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NOI NAADAL - II (Principles of Modern Pathology) SIDUG - NN2

#### PRACTICAL RECORD BOOK

Name of the Student :	
Institutional Roll No. :	
A cademic Vear:	

DEPARTMENT OF NOI NAADAL NOI MUDHAL NAADAL(PATHOLOGY)

UNIVERSITY LOGO

COLLEGE LOGO

NCISM LOGO

COLLEGE NAME	
APPROVED BY NATIONAL COMMISSION FOR INDIAN SYSTEM OF M	
AFFILIATED TO UNIVERSITY NAME	

#### SIDDHA MARUTHUVA ARIGNAR BACHELOR OF SIDDHA MEDICINE AND SURGERY SECOND PROFESSIONALB.S.M.S

#### **NOI NAADAL - II**

(Principles of Modern Pathology)

SIDUG - NN2

#### PRACTICAL RECORD BOOK

Name of the Student :	
Unique AYUSH ID No :	
University Register/Enrollment No.	.:
Institutional Roll No. :	
Academic Year:	

DEPARTMENT OF NOI NAADAL NOI MUDHAL NAADAL (PATHOLOGY)

UNIVERSITY LOGO COLLEGE LOGO

NCISM LOGO

COLLEGE NAME	E				
NATIONAL COM	AMISSION FO	APPROVED B R INDIAN SYST	Y EM OF MEDICINE,	, NEW DELHI	
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			EXAMIN	ERS	
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#### **INDEX**

Sr. No.	Date	Name of Practical	Term	Page No.	Signature of Faculty
1.					
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#### **INSTRUCTIONS & GUIDELINES**

#### General

1. The common format for the practical prescribed by the NCISM is aiming to maintain uniformity among colleges/institutions across the country.

#### **Instructions to Students**

- 2. The student will prepare the practical record book, including the cover page, first inner page, certificate page, and index page as per the format prescribed by the NCISM here.
- 3. The student will record in the practical record book handwritten immediately after each practical and get the signature of the concerned teaching faculty.
- 4. The student will use the specific format/template for recording each practical in the practical record book.

#### **Instructions to Teachers/HOD**

- 5. It is the responsibility of the department to conduct practicals as per the list, schedule, method, etc., specified in the curriculum.
- 6. The teacher must instruct the student to record his/her work as per the specific format prescribed by the NCISM here.(List of practical and format references are enclosed herewith)
- 7. After each practical, the concerned teacher must verify the completion of the record work and put the signature in the index page.
- 8. The certificate page of the practical record will be certified and signed by the concerned head of the department.
- 9. Normal values or any other important information confined to the subject, if any, may be printed in the last pages.

# **List of Practical and Format Reference**

S. No.	Name of the Practical	Format reference
P.1	Hematology*	
1.	Estimation of Bleeding time	I
2.	Estimation of Clotting time	I
3.	Estimation of Haemoglobin	I
4.	Estimation of Erythrocyte Sedimentation Rate	I
5.	Estimation of Total red blood cell count	I
6.	Estimation of Total wbc count	I
7.	Estimation of Differential count	I
8.	Estimation of Platelet count	I
9.	Peripheral Blood Smear – Blood picture	I
P.2	Urine Analysis	
10	Analysis of presence of glucose	II
11	Analysis of presence of protein	II
12	Analysis of presence of ketones	II
13	Analysis of presence of bile salts/ bile pigments	II
14	Analysis of presence of blood	II
Р3	Hematopathology Slides	
15	Anaemia	III
16	Leukaemia	III
P4	Histopathology Slides	
17	Fatty liver	III
18	Granuloma	III
19	Chronic venous congestion lung	III

20	Chronic venous congestion liver	III
21	Chondroma	III
22	Thrombus	III
23	Atheroma	III
24	Pneumonia	III
25	Bronchiectasis	III
26	Tuberculosis lung/lymph node	III
27	Gastric ulcer	III
28	Tuberculosis intestine	III
29	Cirrhosis	III
30	Chronic pyelonephritis	III
31	Adenocarcinoma colon	III
32	Renal cell Carcinoma	III
33	Lipoma	III
34	Osteoclastoma	III
35	Papillary Thyroid Carcinoma	III
36	Leiomyoma	III
37	Fibroadenoma breast	III
38	Carcinoma breast	III
39	Vaginal smear	III
P5	Specimen	
40	Pneumonia	IV
41	Bronchiectasis	IV
42	Tuberculosis lung/ lymph node	IV

43	Tuberculosis Intestine	IV
44	Adenocarcinoma colon	IV
45	Cirrhosis	IV
46	Chronic pyelonephritis	IV
47	Renal cell Carcinoma	IV
48	Gastric ulcer	IV
49	Leiomyoma	IV
50	Fibroadenoma breast	IV
51	Carcinoma breast	IV
P6	Radiological	
52	Cardiothoracic	V
53	Renal	V
54	Gastrointestinal	V
55	Bone and joint	V
P7	Case based learning**	
56	Infectious diseases	VI
57	Environment / nutritional diseases	VI
58	Haematological disorders	VI
59	Cardiothoracic diseases	VI
60	Gastrointestinal diseases	VI
61	Hepatobiliary diseases	VI
62	Renal diseases	VI
63	Neurological diseases	VI
64	Urogenital diseases	VI

#### Format -I

# (For the practical P1)

#### Practical of Haematology

(Diagram Left side and description right side)

- Name of the experiment
- Objective
- Principle\*
- Requirements
- Procedure
- Diagram/Table/Calculation
- Result
- Clinical significance

### Format II

# (For the practical P2)

# Practical of Urine Analysis

- Name of the experiment
- Objective
- Principle\*
- Requirements
- Procedure
- Observation
- Inference
- Clinical significance

#### Format – III

(For the practical P3 and P4)

# Practical of Haematology/Histopathology Slide

- (Diagram Left side and description right side)
- Diagram
- Microscopical features
- Haematological/Histopathology diagnosis
- Clinical significance

### Format-IV

# (For the practical P5)

# Practical of Specimen

(Diagram Left side and description right side)

- Diagram/picture
- Gross features
- Pathological diagnosis
- Clinical significance

### Format-V

# (For the practical P6)

# Practical of Radiology

(Diagram Left side and description right side)

- Diagram/picture
- Part and View
- Radiological findings
- Radiodiagnosis
- Clinical significance

#### Format – VI

### (For the practical P7)

### Case Based Learning

- Details to be given Case scenario with or without investigation
- Questions can be asked
  - o Investigation/ further investigation
  - o Differential Diagnosis
  - o 3. Diagnosis

<sup>\*</sup>Wherever applicable

<sup>\*\*</sup> Minimum three cases from each topic mentioned under case-based learning in practical index SIDUG-NN2 - II B.S.M.S, NCISM.

NORMAL VALUES				
COMPONENT	REFERENCE VALVE			
ERYTHROCYTES				
Erythrocyte Sedimentation Rate	Males – 0-15mm/hr			
	Females- 0-20 mm/hr			
Haemoglobin	Male – 13 -18 gm /dl			
	Female – 11.5 -16.5 gm/dl			
Erythrocyte Total Count	Males -4.5 – 6.5 million cells per /μL			
	Females $-3.8-5.8$ million cells / $\mu L$			
Erythrocyte Diameter	6.7 – 7.7 μm			
Red Cell Distribution Width (RDW)	Males – 12.2 – 16.1 %			
	Females – 11.8- 14.5 %			
ERYTHROCYTE (AbsoluteValues)				
Mean corpuscular Haemoglobin	27 -32 Picograms Per Cell			
Mean Corpuscular Volume	77-93 femtolitres			
Mean Corpuscular Haemoglobin Concentration	30-35 gm /dl			
Haematocrit (PCV)	Males – 40-54 %			
	Females – 37-47 %			
LEUCOCYTES				
Total Leucocyte Count	Adults – 4,000-11,000 / μL			
	Infants at Birth $-10,000$ -25,000 / $\mu L$			
	Infants (1year) $-6,000 - 16,000 / \mu L$			
Differential Leucocyte Count	Neutrophils $-40\text{-}75~\%~(2,000~\text{-}7,500~/\mu\text{L})$ Lymphocytes $-20\text{-}50~\%~(1,500~\text{-}4,000~/\mu\text{L})$			
	Eosinophils – 1-6 % ( 200 -800 /μL )			
	Monocytes – 2-10% ( $40 - 400 / \mu L$ )			
	Basophils - $< 1\%$ ( $10-100 / \mu L$ )			
PLATELETS	1			
Bleeding Time	2-7 minutes			
Clotting Time	4-9 minutes			

Fibrinogen	200-400 mg / dl
Fibrin degradation products	<10 µg /ml
Partial thromboplastin time	30-40 sec
Prothrombin time	10-14 secs
Thrombin time	≤ 20 secs
Platelet count	1,50,000 – 4,00,000 / μL
URINE EXAMINATION	1
Volume ( 24 hr volume )	600-1,800 ml
рН	5.0 -9.0
Specific Gravity	1.002 1.028
Protein Excretion (24 hr urine)	< 150 mg /day
Glucose Excretion (24 hr Urine )	50-300 mg / day
Urobilinogen (24 hr Urine )	1.0-3.5 mg / day
LIVER FUNCTION TESTS	
BILIRUBIN	
Total	0.3 -1.3 mg / dL
Direct (Conjugated )	0.1-0.4 mg/ dL
Indirect (Unconjugated ) `	0.2-0.9 mg / dL
Alkaline Phosphatase	33-96 U/L
Aminotransferases	
Aspartate (AST, SGOT)	12-38 U/L
Alanine (ALT ,SGPT)	7-41 U/L
Total Protein	6.7-8.6 g /dL
Albumin	3.5 -5.5 gm /dL
Globulin	2.0-3.5 gm/dL
A/G ratio	1.5 – 3: 1
RENAL FUNCTION TESTS	
Glomerular Filtration Rate	180 L/day
Renal Blood Flow	1200 mL/ min
Urea	20-40 mg/ dL

Uric acid	Males: 3.1 – 7.0 mg /dL
	Females: 2.5 – 5.6 mg/dL
Creatinine	0.6 – 1.2 mg /dL
Blood Urea Nitrogen	7- 20 mg / dL
Urea creatinine Ratio	10:1
THYROID FUNCTION TESTS	
Thyroxine total	$5.4-11.7~\mu g$ / mL
Triiodothyronine total	77 -135 ng /dL
Thyroid stimulating hormone	0.4 -5.0 μU /mL