

- Shigellosis is primarily a disease of poor and crowded communities that do **not have adequate sanitation or safe water**.
- Incubation Period → The incubation period of shigellosis is **typically 1–4 days**.
- Different Species → The severity of the disease varies by the infecting species:
 - **Shigella dysenteriae infections** usually cause dysentery, which may also occur in infection with *Shigella flexneri*.
 - **Shigella boydii and Shigella sonnei** often have self-limited watery diarrhea.
- Vaccines → Currently, there are **no vaccines** available for shigellosis.

28. PARAM ANANTA

Why in News?

PARAM ANANTA, a state-of-the art Supercomputer has been commissioned at IIT Gandhinagar.

About

- PARAM ANANTA is a **supercomputer** capable of offering peak performance of **838 teraflops**.
- It has been developed jointly by the Centre for Development of Advanced Computing (**C-DAC**) and the **Indian Institute of Technology, Gandhinagar**.
- Established under → **Phase 2** of the National Supercomputing Mission(**NSM**).
- The technology used → It is based on **Direct Contact Liquid Cooling technology** to obtain a high power usage effectiveness and thereby reduce the operational cost.
- Applications → **Multiple applications** from various scientific domains such as Weather and Climate, Bioinformatics, Computational Chemistry, Molecular Dynamics, Material Sciences, and Computational Fluid Dynamics have been installed on the system for the benefit of researchers.
- Significance → With Param Ananta, India now **has 15 supercomputers** with a combined performance capability of 24 petaflops.

29. TELANGANA SPACETECH FRAMEWORK

Why in News?

It's a first-of-its-kind attempt in the government sector to launch spacetechnology framework.

About

- It aims to:
 - help the state emerge as a **commercial hub for all space-related products and services**.
 - **promote domestic production** of launch vehicles, satellite systems and subsystems, ground equipment manufacturing and other facilities.
 - establish Telangana as a **one-stop global destination** for space technology.
- Telangana, which is **already a base for defence & aerospace companies**, has over 1,000 MSMEs catering to aerospace, defence and space sectors.

30. SPACE BRICKS

Why in News?

Researchers from ISRO and Indian Institute of Science (IISc) have developed a way to make bricks of complex shapes from Martian soil with the help of bacteria and urea.

About

- **First slurry** was made by mixing Martian soil with guar gum, a bacterium called **Sporosarcina pasteurii**, urea and nickel chloride (NiCl₂).