

राष्ट्रिय अत्यावश्यक इनभिद्रो निदानात्मक परीक्षण सूची, २०८०

(National Essential In-vitro
Diagnostic List, 2023)



नेपाल सरकार
स्वास्थ्य तथा जनसङ्ख्या मन्त्रालय
स्वास्थ्य सेवा विभाग
राष्ट्रिय जनस्वास्थ्य प्रयोगशाला

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यो कागजात Pandemic Fund कोषको सहयोगबाट मुद्रण गरिएको हो ।

मुद्रण : २,००० प्रति, मे २०२४
सर्वाधिकार: नेपाल सरकार, स्वास्थ्य तथा जनसंख्या मन्त्रालय

प्रदीप पौडेल
Pradip Paudel

स्वास्थ्य तथा जनसङ्ख्या मन्त्री
Minister for
Health and Population



नेपाल सरकार
Government of Nepal

स्वास्थ्य तथा जनसङ्ख्या मन्त्रालय
Ministry of Health and Population



☎ : ०१-५-३६२५३४
☎ : ०१-५-३६२५३४

Website: www.mohp.gov.np

रामशाहपथ, काठमाडौं, नेपाल
Ramshahpath, Kathmandu, Nepal

पत्र संख्या (Ref. No.): ०८१/८२

चलानी नं. (Dispatch No.): ५६७

मिति (Date):

Message



National Health Policy, 2076 ensures availability and accessibility of comprehensive quality health care services to all citizens of Nepal and ensuring the access to quality diagnostic services is a pre-requisite to universal health coverage. I believe, for achieving this goal National Essential In-vitro Diagnostics List (NEIDL), will be one of the significant steps for our commitment to provide quality health services.

In the era of modern healthcare, the role of diagnostics is very crucial where its tests serve as the cornerstone of patient care, guiding clinicians in making informed decisions, tailoring treatments, and ultimately improving outcomes.

National Essential In-vitro Diagnostics List has been developed for all the tiers of health care facilities. This diagnostic list is based on the health necessities and utility at each level. Thus, NEIDL will not just be limited to ensuring increased access, but also in expansion and strengthening of clinical laboratory services at all levels, thus improving on availability of comprehensive health services.

I hope the NEIDL will play a significant role in the easy access of effective and quality diagnostic services to decrease the cost and out of pocket expenditure of citizens.

I would like to extend my heartfelt congratulations to all the team members of the National Public Health Laboratory, for their leadership and unwavering dedication to achieving this important goal.

Thank you.

Pradip Paudel
Minister



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Ramshahpath, Kathmandu
Nepal

Date :



FOREWORD

The Public Health Service Act, 2075 (2018), emphasizes the establishment of regular, effective, and accessible health services for the population. Similarly, the National Health Policy, 2076, also underscores the importance of universal access, transparency, and comprehensive quality health services. For this purpose, the role of quality diagnostic services cannot be overstated.

Requirements of laboratory diagnostic services at all the levels of health facilities are covered by the National Essential In Vitro Diagnostic List (NEIDL) and it will prove to be an outline that will improve access, expansion, and strengthening of clinical laboratory services at all levels in Nepal. This will also ensure availability and access to essential diagnostic tests thus reducing costs and providing quality diagnostic services.

By establishing a standardized framework for diagnostic testing, the National Essential In Vitro Diagnostic List not only streamlines clinical workflows but also fosters consistency and transparency in healthcare delivery.

I would like to applaud the National Public Health Laboratory for their commitment and efforts to this important cause. The NEIDL will undoubtedly contribute to the advancement of healthcare in Nepal.

Dr. Roshan Pokhrel
Secretary



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FOREWORD



It is with great enthusiasm that I present the National Essential In-vitro Diagnostics List (NEIDL). This initiative, spearheaded by the National Public Health Laboratory, marks a significant advancement in our dedication to deliver quality healthcare to all citizens of Nepal.

The Public Health Service Act, 2075 (2018), emphasizes the creation of consistent, effective, and accessible healthcare services for the population. Likewise, the National Health Policy, 2076, highlights the need for universal access, transparency, and comprehensive, high-quality health services.

These policies and strategic plans, developed through extensive consultations with stakeholders, will serve as a roadmap for enhancing access to, expansion of, and strengthening clinical laboratory services in Nepal. This framework will ensure access to essential diagnostic tests, thereby improving healthcare delivery, alleviating the disease burden, and boosting the overall efficiency of our healthcare system.

I extend my congratulations to the National Public Health Laboratory of the Department of Health Services for their leadership and commitment to this vital cause. The NEIDL will surely play a key role in advancing healthcare in Nepal.

Hari Prasad Mainali
Secretary



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Department of Health Services



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FOREWORD



Access to quality diagnostic services is a pre-requisite to universal health coverage. World Health Assembly adopted the resolution to strengthen the diagnostic capacity for which National In Vitro Diagnostic List (NEIDL) was considered one of the essential documents, to ensure regular, effective, quality, and accessible comprehensive health services to all citizens at all levels.

The NEIDL aligns with Nepal's commitment to universal health coverage and the integration of healthcare services, as outlined in the National Health Policy, 2076. It also embodies ongoing commitment to harnessing the power of diagnostics to tackle the healthcare challenges of today and tomorrow.

Tests ranging from the general tests required at the local level to the sophisticated diagnostics necessary at the federal level health facilities have been incorporated in this list. By establishing a standardized catalogue of in vitro diagnostic tests, this list serves as a roadmap for healthcare practitioners, facilitating efficient and effective diagnosis and treatment planning.

I would like to extend my gratitude to National Public Health Laboratory for their commendable leadership and dedication in developing this NEIDL. I am confident that this initiative will play a crucial role in increasing access to quality laboratory health services in Nepal.


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Dr. Bikash Devkota
Director General
Department of Health Services



Government of Nepal
Ministry of Health and Population
Department of Health Services
National Public Health Laboratory

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ACKNOWLEDGEMENT



I am pleased to introduce the National Essential In-vitro Diagnostics List (NEIDL) on behalf of the National Public Health Laboratory. Laboratory services are essential elements of the healthcare system, playing a pivotal role in early detection of disease and their management, underscoring the critical need for precise and dependable test results. The National Essential In-vitro Diagnostics List (NEIDL) embodies our unwavering commitment to ensure that every individual has access to affordable, accessible and quality diagnostic laboratory services.

Developed in line with the World Health Organization's Essential Diagnostics List, this initiative is tailored to meet the diverse needs of healthcare facilities nationwide as it comprises essential diagnostic tests crucial for diagnosing both communicable and non-communicable diseases.

The development of this comprehensive list has been a collaborative effort, bringing together experts from diverse fields, including healthcare professionals, researchers, policymakers, and industry leaders; followed by the development of a preliminary draft. This draft underwent extensive discussions with stakeholders in frequent meetings, where necessary recommendations were incorporated. Subsequently, after a rigorous effort, NEIDL attained its final form, which represents a significant milestone in our efforts to achieve universal health coverage.

I would like to thank the dedicated team members and all stakeholders involved in shaping the NEIDL. My sincere gratitude goes to Dr. Runa Jha for her vision of this program and continued guidance. A big thanks to Dr. Kamana Sharma and Keshav Gyawali for their arduous efforts to bring about this document. I would also like to thank WHO Nepal for their support in the publication of this document.

I am hopeful that the implementation of NEIDL will significantly improve the availability and accessibility to affordable essential diagnostic services leading to prompt and timely intervention, hence alleviating financial burdens and ultimately enhancing health services at all levels. Together, we are paving the way for equal and equitable health care for all.

Dr. Ranjan Raj Bhatta
Director
National Public Health Laboratory

प्रस्तावना

"स्वास्थ्य सेवा ऐन, २०७५ मा स्वास्थ्य सेवालाई नियमित, प्रभावकारी, गुणस्तरीय एवं सर्वसुलभ तुल्याइ नागरिकको पहुँच स्थापित गर्ने लक्ष्य राखिएको छ । विश्व स्वास्थ्य संगठनले सम्बन्धित देशको अवस्था एवं आवश्यकता, राष्ट्रिय स्वास्थ्य नीति, राष्ट्रिय प्रयोगशाला रणनीति, स्वास्थ्य सेवामा सर्वव्यापी पहुँच लगायत स्वास्थ्यसंग सम्बन्धित विषयहरूलाई आधार लिई नेशनल इनभिद्रो डायग्नोस्टिक टेष्ट लिष्ट तयार गरी लागू गर्न प्रोत्साहित गर्ने उद्देश्यले सोको नमूना दस्तावेज तयार गरेको छ ।

यस परिप्रेक्ष्यमा विभिन्न क्षेत्रहरूमा रोगको विद्यमान अवस्था अनुसार प्रयोगशाला सेवाको सुनिश्चितता गर्न, देशको कुनै क्षेत्र विशेषमा हुने रोगहरूको परीक्षणका लागि केन्द्रमा धाउनु पर्ने बाध्यताको अन्त्य गरी सेवाग्राहीहरूलाई सहज रूपमा सेवा प्रदान गर्न मार्गदर्शक दस्तावेजको आवश्यकता रहेको परिप्रेक्ष्यमा जनस्वास्थ्य सेवा ऐन, २०७५ को दफा ६४ ले दिएको अधिकार प्रयोग गरी स्वास्थ्य तथा जनसंख्या मन्त्रालयबाट यो सूची तयार गरिएको छ ।

यो राष्ट्रिय दस्तावेज विश्व स्वास्थ्य संगठनको महत्त्वपूर्ण निदान सूची (Essential Diagnostic List) संरेखित छ, जसको उद्देश्य प्रमाणबाट आधारित मार्गदर्शन प्रदान गर्नु नेशनल इनभिद्रो डायग्नोस्टिक टेष्ट लिष्ट विकास/अपडेटको लागि एक संदर्भ स्थापन गर्नु हो।"

परिच्छेद-१

प्रारम्भिक

१. संक्षिप्त नाम र प्रारम्भ:

- (१) यसको नाम “राष्ट्रिय आवश्यक इनभिद्रो निदानात्मक परीक्षण सूची, २०८०” रहेको छ। अङ्ग्रेजी भाषामा यसलाई “National Essential In-vitro Diagnostic List, 2023” भनी संबोधन गरिनेछ।
- (२) यो सूची तुरुन्त लागू हुनेछ।

२. परिभाषा:

बिषय वा प्रसङ्गले अर्को अर्थ नलागेमा यस सूचीमा:

- (क) “मन्त्रालय” भन्नाले स्वास्थ्य तथा जनसङ्ख्या मन्त्रालयलाई सम्झनु पर्छ।
- (ख) “सरकार” भन्नाले संघ, प्रदेश र स्थानीय तहको सरकारलाई सम्झनु पर्छ।
- (ग) “परीक्षण सूची” भन्नाले अनुसूची-१ मा उल्लिखित राष्ट्रिय आवश्यक इनभिद्रो निदानात्मक परीक्षण सूचीलाई सम्झनु पर्छ।

३. उद्देश्य: यो परीक्षण सूचीको कार्यान्वयनबाट देहाय बमोजिम उद्देश्य प्राप्त हुने अपेक्षा गरिएको छ।

- (क) प्राथमिक उपचार केन्द्रसम्म अत्यावश्यक प्रयोगशाला परीक्षणको पहुँच पुऱ्याउने।
- (ख) स्थानीय स्तरमा नै हुन सक्ने उपचारका लागि टाढा धाउनु पर्ने बाध्यताको अन्त्य गरी नागरिकको स्वास्थ्य उपचार खर्च बचत गर्न सहयोग पुऱ्याउने।
- (ग) रोगको परीक्षण एवं निदान पश्चातमात्र एन्टिबायोटिकको प्रयोग गर्न प्रोत्साहन गर्दै एण्टी माइक्रोबियल रेसिष्टेन्ट (AMR) को दर घटाउन मद्दत पुऱ्याउने।
- (घ) युनिभर्सल हेल्थ कभरेजका लागि अत्यावश्यक स्वास्थ्य परीक्षण सेवामा पहुँच बढाउने।
- (ङ) प्रयोगशाला परीक्षण सेवाको उपलब्धता तथा विस्तार गर्न सहयोग पुऱ्याउने।
- (च) हाल भइरहेका तथा आगामी दिनहरूमा फैलिन सक्ने रोगहरूको समयमै पहिचान गर्न सहयोग पुऱ्याउने।

परीक्षण सूची सम्बन्धी व्यवस्था तथा प्रयोग विधि

४. विभिन्न तहमा उपलब्ध हुनु पर्ने परीक्षण सूची (१) विभिन्न तहका स्वास्थ्य संस्थाहरुको लागि तोकिएको टेष्ट लिष्ट अनुसूची -१ मा समावेश गरिएको छ।
५. प्रयोग विधि: अनुसूची-१ मा उल्लिखित परीक्षण सूचीको प्रयोग देहाय बमोजिम हुन सक्नेछ।
- (क) यस सूचीमा उल्लिखित प्रावधानहरु इनभिद्रो परीक्षण प्रयोगशाला सम्बन्धी नीतिगत मार्गदर्शनका रुपमा रहनेछन्।
 - (ख) विभिन्न स्थानमा इनभिद्रो परीक्षण प्रयोगशाला संचालन सम्बन्धमा सरकार तथा विभिन्न तहका स्वास्थ्य संस्थाहरुले यस दस्तावेजका उल्लिखित परीक्षण सूचीलाई आधार लिन सक्नेछन्।
 - (ग) यसमा उल्लिखित परीक्षणहरु तोकिएको तहबाट उपलब्ध गराउने सुनिश्चितता गर्न आवश्यक भएता पनि ती परीक्षणहरु निःशुल्क रुपमा उपलब्ध गराउन बाध्य हुने छैन। सरकारको नीति एवं अन्य प्रचलित कानूनमा व्यवस्था भए अनुसार ती परीक्षणहरु सःशुल्क वा निःशुल्क रुपमा उपलब्ध गराउन सकिनेछ।
 - (घ) यस दस्तावेजको उद्देश्य उपचारका लागि चाहिने परीक्षणमा सहज पहुँचको सुनिश्चिता गर्ने रहेकोले तोकिएको तहबाट उपलब्ध हुनु पर्ने परीक्षणहरु सो तहमा भएको एक वा बढी स्वास्थ्य संस्थाबाट एकमुष्ट वा आवश्यकता अनुसार छुट्टाछुट्टै उपलब्ध गराउन सकिनेछ। तोकिएको सबै स्वास्थ्य संस्थामा सबै प्रकारका परीक्षणहरु उपलब्ध हुन आवश्यक छैन।
 - (ङ) साधन श्रोत जनशक्ति लगायतको स्वास्थ्य सेवा संचालनको मापदण्ड पूरा भएको अवस्थामा अन्य माथिल्लो तहका लागि तोकिएको परीक्षण सेवा उपलब्ध गराउन बाधा गर्ने छैन।

परिच्छेद-३

विविध

६. **संशोधन एवं अनुसूचीमा हेरफेर वा थपघट:** नेपाल सरकार, स्वास्थ्य तथा जनसङ्ख्या मन्त्रालयले परीक्षण सूचीमा आवश्यकता अनुसार संशोधन एवं अनुसूचीमा हेरफेर वा थपघट गर्न सक्नेछ ।
७. **स्वतः खारेज हुने:** यस लिष्टका कुनै प्रावधान नेपालको प्रचलित कानूनको कुनै प्रावधानसंग बाझिएमा बाझिएको हकसम्म स्वतः खारेज हुनेछ ।

अनुसूची -१

राष्ट्रिय आवश्यक इनभिद्रो निदानात्मक परीक्षण सूची
(National Essential In-vitro Diagnostic List)
(दफा ४.(१) संग सम्बन्धित)

क

स्थानीयस्तरका प्रयोगशाला सेवा प्राथमिक स्वास्थ्य
चौकीहरूमा उपलब्ध हुनु पर्ने परीक्षण सेवाहरू

(List of laboratory services that should be
available at primary health centers at
local level)

क) स्थानीयस्तरका प्रयोगशाला सेवा प्राथमिक स्वास्थ्य चौकीहरुमा उपलब्ध हुनु पर्ने परीक्षण सेवाहरु

General Laboratory Tests (सामान्य परीक्षणहरु)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Clinical Chemistry	Glucose	To screen, diagnose and monitor Diabetes mellitus and hypoglycemia	Capillary whole blood/ venous whole blood (if phlebotomist available)	Glucometer	
	A, B and O blood groups and Rh factor typing	To identify the blood group and Rh type of an individual	Capillary whole blood/ venous whole blood (if phlebotomist available)	Slide/Tube agglutination	
	Hemoglobin (Hb)	To diagnose and monitor anemia and polycythemia	Capillary whole blood / venous whole blood (if phlebotomist available)	Digital Haemoglobin-ometer	
Hematology	Albumin	To detect and monitor renal function	Urine	Dipstick	
	Glucose	To screen, diagnose and monitor Diabetes mellitus	Urine	Dipstick	
	Hemoglobin (Hb)	Clinical marker for certain severe infections, to aid in the diagnosis of intravascular haemolysis, renal conditions, rhabdomyolysis	Urine	Multiparameter urine test strip	If urine microscopy not available
Urine Examination	Ketone bodies	To aid in the diagnosis of ketosis in uncontrolled diabetes, starvation, pregnancy, or diabetic ketoacidosis	Urine	Dipstick	
	Leucocyte esterase and nitrite	To aid in the diagnosis of urinary tract infections (UTIs)	Urine	Multiparameter urine test strip	If urine microscopy not available
	Pregnancy test-Human Chorionic Gonadotrophin	To aid in the detection of pregnancy	Urine (early morning)	RDT	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Cholera	Vibrio cholerae Antigen	For initial detection of cholera	Stool, rectal swab	RDT	
Coronavirus disease (COVID-19)	SARS-CoV-2 Antigen	To aid in diagnosis of COVID-19	Nasal/Nasopharyngeal/ Oropharyngeal swab	RDT	
Dengue	Dengue serology (NS1 Antigen, IgM,IgG)	To aid in the diagnosis of current and past Dengue infection	Whole blood/Serum	RDT	
Filariasis	Microfilarial antigen test	To aid in the diagnosis of lymphatic filariasis caused by Wuchereria Bancrofti	Whole blood	RDT	
HBV Infection	Hepatitis B surface antigen (HBsAg)	To screen for and aid in diagnosis of Hepatitis B infection.	Serum/Plasma	RDT	WHO prequalified Kits
HCV Infection	Hepatitis C Virus Antibody (IgM/IgG)	To screen for and aid in diagnosis of Hepatitis C infection.	Serum/Plasma	RDT	
HIV infection	HIV-1 and HIV-2 Antibody (Anti-HIV Ab IgM)	To screen for and to aid in the diagnosis of HIV infection: adults, adolescents, children and infants > 18 months of age	Serum/Plasma	RDT	In accordance with national HIV testing guidelines
Leishmaniasis	Leishmania donovani Antibody test (rK39)	To aid in the diagnosis of clinically suspected visceral leishmaniasis	Serum/Plasma	RDT	
Malaria	Malaria Antigen	To diagnose one or more human malaria species (P. falciparum and others)	Whole blood	RDT	
Syphilis	Treponema pallidum Antibody	To aid in the diagnosis of T. pallidum	Serum/Plasma	RDT	

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स्थानीय स्तरका प्राथमिक अस्पतालहरूमा
उपलब्ध हुनु पर्ने परीक्षण सेवाहरू

(List of laboratory services that should be
available at primary level hospitals at
local level)

ख) स्थानीय स्तरका प्राथमिक अस्पतालहरूमा उपलब्ध हुनु पर्ने परीक्षण सेवाहरू

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Clinical Chemistry	Alanine aminotransferase (ALT)	To aid in the diagnosis and monitoring of liver function	Serum/Plasma	Manual/Semi-automated analyzer	
	Albumin	To aid in the diagnosis and monitoring of diseases affecting protein metabolism (synthesis, loss, intake, absorption) e.g. liver disease, kidney disease, severe malnutrition, malabsorption, burns, etc.)	Body fluid/Serum	Manual/Semi-automated analyzer	
	Alkaline Phosphatase (ALP)	To aid in the diagnosis of hepatobiliary and bone disorders	Serum/Plasma	Manual/Semi-automated analyzer	
	Aspartate aminotransferase (AST)	To aid in the diagnosis and monitoring of liver function	Serum/Plasma	Manual/Semi-automated analyzer	
	Bilirubin (Total, direct, indirect)	To aid in diagnosis of hepatobiliary disorder and hematological disorders	Serum/Plasma	Manual/Semi-automated analyzer	
	C-reactive protein (CRP)	To detect inflammation and infection as an indicator of various conditions and to monitor response to treatment	Whole blood/Plasma/Serum	RDT/ latex agglutination	
	Creatinine	To assess kidney function	Serum/Plasma	Manual/Semi-automated analyzer	

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Clinical Chemistry	Electrolytes (sodium, potassium)	To monitor fluid, electrolyte, and acid-base balance in disorders of kidney, heart, diabetic ketoacidosis, diabetes insipidus etc.	Serum/Plasma	Ion-Selective Electrode	
	Glucose	To diagnose hypoglycemia and hyperglycemia	Serum/Plasma	Manual/Semi-automated analyzer	
	Lipid profile (total cholesterol, HDL-cholesterol, LDL-cholesterol, Triacylglycerol)	To assess risk of cardiovascular disease (CVD)	Serum/Plasma	Manual/Semi-automated analyzer	
	Total protein	To aid in the diagnosis of liver disease, renal diseases	Body fluid/ serum	Manual/Semi-automated analyzer	
	Urea	To assess kidney function and liver function.	Serum/Plasma	Manual/Semi-automated analyzer	
	Uric acid	To aid in the diagnosis and monitor treatment of gout, renal diseases, autoimmune disease and to aid in the diagnosis of tumor lysis syndrome	Serum/Plasma	Manual/Semi-automated analyzer	
	Occult blood test	To detect blood loss from the gastrointestinal tract.	Stool	Guaiaac method	
	Gram stain	For presumptive identification of microorganisms	disease appropriate specimen (e.g. urine, stool, sputum, body fluids)	Microscopy	
	KOH study	To aid detection of fungus in tissue including hair and nail.	disease appropriate specimen (e.g. urine, stool, sputum, body fluids)	Microscopy	
	Stool routine and microscopic examination	To detect parasites (Ova cyst, larvae and adult) and inflammatory cells.	Stool	Microscopy	
Clinical Microbiology					

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Hematology	A, B and O blood groups and Rh factor typing	To identify the blood group and Rh type of an individual	Capillary whole blood/ venous whole blood	Slide agglutination / Tube agglutination test method	
	Complete blood count (Hemoglobin, Total Leukocyte count, Differential count, Platelet count, Red cell indices, Hematocrit)	To evaluate overall health and to detect a wide range of disorders, including anemia, infections, leukemias, red blood cell, white blood cell and platelet abnormalities and primary immune disorders	Capillary whole blood/ venous whole blood	Manual/automated analyzer	if available
	Erythrocyte sedimentation rate	To detect inflammation as an indicator of various conditions	Capillary/ venous whole blood	Westergren's or Wintrobe method	
	Hematocrit	To evaluate hemoconcentration	Capillary/ venous whole blood	Microhematocrit/ automated analyzer	
	Sickle cell Testing	To aid in the diagnosis of sickle cell anemia, sickle cell trait and other sickling disorders	Venous whole blood	RDT/sodium metabisulphite slide tests(sickling tests)/ solubility test	

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Urine Examination	Albumin	To detect or monitor renal function	Urine	Dipstick	
	Glucose	To screen/ diagnose/monitor Diabetes mellitus	Urine	Dipstick	
	Hemoglobin (Hb)	Clinical marker for certain severe infections, to aid in the diagnosis of intravascular hemolysis, renal conditions, rhabdomyolysis	Urine	Dipstick	
	Ketone bodies	To aid in the diagnosis of ketosis, e.g. in uncontrolled diabetes, starvation, pregnancy, or diabetic ketoacidosis	Urine	Dipstick	
	Leucocyte esterase and nitrite	To aid in the diagnosis of urinary tract infections (UTIs)	Urine	Multiparameter urine test strip	
	Pregnancy test-Human Chorionic Gonadotrophin	To aid in the early detection of pregnancy	Urine (early morning)	RDT	
	Microscopic examination	To identify leukocytes, RBCs, various casts and crystals	Urine	Microscopy	

Primary Hospital / PHC					
Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Cholera	Motility Test	For initial detection of cholera	Stool	Microscopy	
	Vibrio cholera Antigen	For initial detection of cholera	Stool	RDT	
Coronavirus disease (COVID-19)	SARS-CoV-2 Antigen	To aid in diagnosis of COVID-19	Nasal/Nasopharyngeal/ Oropharyngeal swab	RDT	
Dengue	Dengue serology (NS1 Antigen, IgM, IgG)	To aid in the diagnosis of current and past Dengue infection	Whole blood/serum	RDT	
Filariasis	Microfilaria antigen test	To aid in the diagnosis of lymphatic filariasis caused by Wuchereria Bancrofti	Whole blood	Microscopy/RDT	
Hepatitis A virus infection	Hepatitis A Virus Antibody (IgM)	To aid in the diagnosis of HAV infection	Serum/Plasma	RDT	
Hepatitis B virus infection	Hepatitis B surface Antigen (HBsAg)	To screen for HBV infection, or to aid in the diagnosis of chronic and acute HBV infection	Serum/Plasma	RDT	
Hepatitis C virus infection	Hepatitis C Virus Antibody (IgM/IgG)	To diagnose HCV infection	Serum/Plasma	RDT	
Hepatitis E virus infection	Hepatitis E Antibody (IgM/IgG)	To diagnose and monitor HEV infection	Serum/Plasma	RDT	
HIV infection	HIV-1 and HIV 2 Antibody (Anti-HIV Ab IgM)	To screen for and to aid in the diagnosis of HIV infection	Serum/Plasma	RDT	
Leishmaniasis	Leishmania donovani Antibody test (rK39)	To aid in the diagnosis of clinically suspected visceral leishmaniasis	Serum/Plasma	RDT	
Leprosy	Slit skin smear for leprosy	To aid in the diagnosis of leprosy	Slit skin smear	Microscopy	

Primary Hospital / PHC					
Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Leptospirosis	IgM detection test for leptospirosis	To aid in the diagnosis of leptospirosis	Serum/Plasma	RDT	
	Malaria Antigen	To diagnose one or more human malaria species (P. falciparum and)	Whole blood	RDT	
Malaria	Thick and Thin Blood smear	For diagnosis of one or more human malaria species (P. falciparum, P. vivax, P. malaria, P. ovale)	Whole blood	Microscopy	
Scrub typhus	Scrub typhus Antibody (IgM, IgG)	To aid in the diagnosis of Scrub typhus	Serum/Plasma	RDT	
Syphilis	Syphilis Antibody test	To diagnose or to aid in the diagnosis of T. pallidum	Serum/Plasma	RDT	
Tuberculosis	Sputum Examination	To diagnose and monitor the treatment of active tuberculosis	Sputum	Microscopy	
	Mantoux Test	To diagnosis of latent Intradermal TB infection	Intradermal test	Visual inspection	

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जिल्ला स्तरमा उपलब्ध हुनु पर्ने परीक्षण सेवाहरू

(List of laboratory services that should be
available at district level)

ग) जिल्लास्तरमा उपलब्ध हुनु पर्ने परीक्षण सेवाहरू

स्थानीय स्तरमा उपलब्ध हुने सम्पूर्ण परीक्षणका साथै अतिरिक्त देहायका थप परीक्षण सेवाहरू जिल्ला तहमा उपलब्ध हुनु पर्नेछ ।

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (टिप्पणी)
Basic body fluid Profile(CSF, peritoneal, pleural fluid)	Cytological examination	To aid in the diagnosis of reactive and neoplastic lesion	Any Body fluid	Microscopy	if pathologist available
	Differential leukocyte count	To aid in the diagnosis of reactive and neoplastic lesion	Romanowsky stained slide of any body fluid	Microscopy	
	Leukocyte count	To aid in the diagnosis of reactive and neoplastic lesion	Any body fluid	Haemo-cytometer	
	Protein and glucose	To aid in the diagnosis of infections	Any body fluid	Semi-automated/ automated analyzer if available	
	Adenosine Deaminase (ADA)	To aid in the diagnosis of chronic inflammatory disorders	Body fluid/Serum	Semi-automated/ automated analyzer if available	
Clinical Chemistry	Alanine aminotransferase (ALT)	To aid in the diagnosis and monitoring of liver function	Serum	Semi-automated/ automated analyzer if available	
	Albumin	To aid in the diagnosis and monitoring of diseases affecting protein metabolism (synthesis, loss, intake, absorption) e.g. liver disease, kidney disease, severe malnutrition, malabsorption, burns, etc.)	Body fluid/Serum	Semi-automated/ automated analyzer if available	
	Alkaline Phosphatase (ALP)	To aid in the diagnosis of hepatobiliary and bone disorders	Serum/Plasma	Semi-automated/ automated analyzer if available	
	Lipase	To assess acute pancreatitis and other pancreatic disorders	Serum/Plasma	Semi-automated/ automated analyzer if available	

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Clinical Chemistry	Amylase	To assess acute pancreatitis and other pancreatic disorders	Serum/Plasma	Semi-automated/ automated analyzer if available	
	Aspartate aminotransferase (AST)	To aid in the diagnosis and monitoring of liver function	Serum/Plasma	Semi-automated/ automated analyzer if available	
	Bilirubin (Total, direct, indirect)	To aid in diagnosis of hepatobiliary disorder and hematological disorders	Serum/Plasma	Semi-automated/ automated analyzer if available	
	Calcium	To aid in the diagnosis of bone disorders, endocrine disorders, renal disorders and other various disorders	Serum/Plasma	Semi-automated/ automated analyzer if available	
	C-reactive protein (CRP) (quantitative)	To detect inflammation and infection as an indicator of various conditions and to monitor response to treatment	Whole blood/Plasma/Serum	RDT/ latex agglutination	
	Creatinine	To assess kidney function	Serum/Plasma	Semi-automated/ automated analyzer if available	
	Creatine phosphokinase Total (CPK NAC)	To aid in the diagnosis of various muscular disorders and ischemic heart disease	Serum/Plasma	Semi-automated/ automated analyzer if available	
	Creatine phosphokinase (CK- MB)	To aid in the diagnosis of Ischemic heart disease	Serum/Plasma	Semi-automated/ automated analyzer if available	
	Electrolytes (sodium, potassium)	To monitor fluid, electrolyte, and acid-base balance in disorders of kidney, heart, diabetic ketoacidosis, diabetes insipidus etc.	Serum/Plasma	Ion selective electrode	
	Glucose	To diagnose hypoglycemia and hyperglycemia	Serum/Plasma	Semi-automated/ automated analyzer if available	

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Clinical Chemistry	HbA1c	To diagnose and monitor diabetes mellitus	Venous whole blood	Handheld small analyzer / automated analyzer	
	Lactate Dehydrogenase (LDH)	To aid in the diagnosis of hepatobiliary, sepsis and hemolytic disorder	Body fluid/Serum	Semi-automated/ automated analyzer if available	
	Lipid profile (total cholesterol, HDL- cholesterol, LDL-cholesterol, Triacylglycerol)	To assess risk of cardiovascular disease (CVD)	Serum/Plasma	Semi-automated/ automated analyzer if available	
	Procalcitonin	To aid in diagnosis of sepsis.	Serum/Plasma	RDT/ELISA	
	Thyroid Function Test	To aid in the diagnoses of thyroid disorders	Serum/Plasma	ELISA	
	Total protein	To aid in the diagnosis of liver disease, renal diseases	Body fluid/Serum	Semi-automated/ automated analyzer if available	
	Troponin T/I (Qualitative)	To aid in diagnosis of myocardial infarction	Serum/Plasma	RDT	
	Urea	To assess kidney function and liver function.	Serum/Plasma	Semi-automated/ automated analyzer if available	
	Uric acid	To aid in the diagnosis and monitor treatment of gout, renal diseases, autoimmune disease and to aid in the diagnosis of tumor lysis syndrome	Serum/Plasma	Semi-automated/ automated analyzer if available	
	Bacterial culture and antimicrobial sensitivity test	To detect and identify bacterial species and to select appropriate antimicrobial regimens	Disease-appropriate specimens	Manual	relevant biochemical test and serotyping as per requirement

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (टिप्पणी)
Clinical Microbiology	Occult blood test	To detect blood loss from the gastrointestinal tract.	Stool	Guaiaac method	
	Gram stain	For presumptive identification of microorganisms	disease appropriate specimen (e.g. urine, stool, sputum, body fluids)	Microscopy	
	KOH study	To aid detection of fungus in tissue including hair and nail.	disease appropriate specimen (e.g. urine, stool, sputum, body fluids)	Microscopy	
	Stool routine and microscopic examination	To detect parasites (Ova cyst, larvae and adult) and inflammatory cells.	Stool	Microscopy	
	Water Bacteriology	To assess the microbiological quality of water	Water	Membrane filtration method/Culture	
	A, B and O blood groups and Rh factor typing	To identify the blood group and Rh type of an individual	Capillary whole blood/ venous whole blood	Slide agglutination / Tube agglutination test method	
Hematology	Activated partial thromboplastin time (aPTT)	To diagnose bleeding and thrombotic disorders and to monitor anticoagulant therapy	Citrated plasma	Manual/ Semiautomated	
	Bleeding time	To diagnose bleeding and thrombotic disorders	NA (Procedure)	Manual	
	Bone marrow aspiration	To aid in the diagnosis of hematological disorder and hemoparasites	Bone marrow aspirate (Romanowsky stained slide)	Microscopy	if pathologist available
	Clotting time	To diagnose bleeding and thrombotic disorders	Whole blood	Tube/Capillary method	
	Complete blood count (Hemoglobin, Total Leukocyte count, Differential count, Platelet count, Red cell indices, Hematocrit)	To evaluate overall health and to detect a wide range of disorders, including anemia, infections, leukemias, red blood cell, white blood cell and platelet abnormalities and primary immune disorders	Capillary whole blood/ venous whole blood	Automated Hematology analyzer	

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Hematology	D Dimer	To diagnose and follow up disseminated intravascular coagulation	Citrated plasma	Latex agglutination/ Nephelometry	
	Direct Coombs test	To aid in the diagnosis of immune mediated hemolysis.	Venous whole blood	Manual	
	Erythrocyte sedimentation rate	To detect inflammation as an indicator of various conditions	Capillary/ venous whole blood	Westergren's or Wintrobe method	
	Glucose-6-Phosphate Dehydrogenase deficiency	For screening newborns for G6PD deficiency and hemolytic anemia	Venous whole blood	Semi-quantitative fluorescent spot test	
	Indirect Coombs test	To screen for potential blood transfusion reactions or to check for Rh incompatibility.	Serum	Manual	
	Peripheral blood smear Examination	To screen hematological disorder	Whole blood	Microscopy	
	Prothrombin time and International normalized ratio (PT and INR)	To diagnose bleeding or thrombotic disorders and to monitor anticoagulant therapy	Citrated plasma	Manual/ Semiautomated	
	Reticulocyte count	To evaluate the bone marrow response to anemia	Whole blood	Microscopy	
	Sickle cell Testing	To aid in the diagnosis of sickle cell anemia, sickle cell trait and other sickling disorders	Venous whole blood	sodium metabisulphite slide tests(sickling tests)/ solubility test	

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Surgical Pathology	Cytopathology	To assess cells for infection, neoplasia, inflammatory and degenerative disorders	Cervical specimen for Papanicolaou (Pap) smear, body fluids, etc.	Microscopy	
	Histopathology	To assess tissue for infection, neoplasia, inflammatory and degenerative disorders	Surgical resection biopsy, core biopsy, cellblock	Macroscopic and microscopic assessment of tissue sections, stained with routine and special stains	
	Special stains*	To aid in the histocytopathological diagnosis	To aid in the diagnosis of various disease conditions	Manual	As per requirement
	Albumin	To detect or monitor renal function	Urine	Dipstick	
Urine Examination	Glucose	To screen/ diagnose/monitor Diabetes mellitus and hypoglycemia	Urine	Dipstick	
	Hemoglobin (Hb)	Clinical marker for certain severe infections, to aid in the diagnosis of intravascular hemolysis, renal conditions, rhabdomyolysis	Urine	Dipstick	
	Ketone bodies	To aid in the diagnosis of ketosis, e.g. in uncontrolled diabetes, starvation, pregnancy, or diabetic ketoacidosis	Urine	Dipstick	
	Microscopic examination	To identify leukocytes, RBCs, various casts and crystals	Urine	Microscopy	
	Pregnancy test-Human Chorionic Gonadotrophin	To aid in the early detection of pregnancy	Urine (early morning)	RDT	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Brucellosis	Brucella Antibody- test	To aid in the diagnosis of brucellosis	Serum/Plasma	Agglutination method/ELISA	
Cholera	Motility Test	For initial detection of cholera	Stool	Microscopy	
	Vibrio cholera Antigen	For initial detection of cholera	Stool, rectal swab	RDT	
Coronavirus disease (COVID-19)	SARS-CoV-2 Antigen	To aid in diagnosis of COVID-19	Nasal/Nasopharyngeal/ Oropharyngeal swab	RDT	
Dengue	Dengue serology (NS1 Antigen, IgM,IgG)	To aid in the diagnosis of current and past Dengue infection	Whole blood/Serum	RDT/ELISA	
Filariasis	Microfilaria antigen test	To aid in the diagnosis of lymphatic filariasis caused by Wuchereria Bancrofti	Whole blood	Microscopy/RDT	
Hepatitis A virus infection	Hepatitis A Virus Antibody (IgM)	To aid in the diagnosis of HAV infection	Serum/Plasma	RDT/ELISA	
Hepatitis B virus infection	Hepatitis B surface Antigen (HBsAg)	To screen for HBV infection, or to aid in the diagnosis of chronic and acute HBV infection	Serum/Plasma	RDT/ELISA	
Hepatitis C virus infection	Hepatitis C Virus Antibody (IgM/IgG)	To diagnose HCV infection	Serum/Plasma	RDT/ELISA	
Hepatitis E virus infection	Hepatitis E Antibody (IgM/IgG)	To diagnose and monitor HEV infection	Serum/Plasma	RDT/ELISA	
HIV infection	HIV-1 and HIV 2 Antibody (Anti-HIV Ab IgM)	To screen for and to aid in the diagnosis of HIV infection	Serum/Plasma	RDT/ELISA	
Leishmaniasis	Leishmania donovani Antibody test (rK39)	To aid in the diagnosis of clinically suspected visceral leishmaniasis	Serum/Plasma	RDT/ELISA	
Leprosy	Slit skin smear for leprosy	To aid in the diagnosis of leprosy	Slit skin smear	Microscopy	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Leptospirosis	Leptospira Antibody (IgM)	To aid in the diagnosis of leptospirosis	Serum/Plasma	RDT/ELISA	
Malaria	Malaria Antigen	To diagnose one or more human malaria species (P. falciparum and)	Whole blood	RDT	
Scrub typhus	Scrub typhus Antibody (IgM, IgG)	To aid in the diagnosis of Scrub typhus	Serum/Plasma	RDT	
Syphilis	Syphilis Antibody test	To diagnose or to aid in the diagnosis of T. pallidum	Serum/Plasma	RDT, Charcoal agglutination, Hemagglutination test ,Flocculation test	
TORCH screening in pregnancy	TORCH Panel (Toxoplasmosis, Rubella, Cytomegalovirus, and Herpes simplex)	To detect antibodies against a group of congenital infections that may cause prenatal or perinatal complications.	Serum/Plasma	ELISA	
Tuberculosis	Sputum-AFB	To diagnose and monitor the treatment of active tuberculosis	Sputum (AFB Stain)	Microscopy	
	Mantoux Test	To diagnosis of latent Intradermal TB infection	Intradermal test	Visual Inspection	

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प्रदेशस्तरमा उपलब्ध हुनु पर्ने परीक्षण सेवाहरू

(List of laboratory services that should be available at provincial level)

घ) प्रदेशस्तरमा उपलब्ध हुनु पर्ने परीक्षण सेवाहरू

जिल्लास्तरमा उपलब्ध हुने सम्पूर्ण परीक्षणका साथै अतिरिक्त देहायका थप परीक्षण सेवाहरू प्रदेशस्तरमा उपलब्ध हुनु पर्नेछ ।

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Basic body fluid Profile(CSF, peritoneal, pleural fluid)	Cytological examination of body fluid	To aid in the diagnosis of reactive and neoplastic lesion	Any Body fluid	Microscopy	
	Differential leukocyte count	To aid in the diagnosis of reactive and neoplastic lesion	Romanowsky stained slide of any body fluid	Microscopy	
	India Ink Preparation	To aid in the diagnosis of cryptococcal infection	CSF	Microscopy	
	Leukocyte count	To aid in the diagnosis of reactive and neoplastic lesion	Any body fluid	Haemo-cytometer	
	Protein and glucose	To aid in the diagnosis of infections	Any body fluid	Automated analyzer	
	Adenosine Deaminase (ADA)	To aid in the diagnosis of chronic inflammatory disorders	Body fluid/ serum	Automated Analyzer	
Clinical Chemistry	Alanine aminotransferase (ALT)	To aid in the diagnosis and monitoring of liver function	Serum	Automated Analyzer	
	Albumin	To aid in the diagnosis and monitoring of diseases affecting protein metabolism (synthesis, loss, intake, absorption) e.g. liver disease, kidney disease, severe malnutrition, malabsorption, burns, etc.)	Body fluid/ serum	Automated Analyzer	
	Alkaline Phosphatase (ALP)	To aid in the diagnosis of hepatobiliary and bone disorders	Serum/Plasma	Automated Analyzer	
	Lipase	To assess acute pancreatitis and other pancreatic disorders	Serum/Plasma	Automated analyzer	

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (केफियत)
Clinical Chemistry	Amylase	To assess acute pancreatitis and other pancreatic disorders	Serum/Plasma	Automated Analyzer	
	Anti-cyclic Citrullinated peptide(Anti-CCP Ab)	To aid in the diagnosis of Rheumatoid arthritis	Serum/Plasma	CLIA	
	Antinuclear antibody (ANA)	To aid in the diagnosis of various autoimmune diseases	Serum/Plasma	CLIA/IFA	
	Aspartate aminotransferase (AST)	To aid in the diagnosis and monitoring of liver function	Serum/Plasma	Automated Analyzer	
	Bilirubin (Total, direct, indirect)	To aid in diagnosis of hepatobiliary disorder and hematological disorders	Serum/Plasma	Automated Analyzer	
	Calcium	To aid in the diagnosis of bone disorders, endocrine disorders, renal disorders and other various disorders	Serum/Plasma	Automated analyzer	
	Ceruloplasmin	To aid in the diagnosis of Wilson's disease	Plasma/Serum, 24-hour urine	CLIA	
	C-peptide	To diagnose and categorize diabetes mellitus	Serum/Plasma	CLIA	
	C-reactive protein (CRP) (quantitative)	To detect inflammation and infection as an indicator of various conditions and to monitor response to treatment	Whole blood/ plasma/ serum	CLIA	
	Creatinine	To assess kidney function	Serum/Plasma	Automated Analyzer	
	Creatine phosphokinase Total (CPK NAC)	To aid in the diagnosis of various muscular disorders and ischemic heart disease	Serum/Plasma	Automated Analyzer	

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (केफियत)
Clinical Chemistry	Creatine phosphokinase (CK-MB)	To aid in the diagnosis of Ischemic heart disease	Serum/Plasma	Automated Analyzer	
	dsDNA Antibody	To aid in the diagnosis of SLE	Serum/Plasma	CLIA/IFA	
	Electrolytes (sodium, potassium)	To monitor fluid, electrolyte, and acid-base balance in disorders of kidney, heart, diabetic ketoacidosis, diabetes insipidus etc.	Serum/Plasma	Ion- Selective Electrode	
	ENA panel	To aid in the diagnosis of various autoimmune diseases	Serum/Plasma	CLIA	
	Folic acid	To diagnose megaloblastic anemia	Serum/Plasma	CLIA	
	Glucose	To diagnose hypoglycemia and hyperglycemia	Serum/Plasma	Automated Analyzer	
	HbA1c	To diagnose and monitor diabetes mellitus	Venous whole blood	Automated Analyzer	
	Iron profile (serum iron, TIBC, transferrin saturation Ferritin)	To detect iron deficiency and overload	Serum/Plasma	Automated Analyzer	
	Lactate Dehydrogenase (LDH)	To aid in the diagnosis of hepatobiliary, sepsis and hemolytic disorder	Body fluid/ serum	Automated Analyzer	
	Lipid profile (total cholesterol, HDL- cholesterol, LDL-cholesterol, Triacylglycerol)	To assess risk of cardiovascular disease (CVD)	Serum/Plasma	Automated Analyzer	
	Non-specific IgE	To aid in the diagnosis of allergy	Serum/Plasma	CLIA	

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (केफियत)
Clinical Chemistry	NT-ProBNP	To aid in the diagnosis of heart failure	Serum/Plasma	CLIA	
	Procalcitonin	To aid in diagnosis of sepsis.	Serum/Plasma	CLIA	
	Troponin T/I (Quantitative)	To aid in diagnosis of myocardial infarction	Serum/Plasma	EIA	
	Thyroid Function Test	To aid in the diagnoses of thyroid disorders	Serum/Plasma	CLIA	
	Total protein	To aid in the diagnosis of liver disease, renal diseases	Body fluid/Serum	Semi-automated/ automated analyzer if available	
	Urea	To assess kidney function and liver function.	Serum/Plasma	Automated Analyzer	
	Uric acid	To aid in the diagnosis and monitor treatment of gout, renal diseases, autoimmune disease and to aid in the diagnosis of tumor lysis syndrome	Serum/Plasma	Automated Analyzer	
	Vitamin D	To diagnose Vitamin D deficiency/toxicity	Serum/Plasma	CLIA	
	Vitamin B12	To diagnose megaloblastic anemia	Serum/Plasma	CLIA	
	Culture and antimicrobial sensitivity test	To detect and identify bacterial species and to select appropriate antimicrobial regimens	Disease appropriate specimens	Manual/Automated	Relevant biochemical test and serotyping as per requirement
Clinical Microbiology	Occult blood test	To detect blood loss from the gastrointestinal tract.	Stool	Guaiac method	

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (केफियत)
Clinical Microbiology	Bacterial and fungal identification- MALDI-ToF	To identify the genus or species of bacteria, or fungi from microbial isolates/ Sample collected	Microbial isolates/Disease appropriate sample	MALDI	
	Gram stain	For presumptive identification of microorganisms	disease appropriate specimen (e.g. urine, stool, sputum, body fluids)	Microscopy	
	KOH study	To aid detection of fungus in tissue including hair and nail.	Disease appropriate specimen (e.g. urine, stool, sputum, body fluids)	Microscopy	
	Stool routine and microscopic examination	To detect parasites (Ova cyst, larvae and adult) and inflammatory cells.	Stool	Microscopy	
	Water Bacteriology	To assess the microbiological quality of water	Water	Membrane filtration method/Culture	
	A, B and O blood groups and Rh factor typing	To identify the blood group and Rh type of an individual	Capillary whole blood/Venous whole blood	Tube agglutination test method/gel card / automated machine	
Hematology	Activated partial thromboplastin time (aPTT)	To diagnose bleeding and thrombotic disorders and to monitor anticoagulant therapy	Citrated plasma	Manual/ Semiautomated/ automated analyzer	
	Bleeding time	To diagnose bleeding and thrombotic disorders	NA (Procedure)	Manual	
	Bone marrow aspiration	To aid in the diagnosis of hematological disorder and hemoparasites	Bone marrow aspirate (Romanowsky stained slide)	Microscopy	
	Clotting time	To diagnose bleeding and thrombotic disorders	Whole blood	Manual	

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (केफियत)
Hematology	Complete blood count (Hemoglobin, Total Leukocyte count, Differential count, Platelet count, Red cell indices, Hematocrit)	To evaluate overall health and to detect a wide range of disorders, including anemia, infections, leukemias, red blood cell, white blood cell and platelet abnormalities and primary immune disorders	Capillary whole blood/Venous whole blood	Automated Hematology analyzer	
	D Dimer	To diagnose and follow up disseminated intravascular coagulation	Citrated plasma	Automated analyzer	
	Direct Coombs test	To aid in the diagnosis of immune mediated hemolysis.	Venous whole blood	Manual/Automated	
	Erythrocyte sedimentation rate	To detect inflammation as an indicator of various conditions	Capillary whole blood/Venous whole blood	Westergren's or Wintrobe method/ automated analyzer	
	Fetal hemoglobin test	To aid in the diagnosis of anemia	Whole blood	Alkali denaturation method/HPLC/ Capillary zone electrophoresis	
	Fibrinogen assay	To diagnose disseminated intravascular coagulation	Citrated plasma	Manual/ Semiautomated analyzer, EIA	
	Glucose-6-Phosphate Dehydrogenase deficiency	For screening newborns for G6PD deficiency and hemolytic anemia	Venous whole blood	Semi-quantitative fluorescent spot test	
	Indirect Coombs test	To screen for potential blood transfusion reactions or to check for Rh incompatibility.	Serum	Manual/ Automated	
	Peripheral blood smear Examination	To screen hematological disorder	Whole blood	Microscopy of Romanowsky stained slide	

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Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (टिप्पणी)
Hematology	Prothrombin time and International normalized ratio (PT and INR)	To diagnose bleeding or thrombotic disorders and to monitor anticoagulant therapy	Citrated plasma	Manual/ Semiautomated/ automated analyzer	
	Hemoglobin quantification	To aid in the diagnosis of hemoglobinopathy	Whole blood	HPLC/ Capillary zone electrophoresis	
	Reticulocyte count	To evaluate the bone marrow response to anemia	Whole blood	Microscopy of supravital stained slide and automated analyzer	
	Sickle cell Testing	To aid in the diagnosis of sickle cell anemia, sickle cell trait and other sickling disorders	Venous whole blood	Hb Electrophoresis/ HPLC	
	Cytopathology	To assess cells for infection, neoplasia, inflammatory and degenerative disorders	Cervical specimen for Papanicolaou (Pap) smear, body fluids, etc.	Microscopy	
Surgical Pathology	Frozen section	To assess the surgical margin intraoperatively; To diagnose benign versus malignant disease intraoperatively.	Biopsy	Cryostat with microscopy	Health institute providing surgical oncology service
	Histopathology	To assess tissue for infection, neoplasia, inflammatory and degenerative disorders	Surgical resection biopsy, core biopsy, cellblock	Macroscopic and microscopic assessment of tissue sections, stained with routine and special stains	
	Immunohistochemistry (IHC)	To assess cells for specific markers to identify infection, neoplasia, inflammatory and degenerative disorders;	Surgical resection biopsy, core biopsy, cellblock	Manual/ Automated	
	Special stains	To aid in the histocytopathological diagnosis	To aid in the diagnosis of various disease conditions	Manual	As per requirement

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (केफियत)
Urine Examination	24hr Urinary protein	To aid in the diagnosis of renal function	Urine	Automated Analyzer	
	Albumin	To detect or monitor renal function	Urine	Dipstick	
	Glucose	To screen/ diagnose/monitor Diabetes mellitus	Urine	Dipstick	
	Hemoglobin (Hb)	Clinical marker for certain severe infections, to aid in the diagnosis of intravascular hemolysis, renal conditions, rhabdomyolysis	Urine	Dipstick	
	Ketone bodies	To aid in the diagnosis of ketosis, e.g. in uncontrolled diabetes, starvation, pregnancy, or diabetic ketoacidosis	Urine	Dipstick	
	Microalbumin	To aid in the diagnosis/screen/monitor diabetes mellitus and renal function	Urine	Automated Analyzer	
	Microscopic examination	To identify leukocytes, RBCs, various casts and crystals	Urine	Microscopy	
	Pregnancy test-Human Chorionic Gonadotrophin	To aid in the detection of pregnancy	Urine (early morning)	RDT	
	Spot Protein Creatinine Ratio	To aid in the diagnosis of renal function	Urine	Calculated	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (केफियत)
Aspergillosis	Aspergillus Fumigatus IgE/ IgG/ IgM	To aid in the diagnosis and monitoring of Aspergillosis	Serum	ELISA/CLIA	
	Galactomannan Test	To aid in the diagnosis of Aspergillosis	Serum	ELISA/CLIA	
Brucellosis	Brucella Antibody-test	To aid in the diagnosis of brucellosis	Serum	Agglutination method/ELISA	
Chikungunya	Chikungunya Virus Antibody (IgM)	To aid in the diagnosis of Chikungunya	Serum/Plasma	ELISA/CLIA	
Cholera	Motility Test	For initial detection of cholera	Stool	Microscopy	
	Vibrio cholera Antigen	For initial detection of cholera	Stool, rectal swab	RDT	
Coronavirus disease (COVID-19)	SARS-CoV-2 PCR	To diagnose COVID-19	Nasopharyngeal/Oropharyngeal swab/other respiratory specimen	PCR	
Coronavirus disease (COVID-19)	SARS-CoV-2 Antigen	To aid in diagnosis of COVID-19	Nasopharyngeal/Oropharyngeal swab/other respiratory specimen	RDT	
Dengue	Dengue serology (NS1 Antigen, IgM,IgG)	To aid in the diagnosis of current and past Dengue infection	Whole blood/serum	RDT/ELISA	
Echinococcosis (hydatid cyst)	Echinococcus antibody (IgG)	To aid in the diagnosis of Echinococcus infection	Serum	ELISA/CLIA	
Filariasis	Microfilaria antigen test	To aid in the diagnosis of lymphatic filariasis caused by Wuchereria Bancrofti	Whole blood	Microscopy/RDT	
Hepatitis A virus infection	Hepatitis A Virus Antibody (IgM)	To aid in the diagnosis of HAV infection	Serum	ELISA/CLIA	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (केफियत)
Hepatitis B virus infection	Hepatitis B Core Antibody (Anti HBc)	To determine the chronicity of hepatitis B infection	Whole blood	ELISA/CLIA	
	Hepatitis B e-Antigen (HBeAg)	To stage chronic HBV infection and to determine the need for treatment	Serum/Plasma	ELISA/CLIA	
	Hepatitis B surface Antigen (HBsAg)	To screen for HBV infection, or to aid in the diagnosis of chronic and acute HBV infection	Serum/Plasma	ELISA/CLIA	
	Hepatitis B Viral load	To monitor the patient with hepatitis B virus infection	Serum/Plasma	Quantitative PCR	
Hepatitis C	Hepatitis C Virus Antibody (IgM/IgG)	To diagnose HCV infection	Serum/Plasma	ELISA/CLIA	
	Hepatitis C Virus PCR	To diagnose chronic HCV infection	Serum/Plasma	Qualitative PCR	
Hepatitis E	Hepatitis E Antibody (IgM/IgG)	To diagnose and monitor HEV infection	Serum/Plasma	ELISA/CLIA	
	HIV-1 and HIV 2 Antibody (Anti-HIV Ab IgM)	To screen for and to aid in the diagnosis of HIV infection	Serum/Plasma	ELISA/CLIA	
	CD4 cell enumeration	To stage advanced HIV disease and monitor the response to antiretroviral therapy	Whole blood	Flowcytometry/ Lateral flow assay	
HIV	HIV viral Load	To monitor HIV patient on antiretroviral therapy	Plasma	Quantitative PCR	
	Influenza PCR	To diagnose of influenza infection	Nasopharyngeal/Oropharyngeal swab/other respiratory specimen	PCR	
Legionnaires disease	Legionella urinary antigen	To diagnose Legionnaires disease	Urine	ELISA/CLIA	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (केफियत)
Leishmaniasis	Leishmania donovani Antibody test (rk39)	To aid in the diagnosis of clinically suspected visceral leishmaniasis	Serum/Plasma	EIA/CLIA/RDT	
Leprosy	Slit skin smear for leprosy	To aid in the diagnosis of leprosy	Slit skin smear	Microscopy	
Leptospirosis	Leptospira Antibody (IgM)	To aid in the diagnosis of leptospirosis	Serum/Plasma	EIA/CLIA/RDT	
Malaria	Malaria Antigen	To diagnose one or more human malaria species (P. falciparum and)	Whole blood	RDT	
Malaria	Thick and Thin Blood smear	For diagnosis of one or more human malaria species (P. falciparum, P. vivax, P. malaria, P. ovale)	Whole blood	Microscopy	
Scrub typhus	Scrub typhus Antibody (IgM, IgG)	To aid in the diagnosis of Scrub typhus	Serum/Plasma	EIA/CLIA/RDT	
Syphilis	Syphilis Antibody test	To diagnose or to aid in the diagnosis of T. pallidum	Whole blood/ serum/ plasma	RDT, Charcoal agglutination, Hemagglutination test, Flocculation test	
TORCH screening in pregnancy	TORCH Panel (Toxoplasmosis, Rubella, Cytomegalovirus, and Herpes simplex)	To detect antibodies against a group of congenital infections that may cause prenatal or perinatal complications.	Serum	ELISA/CLIA	
Trachoma	Giemsa stain	To aid in the diagnosis of trachoma	Conjunctival scrapings	Microscopy	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Tuberculosis	Immune response by interferon-gamma release assay (IGRA)	To diagnose latent TB infection	Whole blood	As per NTC guidelines	
	Sputum-AFB	To diagnose and monitor the treatment of active tuberculosis	Sputum (AFB Stain)	Microscopy	
	Mantoux Test	To diagnosis of latent Intradermal TB infection	Intradermal test	Visual Inspection	
	Mycobacterium tuberculosis DNA	To diagnose active TB and simultaneously or sequentially detect rifampicin resistance	Sputum/body fluid	PCR	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (केफियत)
Cancer	Alpha-fetoprotein (AFP)	To aid in the diagnosis of liver, ovarian and testicular tumor.	Serum/Plasma	ELISA/CLIA	
	Cancer antigen-125	To aid in the diagnosis of ovarian tumor	Serum/Plasma	ELISA/CLIA	
	Cancer antigen-15.3	To aid in the diagnosis of and follow-up of patients with breast cancer	Serum/Plasma	ELISA/CLIA	
	Carbohydrate antigen- 19.9	To aid in the diagnosis of pancreatic cancer	Serum/Plasma	ELISA/CLIA	
	Carcinoembryonic antigen (CEA)	To aid in the diagnosis, prognosis, and monitoring of colorectal carcinoma	Serum/Plasma	ELISA/CLIA	
	Human Chorionic Gonadotrophin (HCG)	To aid in the diagnosis of and monitoring of germ cell tumours and gestational trophoblastic disease	Serum/Plasma	ELISA/CLIA	
	High Risk Human Papilloma virus PCR	For cervical cancer screening	Cervical smear	PCR	
	Immunohistochemistry panels for cancers of varriou organ system(e.g. Breast , lung, GIT. Reproductive system, Lymphoma, Soften tissue and bone, genitourinary system , CNS)	To aid in the diagnosis, prognosis, and treatment of Cancer	Formalin-fixed paraffin-embedded tissue	Manual/ semiautomated/ Automated	
	Prostate-specific antigen (PSA)	To aid in the diagnosis, prognosis, and monitoring of prostate cancer	Serum/Plasma	ELISA/CLIA	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Endocrine disorders	17 OHP	Screening test for congenital adrenal hyperplasia	Serum	ELISA/CLIA	
	Anti-thyroglobulin	To aid in the diagnoses of autoimmune thyroid disorders	Serum/Plasma	ELISA/CLIA	
	Anti-TPO Antibody	To aid in the diagnoses of autoimmune thyroid disorders	Serum/Plasma	ELISA/CLIA	
	Cortisol	To diagnose central cortisol deficiency or hypercortisolism and to diagnose Addison's disease or Cushing's syndrome	Serum	ELISA/CLIA	
	C-Peptide	Aid in differentiation of Type I and Type II Diabetes Mellitus in ambiguous case, detection of insulinoma	Serum	ELISA/CLIA	
	Estradiol	To aid in the diagnosis and monitoring of female fertility and puberty related disorders. (anovulation, gonadal dysfunction, precocious puberty, primary and secondary amenorrhea)	Serum	ELISA/CLIA	
	Insulin	To diagnose and categorize diabetes mellitus	Serum	ELISA/CLIA	
	Parathyroid hormone	To hypo- / hyper-parathyroidism in disorders of the bone, calcium homeostasis and neoplasia.	Serum/Plasma	ELISA/CLIA	
	Progesterone	To confirm ovulation during infertility evaluation and treatment	Serum	ELISA/CLIA	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (केफियत)
Endocrine disorders	Prolactin	To diagnose and screen female infertility, pituitary tumors and other disorders of causing hyperprolactinemia.	Serum	ELISA/CLIA	
	Thyroid Function Test	To aid in the diagnoses of thyroid disorders	Serum/Plasma	ELISA/CLIA	
	Anti-Mullerian Hormone	To aid in the diagnosis of infertility and several other endocrine disorders.	Serum	ELISA/CLIA	
Infertility	Estrogen	To aid in the diagnosis of infertility and several other endocrine disorders.	Serum	ELISA/CLIA	
	Follicle-stimulating hormone	To aid in the diagnosis of infertility and several other endocrine disorders.	Serum	ELISA/CLIA	
	Luteinizing Hormone	To aid in the diagnosis of infertility and several other endocrine disorders	Serum	ELISA/CLIA	
	Progesterone	To aid in the diagnosis of infertility and several other endocrine disorders	Serum	ELISA/CLIA	
	Semen analysis	To aid in finding the cause of male infertility	Semen	Microscopy	
	Testosterone	To aid in the diagnosis of infertility and several other endocrine disorders.	Serum	ELISA/CLIA	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Malabsorption syndrome	Calprotectin	To aid in the diagnosis of inflammatory bowel disease	Stool	ELISA/CLIA	
	IgA-endomysial antibodies	To aid in the diagnosis of celiac disease	Serum/Plasma	ELISA/CLIA	
	Tissue transglutaminase IgA	To diagnose celiac disease	Serum	ELISA/CLIA	
Maternal screening test	Dual marker test (Pregnancy-associated plasma protein-A and Beta-human chorionic gonadotropin)	To assess the risk of Down's syndrome and Edwards syndrome	Serum	ELISA/CLIA	
	Quadruple markers test (Alpha-fetoprotein, Beta-human chorionic gonadotropin, Estriol, and Inhibin A)	To assess the risk of Down's syndrome and Edwards syndrome	Serum/Plasma	ELISA/CLIA	
	Triple marker Test (Alpha-fetoprotein, Beta-human chorionic gonadotropin, and Estriol)	To assess the risk of Down's syndrome and Edwards syndrome	Serum/Plasma	ELISA/CLIA	
Therapeutic Drug Monitoring	Phenytoin, Phenobarbitone, Valproic acid, Tacrolimus, Cyclosporine, Digoxin, etc.	To monitor the level of drug in the serum	Serum/Plasma	Quantitative Immunoassay	

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राष्ट्रीयस्तरमा उपलब्ध हुनु पर्ने परीक्षण सेवाहरू

(List of laboratory services that should be available at national level)

ङ) राष्ट्रियस्तरमा उपलब्ध हुनु पर्ने परीक्षणहरू

प्रदेशस्तरमा उपलब्ध हुने सम्पूर्ण परीक्षणका साथै अतिरिक्त देहायका थप परीक्षण सेवाहरू राष्ट्रियस्तरमा उपलब्ध हुनु पर्नेछ ।

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Basic body fluid Profile(CSF, peritoneal, pleural fluid)	Cytological examination of body fluid	To aid in the diagnosis of reactive and neoplastic lesion	Any Body fluid	Microscopy	
	Differential leukocyte count	To aid in the diagnosis of reactive and neoplastic lesion	Romanowsky stained slide of any body fluid	Microscopy	
	India Ink Preparation	To aid in the diagnosis of cryptococcal infection	CSF	Microscopy	
	Leukocyte count	To aid in the diagnosis of reactive and neoplastic lesion	Any body fluid	Haemo-cytometer	
	Protein and glucose	To aid in the diagnosis of infections	Any body fluid	Automated analyzer	
Clinical Chemistry	Adenosine Deaminase (ADA)	To aid in the diagnosis of chronic inflammatory disorders	Body fluid/Serum	Automated analyzer	
	Alanine aminotransferase (ALT)	To aid in the diagnosis and monitoring of liver function	Serum	Automated Analyzer	
	Albumin	To aid in the diagnosis and monitoring of diseases affecting protein metabolism (synthesis, loss, intake, absorption) e.g. liver disease, kidney disease, severe malnutrition, malabsorption, burns, etc.)	Body fluid/Serum	Automated Analyzer	
	Alkaline Phosphatase (ALP)	To aid in the diagnosis of hepatobiliary and bone disorders	Serum/Plasma	Automated Analyzer	

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (टिप्पणी)
Clinical Chemistry	Lipase	To assess acute pancreatitis and other pancreatic disorders	Serum/Plasma	Automated analyzer	
	Amylase	To assess acute pancreatitis and other pancreatic disorders	Serum/Plasma	Automated Analyzer	
	Anti-cyclic Citrullinated peptide(Anti-CCP Ab)	To aid in the diagnosis of Rheumatoid arthritis	Serum/Plasma	CLIA	
	Antinuclear antibody (ANA)	To aid in the diagnosis of various autoimmune diseases	Serum/Plasma	CLIA/IFA	
	Aspartate aminotransferase (AST)	To aid in the diagnosis and monitoring of liver function	Serum/Plasma	Automated Analyzer	
	Bilirubin (Total, direct, indirect)	To aid in diagnosis of hepatobiliary disorder and hematological disorders	Serum/Plasma	Automated Analyzer	
	Calcium	To aid in the diagnosis of bone disorders, endocrine disorders, renal disorders and other various disorders	Serum/Plasma	Automated analyzer	
	Ceruloplasmin	To aid in the diagnosis of Wilson's disease	Plasma/Serum, 24-hour urine	CLIA	
	C-peptide	To diagnose and categorize diabetes mellitus	Serum/Plasma	CLIA	
	C-reactive protein (CRP) (quantitative)	To detect inflammation and infection as an indicator of various conditions and to monitor response to treatment	Whole blood/Plasma/Serum	CLIA	
	Creatinine	To assess kidney function	Serum/Plasma	Automated Analyzer	

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Clinical Chemistry	Creatine phosphokinase Total (CPK NAC)	To aid in the diagnosis of various muscular disorders and ischemic heart disease	Serum/Plasma	Automated Analyzer	
	Creatine phosphokinase (CK-MB)	To aid in the diagnosis of Ischemic heart disease	Serum/Plasma	Automated Analyzer	
	dsDNA Antibody	To aid in the diagnosis of SLE	Serum/Plasma	CLIA/IFA	
	Electrolytes (sodium, potassium)	To monitor fluid, electrolyte, and acid-base balance in disorders of kidney, heart, diabetic ketoacidosis, diabetes insipidus etc.	Serum/Plasma	Ion- Selective Electrode	
	ENA panel	To aid in the diagnosis of various autoimmune diseases	Serum/Plasma	CLIA	
	Folic acid	To diagnose megaloblastic anemia	Serum/Plasma	CLIA	
	Glucose	To diagnose hypoglycemia and hyperglycemia	Serum/Plasma	Automated Analyzer	
	HbA1c	To diagnose and monitor diabetes mellitus	Venous whole blood	Automated Analyzer	
	Iron profile (serum iron, TIBC, transferrin saturation Ferritin)	To detect iron deficiency and overload	Serum/Plasma	Automated Analyzer	
	Lactate Dehydrogenase (LDH)	To aid in the diagnosis of hepatobiliary, sepsis and hemolytic disorder	Body fluid/Serum	Automated Analyzer	
	Lipid profile (total cholesterol, HDL- cholesterol, LDL-cholesterol, Triacylglycerol)	To assess risk of cardiovascular disease (CVD)	Serum/Plasma	Automated Analyzer	

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Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (केफियत)
Clinical Chemistry	Non-specific IgE	To aid in the diagnosis of allergy	Serum/Plasma	CLIA	
	NT-ProBNP	To aid in the diagnosis of heart failure	Serum/Plasma	CLIA	
	Procalcitonin	To aid in diagnosis of sepsis	Venous whole blood /Serum /Plasma	RDT/CLIA	
	Total protein	To aid in the diagnosis of liver disease, renal diseases	Body fluid/Serum	Automated Analyzer	
	Troponin T/I (Quantitative)	To diagnose myocardial infarction	Venous whole blood /Serum /Plasma	CLIA	
	Urea	To assess kidney function and liver function.	Serum/Plasma	Automated Analyzer	
	Uric acid	To aid in the diagnosis and monitor treatment of gout, renal diseases, autoimmune disease and to aid in the diagnosis of tumor lysis syndrome	Serum/Plasma	Automated Analyzer	
	Vitamin D	To diagnose Vitamin D deficiency/toxicity	Serum/Plasma	CLIA	
	Vitamin B12	To diagnose megaloblastic anemia	Serum/Plasma	CLIA	
	Bacterial culture and antimicrobial sensitivity test	To detect and identify bacterial species and to select appropriate antimicrobial regimens	Disease appropriate specimens	Manual/Automated	relevant biochemical test and serotyping as per requirement
Clinical Microbiology	Fungal culture and antimicrobial sensitivity test	To detect and identify fungal species and to select appropriate antimicrobial regimens	Disease appropriate specimens	Manual/Automated	

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (टिप्पणी)
Clinical Microbiology	Occult blood test	To detect blood loss from the gastrointestinal tract.	Stool	Guaiaac method	
	Bacterial and fungal identification- MALDI-ToF	To identify the genus or species of bacteria, or fungi from microbial isolates/ Sample collected	Microbial isolates/ disease appropriate sample	MALDI	
	Gram stain	For presumptive identification of microorganisms	Disease appropriate specimen (e.g. urine, stool, sputum, body fluids)	Microscopy	
	KOH study	To aid detection of fungus in tissue including hair and nail.	Disease appropriate specimen (e.g. urine, stool, sputum, body fluids)	Microscopy	
	Stool routine and microscopic examination	To detect parasites (Ova cyst, larvae and adult) and inflammatory cells.	Stool	Microscopy	
	Water Bacteriology	To assess the microbiological quality of water	Water	Membrane filtration method/Culture	
	A, B and O blood groups and Rh factor typing	To identify the blood group and Rh type of an individual	Capillary whole blood/Venous whole blood	Tube agglutination test method/gel card / automated machine	
Hematology	Activated partial thromboplastin time (aPTT)	To diagnose bleeding and thrombotic disorders and to monitor anticoagulant therapy	Citrated plasma	Manual/ Semiautomated/ automated analyzer	
	Bleeding time	To diagnose bleeding and thrombotic disorders	NA (Procedure)	Manual	
	Bone marrow aspiration	To aid in the diagnosis of hematological disorder and hemoparasites	Bone marrow aspirate (Romanowsky stained slide)	Microscopy	
	Clotting time	To diagnose bleeding and thrombotic disorders	Whole blood	Manual	

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (केफियत)
Hematology	Complete blood count (Hemoglobin, Total Leukocyte count, Differential count, Platelet count, Red cell indices, Hematocrit)	To evaluate overall health and to detect a wide range of disorders, including anemia, infections, leukemias, red blood cell, white blood cell and platelet abnormalities and primary immune disorders	Capillary whole blood/Venous whole blood	Automated Hematology analyzer	
	D Dimer	To diagnose and follow up disseminated intravascular coagulation	Citrated plasma	Automated analyzer	
	Direct Coombs test	To aid in the diagnosis of immune mediated hemolysis.	Venous whole blood	Manual/Automated	
	Erythrocyte sedimentation rate	To detect inflammation as an indicator of various conditions	Capillary whole blood/Venous whole blood	Westergren's or Wintrobe method/ automated analyzer	
	Factor Assay	To diagnose various factor deficiency	Citrated plasma	Automated Analyzer	
	Factor Inhibitor Assay	To diagnose and monitor coagulation and bleeding disorders	Citrated plasma	Automated Analyzer	
	Fetal hemoglobin test	To aid in the diagnosis of anemia	Whole blood	Alkali denaturation method/HPLC/ Capillary zone electrophoresis	
	Fibrinogen assay	To diagnose disseminated intravascular coagulation	Citrated plasma	Manual/ Semiautomated analyzer, EIA	
	Glucose-6-Phosphate Dehydrogenase deficiency	For screening newborns for G6PD deficiency and hemolytic anemia	Venous whole blood	Semi-quantitative fluorescent spot test	

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Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (टिप्पणी)
Hematology	Indirect Coombs test	To screen for potential blood transfusion reactions or to check for Rh incompatibility.	Serum	Manual/ Automated	
	Paroxysmal Nocturnal Hemoglobinuria	To aid in the diagnosis of Paroxysmal nocturnal hemoglobinuria	Whole blood	Flowcytometry	
	Peripheral blood smear Examination	To screen hematological disorder	Whole blood	Microscopy of Romanowsky stained slide	
	Prothrombin time and International normalized ratio (PT and INR)	To diagnose bleeding or thrombotic disorders and to monitor anticoagulant therapy	Citrated plasma	Manual/ Semiautomated/ automated analyzer	
	Hemoglobin quantification	To aid in the diagnosis of hemoglobinopathy	Whole blood	HPLC/ Capillary zone electrophoresis	
	Reticulocyte count	To evaluate the bone marrow response to anemia	Whole blood	Microscopy of supravital stained slide and automated analyzer	
	Sickle cell Testing	To aid in the diagnosis of sickle cell anemia, sickle cell trait and other sickling disorders	Venous whole blood	Hb Electrophoresis/ HPLC	
	Cytopathology	To assess cells for infection, neoplasia, inflammatory and degenerative disorders	Cervical specimen for Papanicolaou (Pap) smear, body fluids, etc.	Microscopy	
Surgical Pathology	Frozen section	To assess the surgical margin intraoperatively; To diagnose benign versus malignant disease intraoperatively.	Biopsy	Cryostat with microscopy	Health institute providing surgical oncology service

General Laboratory Tests (सामान्य परीक्षणहरू)					
Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (टिप्पणी)
Surgical Pathology	Histopathology	To assess tissue for infection, neoplasia, inflammatory and degenerative disorders	Surgical resection biopsy, core biopsy, cellblock	Macroscopic and microscopic assessment of tissue sections, stained with routine and special stains	
	Immunofluorescence	To aid in the diagnosis of kidney disease, autoimmune disease, skin diseases	Renal biopsy, skin biopsy	Fluorescence Microscopy	
	Immunohistochemistry (IHC)	To assess cells for specific markers to identify infection, neoplasia, inflammatory and degenerative disorders;	Surgical resection biopsy, core biopsy, cellblock	Manual/ Automated	
	Special stains	To aid in the histocytopathological diagnosis	To aid in the diagnosis of various disease conditions	Manual	As per requirement
	24hr Urinary protein	To aid in the diagnosis of renal function	Urine	Automated Analyzer	
Urine Examination	Albumin	To aid in the diagnosis of renal function	Urine	Dipstick/Automated Analyzer	
	Glucose	To screen/ diagnose/monitor Diabetes mellitus	Urine	Dipstick/Automated Analyzer	
	Hemoglobin (Hb)	Clinical marker for certain severe infections, to aid in the diagnosis of intravascular hemolysis, renal conditions, rhabdomyolysis	Urine	Dipstick/Automated Analyzer	
	Ketone bodies	To aid in the diagnosis of ketosis, e.g. in uncontrolled diabetes, starvation, pregnancy, or diabetic ketoacidosis	Urine	Dipstick/Automated Analyzer	

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Test Category (परीक्षण समूह)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (टिप्पणी)
Urine Examination	Microalbumin	To aid in the diagnosis/screen/ monitor diabetes mellitus and renal function	Urine	Automated Analyzer	
	Microscopic examination	To identify leukocytes, RBCs, various casts and crystals	Urine	Microscopy	
	Pregnancy test- human chorionic Gonadotrophin	To aid in the detection of pregnancy	Urine (early morning)	RDT	
	Spot Protein Creatinine Ratio	To detect or monitor renal function	Urine	Calculated	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Adenovirus infection	Adenovirus PCR	To diagnose adenovirus infection	Disease appropriate specimen	PCR	
Anthrax	Bacillus anthracis PCR	To diagnose Anthrax	Blood, respiratory secretions, CSF, skin lesion swab, etc.	PCR	
Aspergillosis	Aspergillus Fumigatus Antibody (IgE/ IgG/ IgM)	To aid in the diagnosis and monitoring of Aspergillosis	Serum	ELISA/CLIA	
	Galactomannan Test	To aid in the diagnosis of Aspergillosis	Serum	ELISA/CLIA	
Botulism	C. botulinum PCR	To aid in the diagnosis of botulism	Stool, gastric and intestinal contents, wound swabs, and tissue	PCR	
	C. botulinum toxin	To aid in the diagnosis of botulism	Serum, stool	ELISA/CLIA	
Clostridium Difficile Infection	Clostridium difficile toxin	To aid in the diagnosis of food poisoning and diarrhoea	Stool, gastric and intestinal contents	ELISA/CLIA	
Brucellosis	Brucella Antibody (IgM)	To aid in the diagnosis of brucellosis	Serum	Agglutination method / ELISA	
Candidiasis	Germ Tube Test	To aid in the diagnosis of candidiasis and other fungal infections	Disease appropriate specimen	Germ tube test	
	Beta D glucan	To aid in the diagnosis of candidiasis and other fungal infections	Serum	ELISA/CLIA	
Chikungunya	Chikungunya Virus Antibody (IgM)	To aid in the diagnosis of Chikungunya	Serum/Plasma	ELISA/CLIA	
	Chikungunya virus PCR	To diagnose Chikungunya	Whole blood/Serum/Plasma	PCR	
Cholera	Vibrio cholerae Antigen	For initial detection of cholera	Stool, rectal swab	RDT	
	Vibrio cholerae Culture	For diagnosis of cholera	Stool, rectal swab	Culture	
	Vibrio cholerae PCR	For diagnosis of cholera	Stool, rectal swab	PCR	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Coronavirus Disease (COVID-19)	SARS-CoV-2 PCR	To diagnose COVID-19	Nasopharyngeal/Oropharyngeal swab/other respiratory specimen	PCR	
Coxsackie infection	Coxsackie virus PCR	To aid in the diagnosis of Hand foot mouth disease	Body fluid	PCR	
Cryptococcal infection	Cryptococcal antigen	To screen for and diagnose cryptococcal meningitis and other cryptococcal infections	Cerebrospinal fluid/Whole blood/ Serum/Plasma	RDT/ELISA	
	India Ink preparation	To demonstrate cryptococcal capsule to aid in the diagnosis of cryptococcal infection	Cerebrospinal fluid	Microscopy (India Ink)	
Cryptosporidiosis	Cryptosporidium antigen	To aid in the diagnosis of cryptosporidiosis	Stool	ELISA/CLIA	
	Routine and microscopic examination	To aid in the diagnosis of cryptosporidium	Stool	Microscopy	
Cysticercosis	Cysticercosis Antibody	To aid in the diagnosis of cysticercosis	Serum /CSF	ELISA/ EITB	
Cytomegalovirus	Cytomegalovirus Antibody	Detection of IgM and IgG antibodies against CMV	Serum	ELISA/CLIA	
	Cytomegalovirus PCR	To detect CMV	Disease appropriate sample	PCR	
Dengue	Dengue serology (NS1 Antigen, IgM,IgG)	To aid in the diagnosis of current and past Dengue infection	Whole blood/ serum	ELISA/ Immunoassay	
	Dengue virus PCR	For surveillance (serotype differentiation) and confirmation of outbreaks	Whole blood/ serum	PCR	
Ebola virus disease	Ebola virus PCR	For diagnosis of Ebola virus disease	Whole blood	RT PCR/ Ebola Serology (IgM, IgG)	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (टिप्पणी)
Echinococcosis	Echinococcus antibody (IgG)	To aid in the diagnosis of Echinococcus infection	Serum	ELISA/CLIA	
Lymphatic Filariasis	Blood smear for Microfilaria	To diagnose Filariasis caused by Wuchereria Bancrofti	Whole blood	Microscopy	
	Microfilaria antigen test	To aid in the diagnosis of lymphatic filariasis caused by Wuchereria Bancrofti	Whole blood	RDT	
Gonorrhea	Neisseria gonorrhoeae PCR	To diagnose symptomatic or asymptomatic gonorrheal urogenital disease and extragenital infection	vaginal swab, urethral swabs, rectal swabs	PCR	
Hantavirus disease	Hantavirus PCR	To diagnose of hantavirus disease	Whole blood	PCR	
	Hanta Virus (IgM,IgG)	To aid in the diagnosis of hantavirus disease	Serum	ELISA/CLIA	
Hepatitis A virus infection	Hepatitis A Virus PCR	Direct Detection of HAV nucleic acid	Whole Blood, stool	RT PCR	
	Hepatitis A Virus Antibody (IgM)	To aid in the diagnosis of HAV infection	Serum/Plasma	ELISA/CLIA	
Hepatitis B virus infection	Hepatitis B Core Antibody (Anti HBc)	To determine the chronicity of hepatitis B infection	Whole blood	ELISA/CLIA	
	Hepatitis B e-Antigen (HBeAg)	To stage chronic HBV infection and to determine the need for treatment	Serum/Plasma	ELISA/CLIA	
	Hepatitis B surface Antigen (HBsAg)	To screen for HBV infection, or to aid in the diagnosis of chronic and acute HBV infection	Serum/Plasma	ELISA/CLIA	
	Hepatitis B Viral load	To monitor the patient with hepatitis B virus infection	Serum/Plasma	Quantitative PCR	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Hepatitis C	Hepatitis C Virus Antibody (IgM/IgG)	To diagnose HCV infection	Serum/Plasma	ELISA/CLIA	
	Hepatitis C core Antigen	To diagnose chronic HCV infection	Serum/Plasma	ELISA/CLIA	
	Hepatitis C Virus PCR	To diagnose chronic HCV infection	Serum/Plasma	Qualitative PCR	
	Hepatitis C Virus Genotyping	For genotyping of HCV	Serum/Plasma	PCR	
	Hepatitis C Viral Load	To monitor the patient with hepatitis C virus infection	Serum/Plasma	Quantitative PCR	
Hepatitis E	Hepatitis E Antibody (IgM/IgG)	To diagnose and monitor HEV infection	Serum/Plasma	ELISA/CLIA	
	Hepatitis E Virus PCR	Confirm and quantify the presence of hepatitis E virus.	Plasma/Serum/Stool	PCR	
	Histoplasma capsulatum Antigen	To aid in the diagnosis of disseminated histoplasmosis	Urine, fluid, blood, bone marrow, etc.	ELISA/CLIA	
HIV	HIV-1 and HIV 2 Antibody (Anti-HIV Ab IgM)	To screen for and to aid in the diagnosis of HIV infection	Serum/Plasma	ELISA/CLIA	
	CD4 cell enumeration	To stage advanced HIV disease and monitor the response to antiretroviral therapy	Whole blood	Flowcytometry/ Lateral flow assay	
	HIV PCR	To Confirm HIV infection in inconclusive cases from RDT and for early diagnosis of HIV infection in infants (<18 months)	Dried Blood Spot/ Whole blood	Qualitative PCR	
	HIV viral Load	To monitor HIV patient on antiretroviral therapy	Plasma	Quantitative PCR	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Infective panels	Meningitis and encephalitis panels/ Respiratory pathogen panel/Sepsis panel/ GI Panel	Panels of tests to detect common causative organism of meningitis, encephalitis, respiratory disease , sepsis	Disease appropriate specimen	PCR	
	Influenza PCR	To diagnose of influenza infection	Nasopharyngeal/Oropharyngeal swab/other respiratory specimen	PCR	
Japanese encephalitis	JE virus Antibody (IgM)	To aid in the diagnosis of Japanese encephalitis	CSF, serum	ELISA/CLIA	
Legionnaires disease	Legionella PCR	To diagnose Legionnaires disease	Lower respiratory tract specimens such as BAL, bronchial wash, lung tissues, pleural fluid	PCR	
	Legionella urinary antigen	To diagnose Legionnaires disease	Urine	ELISA/CLIA	
Leishmaniasis	Leishmania donovani Antibody test (rK39)	To aid in the diagnosis of clinically suspected visceral leishmaniasis	Serum/Plasma	ELISA/ RDT	
Leprosy	Slit skin smear for leprosy	To aid in the diagnosis of leprosy	Slit skin smear	Microscopy	
Leptospirosis	Leptospira Antibody (IgM)	To aid in the diagnosis of leptospirosis	Serum/Plasma	ELISA/RDT	
	Leptospirosis PCR	To diagnose leptospirosis	Serum/Plasma/Urine	PCR	
Malaria	Malaria Antigen	To diagnose one or more human malaria species (P. falciparum and)	Whole blood	RDT	
	Thick and Thin Blood smear	For diagnosis of one or more human malaria species (P. falciparum, P. vivax, P. malaria, P. ovale)	Whole blood	Microscopy	
	Malaria PCR	For diagnosis of one or more human malaria species (P. falciparum, P. vivax, P. malaria, P. ovale)	Whole blood	PCR	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Measles	Measles Antibody (IgM)	To aid in the diagnosis of Measles infection	Serum/Plasma	ELISA/CLIA	
	Measles PCR	To diagnose Measles infection	Nasopharyngeal swabs, throat swabs, urine	PCR	
M-pox virus	Mpox PCR	To aid in the diagnosis of M- Pox	Body fluid	PCR	
Nipah virus infection	Nipah Virus Antibody (IgM)	To aid in the diagnosis and treatment of Nipah virus infection	Serum/Plasma	ELISA/CLIA	
	Nipah Virus PCR	To diagnose Nipah virus infection	Throat/ nasal swabs, CSF, urine, blood	PCR	
Plague	Y. Pestis PCR	To diagnose Plague infection	Whole blood, lymph node aspirate, sputum, bronchial wash	PCR	
Q fever	Coxiella Brunetti PCR	To diagnose Q fever	Respiratory specimen/whole blood/serum	PCR	
Rabies	Rabies Virus PCR	To aid in diagnosis of Rabies in Humans	Saliva, blood, CSF, skin biopsy	PCR	
Respiratory syncytial virus	RSV PCR	To aid in the diagnosis of RSV infection	Nasopharyngeal/Oropharyngeal swab/other respiratory specimen	ELISA/CLIA	
Rhino virus	Rhino Virus PCR	To diagnose Rhinovirus infection	Nasopharyngeal/Oropharyngeal swab/other respiratory specimen	PCR	
Rota virus	Rota virus Antibody (IgM)	To aid in diagnosis of Rota virus infection	Stool	ELISA/CLIA	
	Rota Virus PCR	To aid in the diagnosis of Rota virus infection	Stool	PCR	
Scrub typhus	Scrub typhus PCR	To diagnose Scrub typhus	Blood, tissue scrapings	PCR	
	Scrub typhus Antibody (IgM , IgG)	To aid in the diagnosis of Scrub typhus	Serum/Plasma	ELISA/CLIA	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Syphilis	T. pallidum Antibody (IgM, IgG)	To diagnose or to aid in the diagnosis of T. pallidum	Whole blood/Serum/Plasma	ELISA/CLIA	
TORCH screening in pregnancy	TORCH Panel (Toxoplasmosis, Rubella, Cytomegalovirus, and Herpes simplex)	To detect antibodies against a group of congenital infections that may cause prenatal or perinatal complications.	Serum	ELISA/CLIA	
Trachoma	Chlamydia trachomatis PCR	To diagnose trachoma	Conjunctival scrapings	PCR	
	Giemsa stain	To aid in the diagnosis of trachoma	Conjunctival scrapings	Microscopy	
Trypanosomiasis	Trypanosoma Cruzi PCR	To diagnose Chagas disease	Whole blood	PCR	
Zika	Zika Virus Antibody (IgM, IgG)	To aid in the detection of antibody against Zika virus	Serum/Plasma	ELISA/CLIA	
	Zika PCR	To diagnose Zika infection	Blood and urine	PCR	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Allergy	Allergy specific allergen Test	To find the causative agent of allergy	Serum	Immunoblotting/ Immunoassay	
	Anti Gastric Parietal Cell Antibody	To aid in the diagnosis of pernicious anemia	Serum	ELISA/CLIA	
	Haptoglobin	To differentiate the mechanism of anemia	Serum/Plasma	Nephelometry/ELISA	
Anemia	Homocysteine	To aid in the diagnosis of megaloblastic anemia	Serum	ELISA/ Electrophoresis/ amino acid analyzers	
	Methylmalonic acid	To aid in the diagnosis of methylmalonic acidemias	Serum/Urine	HPLC	
	Antidromysial Antibody-IgA	To aid in the diagnosis of dermatitis herpetiformis or celiac disease	Serum	ELISA/CLIA	
	Anti-liver-kidney microsomal antibody (LKM)	To aid in the diagnosis of autoimmune hepatitis.	Serum/Plasma	ELISA/CLIA	
Autoimmune diseases	Antimitochondrial antibody	To aid in the diagnosis of autoimmune disease	Serum/Plasma	Immunoassay/IFA	
	Anti-nuclear antibody	To aid in the diagnosis of various autoimmune disease	Serum/Plasma	ELISA/CLIA	Start with common storage disorders
	Anti-TPO Antibody	To aid in the diagnoses of autoimmune thyroid disorders	Serum/Plasma	ELISA/CLIA	
	C-Peptide	Aid in differentiation of Type I and Type II Diabetes Mellitus in ambiguous case, detection of insulinoma	Serum	ELISA/CLIA	
	Anti-smooth muscle antibody	To aid in the diagnosis of autoimmune hepatitis	Serum/Plasma	IFA/ELISA/CLIA	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Autoimmune diseases	Complement	To aid in the diagnosis of inherited complement component deficiency	Serum/Plasma	Immunoassay/ Electrophoresis	
	Extra Nuclear Antigen Panel	To aid in the diagnosis of various autoimmune disease	Serum/Plasma	IFA/ELISA	
	Immunoglobulins	To aid in the diagnosis of autoimmune disease and immunoglobulinopathies	Serum/Plasma/Urine	ELISA/CLIA	
	P-ANCA	To aid in the diagnosis of different types of immune-mediated vasculitis	Serum/Plasma	ELISA/CLIA/ Immunoblot	
	Soluble Liver Antigen (SLA)	To aid in the diagnosis of autoimmune hepatitis.	Serum/Plasma	ELISA/CLIA	
Bleeding Disorders	Anti- 2 Glycoprotein -1 antibodies	Thrombophilia Screening	Serum/Plasma	ELISA/CLIA	If positive to be followed by electro-phoresis by Immuno-fixation
	Anticardiolipin[aCL], Anti-β2-Glycoprotein [Anti-β2GPI] and PTT-LA	To aid in the diagnosis of antiphospholipid antibody syndrome	Whole blood	EIA/CLIA and Coagulometer	
	Antithrombin assay	To aid in the diagnosis of bleeding disorder	Plasma	Chromogenic assay/ ELISA/CLIA	
	Dilute Russell Viper Venom Time	To aid in the diagnosis of antiphospholipid antibody syndrome	Whole blood	Coagulometer	
	Epitope-Specific VWF Activity	To aid in the diagnosis of von Willebrand disease	Whole blood	ELISA	
	Factor V Leiden mutation	To aid in the diagnosis of bleeding disorder	Plasma	APC-R Assay using factor V-deficient plasma or DNA-based assay	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Bleeding Disorders	Lupus Anticoagulant	Thrombophilia Screening	Citrated Whole blood	Coagulometer	
	Platelet function tests	To aid in the diagnosis of bleeding/ clotting disorder	Whole blood	Platelet Aggregometry/ lumi-Aggregometry	
	Protein C, Protein S	To aid in the diagnosis of bleeding	Plasma	ELISA/CLIA/ Fully automated coagulometer	
	Prothrombin G20210 A mutation	To aid in the diagnosis of bleeding	Plasma	DNA-based assay	
	von Willebrand factor antigen	To aid in the diagnosis of von Willebrand disease	Whole blood	ELISA/CLIA	
	Alpha-fetoprotein (AFP)	To aid in the diagnosis of liver, ovarian and testicular tumor.	Serum/Plasma	ELISA/CLIA	
Cancer	BCR:ABL1 fusion gene PML:RARA fusion gene	To diagnose and monitor therapy of chronic myelocytic leukemia (CML) and CML variants, and the prognosis of acute lymphoblastic leukemia (ALL)	Venous whole blood, bone marrow, FFPE	FISH	
	BCR:ABL1 transcripts, PML:RARA transcripts	To diagnose and monitor therapy of chronic myelocytic leukemia (CML) and CML variants, and the prognosis of acute lymphoblastic leukemia (ALL)	Venous whole blood, bone marrow	PCR Qualitative/ Quantitative	
	Cancer antigen-125	To aid in the diagnosis of ovarian tumor	Serum/Plasma	ELISA/CLIA	
	Cancer antigen-15.3	To aid in the diagnosis of and follow-up of patients with breast cancer	Serum/Plasma	ELISA/CLIA	
	Carbohydrate antigen-19.9	To aid in the diagnosis of pancreatic cancer	Serum/Plasma	ELISA/CLIA	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Cancer	Carcinoembryonic antigen (CEA)	To aid in the diagnosis, prognosis, and monitoring of colorectal carcinoma	Serum/Plasma	ELISA/CLIA	
	Free light chain measurement	To aid in diagnosis, prognosis and monitoring of plasma cell dyscrasias	Serum	ELISA/CLIA	
	Human Chorionic Gonadotrophin (HCG)	To aid in the diagnosis of and monitoring of germ cell tumors and gestational trophoblastic disease	Serum/Plasma	ELISA/CLIA	
	High Risk Human Papilloma virus PCR	For cervical cancer screening	Cervical smear	PCR	
	Immunofixation Electrophoresis	To aid in identifying the M component (as IgG, IgM, IgA, IgD, IgE, Kappa, lambda)	serum/urine	Gel/capillary electrophoresis	
	Immunohistochemistry panels for cancers of various organ system (e.g. Breast, lung, GIT. Reproductive system, Lymphoma, Soften tissue and bone, genitourinary system, CNS)	To aid in the diagnosis, prognosis, and treatment of Cancer	Formalin-fixed paraffin-embedded tissue	Manual/ semiautomated/ Automated	
	Immunophenotyping panel of antibodies to Leukemia, Lymphoma, Multiple Myeloma	To aid in the diagnosis of hematological malignancies.	Bone marrow, Peripheral blood, Body fluid Tissue, Lymph node	Flowcytometry	
	Minimal residual disease	To monitor management of hematological malignancies	Bone marrow	PCR/Flowcytometry	
	Minimal residual disease	To monitor management of solid malignancies	Bone marrow	PCR/Flowcytometry	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Cancer	Prostate-specific antigen (PSA)	To aid in the diagnosis, prognosis, and monitoring of prostate cancer	Serum/Plasma	ELISA/CLIA	
	Protein Electrophoresis	To quantify various types of protein and aid in diagnosis of disease associated with abnormal protein production such as multiple myeloma, Waldenstrom macroglobulinemia, monoclonal gammopathy of undetermined significance (MGUS)	Serum, urine	Gel/capillary electrophoresis	
	Serotonin (5Hydroxytryptamine test)	To aid in the differential diagnosis of isolated symptoms suggestive of carcinoid syndrome	Serum/whole blood	ELISA/CLIA	
Chromosomal abnormalities	Karyotyping	To aid in the diagnosis of chromosomal abnormalities	Whole blood	Karyotyping/ Microarray/ FISH	
	Dihydrotestosterone	To aid in the diagnosis of hirsutism and virilization	Serum	ELISA/CLIA	
	17 OHP	Screening test for congenital adrenal hyperplasia	Serum	ELISA/CLIA	
Endocrine disorders	17-Ketosteroids/ 17 OHP	To aid in differentiating disorders associated with abnormal levels of androgens	Urine	Liquid chromatography-mass spectrometry	
	ACTH	To diagnose adrenal insufficiency and pituitary tumors	Serum	ELISA/CLIA	
	Aldosterone	To aid in differentiating hypertension	Serum/ urine	ELISA/CLIA	
	Anti-TPO Antibody	To aid in the diagnoses of autoimmune thyroid disorders	Serum/Plasma	ELISA/CLIA	
	Anti thyroid thyroglobulin	To detect thyroid disorders	Serum	ELISA/CLIA	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Endocrine disorders	Cortisol	To diagnose central cortisol deficiency or hypercortisolism and to diagnose Addison's disease or Cushing's syndrome	Serum	ELISA/CLIA	
	C-Peptide	Aid in differentiation of Type I and Type II Diabetes Mellitus in ambiguous case, detection of insulinoma	Serum	ELISA/CLIA	
	Estradiol	To aid in the diagnosis and monitoring of female fertility and puberty related disorders. (anovulation, gonadal dysfunction, precocious puberty, primary and secondary amenorrhea)	Serum	ELISA/CLIA	
	Free testosterone	To detect hypogonadism	Serum	ELISA/CLIA	
	Growth hormone	To evaluate the level of growth hormone;	Serum	ELISA/CLIA	
	IGF-1	Used to help diagnose growth hormone deficiency (GHD), or less commonly growth hormone excess; to evaluate pituitary function; to monitor the effectiveness of GH treatment	Serum	ELISA/CLIA	
	Insulin	To diagnose and categorize diabetes mellitus	Serum	ELISA/CLIA	
	Metanephrine	To aid in the diagnosis of adrenal gland tumor and paragangliomas	Serum/ urine	Spectrometry	
	Parathyroid hormone	To hypo- / hyper-parathyroidism in disorders of the bone, calcium homeostasis and neoplasia.	Serum	ELISA/CLIA	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Endocrine disorders	Progesterone	To confirm ovulation during infertility evaluation and treatment	Serum	ELISA/CLIA	
	Prolactin	To diagnose and screen female infertility, pituitary tumors and other disorders of causing hyperprolactinemia.	Serum	ELISA/CLIA	
	Renin	To aid in differentiating hypertension	Serum	ELISA/CLIA	
	Thyroid Function Test	To aid in the diagnoses of thyroid disorders	Serum/Plasma	ELISA/CLIA	
	Vanillyl mandelic acid	To screen and monitor catecholamine secreting tumors	Urine	HPLC/ Spectrophotometry	
	Anti-Mullerian Hormone	To aid in the diagnosis of infertility and several other endocrine disorders.	Serum	ELISA/CLIA	
Infertility	Estrogen	To aid in the diagnosis of infertility and several other endocrine disorders.	Serum	ELISA/CLIA	
	Follicle-stimulating hormone	To aid in the diagnosis of infertility and several other endocrine disorders.	Serum	ELISA/CLIA	
	Luteinizing Hormone	To aid in the diagnosis of infertility and several other endocrine disorders.	Serum	ELISA/CLIA	
	Progesterone	To aid in the diagnosis of infertility and several other endocrine disorders.	Serum	ELISA/CLIA	
	Semen analysis	To aid in finding the cause of male infertility	Semen	Microscopy	
	Testosterone	To aid in the diagnosis of infertility and several other endocrine disorders.	Serum	ELISA/CLIA	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Malabsorption syndrome	Calprotectin	To aid in the diagnosis of inflammatory bowel disease	Stool	ELISA/CLIA	
	IgA-endomysial antibodies	To aid in the diagnosis of celiac disease	Serum/Plasma	ELISA/CLIA	
	Tissue transglutaminase IgA	To diagnose celiac disease	Serum	ELISA/CLIA	
Maternal screening test	Dual marker test (Pregnancy-associated plasma protein-A and Beta-human chorionic gonadotropin)	To assess the risk of Down's syndrome and Edwards syndrome	Serum	ELISA/CLIA	
	Non-Invasive Prenatal testing	To aid the detection of fetal genetic abnormalities	Maternal whole blood (cell free DNA)	Targeted gene sequencing	
	Quadruple markers test (Alpha-fetoprotein, Beta HCG, Estriol and Inhibin)	To assess the risk of Down's syndrome and Edwards syndrome	Serum	ELISA/CLIA	
Organ Transplant	Triple marker Test (Alpha-fetoprotein, Beta-human chorionic gonadotropin, and Estriol)	To assess the risk of Down's syndrome and Edwards syndrome	Serum	ELISA/CLIA	
	HLA typing, HLA crossmatch, PRA,DSA,CDC single bead Antigen	To aid in the process of organ transplants for recipient and donor	Whole blood/ saliva	PCR	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (कैफियत)
Organ Transplant Follow-up	Beta D-Glucan	To diagnose various invasive fungal infections .	Serum/sputum/BAL	PCR	
	BK Virus	To screen post transplant infection in transplant recipient.	Serum/Plasma	PCR-SSOP/ SSP/ Flowcytometry Crossmatch/ Bead based crossmatch/ Microscopy crossmatch	
	CMV	To screen post transplant infection in transplant recipient.	Serum/Plasma	ELISA/CLIA	
	Donor derived cell free DNA	To screen post transplant rejection status in transplant recipient.	Serum/Plasma	PCR	
	JC Virus	To screen post transplant infection in transplant recipient.	Serum/Plasma	ELISA/CLIA	
	Pneumocystis Jervovici PCR	To screen post transplant infection in transplant recipient.	Sputum	PCR	
	S Galactomannan	To diagnose invasive pulmonary aspergillosis.	Serum/Sputum/BAL	ELISA/CLIA	
Post stem cell transplant follow up	Chimerism	To monitor success of hematopoietic stem cell transplant	Whole blood/ bone marrow	Flowcytometry	
	CMV Monitoring	CMV monitoring	Serum/Plasma	Microbial culture	
	Drug level monitoring	To monitor prognosis in post transplant recipient	Serum/Plasma	ELISA/CLIA/HPLC/LC- MS/GC-MS	
Stem Cell Transplant	CD 34+ cell count	To quantify stem cells	Donor Cell products	Flowcytometry	
	Microbial Testing	To test sterility of stem cells	Donor Cell products	IFA	
	Nucleated cell count	To aid in determining dose of stem cell	Donor Cell products	NGS	
	Viability Testing	To test the viability of stem cells	Donor Cell products	Automated hematology analyzer	

Disease specific tests (रोगमा आधारित परीक्षणहरू)					
Diseases (रोग)	Name of the test (परीक्षणको नाम)	Purpose of the test (परीक्षणको उद्देश्य)	Type of sample (नमुनाको प्रकार)	Testing method (परीक्षण विधि)	Remarks (टिप्पणी)
Therapeutic Drug Monitoring	Phenytoin, Phenobarbitone, Valproic acid, Tacrolimus, Cyclosporine, Digoxin, etc.	To monitor the level of drug in the serum	Serum	ELISA/CLIA/HPLC/LC-MS/GC-MS	

अनुसूची - २

राष्ट्रिय आवश्यक इनभिद्रो निदानात्मक सूची तयारी प्रक्रिया National Essential In Vitro Diagnostic List Preparation Process

The existence of an effective diagnostic system is a major approach towards strengthening the health care delivery system of a country. The Constitution of Nepal clearly states the basic health service as fundamental right of every citizen. The NEIDL mainly aims to provide evidence for designing effective interventions for achieving quality of life among the people.

The development the NEIDL was done in different phases, with consultation among different experts and stakeholders.

A. *Formation of technical working group*

A preliminary meeting was conducted to design a general plan for the preparation of the NEIDL, under the leadership of NPHL, with key government officials, different division and center chiefs of DOHS, and external development partners. With the conclusions drawn from the meeting, TWG was formed which comprised of the following members, who were continued till the finalization of the document:

- Director, National Public Health Laboratory: Coordinator
- Chief Medical Technologist, National Public Health Laboratory: Member
- Senior Consultant Pathologist, National Public Health Laboratory: Member Secretary
- Officer level Representative, Quality Measurement and Regulation Division, MOHP: Member
- Officer level Representative, Policy, Planning and Monitoring Division, MOHP: Member
- Officer level Representative, Curative Service Division, DOHS: Member
- Officer level Representative, Epidemiology and Disease Control Division, DOHS: Member
- Officer level Representative, Nursing and Social Security Division, DOHS: Member
- Representative, The WHO country office: Member

Two Subject experts (one from laboratory services and one from public health) were identified and hired to support the TWG in information collection and drafting of documents.

B. *Desk review*

Following documents were reviewed before and during the process

- National Health Policy 2019, Nepal
- Nepal Burden of Disease 2019, NHRC
- WHO model list of essential in vitro diagnostics (WHO Essential Invitro Diagnostic List), 2020
- Public Health Service Regulation 2077, Nepal
- Health Facility Operation Standards 2077, Nepal
- Annual Report FY 2078/79, Department of Health Services, Nepal
- WHO Neglected Tropical Disease list
- Diseases needed to be reported in Early warning and Reporting System
- National List of Essential Medicine 2021, Nepal
- National Essential Diagnostic List 2019, India
- WHO list of Emerging and Reemerging disease of Public Health Importance.
- Prioritized Zoonotic Diseases 2078, EDCD, Nepal

C. **Criteria for test selection**

The criteria for the selection of the tests were as follows:

- Tests required to diagnose diseases with high burden and public health relevance in the country.
- Tests required to diagnose diseases and conditions, such as HIV, Tuberculosis, Malaria, etc. are which are addressed by the priority programs of the government.
- The diagnostic tests that ensure the reasonable, efficient, and safer use of the essential medicine list.
- Diagnostic tests for diseases and conditions that may pose a threat of epidemics or outbreaks.
- Tests that carry great importance in supporting the diagnosis, treatment, and monitoring of diseases common in Nepal
- Tests that are commonly outsourced from the country

D. **Draft development**

Assigned experts, in close coordination with TWG developed an initial draft of the NEIDL document which was presented, discussed, and reviewed in series of consultative workshop with the TWG and other stakeholders.

E. **Consultative meeting and draft finalization**

Series of consultative meetings were done including representatives of divisions and centers of, metropolitan, external development partners, government and private hospitals, physicians, laboratory, and medical equipment suppliers. The inputs were also sought from The WHO experts from South-East Asia Regional Office. The inputs from these meetings were incorporated into the document.

अनुसूची - ३

नेपालमा विद्यमान रोगहरुको अवस्था

I. The proportion of deaths due to various diseases (Nepal Burden of Disease 2019, NHRC)

S.N.	Diseases and conditions	Proportion (%)
1	Chronic Respiratory diseases	23.8
2	Cardiovascular diseases	20.7
3	IHD (ischemic heart disease)	12.3
4	Neoplasms	11.6
5	Respiratory infections and TB	8.1
6	Maternal and neonatal disorders	6.1
7	Digestive diseases	5.2
8	Diabetes and kidney diseases	4.9
9	Enteric infections	4.9
10	Lower respiratory infections	4.5
11	Drug-susceptible TB	3.5
12	Diarrheal diseases	2.9
13	Diabetes mellitus type 2	1.7
14	Cirrhosis	1.6
15	Rheumatic heart disease	1.5
16	Nutritional deficiencies	0.9
17	HIV/AIDS and STIs	0.7
18	Neonatal sepsis and other neonatal infections	0.6
19	Encephalitis	0.5
20	Protein-energy malnutrition	0.5
21	Typhoid fever	0.5
22	NTDs and malaria	0.2

II. List of diseases according to the causes of illness

i. Communicable diseases	
Immunization preventable disease	
Measles	Acute Flaccid Paralysis (AFP)
Diphtheria	Rubella
Whooping Cough	Mumps
Neonatal Tetanus	Chicken Pox
Tetanus	Hepatitis B
Tuberculosis	
Vector Borne	
Acute Encephalitis like Syndrome (AES)	Malaria (Plasmodium Vivax)
Filariasis	Kala-azar / Leishmaniasis
Clinical Malaria	Dengue Fever
Water / Food Borne	
Typhoid (Enteric Fever)	Intestinal Worms
Acute gastro-enteritis (AGE)	Jaundice
Amoebic Dysentery / Amoebiasis	Hepatitis A
Bacillary Dysentery / Shigellosis	Hepatitis E
Presumed non-infectious diarrhea	Cholera
HIV / STI	
HIV Infection	Neonatal Conjunctive Syndrome (NCS)
Urethral Discharge Syndrome (UDS) Gonococcal	Genital User Disease Syndrome (GUDS)-female
Scrotal Swelling Syndrome (SSS)	Genital User Disease Syndrome (GUDS)- male
Vaginal Discharge Syndrome (VDS)	Inguinal Bubo Syndrome (IBS)
Lower Abdominal Pain Syndrome (LAPS)	Syphilis
Other Communicable Diseases	
Leprosy	Meningitis
Other Infectious Diseases	
ARI (Acute Respiratory Tract Infection)	Urinary Tract Infection (UTI)
Pneumonia	Viral Influenza
Bronchitis (Acute and chronic)	Reproductive Tract Infection (RTI) – Female
Nutritional and Metabolic disorder	
Goiter, Cretinism	Obesity
Diabetes Mellitus (DM)	Anemia / Polyneuropathy
Malnutrition	Polyneuritis
Avitaminoses & other nutrient deficiency	Dementia
ii. Skin Diseases	
Acne	Vitiligo
Warts	Albinism
Chloasma / melasma	Herpes simplex
Urticaria	Herpes zoster

Dermatitis / Eczema	Erythroderma
Alopecia	Impetigo
Boils	Fungal infection (Lichenplanus)
Abscess	Scabies
Furunculosis	
iii. Ear, Nose and Throat Infection	
Acute Suppurative Otitis Media	Wax
Chronic Suppurative Otitis Media	Nasal Polyps
Sinusitis	Deviated nasal septum (DNS)
Acute Tonsillitis	Rhinitis
Acute Suppurative Otitis Media	Otitis externa
Pharyngitis / Sore throat	Reflux laryngitis
Foreign Body in Ear, Nose and Throat	
iv. Oral health-related conditions	
Dental caries	Hypoplasia
Toothache	Leukoplakia
Periodontal disease (gum disease)	Fungal infection (candidiasis)
Other disorders of teeth	Oral space infection & abscess
Oral ulcer (Apthous & herpetic)	Tooth impaction
v. Eye conditions	
Conjunctivitis	Stye
Trachoma	Chelation
Cataract	Pterygium
Blindness	Diabetic retinopathy
Refractive error	Hypertensive retinopathy
Glaucoma	Entropion
Colour blindness	Ectropion
Exophthalmos	Traumatic eye disease
vi. Obstetric complications	
Ectopic Pregnancy	Antepartum Haemorrhage
Abortion Complication	Prolonged Labour
Pregnancy Induced Hypertension (PIH)	Obstructed Labor
Severe / Pre-eclampsia	Ruptured Uterus
Antepartum Eclampsia	Postpartum Haemorrhage
Intrapartum Eclampsia	Retained Placenta
Postpartum Eclampsia	Other Complications of labor and delivery
Hyperemesis Gravidarum	Puerperal Sepsis
vii. Gynecological conditions	
Pelvic Inflammatory Disease (PID)	Dysfunctional Uterine Bleeding (DUB)
Prolapsed uterus	Sub-fertility (Female/Male)
Menstrual disorder	

viii. Surgical conditions	
Acid peptic disorders	Lumps (lipoma)
Anal Fissure	Sebaceous cyst
Anal fistula	Pilonidal sinus
Fistula of Intestine	Appendicitis
Renal stones	Cholecystitis
Breast lumps (adenoma)	Cholelithiasis (gallstone)
Mastitis (Ignored breast) / breast abscess	Hernia
Mastalgia breast	Hydrocele
Prostatism (BEP/BPH)	Phimosis / para-phimosis
Acid peptic disorders	Haemorrhoids / Piles
Anal Fissure	Epididymitis / Orchitis
ix. Orthopedic conditions	
Falls / injuries / fractures	Osteoarthritis
Road Traffic Accident (RTA)	Backache (musculo-skeletal pain)
Rheumatoid Arthritis	
Arthritis	

III. List of prioritized zoonotic diseases

Cystercercosis/Hydatidosis	Leptospirosis
Zoonotic Tuberculosis	Brucellosis
Toxoplasmosis	Influenza (Zoonotic, Seasonal)
Rabies	Corona Virus(SARS, MERS, SARS Cov-2)
Salmonellosis	Leishmaniasis

IV. Diseases/syndromes listed in EWARS

Malaria
Kala-azar
Dengue
Acute Gastroenteritis
Cholera
Severe Acute Respiratory Illness(SARI) and Influenza Like Illness (ILI)

V. List of Neglected Tropical Disease

Buruli Ulcer	Human African Trypanosomiasis
Chagas disease	Leishmaniasis
Dengue	Leprosy
Chikungunya	Lymphatic Filariasis
Dracunculiasis	Mycetoma
Ecchinococcosis	Chromoblastomycosis and other deep mycoses

Foodborne trematodiasis	Onchocerciasis
Podoconiosis	Rabies
Scabies	Schistosomiasis
Soil transmitted helminthiasis	Snakebite envenoming
Taeniasis/cysticercosis	Trachoma
yaws	Other endemic treponematoses

VI. List of emerging and re-emerging diseases

Virus	
West Nile Fever	Hendra virus infection
Hantavirus Pulmonary Syndrome	Nipah virus infection
Dengue Fever	Chikungunya
Zika Virus Disease	Crimean-Congo haemorrhagic fever
Yellow fever	Highly pathogenic Avian Influenza(H5N1, H7N9)
Japanese encephalitis	Severe Acute Respiratory Syndrome(SARS CoV-1)
Marburg hemorrhagic fever	Middle East Respiratory Syndrome(MERS CoV)
Rift valley fever	COVID-19 (SARS CoV -2)
Ebola hemorrhagic fever	Mpox
Lassa fever	Rabies
Seasonal Influenza(Influenza A/B)	
Bacteria	
Lyme disease	Typhoid fever
Cholera	Plague
Anthrax	Diphtheria
Fungal	
Cryptococcus spp. infections	
Parasite	
Cyclosporiasis infections	Drug resistant malaria
Protein	
Variant Creutzfeldt-Jakob disease	

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