

Electron Mass and Charge



Here are 15 multiple-choice questions (MCQs) based on the provided information about the number of electrons, charge of an electron, mass of an electron, number of protons, and number of neutrons:

Multiple Choice Questions:

1. What is the mass of one electron?

- a) 9.11×10^{-19} kg
- b) 9.11×10^{-31} kg
- c) 1.67×10^{-27} kg
- d) 1.60×10^{-19} kg

2. Calculate the number of electrons in 1 gram of electrons.

- a) 1.098×10^{27}
- b) 1.602×10^{23}
- c) 6.022×10^{24}
- d) 9.11×10^{31}

3. What is the mass of one mole of electrons?

- a) 5.486×10^{-31} kg
- b) 1.6726×10^{-27} kg
- c) 5.486×10^{-7} kg
- d) 1.602×10^{-19} kg

4. What is the charge of one electron?

- a) 1.6726×10^{-27} C
- b) 9.11×10^{-31} C
- c) 1.602×10^{-19} C
- d) 6.022×10^{23} C

5. Calculate the charge of one mole of electrons.

- a) 1.098×10^{27} C
- b) 1.6726×10^{-27} C
- c) 5.486×10^{-7} C
- d) 9.65×10^4 C

6. How many electrons are present in one mole of methane (CH_4)?

- a) 6.022×10^{23}
- b) 1.098×10^{27}
- c) 6.022×10^{24}
- d) 3.011×10^{24}

7. How many neutrons are present in 7 mg of ^{14}C ?

- a) 2.4088×10^{21}
- b) 1.098×10^{27}
- c) 4.0347×10^{21}
- d) 1.602×10^{19}

8. Calculate the mass of 2.4088×10^{21} neutrons.

- a) 1.675×10^{-6} kg

- b) 4.0347×10^{-6} kg
- c) 1.098×10^{-27} kg
- d) 9.65×10^4 kg

9. Find the total number of protons in 34 mg of NH_3 .

- a) 6.022×10^{24}
- b) 1.2044×10^{22}
- c) 1.098×10^{27}
- d) 2.4088×10^{21}

10. What is the mass of 1.2044×10^{22} protons?

- a) 1.2044×10^{-27} kg
- b) 2.0145×10^{-5} kg
- c) 1.675×10^{-27} kg
- d) 9.65×10^4 kg

11. What is the number of electrons in one molecule of methane (CH_4)?

- a) 6
- b) 8
- c) 10
- d) 12

12. Calculate the number of neutrons in one atom of ^{14}C .

- a) 6
- b) 7
- c) 8
- d) 14

13. What is the molar mass of NH_3 ?

- a) 14 g
- b) 17 g
- c) 18 g
- d) 34 g

14. How many molecules are in one mole of NH_3 ?

- a) 1.2044×10^{22}
- b) 6.022×10^{24}
- c) 6.022×10^{23}
- d) 1.098×10^{27}

15. Find the mass of one proton.

- a) 1.6726×10^{-27} kg
- b) 9.11×10^{-31} kg
- c) 1.602×10^{-19} kg
- d) 1.675×10^{-27} kg

Answer Key:

1. b) 9.11×10^{-31} kg
2. a) 1.098×10^{27}
3. c) 5.486×10^{-7}
4. c) 1.602×10^{-19} C
5. d) 9.65×10^4 C
6. c) 6.022×10^{24}
7. a) 2.4088×10^{21}
8. b) 4.0347×10^{-6}

9. b) 1.2044×10^{22}
10. b) 2.0145×10^{-5}
11. c) 10
12. c) 8
13. b) 17 g
14. c) 6.022×10^{23}
15. a) 1.6726×10^{-27} kg