Syllabus subtopic: Science and Technology- developments and their applications and effects in everyday life; Achievements of Indians in science & technology; indigenization of technology and developing new technology.

Prelims and Mains focus: About the TrueNat tool and significance for WHO approval of it, the menace of TB in India

News: The World Health Organization (WHO) has given its approval to TrueNat, an indigenous molecular diagnostic tool to help detect tuberculosis (TB).

About TrueNat

- The TB test, developed by Goa-based Molbio Diagnostics, was found to be comparable in accuracy to similar tests currently in use and has been recommended as a replacement for sputum microscopy tests.

- TrueNat is a **polymerase chain reaction (PCR)- based test** that by assaying the genes present in the TB bacteria, can not only **detect the presence of the bacteria** but can also **detect drug resistance** with the use of chips.

- The DNA of the TB bacteria is extracted from sputum samples collected from the patient and the test can easily and cost-effectively be done in the primary health care setup.

Why is WHO’s approval significant for India

- The approval by WHO is important for India because it has the most number of TB patients in the world.
- According to the National Strategy Plan for TB Elimination 2017-25:
  1. TB kills and estimated 4,80,000 Indians every year and over 1400 everyday.
2. India also has over a million ‘missing cases’ every year that are not notified and most remain either undiagnosed or unaccountably and inadequately diagnosed and treated in the private sector.