

**LASER**  
**Questions & Answers**

**e-content for B.Sc Physics (Honours)**

**B.Sc Part-II**  
**Paper-III**

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# QUESTIONS

- 1) What does the acronym LASER stand for?
  - a) Light Absorption by Stimulated Emission of Radiation
  - b) Light Amplification by Stimulated Emission of Radiation
  - c) Light Alteration by Stimulated Emission of Radiation
  
- 2) What does the acronym MASER stand for?
  - a) Microwave Amplification by Stimulated Emission of Radiation
  - b) Molecular Absorption by Stimulated Emission of Radiation
  - c) The name of Albert Einstein's dog
  
- 3) What is one way to describe a Photon?
  - a) Solid as a rock
  - b) A wave packet
  - c) A torpedo
  
- 4) What determines the color of light?
  - a) its intensity
  - b) its wavelength
  - c) its source
  
- 5) Which scientist first came up with the idea of stimulated emission ?
  - a) Alexander Graham Bell
  - b) Isaac Newton
  - c) Arthur Schalow
  - d) Albert Einstein
  
- 6) Which laser is considered "eye safe"?
  - a) Laser bar-code scanners
  - b) The eximer laser
  - c) Communications lasers

- 7) Why are lasers used in fiber optic communications systems
- a) The government has mandated it
  - b) They can be pulsed with high speed data
  - c) They are very inexpensive
- 8) What type of laser is used in CD and DVD players?
- a) Semiconductor
  - b) YAG
  - c) Alexandrite
- 9) Why are lasers used in “Laser Printers”
- a) They can be focused down to very small spot sizes for high resolution
  - b) They are cheap
  - c) They are impossible to damage
- 10) As wavelength gets longer, the laser light can be focused to...
- a) Larger spot sizes
  - b) Smaller spot sizes
- 11) Which color of light has the shortest wavelength ?
- a) Yellow
  - b) Blue
  - c) Red
  - d) Green
- 12) What property of laser light is used to measure strain in roadways?
- a) Intensity
  - b) Power
  - c) Coherence
- 13) What is the type of laser used most widely in industrial materials processing applications?
- a) Dye Laser
  - b) YAG laser
  - c) Ruby Laser
  - d) Carbon Dioxide Laser

14) Why are lasers used for cutting materials

- a) It never gets dull
- b) It has a small “heat affected zone”
- c) Accuracy
- d) Smoother cuts
- e) Repeatability
- f) All of the above

15) The Eximer laser produces light with what wavelength?

- a) Visible
- b) Ultraviolet
- c) Infrared

16) Laser energy is used to break up kidney or gallstones in process called?

- a) Trbacularplasty
- b) Lithotripsy
- c) Viscocanalostomy

17) The National Ignition Facility will use what type of laser for fusion power experimentation?

- a) Neodymium-glass
- b) Argon gas
- c) Rhodamine Dye

18) Most lasers are electrically inefficient devices.

- a) True
- b) False

19) Chemical lasers use \_\_\_\_ to produce their beams.

- a) Excessive amounts of electrical power
- b) Small amounts of electrical power
- c) No electrical power

20) What type of laser could cause skin cancer if not used properly?

- a) Red semiconductor laser
- b) Blue semiconductor
- c) Eximer laser
- d) YAG laser

## ANSWERS

- 1) b
- 2) a
- 3) b
- 4) b
- 5) d
- 6) a
- 7) b
- 8) a
- 9) a
- 10) b
- 11) b
- 12) c
- 13) d
- 14) f
- 15) b
- 16) b
- 17) a
- 18) a
- 19) c
- 20) c