LAST MINUTE PRELIMS RECKONER 2025

SCIENCE & TECHNOLOGY

DISEASES & PATHOGENS

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INTEGRATED LEARNING FOR CIVIL SERVICES EXAMINATION

DISEASES & PATHOGENS

Disease	Pathogen	Vector	
Chikungunya Dengue Lymphatic filariasis Yellow Fever Zika	Virus Virus Parasite Virus Virus	*Aedes*	Mosquito
Lymphatic filariasis Malaria	Parasite Parasite	*Anopheles*	
Japanese encephalitis Lymphatic filariasis West Nile fever	Virus Parasite Virus	*Culex*	
Plague (transmitted from rats)	Bacteria	Fleas	
Typhus	Bacteria	Lice	
Leishmaniasis (Kala azar)	Parasite	Sandflies	
Crimean-Congo haemorrhagic fever Tick-borne encephalitis	Virus Virus	Ticks	
Chagas disease (American trypanosomiasis)	Parasite	Triatome bugs	
Sleeping sickness (African trypanosomiasis)	Parasite	Tsetse flies	
Kyasanur Forest Disease	Virus	Monkeys	
Guinea Worm Disease (Dracunculiasis)	Parasite	Guinea Worm	
Noma Disease	Bacteria	Fleas	
Nipah	Virus	Bats/Pigs	
Vibrio Vulnificus Infection	Bacteria	Seafood	
Leptospirosis	Bacteria	Cattle/Domestic Pets	
Parrot Fever	Bacteria	Parrots	
Lyme Disease	Bacteria	Ticks	
Scabies	Parasite	Mites	
Taeniasis/Cysticercosis	Parasite	Tapeworms	
Amoebic Dysentery	Parasite	Houseflies	

Disease	Pathogen	Disease	Pathogen
Tuberculosis	Bacteria	Rubella	Virus
Diphtheria	Bacteria	Chickenpox	Virus

Leprosy (Hansen's disease)	Bacteria	Smallpox	Virus
Cholera	Bacteria	Rabies	Virus
Pertussis (Whooping Cough)	Bacteria	Measles	Virus
Tetanus	Bacteria	Mumps	Virus
Gonorrhea	Bacteria	HIV-AIDS	Virus
Syphilis	Bacteria	Severe Acute Respiratory Syndrome (SARS)	Virus
Salmonellosis	Bacteria	Hepatitis A Hepatitis B Hepatitis C Hepatitis D Hepatitis E	Virus
Rheumatic Fever	Bacteria	Monkeypox	Virus
Trachoma	Bacteria	Meningitis	Virus
Pneumonia	Bacteria	Ebola	Virus
Common Cold	Virus	Middle East Respiratory Syndrome (MERS)	Virus

Other Diseases	Causes and Implications
Multiple Sclerosis	Condition in which the body attacks itself by mistake. It affects the central nervous system. The immune system attacks and damages the myelin sheath, a protective covering that surrounds the nerve fibres in the brain and spinal cord, causing a range of symptoms.
Sickle Cell Anaemia (SCA)	A group of inherited red blood cell (RBC) disorders. In cells with SCA, the haemoglobin is abnormal, which causes the RBCs to become hard and sticky and look like a C-shaped farm tool called a “sickle.
Huntington's Disease	It is caused by a mutation in the HTT gene, producing a faulty huntingtin (Htt) protein. Initial symptoms include forgetfulness, loss of balance, and clumsiness in daily tasks. Symptoms worsen over time, affecting mood, and reasoning, and leading to uncontrollable movements.
Pompe Disease	Also known as Glycogen Storage Disease Type II. It is characterized by the buildup of glycogen in the lysosomes of the body’s cells.

	It is a genetic disorder caused by a deficiency of the enzyme acid alpha-glucosidase (GAA). This enzyme is crucial for breaking down glycogen into glucose within the lysosomes of cells.
Thalassaemia	Similar to sickle cell disease, individuals with thalassaemia experience severe anaemia due to low haemoglobin levels, necessitating lifelong blood transfusions and chelation therapy to manage iron accumulation. Major symptoms include fatigue, paleness or jaundice, shortness of breath, delayed growth, facial bone deformities (in severe cases) among others.
Amyotrophic Lateral Sclerosis (ALS)	ALS is a rare and fatal type of motor neuron disease. It is characterized by progressive degeneration of nerve cells in the spinal cord and brain. As motor neurons degenerate and die, they stop sending messages to the muscles, which causes the muscles to weaken, start to twitch (fasciculations), and waste away (atrophy). Eventually, the brain loses its ability to initiate and control Voluntary Movements.
Duchenne Muscular Dystrophy (DMD)	Genetic disease characterized by inability of muscles to produce dystrophin, an enzyme that aids in muscle regeneration. It affects only males. Absence of dystrophin leads to muscle damage, resulting in muscle weakness and ultimately wheelchair-bound conditions in early teens and premature deaths.
Guillain-Barre Syndrome (GBS)	GBS is a serious autoimmune disorder that affects the peripheral nervous system. It initially presents weakness, tingling, and numbness in the limbs, which can progress to paralysis lasting 6-12 months or longer. It affects the nerves responsible for muscle movement, pain, and touch sensations. It is more common in adults & males.

Disease	Caused By	Effect
Black Foot Disease	Arsenic	Numbness in body parts; can cause gangrene if untreated.
Knock-Knee Syndrome	Fluorides	Joint pain, stiffness, skeletal deformities in rare cases.
Baby Blue Syndrome	Nitrates	Low oxygen levels in the blood.
Methemoglobinemia	Nitrates	Abnormal haemoglobin is formed – hinders oxygen transport.
Minamata Disease	Mercury	Neurological disease – can cause insanity, paralysis, comas, etc.