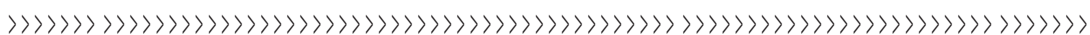


# The Past, Present and Future of Laser Technology I



**Warm up!**



Check the important words and phrases used in the session and what they mean. You can also use the read-aloud voice on the website to check your pronunciation.

<input checked="" type="checkbox"/> Words & Phrases	訳
<input type="checkbox"/> 1. optical fiber	光ファイバー
<input type="checkbox"/> 2. phenomenon	現象
<input type="checkbox"/> 3. entrepreneur	起業家
<input type="checkbox"/> 4. entrepreneurship	起業家であること、起業家精神
<input type="checkbox"/> 5. light bulb	電球
<input type="checkbox"/> 6. phase	(光波・電波などの) 位相、フェーズ
<input type="checkbox"/> 7. incoherent	(光などが) 非干渉性の
<input type="checkbox"/> 8. coherent	(光などが) 干渉性の
<input type="checkbox"/> 9. mouthful	発音しにくくて長たらしい語 (句)
<input type="checkbox"/> 10. commercialize	～を商品化する
<input type="checkbox"/> 11. wavelength	波長
<input type="checkbox"/> 12. telecommunication	(電話・テレビ等による) 遠距離通信 (略: telecom)
<input type="checkbox"/> 13. encode	～を符号化して発信する
<input type="checkbox"/> 14. modulate	～を変調する
<input type="checkbox"/> 15. diameter	直径
<input type="checkbox"/> 16. silicon dioxide	二酸化ケイ素
<input type="checkbox"/> 17. pulse	波動
<input type="checkbox"/> 18. decimal place	小数位
<input type="checkbox"/> 19. mode-locking	モード同期
<input type="checkbox"/> 20. amplify	～を増幅する



**Let's join the session!**

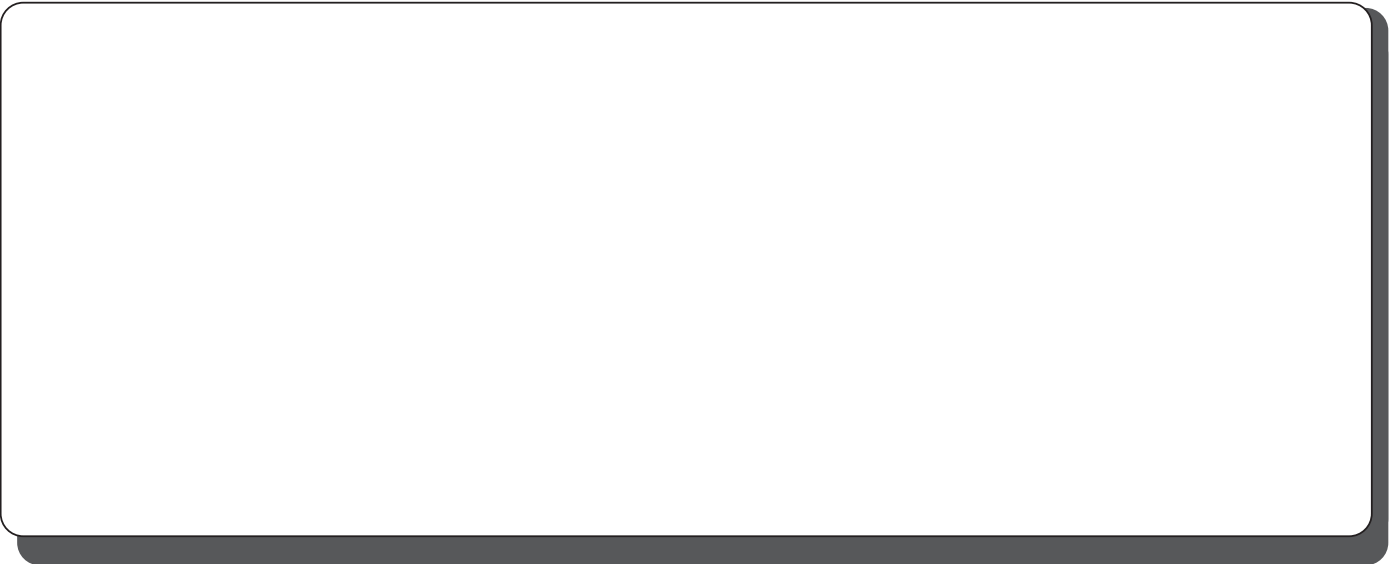


The following questions are based on the contents of the session. Watch the session and answer each question.

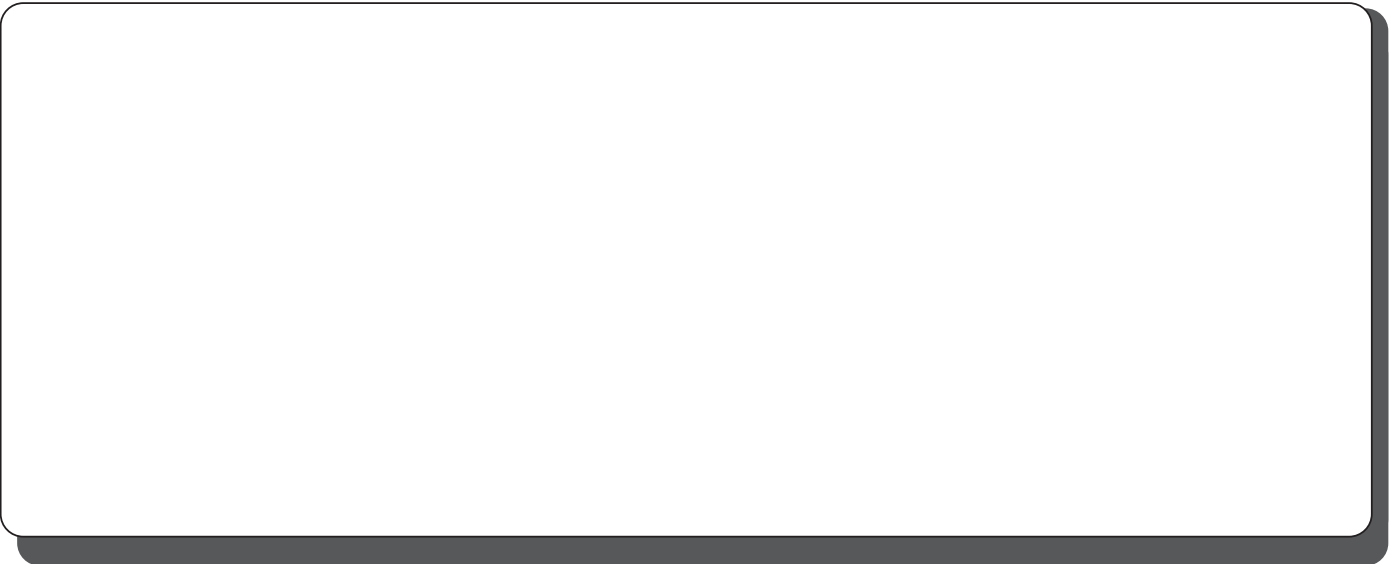
**[ 1 ] Explain the properties of laser light.**

**[ 2 ] Where can we find lasers in our everyday life?**

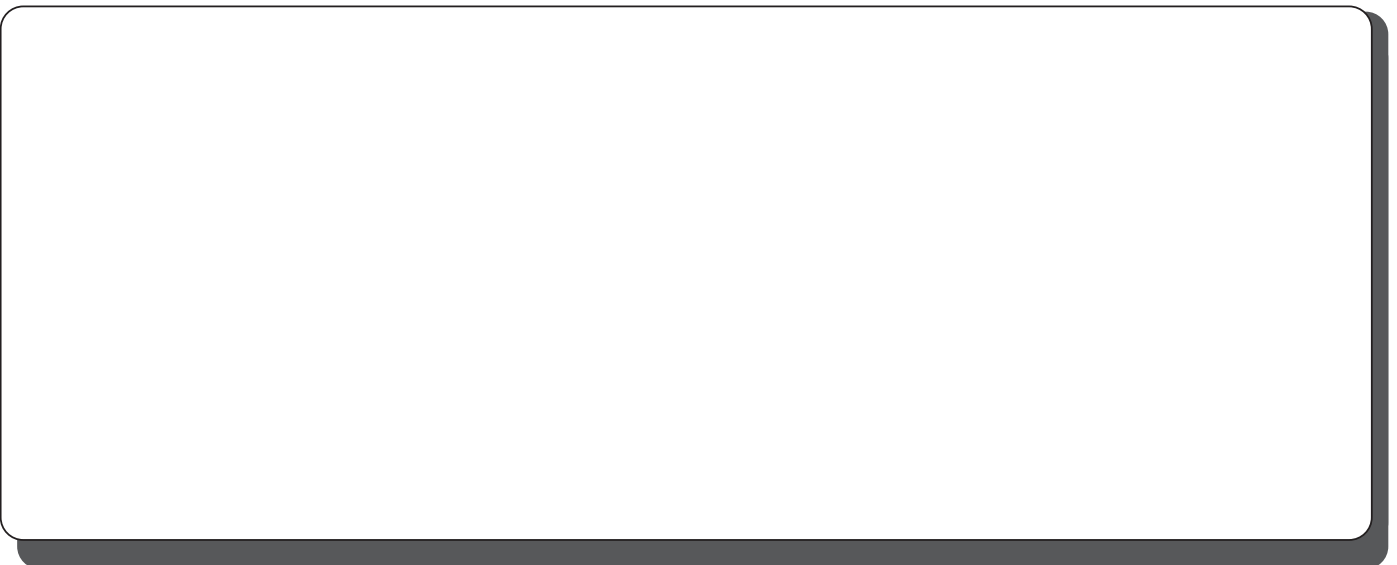
**[ 3 ] What are the advantages of ultrafast lasers?**



**[ 4 ] Explain the history of innovation in pulsed laser technology.**



**[ 5 ] Explain how optical fiber is used in our daily life.**





**Wrap up the session!**



[ 1 ] The following is a summary of the session. Write down the appropriate words in the blanks in the passage.

Laser is a ( ) ( ). ( ) ( ) natural light, laser has the properties of being a ( ) ( ), traveling in ( ) ( ), and being synchronized in the same ( ). The first laser was invented in 1960. Since then, ( ) ( ) of lasers have been invented and used ( ) our daily life. We can see laser ( ) in classrooms and in ( ) ( ) readers in supermarkets. ( ) ( ) lasers are very important for our Internet society today. An ( ) ( ) laser operates in a very short time period known as a ( ), so it can provide extremely high peak ( ). Pulsed lasers in the past were very expensive and very large, but now they have become ( ), ( ) and more ( ). Therefore, they are now used in many ( ).

**[ 2 ] Write down what you learned in today's session.**

