Inter-planetary Contamination in Mars

Recently, astrobiologists have expressed concerns about possible ‘interplanetary contamination’ on Mars. Interplanetary contamination refers to biological contamination of a planetary body by a space probe or spacecraft, either deliberate or unintentional.

In the past, space missions have established physical contact with astronomical bodies such as comets and asteroids, and crewed missions have landed on the Moon. However, since these bodies are known to be hostile to life, the possibility of their contamination has not been a pressing issue.

Type of Contaminations

- **Forward Contamination**: It means the transport of Earth-based microbes to other celestial bodies.
- **Back Contamination**: It is the transfer of extraterrestrial organisms (if they exist) into the Earth’s biosphere.

‘Planetary protection policy’ aims to limit the number of microbes sent to other planets, as well as ensuring that alien life does not cause havoc on Earth. The policy was laid down by Committee on Space Research (COSPAR) established by International Council for Science (ICSU).