

Cable Management Systems.

There are a number of recognised cable management systems for various applications, although with sufficient justification it would be difficult to say if any given one were **right** and another was **wrong**.

The cable management system is quite simply what type of cable is being installed & what type of fixing is being used to keep that cable in place (ie: Single PVC Cables in High Impact PVC Conduit)

However, some installation methods are what could be described as '**acknowledged cable management systems**' and hence should be referred to if given the opportunity to choose a system in a 2400 exam question.

These could include:

Domestic	:	PVC/PVC Twin
Outdoor Lighting & Power	:	SWA
Churches	:	MICC/MIMS
Small Industrial Workshop	:	Steel Trunking & Metal Conduit drops
Large Industrial Workshop	:	Bus-Bar Trunking and metal conduit drops
Industrial Kitchens	:	Galvanised Conduit
Medical Centres	:	Conduit Drops fixed with Hospital Saddles
Agricultural Buildings	:	High Impact PVC Conduit
High Explosive Areas	:	Seamless Conduit
Multi-Story Accommodation	:	Rising Main (Bus Bar) – or Rising Tray with SWA.

Lighting Control (Automatic/Manual)

The main lighting controls are;	Switch (Manual)
	Contactors (Manual or Automatic)
	PIR (Automatic)
	Photocell (Automatic)
	Timer (Automatic)

Firstly it is important to consider the reason for your lighting & the amount of lighting required. The answers to those two main questions will effect the control equipment used, and is when possibly all aspects of the above could come into play. Remember, larger loads will nearly always require a contactor instead of a switch.

A common question asked in the 2400 exam is to explain the design & installation process for providing lighting to a large outdoor area to encompass functional, aesthetic and security purposes. For example, if the question asked referred to the accompanying outdoor yard to a Bus Depot, and asked about Functional and Security lighting, then it is clear that the particular type of lighting chosen would need to be intense, but in essence would be down to the designers' preference.

A convincing answer to cover all aspects of the above may be:

For typical night-time lighting **8No - 300Watt SON-T light fittings** would be installed via a **contactor** which is controlled by a **photocell** – this photocell would in turn be brought on by a **24hour seasonally adjusted timer** unit, timed to come on at dusk until midnight.

For Security purposes **6No 500watt Halogen fittings** would be spaced between the SON-T fittings, with remote **PIR controlled sensors**, on a **timer** set from midnight till dawn. These would have an **over-ride switch** placed within the adjacent building to allow Security Guards to engage the lighting at

any given time. It may be assumed that CCTV is in place, and if this is the case Halogen gives the best lighting for allowing clear recording from CCTV.

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