

21. Fission chain reaction in a nuclear reactor can be controlled by introducing
- A. iron rods
  - B. graphite rods
  - C. cadmium rods
  - D. platinum rods

**Answer:** Option c

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22. Which one of the following radiations possesses maximum velocity?
- A.  $\alpha$ -rays
  - B.  $\beta$ -rays
  - C.  $\gamma$ -rays
  - D. all of above have same speed

**Answer:** Option c

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23. Charge on an electron was determine by
- A. Ampere
  - B. Maxwell
  - C. Millikan
  - D. Thomson

**Answer:** Option c

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24. Charge on neutron is
- A. plus  $1.6 \times 10^{-19}C$
  - B. zero
  - C. minus  $1.6 \times 10^{-19}C$
  - D. no definite charge

**Answer:** Option B

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25. A particle having the mass of an electron and the charge of a proton is called a
- A. antiproton
  - B. positron
  - C. gamma rays
  - D. photon

**Answer:** Option B

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26. Mass of neutron is

[A.](#)  $1.67 \times 10^{-31}$  kg

[B.](#)  $1.67 \times 10^{-27}$  kg

[C.](#)  $9.1 \times 10^{-31}$  kg

[D.](#)  $1.67 \times 10^{-19}$  kg

**Answer:** Option B

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27. Nuclei having the same mass number but different atomic number are

[A.](#) Isotopes

[B.](#) Isobars

[C.](#) Isotones

[D.](#) Isomers

**Answer:** Option B

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28. A mass spectrograph (spectrometer) sorts out

[A.](#) molecules

[B.](#) ions

[C.](#) elements

[D.](#) isotopes

**Answer:** Option B

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29. Sum of the masses of constituent nucleons as compared to the mass of the resultant nucleus is

[A.](#) smaller

[B.](#) greater than 82

[C.](#) same

[D.](#) some times smaller some times greater

**Answer:** Option B

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30. An  $\alpha$ -particle is emitted from  ${}^{226}_{88}\text{Ra}$ . What is the mass and atomic number of the daughter nucleus?

[A.](#) 224 - 84

[B.](#) 220 - 80

[C.](#) 222 - 86

[D.](#) 226 - 87

**Answer:** Option C