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NEET NUCLEI — NUCLEAR FISSION — PYQS

Max. Marks: 24 **Questions:** 6

Section A (MCQ) — 6 questions

Q.1 Water is used as a coolant in a nuclear reactor because of its [RE-NEET (UG) 2024]

(1) high thermal expansion coefficient

(2) high specific heat capacity

(3) low density

(4) low boiling point

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Q.2 A nucleus with mass number 240 breaks into two fragments each of mass number 120, the binding energy per nucleon of unfragmented nuclei is 7.6 MeV while that of fragments is 8.5 MeV. The total gain in the Binding Energy in the process is : [NEET (UG) 2021]

(1) 216 MeV (2) 0.9 MeV

(3) 9.4 MeV (4) 804 MeV

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Q.3 When a uranium isotope $^{235}_{92}U$ is bombarded with a neutron, it generates $^{89}_{36}Kr$, three neutrons and : [NEET (UG) 2020]

(1) $^{91}_{40}Zr$ (2) $^{101}_{36}Kr$ (3) $^{103}_{36}Kr$ (4) $^{144}_{56}Ba$

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Q.4 In any fission process the ratio $\frac{\text{mass of fission products}}{\text{mass of parent nucleus}}$ is [AIPMT 2005]

(1) equal to 1

(2) greater than 1

(3) less than 1

(4) depends on the mass of the parent nucleus.

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Q.5 Energy released in nuclear fission is due to [AIPMT 2001]

(1) some mass is converted into energy

(2) total binding energy of fragments is more than the binding energy of parental element

(3) total binding energy of fragments is less than the binding energy of parental element

(4) total binding energy of fragments is equal to the binding energy of parental element

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Q.6 Nuclear fission is best explained by [AIPMT 2000]

(1) liquid drop model

(2) Yukawa π-meson theory

(3) independent particle model of the nucleus

(4) proton-proton cycle

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ANSWER KEY

Ques.	1	2	3	4	5	6					
Ans.	2	1	4	3	1	1					