Structure of theAtom

Multiple Choice Questions

Question 1.

In 1906, J.J. Thomson was awarded the Nobel prize for his discovery of:

(a) Electron

(b) Proton

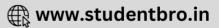
(c) Neutron

(d) Positron

▼ Answer

Answer: (a) Electron





Question 2. Who discovered the nucleus of an atom? (a) J.J. Thomson (b) Neils Bohr (c) Rutherford (d) J. Chadwick

▼ Answer

Answer: (c) Rutherford

Question 3.Who is known as the 'Father of nuclear Physics'?(a) J. J. Thomson(b) E. Rutherford(c) Neils Bohr(d) J. Chadwick

▼ Answer

Answer: (b) E. Rutherford

Question 4.

An atomic number of an element equals to what present in the nucleus of its atom?

(a) Protons

(b) Electrons

(c) Both of them

(d) None of them

▼ Answer

Answer: (a) Protons

Question 5.

Rutherford's alpha-particle scattering experiment was responsible for the discovery of:

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(a) Atomic nucleus

- (b) Electron
- (c) Proton
- (d) Neutron

▼ Answer

Answer: (a) Atomic nucleus

Question 6. Isotopes of an element have:

- (a) the same physical properties
- (b) different chemical properties
- (c) different number of neutrons
- (d) different atomic numbers

▼ Answer

Answer: (c) different number of neutrons

Question 7.

Number of valence electrons in CP ion are:

(a) 16

(b) 8

(c) 17

(d) 18

▼ Answer

Answer: (b) 8

Question 8.

Which one of the following is a correct electronic configuration of sodium? (a) 2, 8 (b) 8, 2, 1 (c) 2, 1, 8 (d) 2, 8, 1

▼ Answer

Answer: (d) 2, 8, 1

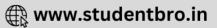
Question 9. Who used the term 'ATOM' for the first time? (a) Rutherford (b) John Dalton (c) Chadwick (d) Bohr

▼ Answer

Answer: (b) John Dalton

Question 10. Which of the following are called nucleon? (a) Protons (b) Neutrons





(c) Electrons

(d) Both, Protons and Neutrons

▼ Answer

Answer: (d) Both, Protons and Neutrons

Question 11.

Which of the following particles was discovered first?

(a) Neutron

(b) Electron

- (c) Proton
- (d) Meson

▼ Answer

Answer: (b) Electron

Question 12.

Which of the following atom does not have the neutron?

(a) Carbon

(b) Nitrogen

(c) Hydrogen

(d) Helium

Answer

Question 13. Who gave the name 'Proton' the positively charged particles of an atom? (a) Chadwick (b) Goldstein (c) Rutherford (d) John Dalton

▼ Answer

Answer: (c) Rutherford

Question 14. The maximum number of electrons in any shell of an atom is: (a) n^2 (b) $2n^2$ (c) $(n-1)^2$ (d) $3n^2$

▼ Answer





Answer: (b) $2n^2$

Question 15. Which of the following rays have the maximum penetration power? (a) α-rays (b) X-rays (c) γ-rays (d) Cathod rays

▼ Answer

Answer: (c) γ -rays

Question 16. Who gave the first model of the atom? (a) J.J. Thomson (b) Chadwick (c) Goldstein (d) Neils Bohr

▼ Answer

Answer: (a) J.J. Thomson

Fill in the Blanks.

Question 17. are atoms of the same element, which have different mass numbers.

▼ Answer

Answer: Isotopes

Question 18.

_____ are atoms having the same mass number but different atomic numbers.

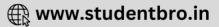
▼ Answer

Answer: Isobars

Question 19. Neutrons are present in the nucleus of all atoms, except ______

▼ Answer





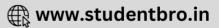
Answer: hydrogen

Ouestion 20. α -particles are doubly-charged _____ ions. ▼ Answer Answer: helium Question 21. Neutron was discovered by ▼ Answer Answer: Chadwick Question 22. The neutral particle in the nucleus of an atom is ▼ Answer Answer: neutron Question 23. Atomic number of sodium is ▼ Answer Answer: 11 Question 24. The mass of an electron is about ______ times, the mass of a hydrogen atom. ▼ Answer Answer: $\frac{1}{2000}$ True/False. Question 25.

Sir J.J. Thomson discovered the anode rays.

▼ Answer





Answer: False

Question 26. According to Rutherford, the positive charge of an atom is concentrated in its center.

▼ Answer

Answer: True

Question 27. Elements are defined by the number of protons they possess.

▼ Answer

Answer: True

Question 28. Valency is the combining capacity of an atom.

▼ Answer

Answer: True

Question 29. α-particles have a mass of 2u.

▼ Answer

Answer: False

Question 30. The mass of electrons is considered to be negligible and its charge is plus one.

▼ Answer

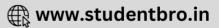
Answer: False

Question 31. According to Thomson, an atom consists of a positively charged sphere and the electrons are embedded in it.

▼ Answer

Answer: True





Question 32.

The negative and positive charges are equal in magnitude. So, the atom as a whole is electrically neutral.

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▼ Answer

Answer: True

Match the Column.

Question 33.

А	В
1. Discovery of Proton	(i) Deuterium
2. Hydrogen	(ii) 4
3. Valency of Magnesium	(iii) Positive charge
4. Valency of Carbon	(iv) He
5. Symbol of Helium	(v) H
6. Symbol of Hydrogen	(vi) 2
7. Electron	(vii) E. Goldstein
8. Proton	(viii) Negative charge
▼ Answer	

Answer:

А	В
1. Discovery of Proton	(vii) E. Goldstein
2. Hydrogen	(i) Deuterium
3. Valency of Magnesium	(vi) 2
4. Valency of Carbon	(ii) 4
5. Symbol of Helium	(iv) He
6. Symbol of Hydrogen	(v) H
7. Electron	(viii) Negative charge
8. Proton	(iii) Positive charge

Answer in Word/Sentence.

Question 34. What is the value of charge on a proton?

▼ Answer

Answer: 1.6×10^{-19} coulomb positive charge

Question 35. What is the value of charge on an electron?

▼ Answer

Answer: 1.6×10^{-19} coulomb negative charge

Question 36. What is the value of charge on a neutron?

▼ Answer

Answer: Zero (0) or no charge

Question 37.

According to Neils Bohr, electrons can revolve only in certain orbits. What name was given by him to these certain orbits?

▼ Answer

Answer: Discrete orbits of electrons

Question 38.

According to Bohr-Burry rules, which formula is used to express the maximum number of electrons in an orbit of an atom?

▼ Answer

Answer: 2n²

Question 39.

What is the maximum number of electrons in the outermost shell, according to Bohr-Burry?

▼ Answer

Answer: 8



