

Breeders as an Inexhaustible Energy Source

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1 Quiz

1.1 Questions

1. Mention the different stages in nuclear fuel cycle.
2. Which ones of the following is not true about closed fuel cycle?
 - (a) increase in requirement of fresh uranium
 - (b) reduction in waste management cost
 - (c) fissile products of spent fuel separated
 - (d) spent fuel returned to reactor without any processing
3. Which one(s) of the following is(are) not true about breeders?
 - (a) consume more fuel than they consume
 - (b) increased energy potential of fuel
 - (c) power cost dependent on the fluctuations in the fuel cost
 - (d) an inexhaustible source of energy
4. Though the spent fuel still contains fissile isotopes, the same cannot be used directly in nuclear reactor. Why?
5. What are the factors taken into consideration while sorting fission products before disposal?

1.2 Answers

1. Front-end of the cycle, service period and back-end of the cycle.
2. (a) & (d)
3. (a) & (c)
4. The concentration of fissile isotopes in the spent fuel is too low to sustain a chain reaction
5. Half-life and activities of fission products