

LISTENING

GRADE 11

SPACE

1. Listen and fill the blanks:

There are many amazing stories of human survival, but actually our bodies are very fragile and do not cope well with extremes. Polar explorers can cope with temperatures of¹ _____, but only if they keep warm. Most people will collapse if their body temperature drops by only² _____, and if it drops by³ _____, they'll die. Heat can be just as dangerous. Temperatures of 35°C are safe, provided humidity is not above⁴ _____. High altitudes are dangerous too. We pass out when the pressure falls

below⁵ _____ of normal atmospheric pressure. This happens at about⁶ _____ metres. Climbers can go higher because their bodies gradually get used to it, but no one survives for long at 8,000 metres. At high altitudes, lack of oxygen is another problem. At ground level, about⁷ _____ of the air is oxygen. If that falls below⁸ _____, we die.

2. Listen and fill the blank:

A: Professor Martin, you're 1..... in the limits of the human body, is that right?

B: Yes, that's right. So, for example, we've been asking, is it possible to 2..... in a vacuum?

A. And what's the answer?

B. Well, sadly, we know how long humans can survive in a 3..... in outer space. Three Russian cosmonauts died in 1971 when their space capsule had a major problem. At an altitude of 4..... km, the pressure inside the capsule dropped to zero and the crew died after 30 to 40 seconds.

A: What a tragedy.

B: Yes, indeed. But it is possible to survive shorter periods of time in a vacuum. In 5....., a scientist was testing a spacesuit in a special room when the pressure suddenly dropped to

almost for a period of 27 seconds. He passed out after 15 seconds and he woke up when the pressure inside the room returned to normal. He was fine.

A: Good. So what else have you been 6.....?

B: We've also been asking, how long can the human body survive without 7.....?

A: And what is the answer?

B: Well, we can't force people to stay awake until they die. So it's impossible to know the exact limits. But we know about some extreme cases. For example, on 28th December 1963, Randy Gardner, a 17 year old student, got up at 6 o' clock in the morning and didn't go back to sleep again until the morning of the 8th of January 1964. That's 264 (8).....

A: Amazing. How many days is that?

B: About 11 days.

A: He probably slept for a 9..... after that.

B: Actually, no. His first sleep after those 11 days lasted almost (10)hours.

3,LISTEN AGAIN AND CHOOSE A, B, C:

1. What question were the researchers asking about the human body?

- A. Whether humans can live underwater
 - B. Whether it is possible to survive in a vacuum
 - C. Whether humans can live without oxygen
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2. What happened to the three Russian cosmonauts in 1971?

- A. Their spaceship caught fire
 - B. Their communication system failed
 - C. Their capsule lost pressure and they died
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3. At what altitude did the cosmonauts' capsule lose pressure?

- A. 50 km
 - B. 168 km
 - C. 200 km
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4. How long did the cosmonauts survive after the pressure dropped to zero?

- A. 30–40 seconds
 - B. 2 minutes
 - C. 1 hour
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5. What happened to the scientist in 1966 when the pressure suddenly dropped?

- A. He died immediately
 - B. He passed out
 - C. He stayed conscious
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6. How long did the pressure drop last in the 1966 experiment?

- A. 10 seconds
 - B. 27 seconds
 - C. 1 minute
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7. What other question have researchers been studying?

- A. How long humans can survive underwater
 - B. How long humans can survive without food
 - C. How long humans can survive without sleep
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8. How old was Randy Gardner when he stayed awake for 264 hours?

- A. 17
 - B. 18
 - C. 19
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9. How many days did Randy stay awake?

- A. 9 days
 - B. 11 days
 - C. 14 days
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10. How long did Randy sleep after staying awake for 11 days?

- A. About 5 hours
- B. Almost 10 hours
- C. Almost 15 hours