

WRAP Exams · wrapexams.com

Prelims PYQ, Mains model answers, and copy evaluation. Write to the desk for this paper, a doubt, or the AI waitlist.

ask@wrapexams.com · +91 85951 84903 · wrapexams.com

Q16

Give an account of the growth and development of nuclear science and technology in India. What is the advantage of fast breeder reactor programme in India?

UPSC Civil Services Mains 2017 · GS III · 15 marks · Indian Economy

Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

Facts & figures for this PYQ only.

Numbers move. Confirm the latest Budget, Economic Survey or census round. This sheet is for revision, not a substitute for the model answer.

<https://wrapexams.com/upsc/mains-answers/gs-3/2017/give-an-account-of-the-growth-and-development-of-nuclear-science-and-technology-in-india-what-is-the-advantage-of-fast-breeder-reactor-programme-in-india/>

AEC / DAE

Atomic Energy Commission (from 1948) and **Department of Atomic Energy** (1954): the civilian nuclear State.

Apsara 1956

India's first research reactor at Trombay; the start of an indigenous operator culture.

Three-stage programme

PHWR (natural uranium), FBR (plutonium breeding), then thorium-U-233 systems.

FBTR / PFBR

Fast Breeder Test Reactor (Kalpakkam, 1985) and Prototype Fast Breeder Reactor: the Indian FBR line.

NSG waiver 2008

Nuclear Suppliers Group exception after the Indo-US civil nuclear deal, allowing civilian fuel and reactor trade under safeguards.

WRAP Exams · Write. Read. Analyse. Practice. · <https://wrapexams.com/upsc/mains-answers/gs-3/2017/give-an-account-of-the-growth-and-development-of-nuclear-science-and-technology-in-india-what-is-the-advantage-of-fast-breeder-reactor-programme-in-india/> · ask@wrapexams.com · wrapexams.com