrate familiarity with principle and procedures involved in:
 - (i) Resolving ABO grouping problems.
 - (ii) Identification of RBC antibody.
 - (iii) Investigation of transfusion reaction.
 - (iv) Testing of blood for presence of:
 - (a) HBV (Hepatitis B Virus Markers).
 - (b) HCV (Hepatitis C Virus Markers)
 - (c) HIV (Human Immunodeficiency Virus Testing)
 - (d) VDRL
 - (e) Malaria

Immunohistochemistry

Skills (desirable)

- Be able to perform immuno-histochemical staining using paraffin section with at least one of the commonly used antibodies (Cytokeratin or LCA) using PAP method.

Syllabus

Course contents:

The study of Pathologic Anatomy includes all aspects of Pathology as encompassed in the branches of General and Systemic Pathology. Only the broad outlines are provided.

A) 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.

B) Systemic Pathology:

The study of normal structure and function of various organ systems and the aetiopathogenesis, gross and microscopic alterations of structure of these organ systems in disease and functional correlation with clinical features.

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NSingh, etc.

C) Haematology

The study of Haematology includes all aspects of the diseases of the blood and bone marrow. This would involve the study of the normal, and the causes of diseases and the changes thereof.

1. Laboratory Medicine (Clinical Biochemistry/Clinical Pathology including Parasitology).
2. Transfusion Medicine (Blood Banking).
3. The student is expected to acquire a general acquaintance of techniques and principles and to interpret data in the following fields.
 - a) Immunopathology
 - b) Electron microscopy
 - c) Histochemistry
 - d) Immunohistochemistry
 - e) Cytogenetics
 - f) Molecular Biology
 - g) Maintenance of records
 - h) Information retrieval, use of Computer and Internet in medicine.
 - i) Quality control, waste disposal

It is difficult to give a precise outline of the Course Contents for post graduate training. A post graduate is supposed to acquire not only the professional competence of a well-trained specialist but also academic maturity, a capacity to reason and critically analyse scientific data as well as to keep himself abreast of the latest developments in the field of Pathology and related sciences. A brief outline of what is expected to be learnt during the MD Course is given under each head.

Surgical Pathology

Knowledge

- The student should be able to demonstrate an understanding of the histogenetic and patho-physiologic processes associated with various lesions.
- Should be able to identify problems in the laboratory and offer viable solutions.

Autopsy Pathology

Knowledge

- Should be aware of the technique of autopsy.
- Should have sufficient understanding of various disease processes so that a meaningful clinico-pathological correlation can be made.
- Demonstrate ability to perform a complete autopsy independently with some physical assistance, correctly following the prescribed instructions. Correctly

identify all major lesions which have caused, or contributed to the patient's death, on macroscopic examination alone and on microscopy in at least 90% of the autopsies in an average teaching hospital.

- In places where non-medico-legal autopsies are not available each student should be made to observe at least five medico-legal autopsies.
- Write correctly and systematically Provisional and Final Anatomic Diagnosis reports.

Cytopathology

Knowledge

- Should possess the background necessary for the evaluation and reporting of cytopathology specimens.
- Demonstrate familiarity with the following, keeping in mind the indication for the test.
 - (i) Choice of site from which smears may be taken
 - (ii) Type of samples
 - (iii) Method of obtaining various specimens (urine sample, gastric smear, colonic lavage etc.)
 - (iv) Be conversant with the principles and preparation of solutions of stains

Haematology

Knowledge

- Should demonstrate the capability of utilising the principles of the practice of Haematology for the planning of tests, interpretation and diagnosis of diseases of the blood and bone marrow.
- Should be conversant with various equipments used in the Haematology laboratory.
- Should have knowledge of automation and quality assurance in Haematology.
- Correctly plan a strategy of investigating at least 90% of the cases referred for special investigations in the Hematology Clinic and give ample justification for each step in consideration of the relevant clinical data provided.

Laboratory Medicine

Knowledge

- Possess knowledge of the normal range of values of the chemical content of body fluids, significance of the altered values and its interpretation.
- Possess knowledge of the principles of following specialized organ function tests and the relative utility and limitations of each and significance of the altered values.

- (i) Renal function tests

- (ii) Liver function tests
- (iii) Pancreatic function tests
- (iv) Endocrine function tests
- (v) Tests for malabsorption

- Know the principles, advantages and disadvantages, scope and limitation of automation in the laboratory.
- Know the principles and methodology of quality control in the laboratory.

Transfusion Medicine (Blood Banking)

Knowledge

The student should possess knowledge of the following aspects of Transfusion Medicine.

- Basic immunology
- ABO and Rh groups
- Clinical significance of other blood groups
- Transfusion therapy including the use of whole blood and RBC concentrates
- Blood component therapy
- Rationale of pre-transfusion testing.
- Infections transmitted in blood.
- Adverse reactions to transfusion of blood and components
- Quality control in blood bank

Basic Sciences (in relation to Pathology)

a) Immunopathology

Knowledge

- Demonstrate familiarity with the current concepts of structure and function of the immune system, its aberrations and mechanisms thereof.
- Demonstrate familiarity with the scope, principles, limitations and interpretations of the results of the following procedures employed in clinical and experimental studies relating to immunology.
 - (a) ELISA techniques
 - (b) Radioimmunoassay
 - (c) HLA typing
- Interpret simple immunological tests used in diagnosis of diseases and in research procedures.
 - (i) Immunoelectrophoresis
 - (ii) Immunofluorescence techniques especially on kidney and skin biopsies
 - (iii) Anti-nuclear antibody (ANA)
 - (iv) Anti-neutrophil cytoplasmic antibody (ANCA)

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b) Electron Microscopy

Knowledge

- Demonstrate familiarity with the principles and techniques of electron microscopy and the working of an electron microscope (including Transmission and Scanning Electron microscope: TEM and SEM)
- Recognise the appearance of the normal subcellular organelles and their common abnormalities (when provided with appropriate photographs).

c) Enzyme Histochemistry

Knowledge

- Should be familiar with the principles, use and interpretation of common enzyme histochemical procedures (Alkaline Phosphatase, Acid Phosphatase, Glucose-6-Phosphate Dehydrogenase, Chloroacetate Esterase).

d) Immunohistochemistry

Knowledge

- Demonstrate familiarity with the principles and exact procedures of various immunohistochemical stains using both PAP (Peroxidase-anti-peroxidase) and AP-AAP (Alk. Phosphatase-anti-Alk. Phosphatase) ABC (Avidin-Biotin Conjugate) systems; employing monoclonal and polyclonal antibodies.
- Be aware of the limitations of immuno-histochemistry.

e) Molecular Biology

Knowledge

- Should understand the principles of molecular biology especially related to the understanding of disease processes and its use in various diagnostic tests.
- Should be conversant with the principle and steps and interpretation of Polymerase Chain Reaction (PCR), Western Blot, Southern Blot, Northern Blot and Hybridisation) procedures.

f) Cytogenetics

Knowledge

- Demonstrate familiarity with methods of Karyotyping and Fluorescent in-situ Hybridisation (FISH).

g) Tissue Culture

Knowledge

- Demonstrate familiarity with methods of tissue culture.

Handwritten notes and signatures in the bottom left corner, including "H of", "SG", "me", "SSh", "for", and a large signature "Rising" with "Alu" and "Ch" written below it.

h) Principles of Medical Statistics

Knowledge

- Demonstrate familiarity with importance of statistical methods in assessing data from patient material and experimental studies.

TEACHING AND LEARNING METHODS

Post Graduate Training

Teaching methodology

Based on the available facilities, the Department can prepare a list of post graduate experiments pertaining to basic and applied Pathology. Active learning should form the mainstay of post graduate training; there should be lectures for post graduates (at least 20 per year), along with seminars, symposia, group-discussions and Journal clubs. The post graduate students should regularly do the ward rounds of various clinical departments and learn cases of interest for discussion with the clinical faculty. Each college should have a Medical Education Unit to generate teaching resource material for undergraduates and evolving of problem solving modules. Department should encourage e-learning activities.

Rotation:

Postings to laboratories/assignments

The three-year training programme for the MD degree may be arranged in the form of postings to different assignments/laboratories for specified periods as outlined below. The period of such assignments/postings is recommended for 35 months. Posting schedules may be modified depending on needs, feasibility and exigencies. For facilities not available in the parent institution as well as for additional knowledge and skill, extramural postings may be undertaken.

Section/Subject	Duration in months
(i) Surgical Pathology and Autopsy and Pathology Techniques	12
(ii) Haematology and Laboratory Medicine	10
(iii) Cytopathology	08
(iv) Transfusion Medicine/Blood Bank	02
(v) Museum techniques and record management	01
(vi) Basic Sciences including Immunopathology, Electron microscopy, Molecular Biology, Research Techniques and cytogenetics etc	02
Total	35