

Nuclear Engineering Interview Questions And Answers Guide.



Global Guideline.

<https://globalguideline.com/>



Nuclear Engineering Job Interview Preparation Guide.

Question # 1

Do you know what is Nuclear Engineering?

Answer:-

Nuclear engineering is the branch of engineering concerned with the application of the breakdown (fission) as well as the fusion of atomic nuclei and/or the application of other sub-atomic physics, based on the principles of nuclear physics.

[Read More Answers.](#)

Question # 2

Do you know what does a nuclear engineer do?

Answer:-

Developing nuclear equipment, such as reactor cores and radiation shielding
Monitoring nuclear plant design, construction and operations to ensure that the plants meet safety standards
Writing instructions for the handling and disposal of nuclear waste
Testing whether methods of using nuclear material, reclaiming nuclear fuel or disposing of nuclear waste are acceptable
Taking corrective action or ordering plant shutdowns in emergencies
Examining nuclear accidents and gathering data that can be used to prevent future accidents

[Read More Answers.](#)

Question # 3

What is the history of Nuclear Engineering?

Answer:-

Nuclear engineering was born in the 20th century with the announcement in 1939 of the discovery of nuclear fission by the German chemists.

[Read More Answers.](#)

Question # 4

Which of the following may be used to measure the rate of nuclear disintegration?

- A. Geiger-Muller Counter
- B. Cyclotron
- C. Cold chamber
- D. Mass spectrograph?

Answer:-

Option A

[Read More Answers.](#)

Question # 5

The decrease in the atomic number is not observed in case of

- A. electron capture
- B. γ -emission
- C. β^- -emission
- D. positron emission?

Answer:-

Option B

[Read More Answers.](#)

Question # 6

The mass number of an element is not changed, when it emits _____ radiations.

- A. α & β
- B. β & γ



- C. Y & a
- D. a, B, & Y

Answer:-

Option B

[Read More Answers.](#)

Question # 7

Which of the following is not a naturally occurring nuclear fuel

- A. Uranium-238
- B. Thorium-233
- C. Plutonium-239
- D. None of these

Answer:-

Option C

[Read More Answers.](#)

Question # 8

An electron has a mass that is approximately _____ that of the proton.

- A. 1836 (approximately)
- B. 1/1836 (approximately)
- C. 1
- D. $\hat{a}^Z?$

Answer:-

Option B

[Read More Answers.](#)

Question # 9

Which is the most commonly used molten metal for cooling of nuclear reactors ?

- A. Calcium
- B. Sodium
- C. Mercury
- D. Zinc

Answer:-

Option B

[Read More Answers.](#)

Question # 10

The amount of a radioactive material (having a half life of 100 years) remaining after 400 years will be _____ of its original weight.

- A. 1/2
- B. 1/4
- C. 1/8
- D. 1/16

Answer:-

Option D

[Read More Answers.](#)

Question # 11

The second underground nuclear test was conducted by India at

- A. Jaisalmer
- B. Pokhran
- C. Kalpakkam
- D. Narora

Answer:-

Option B

[Read More Answers.](#)

Question # 12

Which of the following is artificially produced as it does not occur in nature ?

- A. Uranium-235
- B. Uranium-233
- C. Plutonium-239
- D. Both (b) and (c)

Answer:-

Option D

[Read More Answers.](#)

Question # 13



Gas cooling as compared to water cooling of nuclear reactors

- A. can not attain a high temperature.
- B. is more efficient as gas has a higher specific heat.
- C. can produce only saturated steam for feeding to power turbine.
- D. none of these.

Answer:-

Option D

[Read More Answers.](#)

Question # 14

The decay product of tritium (a beta emitter) is

- A. lithium
- B. helium
- C. deuterium
- D. hydrogen?

Answer:-

Option B

[Read More Answers.](#)

Question # 15

Heat is generated in a nuclear reactor (thermal) by

- A. combustion of a nuclear fuel e.g. uranium.
- B. fusion of atoms of uranium.
- C. absorption of neutrons in uranium atoms.
- D. fission of U-235 by neutrons.?

Answer:-

Option D

[Read More Answers.](#)

Question # 16

The time taken for a radioactive element to reduce to 50% of its original weight is _____ years, if its half life period is 12 years.

- A. 24
- B. 18
- C. 6
- D. 36

Answer:-

Option B

[Read More Answers.](#)

Question # 17

Which of the following may not need a moderator?

- A. Candu reactor
- B. Fast breeder reactor
- C. Homogeneous reactor
- D. Pressurised water reactor

Answer:-

Option B

[Read More Answers.](#)

Question # 18

The amount of a radioisotope remaining undecayed after a time equal to four times its half life, will be _____ percent.

- A. 3.125
- B. 6.25
- C. 12.50
- D. 25

Answer:-

Option B

[Read More Answers.](#)

Question # 19

Commercial power generation from fusion reactor is not yet possible, because

- A. it is difficult to control fusion reaction.
- B. the fuel required (e.g. deuterium and tritium) is scarce.
- C. it is difficult to initiate fusion reaction.
- D. quantity of fuel required for initiating fusion reaction is prohibitively high.

Answer:-

Option A



[Read More Answers.](#)

Question # 20

One 'amu' is equivalent to

- A. 9.31 MeV
- B. 931 eV
- C. 931 Mev
- D. 931J

Answer:-

Option C

[Read More Answers.](#)

Question # 21

Fast breeder reactors do not

- A. use Th-232 as fissile fuel.
- B. convert fertile material to fissile material.
- C. use fast neutrons for fission.
- D. use molten sodium as coolant.

Answer:-

Option A

[Read More Answers.](#)

Question # 22

Thorium-232 is converted into uranium-233 in a/an _____ nuclear reactor.

- A. thermal
- B. fast breeder
- C. heavy water moderated
- D. enriched uranium

Answer:-

Option B

[Read More Answers.](#)

Question # 23

Which of the following may not need a control rod ?

- A. Liquid metal cooled reactor.
- B. Fast breeder reactor.
- C. Candu reactor.
- D. None of these.

Answer:-

Option D

[Read More Answers.](#)

Question # 24

Spent fuel from the nuclear thermal reactor contains

- A. fission products
- B. plutonium
- C. unused fuel
- D. all (a), (b) & (c)

Answer:-

Option D

[Read More Answers.](#)

Question # 25

A boiling water reactor is the one, in which the

- A. coolant water is allowed to boil in the core of the reactor.
- B. coolant water, after being heated in the reactor core, generates steam in a boiler.
- C. pressurised water is pumped into the core.
- D. fuel and the coolant are thoroughly mixed to form a homogeneous solution.

Answer:-

Option A

[Read More Answers.](#)

Question # 26

Which is used as a coolant in nuclear reactor due to its high capture cross-section ?

- A. H₂
- B. N₂
- C. He



D. CO₂

Answer:-

Option A

[Read More Answers.](#)

Question # 27

Moderating material used in a thermal-reactor should be a

- A. good absorber of neutrons.
- B. solid substance.
- C. poor absorber of neutrons.
- D. none of these.

Answer:-

Option C

[Read More Answers.](#)

Question # 28

Ordinary water is not used as a moderator because, it

- A. has a low absorption cross-section.
- B. has a low scattering cross-section.
- C. absorbs neutrons.
- D. does not absorb neutrons.

Answer:-

Option C

[Read More Answers.](#)

Question # 29

The atomic number of a radioactive element is not changed, when it emits _____ rays.

- A. α
- B. β
- C. γ
- D. α & β

Answer:-

Option C

[Read More Answers.](#)

Question # 30

Fission of U-235 on slow neutron bombardment can be represented by

- A. ${}_{92}\text{U}^{235} + 3 \text{Y} \rightarrow {}_{56}\text{Ba}^{143} + {}_{36}\text{Kr}^{90}$
- B. ${}_{92}\text{U}^{235} + 0\text{n}1 \rightarrow {}_{56}\text{Ba}^{143} + {}_{36}\text{Kr}^{90} + 3 \text{0n}1$
- C. ${}_{92}\text{U}^{235} + 0\text{n}1 \rightarrow {}_{56}\text{Ba}^{143} + {}_{36}\text{Kr}^{90} + 3 \text{0n}1 + \text{Q (energy)}$
- D. ${}_{92}\text{U}^{235} + 0\text{n}1 \rightarrow {}_{92}\text{U}^{236} + 30\text{n}1 + \text{Q (energy)}$

Answer:-

Option C

[Read More Answers.](#)

Question # 31

A nuclear reactor can't be used for

- A. the production of radioisotopes.
- B. supplying intense fields or beams of neutron for scientific experiments.
- C. marine ship propulsion.
- D. none of these.

Answer:-

Option D

[Read More Answers.](#)

Question # 32

Which of the following is a moderating material used in nuclear reactor ?

- A. Graphite.
- B. Cadmium.
- C. Zircalloy (an alloy of zirconium and aluminium).
- D. Stainless steel.

Answer:-

Option A

[Read More Answers.](#)

Question # 33



The atomic number of an element is equal to the number of _____ present in its atom.

- A. neutrons
- B. electrons
- C. protons
- D. either (b) or (c)

Answer:-

Option D

[Read More Answers.](#)

Question # 34

Which of the following is not, a fertile material?

- A. Th-232
- B. U-238
- C. U-233
- D. none of these

Answer:-

Option C

[Read More Answers.](#)

Question # 35

Molten sodium (as a coolant in fast breeder reactor)

- A. can't attain high temperature at normal pressure.
- B. is not at all corrosive, even at a higher temperature.
- C. is highly radioactive at elevated temperatures and can cause explosion, when it comes in contact with air or water.
- D. none of these

Answer:-

Option C

[Read More Answers.](#)

Question # 36

Final product of uranium extraction plant at Jadugoda (Bihar) is

- A. uranium
- B. uranium oxide
- C. uranium carbide
- D. magnesium diuranate

Answer:-

Option D

[Read More Answers.](#)

Question # 37

Which one is the radioactive isotope of hydrogen?

- A. Deuterium
- B. Ortho-hydrogen
- C. Tritium
- D. None of these

Answer:-

Option C

[Read More Answers.](#)

Question # 38

A homogeneous reactor is the one, in which the

- A. fissile atoms are evenly distributed throughout the mass of nuclear reactor.
- B. same substance (e.g. heavy water) is used as moderator & coolant.
- C. the fuel and the moderator is mixed to form a homogeneous material.
- D. all (a), (b) and (c).

Answer:-

Option C

[Read More Answers.](#)

Question # 39

Hydrogen has _____ isotopes.

- A. no
- B. one
- C. two
- D. three

Answer:-

Option D



[Read More Answers.](#)

Question # 40

MeV is the unit of

- A. radioactivity
- B. energy
- C. potential difference
- D. none of these

Answer:-

Option B

[Read More Answers.](#)

Question # 41

Velocity of the thermal neutron (< 0.025 eV) used for fission of U-235 is around _____ m/sec.

- A. 1
- B. 2200
- C. 3×10^{11}
- D. 9×10^{21}

Answer:-

Option B

[Read More Answers.](#)

Question # 42

Energy equivalent to one atomic mass unit (amu) is _____ MeV.

- A. 9.31
- B. 93.1
- C. 931
- D. 9310

Answer:-

Option C

[Read More Answers.](#)

Question # 43

"Critical mass" is the minimum mass of nuclear fissile material required for the

- A. sustainment of chain reaction.
- B. power generation on commercial scale.
- C. economic power generation.
- D. none of these.

Answer:-

Option A

[Read More Answers.](#)

Question # 44

The type of pump used for the recirculation of molten sodium coolant in liquid metal cooled reactor is a/an _____ pump.

- A. electromagnetic
- B. reciprocating
- C. centrifugal
- D. volute

Answer:-

Option A

[Read More Answers.](#)

Question # 45

Fast breeder Test Reactor (FBTR) is located at

- A. Kalpakkam (near Madras).
- B. Kota (in Rajasthan).
- C. BARC (Trombay).
- D. Tarapur (in Maharashtra).

Answer:-

Option A

[Read More Answers.](#)

Question # 46

Tarapur atomic power station

- A. has two boiling water reactors of American design.
- B. has an installed capacity of 400 MW.
- C. is the first power reactor in India, which became critical in 1969.



D. all (a), (b) and (c).

Answer:-

Option D

[Read More Answers.](#)

Question # 47

In a nuclear explosion, the energy is released primarily in the form of _____ energy-

- A. potential
- B. thermal
- C. kinetic
- D. electrical

Answer:-

Option C

[Read More Answers.](#)

Question # 48

The largest stable nucleus is

- A. U-235
- B. U-238
- C. Pb-206
- D. Bi-209

Answer:-

Option A

[Read More Answers.](#)

Question # 49

Hydrogen bomb employs the nuclear fusion of

- A. hydrogen
- B. deuterium
- C. tritium
- D. helium

Answer:-

Option B

[Read More Answers.](#)

Question # 50

Sodium melts (at atmospheric pressure) at a temperature of _____ .C.

- A. 58
- B. 98
- C. 348
- D. 588

Answer:-

Option B

[Read More Answers.](#)

Question # 51

The ratio of volume of an atom to that of its nucleus is

- A. 10¹²
- B. 10⁻¹²
- C. 10⁻⁸
- D. 10⁸

Answer:-

Option A

[Read More Answers.](#)

Question # 52

Research reactors are normally meant for

- A. producing high neutron flux 10¹²-10¹³ neutrons/cm², sec and studying the effect of neutron bombardment on different materials.
- B. accelerating the neutrons.
- C. power generation.
- D. none of these

Answer:-

Option A

[Read More Answers.](#)

Question # 53



Out of the following places, a nuclear power plant is not located at

- A. Talcher (Orissa)
- B. Kaiga (Karnataka)
- C. Rawatbhata (Rajsthan)
- D. Kalpakkam (Tamilnadu)

Answer:-

Option A

[Read More Answers.](#)

Question # 54

Thermal neutrons which are used to cause the fission of U-235 have energy _____ eV.

- A. < 0.025
- B. > 1
- C. 1-25
- D. > 200.

Answer:-

Option A

[Read More Answers.](#)

Question # 55

Which of the following types of nuclear reactors is most prone to radioactive hazards?

- A. Pressurised water reactor
- B. Gas cooled reactor
- C. Molten sodium cooled reactor
- D. Boiling water reactor

Answer:-

Option D

[Read More Answers.](#)

Question # 56

Thermal nuclear reactors using enriched uranium as fuel contains a maximum of _____ percent fissile material i.e. U-235.

- A. 1
- B. 2
- C. 3
- D. 7

Answer:-

Option C

[Read More Answers.](#)

Question # 57

The atomic weight and atomic number of an element are A and Z respectively. What is the number of neutrons in the atom of that element?

- A. A+Z
- B. A- Z
- C. A
- D. Z

Answer:-

Option B

[Read More Answers.](#)

Question # 58

Which of the following is not used as a nuclear fuel cladding material?

- A. Zircalloy
- B. Cadmium
- C. Ceramics
- D. Stainless steel

Answer:-

Option B

[Read More Answers.](#)

Question # 59

The function of moderators in nuclear reactor is to

- A. slow down the secondary neutrons.
- B. absorb the secondary neutrons.
- C. control the chain reaction.
- D. none of these.

Answer:-

Option A



[Read More Answers.](#)

Question # 60

Specific gravity of uranium and plutonium is about

- A. 9
- B. 13
- C. 19
- D. 27

Answer:-

Option C

[Read More Answers.](#)

Question # 61

Pick out the wrong statement.

- A. The nucleus of a hydrogen atom is identical with a proton.
- B. A, β -ray particle is identical with an electron.
- C. Mass of an electron is about 1/1800th of the lightest nucleus.
- D. Positron is heavier than a proton.

Answer:-

Option D

[Read More Answers.](#)

Question # 62

If 4 gm of a radioisotope has a half life period of 10 days, the half life of 2 gm of the same isotope will be _____ days.

- A. 5
- B. 10
- C. 20
- D. 30

Answer:-

Option B

[Read More Answers.](#)

Question # 63

_____ nuclear reactor does not require a heat exchanger to supply steam to power turbine.

- A. Molten sodium cooled
- B. Helium cooled
- C. Boiling water
- D. Pressurised water

Answer:-

Option C

[Read More Answers.](#)

Question # 64

Radioactive decay is a _____ change.

- A. chemical
- B. nuclear
- C. physical
- D. none of these

Answer:-

Option B

[Read More Answers.](#)

Question # 65

Nuclear fuel complex, Hyderabad is engaged in the job of

- A. manufacture of nuclear fuel elements/assemblies .
- B. processing of uranium ore.
- C. treatment of spent fuel.
- D. none of these.

Answer:-

Option A

[Read More Answers.](#)

Question # 66

A moderator _____ the neutrons.

- A. slows down
- B. absorbs
- C. accelerates



D. reflects

Answer:-

Option A

[Read More Answers.](#)

Question # 67

Thorium can be converted into U-233 in a _____ reactor.

- A. liquid metal cooled
- B. fast breeder
- C. thermal
- D. swimming pool

Answer:-

Option B

[Read More Answers.](#)

Question # 68

Nuclear fuel generally used in reactors is uranium oxide instead of uranium, because the former has higher

- A. melting point, hence can be subjected to higher temperature.
- B. density ; hence core volume for a given power output would be smaller.
- C. resistance to effects of irradiation.
- D. all (a), (b) and (c).

Answer:-

Option D

[Read More Answers.](#)

Question # 69

Which is a fertile nuclear fuel?

- A. U-233
- B. U-235
- C. Pu-239
- D. Th-232

Answer:-

Option D

[Read More Answers.](#)

Question # 70

The time required for half of the _____ of a radioactive isotope to decay is called its half life.

- A. nuclei
- B. electrons
- C. protons
- D. neutrons

Answer:-

Option A

[Read More Answers.](#)

Question # 71

The ratio of atomic radius to its nuclear radius is about

- A. 105
- B. 108
- C. 1012
- D. 1015

Answer:-

Option A

[Read More Answers.](#)

Question # 72

Which one is different for the neutral atoms of the isotopes of an element?

- A. Atomic weights
- B. Atomic numbers
- C. Number of protons
- D. Number of electrons

Answer:-

Option A

[Read More Answers.](#)

Question # 73



_____ moderator is used in a fast breeder reactor.

- A. Graphite
- B. Heavy water
- C. Beryllium
- D. No

Answer:-

Option D

[Read More Answers.](#)

Question # 74

The velocity of thermal (slow) neutrons triggering nuclear fission reaction (having energy equal to 0.025 eV) is about _____ metres/second.

- A. 1100
- B. 2200
- C. 3300
- D. 4400

Answer:-

Option B

[Read More Answers.](#)

Question # 75

Thermal shield is used in high powered nuclear reactors to

- A. protect the walls of the reactor from radiation damage.
- B. absorb the fast neutrons.
- C. slow down the secondary neutrons.
- D. protect the fuel element from coming in contact with the coolant.

Answer:-

Option A

[Read More Answers.](#)

Question # 76

The half life period of a radioactive substance is best determined by counting the number of alpha particles emitted per second in a Geiger Muller counter from its known quantity. If the half life period of a radioactive substance is one month, then

- A. 3/4th of it will disintegrate in two months.
- B. it will completely disintegrate in two months.
- C. it will completely disintegrate in four months.
- D. 1/8th of it will remain intact at the end of four months.

Answer:-

Option B

[Read More Answers.](#)

Question # 77

Graphite is used in nuclear reactor as

- A. insulation lining of the reactor.
- B. fuel.
- C. lubricant.
- D. retarder of neutron velocity.

Answer:-

Option D

[Read More Answers.](#)

Question # 78

The half life period of a radioactive element depends on its

- A. temperature
- B. pressure
- C. amount
- D. none of these

Answer:-

Option D

[Read More Answers.](#)

Question # 79

_____ have the same mass number, but different nuclear charge.

- A. Isotopes
- B. Isobars
- C. Isotones
- D. none of these

Answer:-

Option B



[Read More Answers.](#)

Question # 80

Which one is radioactive in nature?

- A. Helium
- B. Deuterium
- C. Heavy hydrogen
- D. Tritium

Answer:-

Option D

[Read More Answers.](#)

Question # 81

The most commonly used nuclear fuel in boiling water reactor is

- A. enriched uranium
- B. natural uranium
- C. plutonium
- D. monazite sand

Answer:-

Option A

[Read More Answers.](#)

Question # 82

Nuclides having the same atomic numbers are termed as

- A. isotopes
- B. isomers
- C. isotones
- D. isobars

Answer:-

Option B

[Read More Answers.](#)

Question # 83

A fertile material is the one, which can be

- A. converted into fissile material on absorption of neutron.
- B. fissioned by slow (thermal) neutrons.
- C. fissioned by fast neutrons.
- D. fissioned by either slow or fast neutrons.

Answer:-

Option A

[Read More Answers.](#)

Question # 84

Fast breeder nuclear reactors using enriched uranium as fuel may contain upto a maximum of _____ percent of U-235 (i.e. fissile material).

- A. 15
- B. 45
- C. 65
- D. 85

Answer:-

Option D

[Read More Answers.](#)

Question # 85

Thorium metal

- A. resembles steel in appearance.
- B. is less hard (in the range of silver).
- C. is highly ductile.
- D. all (a), (b) and (c).

Answer:-

Option D

[Read More Answers.](#)

Question # 86

Enrichment of uranium is done to increase the concentration of _____ in the natural uranium.

- A. U-238
- B. U-233
- C. U-235



D. Pu-239

Answer:-

Option C

[Read More Answers.](#)

Question # 87

Atoms with same number of neutrons, but different number of nucleons are called

- A. isotones
- B. isobars
- C. isotopes
- D. isoters

Answer:-

Option A

[Read More Answers.](#)

Question # 88

Which of the following ores contains maximum percentage of uranium?

- A. Carnotite
- B. Thorium.
- C. Rescolite
- D. Pitchblende

Answer:-

Option D

[Read More Answers.](#)

Question # 89

Uranium ore is currently mined & concentrated at

- A. Jadugoda
- B. Ghatsila
- C. Khetri
- D. Alwaye

Answer:-

Option A

[Read More Answers.](#)

Question # 90

How many atoms are present in one gm-atom of an element?

- A. 2×10^{23}
- B. 6×10^{23}
- C. 6×10^{32}
- D. 5×10^5

Answer:-

Option B

[Read More Answers.](#)

Question # 91

Emission of β -particles during radioactive decay of a substance is from

- A. innermost shell
- B. nucleus
- C. outermost shell
- D. none of these

Answer:-

Option B

[Read More Answers.](#)

Question # 92

Percentage of U-238 in natural uranium is around

- A. 0.71
- B. 99.29
- C. 0.015
- D. 29.71

Answer:-

Option B

[Read More Answers.](#)

Question # 93



Fuel for a nuclear reactor (thermal) is

- A. uranium
- B. plutonium
- C. radium
- D. none of these

Answer:-

Option A

[Read More Answers.](#)

Question # 94

A fast breeder reactor employs

- A. graphite as moderator.
- B. water as coolant.
- C. molten sodium as coolant as well as moderator.
- D. U-235 as fuel.

Answer:-

Option D

[Read More Answers.](#)

Question # 95

Plutonium

- A. is recovered from spent fuel from thermal nuclear reactor.
- B. has much lower melting point (640.C) compared to thorium (1690.C).
- C. both (a) and (b).
- D. neither (a) nor (b).

Answer:-

Option C

[Read More Answers.](#)

Question # 96

A control rod

- A. should have small absorption cross-section.
- B. is generally made of boron, hafnium or cadmium.
- C. should have large absorption cross-section.
- D. both (b) and (c).

Answer:-

Option D

[Read More Answers.](#)

Question # 97

Number of secondary neutron emitted on fission of an atom of U-235 by slow neutron bombardment is

- A. 3
- B. 235
- C. 200
- D. 92

Answer:-

Option A

[Read More Answers.](#)

Question # 98

Fuel for a fast breeder reactor is

- A. plutonium
- B. uranium
- C. radium
- D. neptunium

Answer:-

Option A

[Read More Answers.](#)

Question # 99

Fast breeder test reactor at Kalpakkam is designed for using

- A. thorium as a fertile material.
- B. U-238 as a fertile material.
- C. helium as a coolant.
- D. uranium ore directly as a fuel.

Answer:-

Option A



[Read More Answers.](#)

Question # 100

In the gaseous diffusion process of uranium enrichment, the natural uranium is converted into gaseous

- A. uranium oxide
- B. uranium hexafluoride
- C. uranium carbide
- D. uranium sulphate

Answer:-

Option B

[Read More Answers.](#)

Question # 101

The mass number of an element is equal to the number of _____ in the nucleus.

- A. electrons
- B. neutrons
- C. protons
- D. neutrons plus protons (i.e., nucleons)

Answer:-

Option D

[Read More Answers.](#)

Question # 102

Mass of a positron is same as that of a/an

- A. electron
- B. α -particle
- C. proton
- D. neutron

Answer:-

Option A

[Read More Answers.](#)

Question # 103

Biological shield is provided in a nuclear power reactor to protect the _____ from radiation damage.

- A. fuel elements
- B. operating personnels
- C. walls of the reactor
- D. none of these

Answer:-

Option B

[Read More Answers.](#)

Question # 104

Isotopes of an element have different

- A. mass number
- B. electronic configuration
- C. nuclear charge
- D. chemical properties

Answer:-

Option A

[Read More Answers.](#)

Question # 105

Nuclear reactors are provided with shield to guard against the emission of mainly _____ rays.

- A. X
- B. α and β
- C. neutrons & gamma
- D. infrared

Answer:-

Option C

[Read More Answers.](#)

Question # 106

Radioactive decay of a material involves a _____ order reaction.

- A. third
- B. second
- C. first



D. zero

Answer:-

Option C

[Read More Answers.](#)

Question # 107

Which of the following factors is the most important in the site selection for a nuclear power plant?

- A. Absence of earthquake prone zone in nearby areas.
- B. Abundant availability of water.
- C. Remotely located from residential areas.
- D. Proximity to fuel source.

Answer:-

Option A

[Read More Answers.](#)

Question # 108

A fast breeder reactor

- A. uses natural uranium as fuel.
- B. does not require a moderator.
- C. both (a) and (b).
- D. neither (a) nor (b).

Answer:-

Option B

[Read More Answers.](#)

Question # 109

Heavy water has maximum density at _____ .C.

- A. 4
- B. 11.6
- C. 0
- D. 18.6

Answer:-

Option B

[Read More Answers.](#)

Question # 110

Ceramic nuclear metals compared to solid nuclear metals have

- A. higher melting points.
- B. low strength at high temperature.
- C. more chances of radiation damage.
- D. poorer corrosion resistance.

Answer:-

Option A

[Read More Answers.](#)

Question # 111

Uranium ore is mined & concentrated in India at

- A. Jadugoda(Jharkhand)
- B. Kota (Rajasthan)
- C. Tuticorin (Tamilnadu)
- D. Talchar (Orissa)

Answer:-

Option A

[Read More Answers.](#)

Question # 112

Which of the following reactors is operated at high neutron flux and low power level?

- A. Breeder reactor.
- B. Research reactor.
- C. Heterogeneous reactor.
- D. Liquid metal (e.g., molten sodium) cooled reactor.

Answer:-

Option B

[Read More Answers.](#)

Question # 113



Uranium percentage in monazite sand is about

- A. 0.01
- B. 0.25
- C. 1.2
- D. 7

Answer:-

Option B

[Read More Answers.](#)

Question # 114

Artificially produced radioactive isotopes are used for

- A. power generation.
- B. treatment of certain diseases.
- C. initiating nuclear fission and fusion.
- D. all (a), (b) and (c).

Answer:-

Option B

[Read More Answers.](#)

Question # 115

In a homogeneous nuclear reactor, the _____ are mixed together.

- A. fuel & coolant
- B. fuel & moderator
- C. coolant & moderator
- D. none of these

Answer:-

Option B

[Read More Answers.](#)

Question # 116

Enriched uranium means that, it contains

- A. more than 0.71% of U-235.
- B. only fertile material.
- C. only fissile material.
- D. no impurities.

Answer:-

Option A

[Read More Answers.](#)

Question # 117

The radioisotope used to study the thyroid gland is

- A. iodine
- B. cobalt
- C. iron
- D. carbon

Answer:-

Option A

[Read More Answers.](#)

Question # 118

Which of the following radiations is the least penetrating?

- A. a-rays
- B. B-rays
- C. Y-rays
- D. X-rays

Answer:-

Option A

[Read More Answers.](#)

Question # 119

Hydrogen differs from deuterium in _____ properties.

- A. radioactive
- B. physical
- C. chemical
- D. all (a), (b) and (c)

Answer:-

Option B



[Read More Answers.](#)

Question # 120

Both tritium and deuterium have the same number of

- A. neutrons
- B. electrons
- C. protons
- D. nucleons

Answer:-

Option A

[Read More Answers.](#)

Question # 121

Nuclear power generation capacity in India is

- A. 3000 MW.
- B. 10000 MW.
- C. more than hydroelectric power generation capacity.
- D. more than thermal power generation capacity.

Answer:-

Option A

[Read More Answers.](#)

Question # 122

Heavy water plant is not located at

- A. Kota and Baroda
- B. Talcher (Orissa)
- C. Tuticorin(Tamilnadu)
- D. Korba

Answer:-

Option D

[Read More Answers.](#)

Question # 123

β -rays emission in radioactive disintegration is always accompanied by the emission of

- A. γ -rays
- B. α -rays
- C. neutrons
- D. none of these

Answer:-

Option A

[Read More Answers.](#)

Question # 124

Out of the following, nucleus of _____ atom contains the largest number of neutrons.

- A. U-235
- B. U-238
- C. U-239
- D. Pu-239

Answer:-

Option C

[Read More Answers.](#)

Question # 125

A radioactive substance does not emit

- A. α -ray
- B. proton
- C. positron
- D. β -ray

Answer:-

Option B

[Read More Answers.](#)

Question # 126

Indian monazite sand contains _____ percent thorium.

- A. 10
- B. 25
- C. 60



D. 90

Answer:-

Option A

[Read More Answers.](#)

Question # 127

The half life period of a radioactive element depends upon the

- A. temperature
- B. pressure
- C. amount of element present
- D. none of these

Answer:-

Option D

[Read More Answers.](#)

Question # 128

Unit of radioactivity is

- A. barn
- B. Fermi
- C. Angstrom
- D. Curie

Answer:-

Option D

[Read More Answers.](#)

Question # 129

One 'amu' is equivalent to

- A. 9.31 Mev
- B. 931 eV
- C. 931 MeV
- D. 931 J

Answer:-

Option C

[Read More Answers.](#)

Question # 130

Pick out the wrong statement.

- A. α -particle emission from a radioactive element makes it electrically negative.
- B. β -particle emission from a radioactive element makes it electrically positive.
- C. A radioactive element having a half life period of 20 years will completely disintegrated in 40 years.
- D. The disintegration constant of a radioactive isotope is independent of pressure, temperature or concentration.

Answer:-

Option C

[Read More Answers.](#)

Question # 131

Which of the following undergoes fission reaction easily?

- A. U-235
- B. U-238
- C. Th-232
- D. none of these

Answer:-

Option A

[Read More Answers.](#)

Question # 132

Percentage of heavy water in ordinary water is around

- A. 0.015
- B. 7.54
- C. 0.71
- D. 32.97

Answer:-

Option A

[Read More Answers.](#)

Question # 133



Safety rods provided in nuclear reactors to guard against accidents, in case of earthquake are made of

- A. high carbon steel.
- B. molybdenum.
- C. zircalloy.
- D. boron or cadmium.

Answer:-

Option D

[Read More Answers.](#)

Question # 134

Nucleus of ${}^{92}\text{U}^{235}$ contains _____ protons.

- A. 92
- B. 235
- C. 143
- D. 325

Answer:-

Option A

[Read More Answers.](#)

Question # 135

Pick out the wrong statement.

- A. Isotopes have the same number of protons & electrons, but different number of neutrons.
- B. Hydrogen has two isotopes.
- C. In ordinary hydrogen, ${}^1\text{H}^1$ and ${}^1\text{H}^2$ are present in the ratio 6400:1.
- D. none of these.

Answer:-

Option B

[Read More Answers.](#)

Question # 136

Thorium-232 (a fertile material) on absorption of a neutron gets converted into _____, which is a fissile material.

- A. thorium-233
- B. uranium-235
- C. uranium-233
- D. plutonium-239

Answer:-

Option C

[Read More Answers.](#)

Question # 137

The critical mass of a fissionable material can be reduced by

- A. heating it.
- B. cooling it.
- C. surrounding it by neutron reflecting material.
- D. surrounding it by neutron absorbing material.

Answer:-

Option C

[Read More Answers.](#)

Question # 138

Primary purpose of a _____ nuclear reactor is to supply a high neutron flux of the order of 10^{13} to 10^{14} neutrons/cm² second.

- A. research
- B. power
- C. breeder
- D. homogeneous

Answer:-

Option A

[Read More Answers.](#)

Question # 139

Heavy water plant is not located at

- A. Talcher
- B. Tuticorin
- C. Ramagundam
- D. Kota

Answer:-

Option C



[Read More Answers.](#)

Question # 140

Which is not a fissile nuclear material?

- A. U-233
- B. U-235
- C. U-238
- D. Pu-239

Answer:-

Option C

[Read More Answers.](#)

Question # 141

Nuclear fuel usually used in a Boiling Water Reactor (BWR) is

- A. plutonium
- B. enriched uranium
- C. natural uranium
- D. thorium

Answer:-

Option B

[Read More Answers.](#)

Question # 142

In β -decay of radioactive material, the ratio of neutron to proton

- A. increases.
- B. remains same.
- C. decreases.
- D. is unpredictable; may increase or decrease.

Answer:-

Option C

[Read More Answers.](#)

Question # 143

Energy produced in the nuclear fission is of the order of _____ MeV.

- A. 20
- B. 200
- C. 1000
- D. 2000

Answer:-

Option B

[Read More Answers.](#)

Question # 144

Pressure in a Pressurised Water Reactor (PWR) is used for

- A. maintaining constant pressure in the primary cooling circuit under varying loads.
- B. superheating the steam.
- C. pressurising the water in the primary coolant circuit.
- D. none of these.

Answer:-

Option A

[Read More Answers.](#)

Question # 145

Pick out the wrong statement.

- A. The disintegration rate of a radioactive substance can not be increased by heating it.
- B. Electrons have negligible mass and unit negative charge.
- C. Deuterium atom has one proton and two neutrons in its nucleus.
- D. Cadmium is capable of absorbing neutrons.

Answer:-

Option C

[Read More Answers.](#)

Question # 146

Water is a better coolant than a gas (like CO₂, He, N₂ etc.), because it

- A. is a better neutron moderator as well.
- B. requires comparatively smaller pumps and heat exchanger for a given heat transfer rate.
- C. has a better heat transfer characteristics, and it can be pressurised to attain a high temperature.



D. all (a), (b) and (c).

Answer:-

Option D

[Read More Answers.](#)

Question # 147

Percentage of the heavy water in ordi water is around

- A. 0.015
- B. 7.54
- C. 0.71
- D. 32.97

Answer:-

Option A

[Read More Answers.](#)

Question # 148

Which of the following is not used as a moderator in nuclear reactor?

- A. Molten sodium
- B. Light water
- C. Beryllium
- D. Boron hydride

Answer:-

Option A

[Read More Answers.](#)

Question # 149

Which of the following isotopes is not present in natural uranium?

- A. U-238
- B. U-234
- C. U-235
- D. U-232

Answer:-

Option D

[Read More Answers.](#)

Question # 150

Which of the following is present in Bhabha Atomic Research Centre (BARC) complex, Trombay (Bombay)?

- A. Power reactor
- B. Research reactor
- C. Fast breeder reactor
- D. Heavy water plant

Answer:-

Option B

[Read More Answers.](#)

Question # 151

Quantity of fissionable material (i.e. U-235) in natural uranium is _____ percent.

- A. 0.71
- B. 6.31
- C. 99.29
- D. 12.73

Answer:-

Option A

[Read More Answers.](#)

Question # 152

Pick out the correct statement.

- A. Loss of electrons from neutral atoms produces negative ions.
- B. The radius of nucleus & atomic size are of the order of 10^{-12} cm & 10^{-8} cm respectively.
- C. Gain of electrons by neutral atoms form cations.
- D. Proton to neutron ratio in a stable nucleus is 2 : 1.

Answer:-

Option B

[Read More Answers.](#)

Question # 153



_____ gas is normally not used as a coolant in a nuclear reactor, because of its high neutron capture cross-section.

- A. Nitrogen
- B. Hydrogen
- C. Helium
- D. Carbon dioxide

Answer:-

Option A

[Read More Answers.](#)

Question # 154

Uranium Corporation of India Limited (UCIL) engaged in the mining & concentration of uranium ore is located at

- A. Alwaye (in Kerala)
- B. Jadugoda (in Jharkhand)
- C. Kalpakkam (in Tamilnadu)
- D. Gopalpur coast (in Orissa)

Answer:-

Option B

[Read More Answers.](#)

Question # 155

'Heavy water' is termed as 'heavy' because it is

- A. denser than water.
- B. an oxide of deuterium.
- C. a heavy liquid.
- D. an oxide of heavier isotope of oxygen.

Answer:-

Option B

[Read More Answers.](#)

Question # 156

When the difference between mass number and atomic number of atoms of two or more elements are same, the atoms are termed as

- A. isomers
- B. isotopes
- C. isobars
- D. isotones

Answer:-

Option D

[Read More Answers.](#)

Question # 157

The new nucleus formed after β -decay of a radioactive element has

- A. less atomic number
- B. less atomic weight
- C. more atomic number
- D. more atomic weight

Answer:-

Option A

[Read More Answers.](#)

Question # 158

The sum of masses of two nuclei produced in nuclear fission compared to the mass of original nucleus is

- A. less
- B. more
- C. same
- D. much more

Answer:-

Option A

[Read More Answers.](#)

Question # 159

Net efficiency of ordinary light water cooled nuclear reactor is about _____ percent.

- A. 32
- B. 52
- C. 72
- D. 88

Answer:-

Option A



[Read More Answers.](#)

Question # 160

The atomic mass of an element is fractional, because

- A. of uncertainty principle.
- B. it may have isobars.
- C. it contains neutrons.
- D. it may have isotopes.

Answer:-

Option D

[Read More Answers.](#)

Question # 161

A heterogeneous reactor is the one, in which the moderator and the

- A. coolant are different materials.
- B. coolant are present in different phases (e.g., heavy water and graphite).
- C. fuel are present in different phases (e.g. uranium and heavy water).
- D. none of these.

Answer:-

Option C

[Read More Answers.](#)

Question # 162

Radioactivity of an isotope is expressed in

- A. barn
- B. MeV
- C. Curie
- D. Ergs=

Answer:-

Option C

[Read More Answers.](#)

Question # 163

Extraction of uranium from its ore is done by _____ method.

- A. chemical
- B. pyrometallurgical
- C. physical beneficiation
- D. electrometallurgical

Answer:-

Option A

[Read More Answers.](#)

Question # 164

Isotopes of an element have the same

- A. number of neutrons
- B. mass number
- C. electronic configuration
- D. atomic weight

Answer:-

Option C

[Read More Answers.](#)

Question # 165

Nuclear power plant is not located at

- A. Talcher (Orissa)
- B. Rawatbhata (Rajasthan)
- C. Kalpakkam (Tamilnadu)
- D. Kaiga (Karnataka)

Answer:-

Option A

[Read More Answers.](#)

Question # 166

Heavy water is used as a moderator in a

- A. pressurised water reactor (PWR).
- B. boiling water reactor (BWR).
- C. Candu reactor.



D. molten sodium cooled reactor.

Answer:-

Option C

[Read More Answers.](#)

Question # 167

Which of the following is a fuel for a fusion reactor (thermonuclear reactor)?

- A. Deuterium and tritium
- B. U-233
- C. Thorium
- D. Heavy water

Answer:-

Option A

[Read More Answers.](#)

Question # 168

Positron is a/an

- A. nucleus having two protons.
- B. helium nucleus.
- C. electron with positive charge.
- D. nucleus with one proton and one neutron.

Answer:-

Option C

[Read More Answers.](#)

Question # 169

Uranium is recovered from its ore (pitchblende) by

- A. froth floatation technique.
- B. leaching with sulphuric acid.
- C. smelting in a furnace.
- D. dissolving in water.

Answer:-

Option B

[Read More Answers.](#)

Question # 170

Which of the following is the best nuclear fuel?

- A. Np- 239
- B. U-234
- C. Pu-239
- D. Th-236

Answer:-

Option C

[Read More Answers.](#)

Question # 171

Pick out the correct statement.

- A. Positron is the antiparticle of electron.
- B. In α -decay, the ratio of neutron to proton decreases.
- C. Ionising power of β -rays is higher than that of α -rays.
- D. Speed of α -rays is more than that of γ -rays.

Answer:-

Option A

[Read More Answers.](#)

Question # 172

A pressurised water reactor (PWR) uses pressurised water as a

- A. coolant.
- B. working fluid in power turbine.
- C. moderator.
- D. none of these.

Answer:-

Option A

[Read More Answers.](#)

Question # 173



Out of the following places, heavy water plant is not located at

- A. Baroda
- B. Ramagundam
- C. Talcher
- D. Tuticorin

Answer:-

Option B

[Read More Answers.](#)

Question # 174

The phenomenon of radioactivity was discovered by

- A. Madam Curie
- B. Bacquerrel
- C. Roentgen
- D. J.J. Thomson

Answer:-

Option B

[Read More Answers.](#)

Question # 175

75% of a radioactive element decays in 6 hours. Its half life period is _____ hours.

- A. 3/4
- B. 1/6
- C. 3
- D. 4

Answer:-

Option C

[Read More Answers.](#)

Question # 176

Which of the following nuclear reactors is the most efficient thermodynamically while operating between the same temperature and pressure limits of the reactor?

- A. Molten sodium cooled
- B. CO₂ gas cooled
- C. Pressurised water
- D. Boiling water

Answer:-

Option D

[Read More Answers.](#)

Question # 177

Which of the following accounts for the maximum energy release in the nuclear fission process?

- A. Kinetic energy of fission products
- B. Radioactive decay of fission products
- C. Instantaneous release of γ -rays
- D. Kinetic energy of neutrons

Answer:-

Option A

[Read More Answers.](#)

Question # 178

In a pressurised water reactor (PWR), the

- A. fuel is natural uranium and heavy water acts both as moderator & coolant.
- B. coolant water boils in the core of the reactor.
- C. coolant water is pressurised to prevent bulk boiling of water in the core.
- D. use of moderator is not required.

Answer:-

Option C

[Read More Answers.](#)

Question # 179

Liquid metal (e.g. , molten sodium) is preferred as a coolant in case of a/an _____ reactor.

- A. homogeneous
- B. graphite moderated
- C. fast breeder
- D. enriched uranium (3% U-235) fuelled

Answer:-

Option C



[Read More Answers.](#)

Question # 180

Coolant used in a boiling water reactor is

- A. hydrogen gas
- B. water
- C. steam
- D. a mixture of water & steam

Answer:-

Option D

[Read More Answers.](#)

Question # 181

A thermal nuclear reactor compared to a fast breeder reactor

- A. uses slower neutrons for fission.
- B. uses faster neutrons for fission.
- C. gives higher power density.
- D. requires less fuel to run at the same power level.

Answer:-

Option A

[Read More Answers.](#)

Question # 182

The phenomenon of nuclear fission is opposite to that of

- A. radioactive decay
- B. thermionic emission
- C. nuclear fusion
- D. combustion

Answer:-

Option C

[Read More Answers.](#)

Question # 183

An ideal coolant for a nuclear reactor should

- A. be a good absorber of neutrons.
- B. be capable of attaining high temperature, only when it is pressurised.
- C. have high density, but low heat transfer co-efficient.
- D. be free from radiation damage and non-corrosive.

Answer:-

Option D

[Read More Answers.](#)

Question # 184

The size of an atom is of the order of one

- A. .Angstrom
- B. fermi
- C. micron
- D. mm

Answer:-

Option A

[Read More Answers.](#)

Question # 185

The molecular weight of heavy water is

- A. 10
- B. 18
- C. 20
- D. 36

Answer:-

Option C

[Read More Answers.](#)

Question # 186

Which of the following is not a good moderating material?

- A. Concrete
- B. Boron
- C. 18/8 stainless steel



D. All (a), (b) and (c)

Answer:-

Option D

[Read More Answers.](#)

Question # 187

The first underground nuclear test was conducted by India at

- A. Jaisalmer
- B. Pokharan
- C. Kalpakkam
- D. Narora

Answer:-

Option B

[Read More Answers.](#)

Question # 188

Main source of _____ is monazite sand.

- A. uranium
- B. polonium
- C. hafnium
- D. thorium

Answer:-

Option D

[Read More Answers.](#)

Question # 189

A radioactive isotope undergoes decay with respect to time following _____ law.

- A. logarithmic
- B. exponential
- C. linear
- D. inverse square

Answer:-

Option B

[Read More Answers.](#)

Question # 190

Atoms of U-238 and U-235 differ in structure by three

- A. electrons and three protons
- B. protons
- C. neutrons
- D. electrons

Answer:-

Option C

[Read More Answers.](#)

Question # 191

Heavy water (D₂O) in a nuclear reactor serves as a

- A. coolant
- B. moderator
- C. both (a) & (b)
- D. neutron absorber

Answer:-

Option C

[Read More Answers.](#)

Question # 192

Solar energy results from _____ reaction.

- A. fission
- B. combustion
- C. thermonuclear
- D. none of these

Answer:-

Option C

[Read More Answers.](#)

Question # 193



Which of the following nuclear materials is fissile?

- A. Uranium-238
- B. Thorium-232
- C. Plutonium-239
- D. None of these

Answer:-

Option C

[Read More Answers.](#)

Question # 194

The main ore of uranium is

- A. pitchblende
- B. monazite sand
- C. cassiterite
- D. chalcopyrite

Answer:-

Option A

[Read More Answers.](#)

Question # 195

Function of control rod in a nuclear reactor is to control

- A. temperature
- B. pressure
- C. fuel consumption
- D. absorption of neutrons

Answer:-

Option D

[Read More Answers.](#)

Question # 196

The ratio of neutrons to protons of an element having a mass number and atomic number of 80 and 40 respectively is

- A. 1
- B. 0.5
- C. 2
- D. 4

Answer:-

Option A

[Read More Answers.](#)

Question # 197

In nuclear reactions, _____ number is conserved.

- A. mass
- B. atomic
- C. both (a) & (b)
- D. neither (a) nor (b)

Answer:-

Option C

[Read More Answers.](#)

Question # 198

Critical energy should be _____ the neutron binding energy of the atom in order to initiate a nuclear fission.

- A. equal to
- B. less than
- C. more than
- D. either more or less==

Answer:-

Option C

[Read More Answers.](#)

Question # 199

The main ore of thorium is

- A. pitchblende
- B. monazite sand
- C. limonite
- D. galena

Answer:-

Option B



[Read More Answers.](#)

Question # 200

Fast breeder reactors are most usable in India, because of our largest _____ deposits.

- A. thorium
- B. plutonium
- C. uranium
- D. none of these

Answer:-

Option A

[Read More Answers.](#)

Question # 201

'Light water' used as a coolant in nuclear reactor is nothing but

- A. ordinary water.
- B. mildly acidic (pH = 6) water.
- C. mildly alkaline (pH = 8) water.
- D. none of these.

Answer:-

Option A

[Read More Answers.](#)

Question # 202

The emission of an α -particle causes the resultant nucleus to have

- A. more atomic weight and less atomic number.
- B. less atomic weight and less atomic number.
- C. less atomic weight and more atomic number.
- D. none of these.

Answer:-

Option A

[Read More Answers.](#)

Question # 203

Extraction of uranium from its ore is done using _____ methods.

- A. electrometallurgical
- B. pyrometallurgical
- C. chemical
- D. physical beneficiation

Answer:-

Option C

[Read More Answers.](#)

Question # 204

Coolant present in the primary circuit of a pressurised water reactor is high pressure

- A. sub cooled water
- B. saturated water
- C. superheated steam
- D. saturated steam

Answer:-

Option B

[Read More Answers.](#)

Question # 205

First experimental observation of nuclear fission was done by

- A. Plane
- B. Rutherford
- C. Fermi
- D. Hahn and Strassman

Answer:-

Option C

[Read More Answers.](#)

Question # 206

The half life period of a radioactive element is 100 days. After 400 days, one gm of the element will be reduced to _____ gm.

- A. 1/4
- B. 1/8
- C. 1/2



D. 1/16

Answer:-

Option D

[Read More Answers.](#)

Question # 207

H₂ is a better coolant than CO₂, due to its relatively

- A. lower density.
- B. higher specific heat.
- C. non-reactivity to uranium.
- D. lower neutron capture cross-section.

Answer:-

Option B

[Read More Answers.](#)

Question # 208

A fast breeder reactor

- A. utilises fast neutrons for causing fission.
- B. converts fertile material (e.g., U-238) into fissile material (Pu-239).
- C. normally employs molten sodium as coolant.
- D. all (a), (b) and (c).

Answer:-

Option D

[Read More Answers.](#)

Question # 209

U-235 content in enriched uranium, that is normally used in power reactors (e.g., at Tarapur atomic power plant), is about _____ percent.

- A. 85
- B. 50
- C. 3
- D. 97

Answer:-

Option C

[Read More Answers.](#)

Question # 210

Bhabha Atomic Research Centre (BARC) located at Trombay (near Bombay) has

- A. five operating research reactors (namely Apsara, Cirus Zerelina, Purnima and Dhurva).
- B. a 420 MW nuclear power plant.
- C. a very large capacity (100 tons/yr) heavy water plant.
- D. all (a), (b) and (c).

Answer:-

Option A

[Read More Answers.](#)

Question # 211

Nucleus of tritium has _____ neutrons.

- A. 1
- B. 2
- C. 3
- D. 5

Answer:-

Option B

[Read More Answers.](#)

Question # 212

Percentage of natural uranium present in uranium ore found in Jadugoda (Jharkhand) is

- A. 0.1
- B. 1
- C. 3
- D. 12

Answer:-

Option A

[Read More Answers.](#)

Question # 213



Candu reactor is a _____ nuclear reactor.

- A. natural uranium fuelled heavy water cooled & moderated
- B. highly enriched uranium (85% U-235) fuelled
- C. homogeneous
- D. fast breeder

Answer:-

Option A

[Read More Answers.](#)

Question # 214

Which of the following is a non-fissile material?

- A. Plutonium-239
- B. Uranium-235
- C. Uranium-233
- D. Thorium-232

Answer:-

Option D

[Read More Answers.](#)

Question # 215

Use of molten metal as a coolant in fast breeder reactor helps in

- A. rapid heat transfer from the core.
- B. accelerating the reaction rate in the core.
- C. breeding neutrons.
- D. accelerating the neutrons.

Answer:-

Option A

[Read More Answers.](#)

Question # 216

What is the average life of a radioactive atom having a 'half life period' of T?

- A. 1.44 T
- B. 0.144 T
- C. 14.4 T
- D. 2T

Answer:-

Option A

[Read More Answers.](#)

Question # 217

Secondary cooling circuit is a must in molten sodium cooled fast breeder reactor for

- A. achieving high degree of superheat in the steam.
- B. faster heat removal rate from the core.
- C. lowering the coolant circulation pressure.
- D. avoiding the mixing of water with radioactive sodium, as it may cause explosion.

Answer:-

Option D

[Read More Answers.](#)

Question # 218

The main purpose of control rod in a nuclear reactor is to control the

- A. chain reaction and hence the power output by regulating the number of secondary neutrons causing fission.
- B. emission of hazardous radiation.
- C. conversion of fissile material into fertile material.
- D. velocity of the secondary neutrons.

Answer:-

Option A

[Read More Answers.](#)

Question # 219

Which of the following is not an ore of uranium?

- A. Pitchblende
- B. Kyanite
- C. Carnotite
- D. Rescolite

Answer:-

Option B



[Read More Answers.](#)

Question # 220

Nuclear power reactor located at Tarapur is of _____ type.

- A. fast breeder
- B. pressurised water
- C. boiling water
- D. gas cooled

Answer:-

Option C

[Read More Answers.](#)

Question # 221

Which of the following gases has very high neutron capture cross-section, making it unsuitable as a coolant in nuclear reactor?

- A. N₂
- B. He
- C. CO₂
- D. H₂

Answer:-

Option A

[Read More Answers.](#)

Question # 222

The number of neutrons in the nucleus of Uranium-233 (⁹²U²³³) is

- A. 141
- B. 92
- C. 233
- D. 325

Answer:-

Option A

[Read More Answers.](#)

Question # 223

The ratio of mass of a neutron to that of an electron is about 1839. What is the ratio of the mass of a proton to that of an electron?

- A. 159
- B. 1837
- C. 2537
- D. 10000

Answer:-

Option B

[Read More Answers.](#)

Question # 224

Heavy water is preferred over ordinary water as a coolant, because it.

- A. acts both as an efficient coolant as well as a moderator.
- B. can be heated to a higher temperature without pressurizing.
- C. is less prone to radiation damage.
- D. all (a), (b) and (c).

Answer:-

Option D

[Read More Answers.](#)

Question # 225

An element having large number of _____ is most easily subjected to nuclear fission.

- A. protons
- B. electrons
- C. neutrons
- D. nucleons

Answer:-

Option D

[Read More Answers.](#)

Question # 226

Coolant used in a fast breeder reactor is

- A. molten sodium
- B. heavy water
- C. ordinary water



D. helium

Answer:-

Option A

[Read More Answers.](#)

Question # 227

Which of the following is the most harmful for the human being?

- A. β -rays
- B. X-rays
- C. Y-rays
- D. ultra violet rays

Answer:-

Option C

[Read More Answers.](#)

Question # 228

Molten sodium is used as a coolant in a fast breeder reactor, because of its

- A. excellent moderating properties.
- B. neutron breeding capability.
- C. faster heat removal capability from the core.
- D. capability to increase the reaction rate in the core.

Answer:-

Option C

[Read More Answers.](#)

Question # 229

Pick out the wrong statement.

- A. Atoms with same number of nucleons but different number of protons are called isobars.
- B. Atoms with same number of protons but different number of nucleons are called isotopes.
- C. Out of α , β , and γ -rays, the one having maximum penetration power are γ -rays.
- D. The product formed by emission of α -particle has mass number less by 4 units than the parent nuclide.

Answer:-

Option B

[Read More Answers.](#)

Question # 230

The electric power generation cost in nuclear power plant is less than that in a coal based thermal power plant, mainly because the

- A. fuel cost per unit power generated is less.
- B. thermal efficiency of the former is higher.
- C. maintenance cost of the former is less.
- D. none of these.

Answer:-

Option A

[Read More Answers.](#)

Question # 231

Pressure of CO_2 gas (which is a coolant) in the Calder-Hall nuclear reactor is _____ kgf/cm^2 .

- A. 0.2
- B. 7
- C. 35
- D. 50

Answer:-

Option B

[Read More Answers.](#)

Question # 232

Heavy water used in the nuclear reactors to slow down the speed of neutrons is

- A. highly purified water.
- B. a compound of oxygen and deuterium.
- C. water having dissolved salts of heavy metals.
- D. none of these.

Answer:-

Option B

[Read More Answers.](#)

Question # 233



The disintegration rate of a radioactive element

- A. progressively increases.
- B. progressively decreases.
- C. remains constant throughout.
- D. may increase or decrease depending on the material.

Answer:-

Option B

[Read More Answers.](#)

Question # 234

Pick out the wrong statement.

- A. The ratio of the density of the 'nucleus' to that of the 'atom' is 1012 .
- B. a-particle is identical with a doubly charged helium ion.
- C. The mass of deuterium atom is half that of helium atom.
- D. Gamma rays are high energy electrons.

Answer:-

Option D

[Read More Answers.](#)

Question # 235

Neutrons have mass approximately equal to that of _____ atoms.

- A. hydrogen
- B. helium
- C. deuterium
- D. none of these

Answer:-

Option A

[Read More Answers.](#)

Engineering Most Popular Interview Topics.

- 1 : [Civil Engineering Frequently Asked Interview Questions and Answers Guide.](#)
- 2 : [Mechanical Engineering Frequently Asked Interview Questions and Answers Guide.](#)
- 3 : [Electrical Engineering Frequently Asked Interview Questions and Answers Guide.](#)
- 4 : [Chemical Engineering Frequently Asked Interview Questions and Answers Guide.](#)
- 5 : [Automobile Engineering Frequently Asked Interview Questions and Answers Guide.](#)
- 6 : [Electronics Communications Frequently Asked Interview Questions and Answers Guide.](#)
- 7 : [Instrumentation Engineering Frequently Asked Interview Questions and Answers Guide.](#)
- 8 : [Marine Engineering Frequently Asked Interview Questions and Answers Guide.](#)
- 9 : [Industrial Engineering Frequently Asked Interview Questions and Answers Guide.](#)
- 10 : [RF Engineer Frequently Asked Interview Questions and Answers Guide.](#)

About Global Guideline.

Global Guideline is a platform to develop your own skills with thousands of job interview questions and web tutorials for fresher's and experienced candidates. These interview questions and web tutorials will help you strengthen your technical skills, prepare for the interviews and quickly revise the concepts. Global Guideline invite you to unlock your potentials with thousands of [Interview Questions with Answers](#) and much more. Learn the most common technologies at Global Guideline. We will help you to explore the resources of the World Wide Web and develop your own skills from the basics to the advanced. Here you will learn anything quite easily and you will really enjoy while learning. Global Guideline will help you to become a professional and Expert, well prepared for the future.

* This PDF was generated from <https://GlobalGuideline.com> at **November 29th, 2023**

* If any answer or question is incorrect or inappropriate or you have correct answer or you found any problem in this document then don't hesitate feel free and [e-mail us](#) we will fix it.

You can follow us on FaceBook for latest Jobs, Updates and other interviews material.
www.facebook.com/InterviewQuestionsAnswers

Follow us on Twitter for latest Jobs and interview preparation guides
<https://twitter.com/InterviewGuide>

Best Of Luck.

Global Guideline Team
<https://GlobalGuideline.com>
Info@globalguideline.com