Fundamental Changes to BS7671:2008 from BS7671:2004

Parts 1 - 4 covered am.

Part 1 Scope

Part 1 134.2.1 ... Inspection & Testing shall be carried out...

Part 1 135.12 ...every installation is subjected to periodic inspection & testing

Part 2 Definitions

New words & phrases defined, such as:

Basic Protection (Direct Contact)
Class I, Class II, Class III Equipment
Competent Person
Fault Protection(Indirect Contact)
Houseboat
Instructed Person
Powertrack system (PT System)
PV – Photovoltaic
Skilled Person

New page of Symbols & Algebraic Terms

Part 3 General Characteristics

Chapter 32 Be aware of the slight descriptive changes in Appendix 5 for A/B/C ratings Chapter 36 Continuity of Service (New)

Part 4 Protection for Safety

Chapter 41 – Much added symposium regarding RCD's 411.1

Protective Measure: Automatic Disconnection of Supply – (EEBAADS has been removed) 411.3.1.2

Protective Equipotential Bonding

Table 41.1 - Disconnection Times (New)

Tables 41.2, 41.3, 41.4 – Zs now taken at 230V so the figures are slightly less than 16th Edition* *see appx 14 for new inclusion of 80% rule for Measured Zs.

Table 41.5 for RCD's in a TT system (New) 411.7.5 – Plugs, sockets, LSC's, DCL's and cable couplers Typical additional Regulation to cover new technology...

412.2.1.1

New Symbols - ie:



& used when discussing Electrical Equipment...

415.1.1

Additional Protection: (RCDs)

See appendix 3 – page 243 for new Table covering new disconnection times

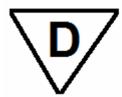
416: Basic Protection (was Direct Contact)

Fig 417 now present (previously in definitions)

422 - Precautions where a risk of Fire exists

New symbols present as shown below in Fig 1

Fig 1.





See Regulations 422.3.2 & 422.4.2 for use of these symbols and meanings

434.5 Fault Current of a Protective Device

Table 43.1 (new) and equation
$$t = \frac{k^2 S^2}{I^2}$$

Chapter 44 – Voltage Disturbance & Electromagnetic Disturbances (New)

442.2 – Uf, U₁ and U₂ new – see Figure 44.1 (New) – discussed the effect a fault on the primary side of a HV transformer may have on the secondary side, and precautions required. Very deep chapter, and need only be referred to for the exam.

Fig & Table 44.2 & Table 44.3 (new- but only used for high end design work in practice).

Parts 5, 6 & 7. & new Appendix covered PM.

Some familiar working Appendix pointers...

Appendix 4 Page 254 - for Groups of different cables use the equation $F = \frac{1}{\sqrt{n}}$

Page 255 - new Correction Factor listed : Cc

Page 261 – Reference Methods are now letters (although Table 4A2 is numbered & for T&E cable)

Page 267-272 Tables 4B1 to 4C5 – Ambient Temp, Grouping, Buried Cables Tables (New layout)

Page 282 – Twin & Earth Current Carrying Table with V_d per Amp per Meter attached.

Appendix 14 - discussed earlier (Earth Fault Loop Impedance) including reference to the 80% rule.

Appendix 15 - Rings & Radials (spot the mistakes &/or debatable diagrams....!)