

**Avinashilingam Institute for Home Science and Higher Education for Women
Coimbatore – 641 043**

**Master Degree Examination – November - 2018
First Semester**

**Class : PG
Major : PHYSICS**

**Time: 3 hours
Max. Marks: 60**

17MPHC03- LASER AND SPECTROSCOPY

Part - A 10 x 1/2 = 5

Choose the correct answer

1. The other name for laser is -----

- a. maser b. optical maser c. daser d. scalpel

2. The excitation process requires the presence of -----.

- a. absorption b. radiation c. conduction d. convection

3. The Optical resonator provides -----.

- a. optical feedback b. feedback c. resonance d. oscillation

4. How many main components are there in a laser?

- a. one b. two c. three d. four

5. The regions from radio frequency to gamma rays together is called ----- spectrum.

- a. visible b. IR c. Electromagnetic d. UV

6. A rigid rotator consists of ----- masses connected by a rigid rod.

- a. four b. three c. two d. one

7. A molecule of n atoms has ----- degrees of freedom.

- a. n b. 2n c. 3n d. 4n

8. The Nernst filament requires ----- to make it conductive.

- a. preheating b. post-heating c. cooling d. precooling

9. Which line will have more frequency?

- a. Rayleigh b. Stokes c. anti-Stokes d. Raman

10. In Raman spectroscopy, to reduce fluorescence ----- frequency is preferred.

- a. low b. high c. mid d. medium

