

## Categorization of Laboratory Tests

## Group A

S. No.	Test	Recommended Method(s)
1.	11 cells panel for antibody identification	
2.	24 hours urine for proteins, sodium, creatinine	Fully automated chemistry analyser
3.	24 hr. urinary cortisol	
4.	3 Cell panel Antibody screening for pregnant female	
5.	Absolute Eosinophil Count	Fully Automatic Analyser
6.	Acid phosphatase	Fully automated chemistry analyser
7.	Activated partial thromboplastin time	
8.	Alkaline phosphatase	Fully automated chemistry analyser
9.	ANA qualitative	IFA/Line immunoassay/ELISA
10.	Bacterial culture and sensitivity	
11.	BETA-2 microglobulin assay	
12.	Bleeding time	
13.	Blood grouping (Blood Group/Rh Type)	Slide Method/ Gel method
14.	Blood Sugar (Fasting/PP/Random)	Hexokinase method / fully automated analyser
15.	Blood Urea	Urease method / fully automated analyser
16.	Blood Urea Nitrogen (BUN)	Urease method / fully automated analyser
17.	C.P.K	Fully automated chemistry analyser
18.	C.R.P quantitative	Immunoturbidometry/Nephelometry
19.	CK MB	Rapid card/ Fully automated chemistry analyser
20.	Complete Haemogram (Hb, TLC, DLC, Pl. Count, RBC indices, reticulocyte count ESR, Blood smear)	Using automated counter
21.	Coomb's Test direct	
22.	Coomb's Test indirect	
23.	Cortisol	Chemiluminiscence assay
24.	Creatinine Clearance	Fully automated chemistry analyser
25.	DLC	Using automated counter
26.	ESR	Using fully/semi automatic ESR Analyser
27.	Foetal Haemoglobin (HbF)	HPLC
28.	Free T3	Chemiluminiscence assay

29.	Free T4	Chemiluminiscence assay
30.	FSH	Chemiluminiscence assay
31.	Glucose 6 phosphate Dehydrogenase (G6PD) Deficiency Test	
32.	Glucose tolerance test(GTT)	GOD-POD Method / Fully automated clinical analyser
33.	Gram stain and Pus and body fluid	Microscopy
34.	Haemoglobin	Using automated counter
35.	Haemogram (Hb, TLC, DLC, Pl.Count)	Using automated counter
36.	HB A1C	HPLC
37.	HBsAg	Rapid Card test/ELISA
38.	HCV	Rapid Card Test/ELISA
39.	HIV serology	as per NACO guidelines
40.	IgA	Immunoturbidometry/Chemiluminiscence
41.	IgG	Immunoturbidometry/Chemiluminiscence
42.	IgM	Immunoturbidometry/Chemiluminiscence
43.	Insulin levels	Immunoturbidometry/Chemiluminiscence
44.	Kidney Function Tests (Blood Urea , S. Creatinine, BUN, S. Uric acid)	Jaffe rate blanked on automated analyser
45.	L.D.H	Fully automated chemistry analyser
46.	LDL	Fully automated chemistry analyser
47.	LH	Chemiluminiscence assay
48.	Lipid Profile (S. Cholesterol, Triglycerides, LDL, HDL, VLDL)	Cholesterol - oxidase method; HDL-Direct method; LDL- direct method; TG-Lipase GPO-PAP (no correction) method
49.	Liver Function Tests (S. Bilirubin - Total & Unconjugated, SGOT, SGPT, S. Alkaline Phosphatase, S. proteins (Total, A/G ratio), GGT	Modified jendrassik/diazo with sulphanic acid on automated analyser
50.	Malaria Screen (Both for P.V and P.F)	Rapid Card Method and P/S Examination
51.	MCH	Using automated counter
52.	MCHC	Using automated counter
53.	Peripheral Blood Smear	Microscopy
54.	Platelet Count	Using automated counter
55.	Platelet function test	
56.	Progesterone	Chemiluminiscence assay
57.	Prolactin	Chemiluminiscence assay
58.	Prothrombin time (PT)	Automated analyser
59.	RBC indices	Using automated counter
60.	Reticulocyte count	Using automated counter

61.	RH antibody titer	
62.	Rheumatoid factor test	Immunturbidometry/Nephelometry
63.	Routine-H and E	
64.	S. Alkaline Phosphatase	AMP optimized to IFCC on automated analyser
65.	S. Bilirubin (Total, Unconjugated)	Modified Jendrassik/diazo with sulphanic acid on automated analyser
66.	S. Creatinine	Jafe rate blanked on automated analyser/ Fully automated chemistry analyser
67.	S. proteins (Total protein,albumin and A/G ratio)	Biurate reaction end point on automated analyser
68.	S. Uric acid	Jafe rate blanked on automated analyser/ Fully automated chemistry analyser
69.	Serum Albumin	Fully automated chemistry analyser
70.	Serum amylase	BPMPG METHOD / Fully automated chemistry analyser
71.	Serum bilirubin total direct	Fully automated chemistry analyser
72.	Serum Calcium Ionised	ISE
73.	Serum Calcium Total	ARSENZO THREE automated analyser
74.	Serum Chloride	ISE
75.	Serum cholesterol	Fully automated chemistry analyser
76.	Serum Electrolytes (Chloride)	ISE
77.	Serum Electrolytes (Lithium)	ISE
78.	Serum Electrolytes (Sodium, Potassium)	ISE
79.	Serum electrophoresis	
80.	Serum ferritin	Chemiluminiscence
81.	Serum iron	
82.	Serum lactate	
83.	serum Lipase	Fully automated chemistry analyser
84.	serum magnesium	Xylidyl blue method/ Fully automated chemistry analyser
85.	Serum Phosphate	Phosphomolybedate UV method on automated analyser
86.	Serum protein	Fully auomated chemistry analyser
87.	Serum Testosterone	Chemiluminiscence assay
88.	SGOT	Tris buffer without p5p / automated analyser
89.	SGPT	Tris buffer without p5p / automated analyser
90.	Smear for Acid fast bacilli	
91.	Smear for Gram stain and Albert stain for throat swab for diphtheria	Microscopy
92.	Stool (Routine, Microscopy, Occult blood)	Microscopy and card test
93.	Tests for lupus Anticoagant	
94.	Tests for RBCs sickling	

95.	Thalassemia studies (Red Cell indices and Hb HPLC)	HPLC
96.	Thyroid profile (T3, T4, TSH)	Chemiluminiscence assay
97.	Total Cholesterol	Cholesterol - oxidase method on automated analyser
98.	Total iron binding capacity (TIBC)	Automated method
99.	Total Leucocyte Count (TLC)	Using automated counter on automated analyser
100.	Total protein ALB/GLO ratio	
101.	Total Reticulocyte Count	Using automated counter on automated analyser
102.	Triglycerides	TG-Lipase GPO-PAP (no correction) method
103.	TSH	Chemiluminiscence assay
104.	Urinary calcium	Fully automated chemistry analyser
105.	Urinary chloride	Fully automated chemistry analyser
106.	Urinary potassium	
107.	Urinary sodium	
108.	Urine - Bile Pigment and Salts, pH, Specific gravity, Urobilinogen, proteins, Ketones, Glucose, Leuckocyte esterase, Nitrite	Strip Method
109.	Urine (Routine, Microscopy, Albumin and Sugar)	Microscopy and dipstick
110.	Urine Culture and Sensitivity	Conventional culture and CLSI/EUCAST based susceptibility testing
111.	Urine ketones	
112.	Urine microalbimin	
113.	Urine pregnancy test	
114.	Urine total proteins	Fully automated chemistry analyser
115.	VDRL Test	Approved assay using VDRL antigen
116.	Vitamin B12 assay	Chemiluminiscence assay
117.	Widal T est'	Tube Method

## Group B

S. No.	Test	Recommended Method(s)
1.	17-DH Progesterone.	Chemiluminescence
2.	ACTH	Chemiluminescence method
3.	AFP.	Chemiluminescence method
4.	ANA (atleast 14 differential antigens)	LIA
5.	ANA Quantitative	ELISA/ Immunoturbidometry/ Chemiluminescence/ Nephelometry
6.	Androstendione.	Chemiluminescence method
7.	Anemia Profile (Serum iron / TIBC / Serum Ferritin)	
8.	Anti cycloicitrullinated peptide (Anti CCP)	
9.	Anti tissue transglutaminase antibody-IgA	ELISA/ Chemiluminescence
10.	Anti-Amoebic IgM Antibodies	ELISA/ ELUA/Chemiluminescence Assay
11.	Anti-Chikungunya IgM Antibodies	ELISA
12.	Anti-Chlamydial IgG	ELISA/ ELUA/Chemiluminescence Assay
13.	Anti-Chlamydial IgM	ELISA/ ELUA/Chemiluminescence Assay
14.	Anti-CMV IgG Antibodies	ELUA/Chemiluminescence Assay
15.	Anti-CMV IgG avidity Antibodies	ELUA/Chemiluminescence Assay
16.	Anti-CMV IgM Antibodies	ELUA/Chemiluminescence Assay
17.	Anti-Cytocercus/T. solium Antibodies	ELISA
18.	Anti-HSV IgG Antibodies	ELISA/ELUA/Chemiluminescence Assay
19.	Anti-HSV IgM Antibodies	ELISA/ELUA/Chemiluminescence Assay
20.	Anti-leishmanial Antibodies (rK 39 Antigen)	Rapid card/ELISA
21.	Anti-Mycoplasma IgM	ELISA/ ELUA/Chemiluminescence Assay
22.	Anti-Rubella IgG Antibodies	ELUA/Chemiluminescence Assay
23.	Anti-Rubella IgG avidity Antibodies	ELUA/Chemiluminescence Assay
24.	Anti-Rubella IgM Antibodies	ELUA/Chemiluminescence Assay
25.	Anti-thrombin	
26.	Anti-Toxoplasma IgG Antibodies	ELUA/Chemiluminescence Assay
27.	Anti-Toxoplasma IgG avidity Antibodies	ELUA/Chemiluminescence Assay
28.	Anti-Toxoplasma IgM Antibodies	ELUA/Chemiluminescence Assay
29.	Apo A1.	Immunoturbidimetric
30.	Apo B.	Immunoturbidimetric
31.	Ascitic fluid pretein and sugar	On fully automated analyser
32.	ASO Titre Quantitative	Immunoturbidometry/ Chemiluminescence/Nephelometry

33.	Bence Jones proteins	
34.	Biopsy Analysis (Skin and kidney disease)	
35.	Bleeding disorder panel -BT, PT, APPT	
36.	Blood Culture and Sensitivity	Automated Blood Culture System
37.	Blood gas analysis with electrolytes	
38.	Body fluid (CSF/Ascitic Fluid etc.) Sugar, Protein etc.	Pyrogallol/biurate on fully automated analyser
39.	Body fluid for Malignant cells	Microscopy
40.	Body fluid LDH (e.g. Pleural fluid)	Immunoturbidometry
41.	c-ANCA antibodies	ELISA/IFA
42.	C-Peptide.	Chemiluminescence
43.	CA 15.3	Chemiluminescence Assay
44.	CA. 125.	Chemiluminescence Assay
45.	Calcitonin	Chemiluminescence Assay
46.	Carbamazepine	immuno turbidometry
47.	Carcinoembryonic antigen (CEA)	Chemiluminescence Assay
48.	CPK total	IFCC on automated analyser
49.	CPK-MB quantitative	Total Inhibition method on automated analyser
50.	CSF Protein and Sugar quantitative	Immunoturbidimetric using automated analyser
51.	DHEAS.	Chemiluminescence
52.	Ds DNA quantitative	IFA/LIA/ ELISA/ ELUA/Chemiluminescence Assay
53.	FNAC	
54.	Folic acid assay	Chemiluminescence Assay
55.	Fungal Culture and sensitivity (Yeast)	
56.	Growth Hormone.	Chemiluminescence
57.	HAV IgM antibodies	ELISA/ELUA/Chemiluminescence
58.	HCG.	Chemiluminescence method
59.	HEV IgM antibodies	ELISA/ ELUA/Chemiluminescence Assay
60.	Homocysteine.	ENZYMATIC/ Chemiluminescence
61.	HPV serology	ELISA
62.	hsCRP Quantitative	Immunoturbidimetric/ Nephelometry
63.	Hydatid Serology.	ELISA
64.	IgM (For cardiolipin and B2 glycoprotein 1)	
65.	Lp (a).	Immunoturbidimetric
66.	p-ANCA antibodies	ELISA/IFA
67.	PAP Smear	
68.	Pleural fluid protein and sugar	On fully automated analyser
69.	Post Coital Smear Examination	

70.	Protein S	
71.	PSA- Free.	Chemiluminescence method
72.	PSA- Total.	Chemiluminescence method
73.	PT/PTTK/INR	Automated Method
74.	PTH (Parathormone)	CHEMILUMINESCENCE
75.	Rapid Antigen Detection of Group A Streptococcus	Rapid card test
76.	Rota Virus serology	Rapid Card
77.	Rota Virus serology	ELISA
78.	Scrub Typhus antibody Test	ELISA
79.	Semen Analysis	
80.	Serum ADA	Immunoturbidimetric
81.	Serum Ammonia	Enzymatic UV method on automated analyser
82.	Serum erythropoietin	
83.	Serum Fluoride	ISE
84.	Serum Folic Acid	Chemiluminescence method
85.	Serum homocystine	ELISA/ ELUA/ Chemiluminescence Assay
86.	Serum Osmolality	
87.	Serum Phenytoin levels	Fully automated analyser
88.	Serum PTH	Chemiluminescence method
89.	Serum Valproate level	Fully automated analyser
90.	Serum Vit B12 Assay	Chemiluminescence method
91.	Stool Culture and sensitivity for Vibrio, Salmonella, Shigella	Automated ID and Sensitivity
92.	TB Culture (liquid culture method)	RNTCP Approved Method
93.	Test for antiphospholipid antibodies syndrome	
94.	Test for hypercoagulable states- Protein C, Protein S, Antithrombin	
95.	Thyroglobulin.	Chemiluminescence
96.	TPO	Chemiluminescence method
97.	Triple Marker (Pregnancy) Estradiol, AFP, beta-HCG	Chemiluminescence method
98.	Troponin I	Rapid card
99.	Troponin T	Rapid card
100.	Typhidot Test	Rapid Card
101.	Urinary copper	
102.	Urinary creatinine	On fully automated analyser
103.	Urinary Proteins -24 Hour	On fully automated analyser
104.	Urinary Uric acid	On fully automated analyser
105.	Urine ca/creatinine ratio	On fully automated analyser
106.	Urine Osmolality	
107.	Urine protein/Creatinine ratio	On fully automated analyser
108.	VitD3 assay	Chemiluminescence method

Group C

<b>S. No.</b>	<b>Test</b>	<b>Recommended Method(s)</b>
<b>1.</b>	<b>Anti Sperm Antibodies</b>	<b>ELISA</b>
<b>2.</b>	<b>Brucella serology</b>	<b>ELISA/Weil Felix Test</b>
<b>3.</b>	<b>Catecholamines. Serum</b>	<b>Latex enhanced immuno turbidometry</b>
<b>4.</b>	<b>Fibrinogen.</b>	<b>Automatic coagulation analyzer</b>
<b>5.</b>	<b>Fructosamine.</b>	<b>ENZYMATIC</b>
<b>6.</b>	<b>Influenza A H1N1 PCR</b>	<b>As per recommendations</b>
<b>7.</b>	<b>Leukemia panel /Lymphoma panel</b>	<b>Flow cytometry</b>
<b>8.</b>	<b>PNH Panel-CD55,CD59</b>	<b>Flow cytometry</b>
<b>9.</b>	<b>Serum Procalcitonin Test</b>	<b>Chemiluminescence</b>
<b>10.</b>	<b>Serum Protein electrophoresis with immunofixationelectrophoresis (IFE)</b>	
<b>11.</b>	<b>Vinyl Mandelic Acid (Urine)</b>	<b>Latex enhanced immuno turbidometry</b>
<b>12.</b>	<b>Chikungunya IgM ELISA</b>	<b>ELISA</b>
<b>13.</b>	<b>Dengue IgM ELISA</b>	<b>ELISA</b>
<b>14.</b>	<b>Dengue NS1 ELISA</b>	<b>ELISA</b>