

# Forum:Seminar papers/Biophysics/2. LF/2018-2019/Group 6/GL

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## MCQs for Lasers and Microscopy

1. Which of the following microscopy mode is described by the following: „the flow of electrons passing through the object and electron optics forms an image directly on a fluorescent screen“?

- a) Scanning electron microscopy
- b) Transmission electron microscopy
- c) Confocal microscopy
- d) Stereo microscopy

Answer = B

2. Lasers can be utilized in all of the following except:

- a) Dermatology
- b) Excising a tumour
- c) Change the shape of the cornea
- d) They can be used in all of the above

Answer = D

3. Ultra-microscopy is used for which of the following:

- a) Observation in the dark field
- b) Increasing the limit of resolution of a microscope
- c) Utilizing birefringence
- d) Converting heat energy to electric energy

Answer = A

4. Image quality in electron microscopy depends on which of the following:

- a) Electron optic system
- b) Quality of vacuum
- c) stability of electron lenses
- d) all are important for image quality

Answer = D

5. Which of the following are components of a transmission electron microscope:

- a) high voltage supply
- b) electron gun
- c) fluorescent screen
- d) all of the above

Answer = D

6. Which of the following pairs of lasers can both be pumped only optically?
- Gas and solid lasers
  - Solid and liquid lasers
  - Liquid and gas Lasers
  - Argon and CO<sub>2</sub> lasers

Answer: choice B

7. The word LASER is an acronym which stands for
- Light Amplification by Stimulated Emission of Radiation
  - Light Attenuation by Stimulated Emission of Radiation
  - Light Amplification by Stimulated Excitation of Radiation
  - Light Attenuation by Stimulated Excitation of Radiation

Answer: Choice A

8. Which is the frequency of X-rays?
- $10^{18}$
  - $10^{10}$
  - $10^{-10}$
  - $10^{-8}$

Answer: Choice A

9. What is the smallest resolution of the human eye?
- 2 mm
  - 0.2 dm
  - 0.2 mm
  - 0.2 nm

Answer: Choice C

10. In which of the following microscopy techniques can Tyndall's Phenomenon occur?
- Ultramicroscopy
  - Monochromatic Microscopy
  - Microradiography
  - Inverse Microscopy

Answer: A