Unit 4 - Dispersion Effects and Transverse Electromagnetic Mode

New Assessment week 3

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-08-21, 23:59 IST.

1) When light propagates through an absorbing medium — *1 point*

- intensity drops linearly as a function of optical path length
- intensity drops exponentially as a function of optical path length
- intensity increases linearly as a function of optical path length
- intensity increases exponentially as function of optical path length

No, the answer is incorrect.
Score: 0

Accepted Answers:
intensity drops exponentially as a function of optical path length

2) If you make an attempt to view a 100 fs optical pulse is using an oscilloscope and a photodiode, what would you see in oscilloscope: — *1 point*

- a 100 fs pulse
- a 100 ps pulse
- a 10 fs pulse
- a 10 ns pulse

No, the answer is incorrect.
Score: 0

Accepted Answers:
a 10 ns pulse

3) When light propagates through a lasing medium — *1 point*

- intensity drops linearly as a function of optical path length
- intensity drops exponentially as a function of optical path length
- intensity increases linearly as a function of optical path length
- intensity increases exponentially as function of optical path length

No, the answer is incorrect.
Score: 0

Accepted Answers:
intensity increases exponentially as function of optical path length

4) If you make an attempt to view a 100 fs optical pulse is using an oscilloscope and a photodiode, what would you see in oscilloscope: — *1 point*

- a 100 fs pulse
- a 100 ps pulse
- a 10 fs pulse
- a 10 ns pulse

No, the answer is incorrect.
Score: 0

Accepted Answers:
a 10 ns pulse

5) Population inversion can be achieved for — *1 point*

- two level system
- one level system
- any system
- four level system

No, the answer is incorrect.
Score: 0

Accepted Answers:
four level system

6) Longitudinal modes are those λs which sustain in a cavity of length L, where — *1 point*

- $\lambda=2L/m$ Invalid HTML tag: tag name o:p is not allowed
- $\lambda=L/m$ Invalid HTML tag: tag name o:p is not allowed
- $\lambda=L$ Invalid HTML tag: tag name o:p is not allowed
- $\lambda=2L$ Invalid HTML tag: tag name o:p is not allowed

No, the answer is incorrect.
Score: 0

Accepted Answers:
$\lambda=2L/m$ Invalid HTML tag: tag name o:p is not allowed

7) Due to optical Kerr effect, — *1 point*

- Refractive index depends on wavelength
- Refractive index depends on intensity
- Refractive index becomes greater than 1
- Refractive index becomes less than 1.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Refractive index depends on intensity

8) CPA scheme to create a short pulse includes — *1 point*

- compressed-pulse-amplification
- stretch-amplify-compres
- directly amplif
- stretch-amplify

No, the answer is incorrect.
Score: 0

Accepted Answers:
stretch-amplify-compres

9) Deconvolution factor for an autocorrelation measurement of a Gaussian pulse is — *1 point*

- 1.32
- 1.22
- 1.41
- 0.44

No, the answer is incorrect.
Score: 0

Accepted Answers:
1.41

10) In a FROG measurement, which detector do you need? — *1 point*

- a spectrometer
- a photodiode
- a PMT
- a CCD camer

No, the answer is incorrect.
Score: 0

Accepted Answers:
a spectrometer

11) In an autocorrelation measurement, which detector do you need? — *1 point*

- a spectrometer
- a photodiode
- a PMT
- either option (b) or (c).

No, the answer is incorrect.
Score: 0

Accepted Answers:
either option (b) or (c).