Dept. of Physics

DEGLOOR COLLEGE, DEGLOOR

MCQ for Practice

B.Sc. S.Y. Unit: Lasers

1. Laser is …

   a) Electric device b) Photoelectric device

   c) Photonic device d) None of these

2. LASER is the acronym for

   a) Light Amplification through Spontaneous Emission of Radiation
   b) Light Amplification through Stimulated Emission of Radiation
   c) Light Amplification through Spontaneous Ejection of Radiation
   d) Light Analyzing through Stimulated Emission of Radiation

3. When light travels through medium, gradual reduction in intensity occurs due to
   a) Absorption of light in medium b) Scattering of light in medium
   c) Both absorption and scattering of light in medium d) None of these

4. Laser beam is
   a) Dichromatic b) Monochromatic
   c) Coherent d) Both monochromatic and coherent

5. Laser is effect of
   a) Interaction of light with matter b) Interaction of light with light
   c) Interaction of matter with matter d) None of these

6. Emission of photon by an atom without any external impetus is called
   a) Spontaneous emission b) Stimulated emission
   c) Absorption d) None of these

7. The process of ……. Emission can not be controlled from outside
   a) Stimulated b) Spontaneous
   c) Both Stimulated and Spontaneous d) Neither Stimulated nor Spontaneous

8. The incoherent light can be emitted by
   a) Stimulated emission b) Spontaneous emission
   c) Both Stimulated and Spontaneous d) None of these

9. Population inversion is
   a) Non- equilibrium state b) Negative temperature state
   c) Equilibrium state d) Both a and b

10. Population inversion state means
    a) Population of upper energy level is greater than population of lower energy level
    b) Population of upper energy level is less than population of lower energy level
    c) Population of upper energy level is equal to population of lower energy level
    d) None of these

11. During population inversion
    a) $N_1=N_2$ b) $N_2>>N_1$
    c) $N_2 < N_1$ d) $N_2<< N_1$

12. At thermal equilibrium state
    a) $N_1=N_2$ b) $N_1>>N_2$
    c) $N_1 < N_2$ d) $N_1<< N_2$
13. Medium holding active centers called ..
    a) Active medium b) Active centers
    c) Laser medium d) Both a and c
14. Laser is
    a) Light source b) Sound source
    c) Both sound and light source d) None of these
15. Important characteristics or properties of laser is
    a) Directionality & negligible coherence b) High intensity & monochromaticity
    c)High degree of coherence d) All of the above
16. He-Ne LASER is
    a) Liquid Laser b) Gas laser
    c) Solid state Laser d) All of these
17. He – Ne laser generates light of wavelength
    a) 6428 A° b) 6328 A°
    c) 6028 A° d) 6128 A°
18. IN He-Ne Laser active medium can be excited by
    a) Electrical discharge method b) Optical pumping method
    c) Direct conversion d) None of these
19. Which of the following is / are technique of pumping?
    a) Optical pumping b) Electrical discharge
    c) Direct conversion d)All of these
20. In ……, a light source is used to illuminate the active medium
    a) Optical pumping b) Electrical discharge
    c) Direct conversion d) All of these
21. In ……, electric field causes ionization of medium
    a) Optical pumping b) Electrical discharge
    c) Direct conversion d) All of these
22. He-Ne Laser consist of mixture of Helium to Neon in the ratio
    a) 10 :1 b) 1 :10
    c) 2 :10 d) 10 : 5
23. In He-Ne Laser the active centers are
    a) Neon atoms b) Helium atoms
    c) Both He and Ne atoms d) None

24. He-Ne Laser can be used in

a) Bar code reading

b) Laser printing

c) Both a and b

d) None of these