

**SCORE Qcard-1
Answer**

Topic Relevance: SSC JE, KSEB Sub-Engineer

Approx Lumens in a 7W LED lamp

option c. 600 lumens

Luminous efficacy table

Light type	Typical luminous efficacy (lumens/watt)
Tungsten incandescent light bulb	12.5-17.5 lm/W
Halogen lamp	16-24 lm/W
Fluorescent lamp	45-75 lm/W
LED lamp	80-100 lm/W
Metal halide lamp	75-100 lm/W
High pressure sodium vapor lamp	85-150 lm/W
Low pressure sodium vapor lamp	100-200 lm/W
Mercury vapor lamp	35-65 lm/W

Energy saving lamps have high luminous efficacy (more lumens per watt).

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*SCORE Qcard-2
Answer*

Topic Relevance: SSC JE, KSEB Sub-Engineer

Carbon arc lamps are commonly used in

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option B. Cinema Projectors

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**SCORE Qcard-3
Answer**

Topic Relevance: SSC JE, KSEB Sub- Engineer

Luminous intensity observed from an ideal diffusely reflecting surface is directly proportional to the cosine of the angle between the direction of the incident light and the surface normal

**option A. Lambert's Emission
law (cosine emission law)**

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SCORE Qcard-4
Answer

Topic Relevance: SSC JE, KSEB Sub- Engineer

One Lumen per square meter is

option B. one lux

Candela indicates the
STRENGTH of the light emission

Candela

Lumen describes the amount
of light that is radiated

Lumen

Lux indicated the illumination
intensity of an area.

Lux

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**SCORE Qcard-5
Answer**

Topic Relevance: SSC JE, KSEB Sub- Engineer

The color temperature of day light is in the range

option C. 6000K

Color Temperature (KELVIN)	2000K - 3000K	3100K - 4500K	4600K - 6500K
Light Appearance	Warm White	Cool White	Daylight
Ambience	Cozy, calm, inviting, intimate	Bright, vibrant	Crisp, invigorating
Best for	Pendants, wall/coach lanterns, restaurant/commercial ambient lighting, residential recessed lighting, table & floor lamps	Basements, garages, work environments, task lighting	Display areas, security lighting, garages, task lighting

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SCORE Qcard-6 Answer

Topic Relevance: SSC JE, KSEB Sub-Engineer

Candela is the unit of

Option A. Luminous intensity

Luminous intensity is the perceived power per unit solid angle. If a lamp has a 1 lumen bulb and the optics of the lamp are set up to focus the light evenly into a 1 steradian beam, then the beam would have a luminous intensity of 1 candela

Credits: nptel,wiki

Also refer Qcard-4 answer

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SCORE Qcard-7 Answer Topic Relevance: SSC JE, KSEB Sub- Engineer

Lamp with highest power factor

Option A. GLS lamp

Standard type of

"General Lighting Service (GLS)

incandescent lamp with a coiled

coil tungsten filament



Types of GLS light bulb: (l-r)
Incandescent GLS with BC-B22d bayonet base, halogen GLS with ES-E27 screw cap base, energy saving CFL (Compact Fluorescent) with a BC-B22d bayonet base and a clear glass LED filament GLS with ES-E27 screw cap base.

Credits: nptel, Crompton.co

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SCORE Qcard-8 Answer

Topic Relevance: SSC JE, KSEB Sub-Engineer

Capacitor used in AT circuit of a sodium vapour lamp serves which purpose

Option D. Improvement of power factor

A choke is provided in sodium vapour lamp for stabilizing the electric discharge and a capacitor for power factor improvement.



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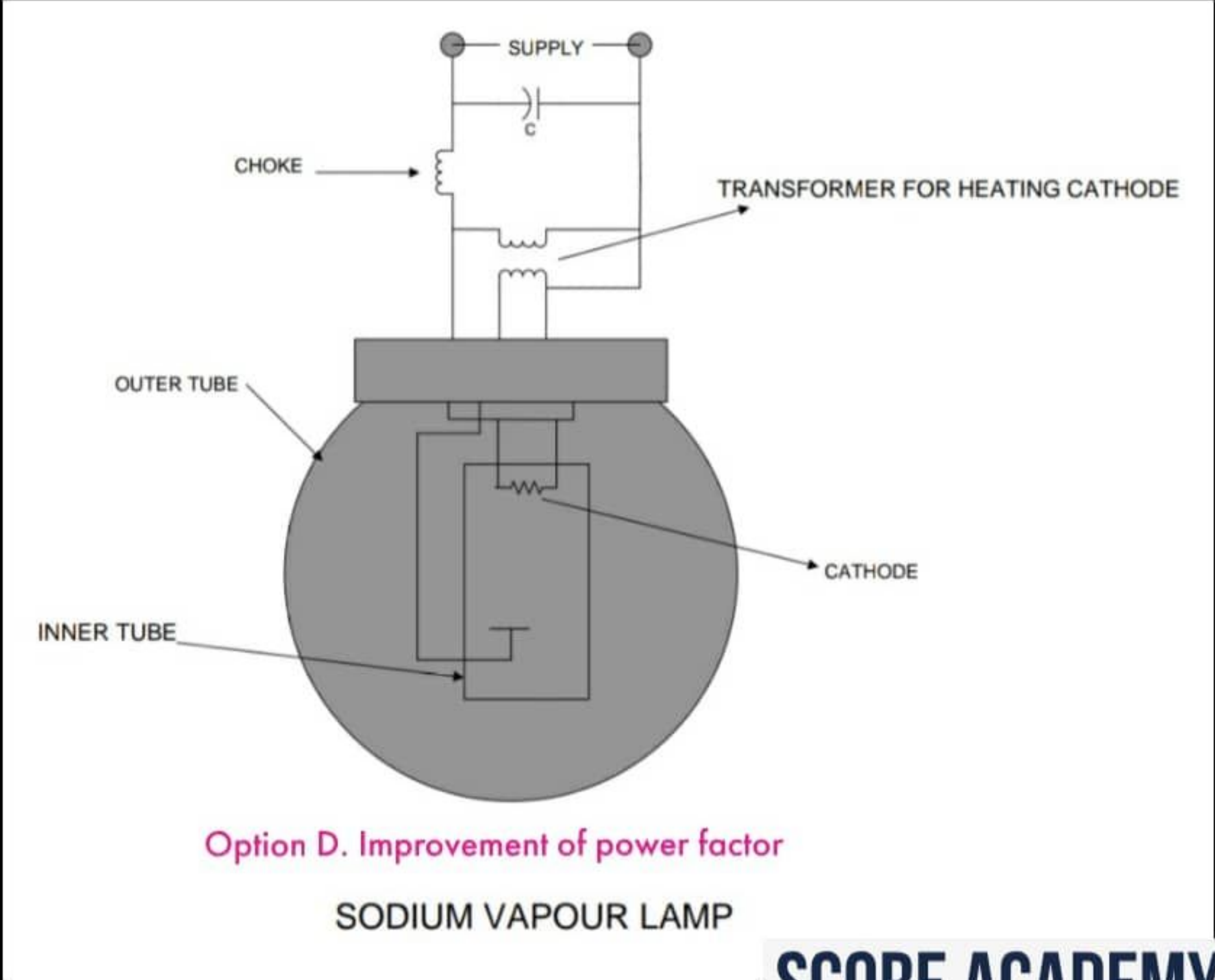


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SCORE Qcard-8 **Topic Relevance: SSC JE, KSEB Sub-Engineer**

Capacitor used in AT circuit of a sodium vapour lamp serves which purpose



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SCORE Qcard-9 Answer

Topic Relevance: SSC JE, KSEB Sub-Engineer

Lumen is

1. Luminous flux emitted in a unit solid angle by a source of one candle power
2. Is the measure of rate of energy radiation from a source
3. Lumen = candle power x solid angle
4. 1 lumen is 0.0016 watts

Option D. All are True

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SCORE Qcard-10 Answer

Topic Relevance: SSC JE, KSEB Sub-Engineer

Initial light emitted by a sodium vapour lamp is of _____ color

Option B. Red/Pink

For starting the lamp the electric discharge is allowed to take place in neon gas. The temperature inside the discharge tube rises and vaporizes sodium. Operating temperature is around 3000C. It takes about 10 minutes for the sodium vapour to displace the RED colour of the NEON by its own yellow colour.

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SCORE Qcard-11 Answer

Topic Relevance: SSC JE, KSEB Sub-Engineer

Germicidal lamps are

1. Lamps which produce UV light

3. Wavelength of 253.7 nm

Option A. 1 & 3 are True

Germicidal lamps are similar to fluorescent lamps but have NO phosphor coating and have tubes made of FUSED QUARTZ. This combination produces UV light of wavelength 253.7 nm (1182.5 THz)

Credits: wiki, science direct



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