Assignment 2

Due on 2020-02-12, 23:59 IST.

1. According to Bougainville's equation, degree of ionization er K:
   - fraction of electrons in ionized gas
   - inversely proportional to temperature
   - not dependent on temperature
   - fraction of gas in ionized state
   No, the answer is incorrect.
   Score: 0
   Accepted Answer:
   Fraction of gas in ionized state.

2. (Discussed in lecture)
   - Rate of ionization and ionization loss:
   - ionization rate is inversely proportional to the inverse of the fourth power of the temperature.
   - ionization loss is inversely proportional to the fourth power of the temperature.
   No, the answer is incorrect.
   Score: 0
   Accepted Answer:
   ionization rate and ionization loss are inversely proportional to the fourth power of the temperature.

3. Dissociation of a diatomic gas:
   - monatomic gases
   - diatomic gases
   - inert gases
   No, the answer is incorrect.
   Score: 0
   Accepted Answer:
   diatomic gases

4. The net effect of an ion current is to:
   - electron current + ion current
   - electron current - ion current
   - ion current - ion current
   - only determined by ion current
   No, the answer is incorrect.
   Score: 0
   Accepted Answer:
   electron current + ion current

5. The average drift velocity of an ion is:
   - acceleration of separation between two collisions
   - acceleration of electron charge between two collisions
   - always higher than thermal velocity of ion
   - acceleration of electron charge between two collisions
   No, the answer is incorrect.
   Score: 0
   Accepted Answer:
   acceleration of electron charge between two collisions

6. Ionizing gas, electronic current is always determined by:
   - electron current because mass of the electron is low
   - low current because mass of the electron is high and it is a scattering particle of the electron
   - potential difference of the electron
   No, the answer is incorrect.
   Score: 0
   Accepted Answer:
   electron current because mass of the electron is low

7. Electrical conductivity of a gas in mm:
   - decrease with temperature
   - increase with temperature
   - does not depend on temperature
   - does not depend on pressure
   No, the answer is incorrect.
   Score: 0
   Accepted Answer:
   increase with temperature

8. Calcium (Ca) ion is used to calculate:
   - fast transfers to conduction
   - fast transfers by convection
   - fast transfers by radiation
   - all of the above
   No, the answer is incorrect.
   Score: 0
   Accepted Answer:
   fast transfers by radiation