S&T

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Q: NASA's Double Asteroid Redirection Test gives hope that the technological advancement can prevent extraterrestrial threats. Explain.

National Aeronautics and Space Administration [NASA] had launched its Double Asteroid Redirection Test [DART] mission.

DART:

1. Low cost Spacecraft
2. had two solar arrays and using hydrazine propellant.
3. Carried 10kg Xenon for demonstrating NASA's new [NEXT-C] Nasa Evolutionary Xenon Thruster - Commercial, which provides a combination of performance and spacecraft integration capabilities.

Launch:

1. First Kinetic impactor Method to be tested successfully.
2. Data obtained from DART's mission be compared with various Computer Simulations to ascertain wheather this option will be viable.

DART Mission :

① The Mission is to test Kinetic Impactor technology that would allow a spacecraft to craft into an asteroid and change its course.

Reason behind Mission :

① There is a need to develope this mission because an impact of small asteroid can cause serious Consequences.

Eg: Chicxulub, a crater, remainder of an impact that 10km wide asteroid fell on the earth 66 Million years ago wiped out 75% plants & animals.

② Even as small as 10m wide asteroid can destroy a city like chennai completely.

③ There are Huge threats to life on earth, climate change being the most eminent and definite.

China's future Mission : china has a plan to deflect 40m wide asteroid 2020 PN 1 by 2026.

It is to be hoped that this demonstration of engineering and Science can be extrapolated to 'kick-start' a move to the avoid drastic impact of such disasters also.