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Q72

With reference to street- lighting, how do sodium lamps differ from LED lamps? 1. Sodium lamps produce light in 360 degrees but it is not so in the case of LED lamps. 2. As street-lights, sodium lamps have longer life span than LED lamps. 3. The spectrum of visible light from sodium lamps is almost monochromatic while LED lamps offer significant colour advantages in street- lighting. Select the correct answer using the code given below (a) 3 only (b) 2 only (c) 1 and 3 only (d) 1, 2 and 3 Official key: C.

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Explanation

(a)

3 only. Statement 1 (360° sodium vs directional **LED**) also holds.

(b)

2 only. LEDs outlast sodium; the lifespan claim is backwards.

(c) Official key

1 and 3 only. Sodium lamps throw light all around and are nearly monochromatic. LEDs are directional and give a broader, controllable colour. Sodium does not live longer.

(d)

All three. Statement 2 fails.

Summary

Official key is (c) 1 and 3 only. High-pressure/low-pressure sodium is omnidirectional and almost one colour. **LED** street lights are directional and better on colour. **LED** life is longer, not shorter, than sodium.

Related possible facts

These can be asked in a future Prelims paper.

LPS / HPS

Narrow yellow/orange street glow.

LED

Long life, directional, high CRI.

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