PART 1: SCOPE, OBJECT, FUNDAMENTAL PRINCIPLES

IS ELECTRIC VEHICLE CHARGING COVERED BY BS 7671?

Part 1 is short and yields **4 exam questions**. It answers three kinds of question: what the book covers, what it's *for*, and the safety principles behind everything else.

CHAPTER	WHAT IT DOES	TYPICAL QUESTION
11	**Scope** — what's included and what's excluded	"Which is included in the scope of BS 7671?"
12	**Object and effects**	Relationship with statutory regulations
13	**Fundamental principles**	"Which sets out the fundamental principles…?"

110.1 gives the list of what the Regulations apply to — a typical question asks whether **electric vehicle charging** is covered, and you find it simply by reading the list. Turn the page and **110.2** gives the exclusions — **lightning protection systems**, for example.

> **Keyword habit.**
> Highlight the two phrases "the Regulations apply to" and "the Regulations *do not* apply to". Half of Part 1's questions are answered by landing on one of those two lists.

120.2 is the one that catches people: it states that **Chapter 13 sets out the fundamental principles, and does not include detailed technical requirements** which may change with technical developments. So a question asking where the *fundamental principles* are set out points to **Chapter 13**, not Chapter 11 or 12 — and Chapter 13 is not where the detailed technical requirements live.

New materials and inventions. BS 7671 doesn't forbid something new. Where a new material or invention leads to a departure from the Regulations, the resulting degree of safety must be **no less** than you would get by complying with them. That is the designer's judgement, and the departure is recorded on the certificate. Example: a new type of fused connection unit with no British Standard yet can still be fitted.

> ☰ **Fundamental principles** are what every installation shares — like all of us having a skeleton and a circulatory system. Protection for safety, protection against electric shock, against thermal effects, against overcurrent. Chapter 13 is where they live.

Chapter 13 also carries the protective measures. A typical question asks which is **not** a method of providing **fault protection**, and the answer is the one not in the list — note the trap word **not**.

B

Basic protection

One layer between you and a live part:

insulation

on the conductor, or an

enclosure/barrier

such as a consumer unit lid or a switch cover.

F

Fault protection

Protection when something has already gone wrong: mainly

ADS

(automatic disconnection of supply), also double or reinforced insulation, electrical separation, ELV.

✋ **Don't reflex to "RCD" for fault protection.** An RCD or RCBO *can* serve as fault protection, but its main job in these questions is **additional protection**. ADS is the headline answer for fault protection.

- **110.1** · what the Regulations apply to
- **110.2** · exclusions from the scope
- **120.2** · Chapter 13 holds the fundamental principles
- **Part 1** · new materials and inventions: safety no less than compliance
- **Chapter 13** · fundamental principles, protection for safety

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