

Class XI; Subject: Chemistry

1. What is the difference between the following ?: i) 160 cm ii) 160.0 cm. (1)
2. What is the difference between molality and molarity? (1)
3. State Heisenberg's Uncertainty Principle. (1)
4. Which quantum number determines the i) shape and ii) size of the orbital? (1)
5. What is the lowest value of n that allows g -orbital to exist? (1)
6. Calculate the wavelength of an electron moving with velocity of 2.05×10^7 m/s. (2)
7. An atomic orbital has $n = 3$. What are the possible values of l and m ? (2)
8. How much copper can be obtained from 100 g of copper sulphate?(Atomic mass of
Cu = 63.5 u) (2)
9. a) State Pauli's Exclusion Principle.
b) Draw the shapes of orbitals with $l = 2$. (3)
10. 3.0 g of H_2 react with 29.0 g of O_2 to form H_2O
 - i) Which is the limiting reagent?
 - ii) Calculate the maximum amount of H_2O that can be formed.
 - iii) Calculate the amount of the reactant left unreacted. (3)
11. The density of 3M solution of NaCl is 1.25 g/mL . Calculate the molality of the solution. (3)