

**Salahaddin University – Erbil Subject: Principle Inorganic Chemistry**

**College of Education Stage: 1st**

**Department of Chemistry Time: 1 hr.**

**Date: 8 / 1 / 2022**

**Midterm Examination 1st- Semester (2022-2023)**

**Q1// *Choose the correct answer for each of the following: (10 M)***

**1-** The energy levels are represented by an integer (n= 1,2,3,…..) known as the :

1. **Quantum number b. orbital c. angular momentum**

**2-** Thomson determined the:

**a.** **mass of electron b. charge of electron c. ratio of charge to mass of electron (e/m)**

**3-** Among (4s, 4p, 3d) orbitals, the highest energy level is:

**a. 4s b. 4p c. 3d**

**4-** The number of neutron in 235U92 equal to:

**a. 92 b. 143 c. no one of them**

**5-** In Brackett series n1 equal to: **a. n1= 2 b. n1= 3 c. n1= 4**

**6-** The mass of proton equals to:

1. **9.109x 10-31  b. zero c. 1.673x10-27**

**7-** The hydrogen atom called tritium, have mass number equal to:

**a. 2 b. 3 c. no one of them.**

**8-** Which electromagnetic waves enable humans to see:

1. **Ultraviolet light b. Microwaves c. Visible light**

**9-** The wave length (**λ**) of red color in visible region is:

1. **656 nm b. 486 nm c.410 nm**

**10-**The electron capacity of shell when n=3 is**:**

1. **8 b. 18 c. 32**

**Q2/ A. Defines the following items: (8 M)**

1. Isoelectronic species

1. Radio waves
2. Atomic number (**Z**)

1. **Hund,s rule**

**B:** Write a term symbol for **C** atom **(Z=6) (8M)**

**C:** Draw **-** the schematic diagram of a cathode rays discharge tube for discovery of electrons**. (5M)**

**D:** Limitations of Bohr,s Model of an atom **(4M)**

**Examiner: Lec. Beriwan M. H. Ameen**