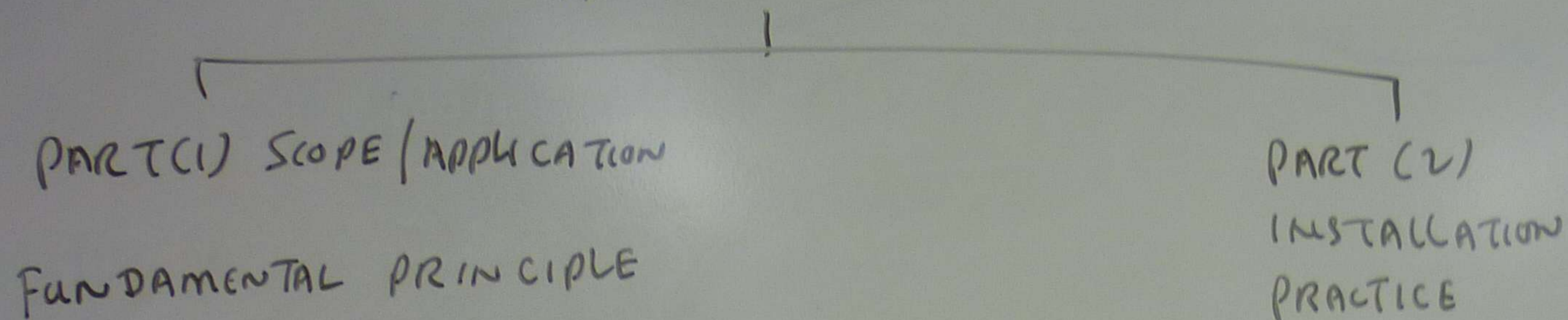


AS 3000 WIRING RULE



STRUCTURE

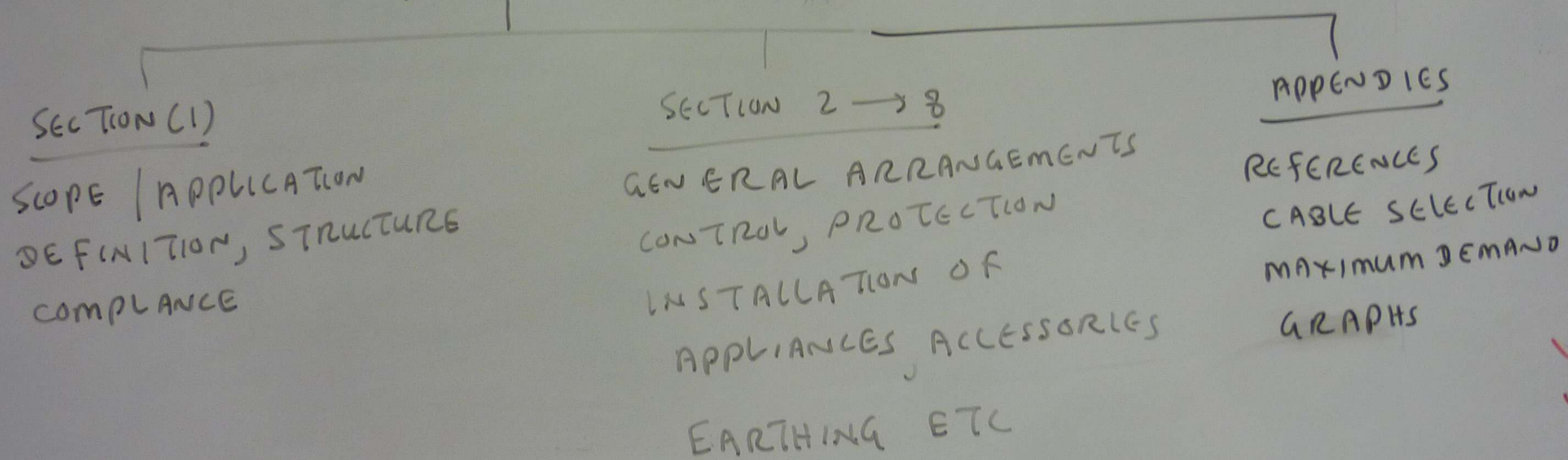


TABLE C1 - DOMESTIC ELECTRICAL INSTALLATION

TABLE C2 - NON DOMESTIC ELECTRICAL INSTALLATION

| ph | DETER | DOMESTIC | SINGLE |
|----|----------|----------|--------|
| ✓ | 24 | L | |
| ✓ | 10 mm | L | |
| ✓ | 9 - 10 A | | |
| ✓ | 8 - 10 A | | |
| ✓ | 1 - 50 W | | |
| ✓ | 1 - 100 | | |
| ✓ | 1 - 15 A | | |
| ✓ | 1 - 10 | | |
| ✓ | 1 - 4 | | |
| ✓ | 1 - 3 | | |

PART (2)
INSTALLATION
PRACTICE

ARRANGEMENTS
SECTION
OF
ACCESSORIES
ETC

APPENDICES
REFERENCES
CABLE SELECTION
MAXIMUM DEMAND
GRAPHS

TABLE C1 - DOMESTIC ELECTRICAL
INSTALLATION
TABLE C2 - NON DOMESTIC
ELECTRICAL INSTALLATION

MAXIMUM DEMAND

TO SELECT THE APPROPRIATE SUPPLY CABLE
AS 3000: 2007 TABLE C1, C2, C3 - PAGE 371

pb DETERMINE THE MAXIMUM DEMAND OF A SINGLE
DOMESTIC ELECTRICAL INSTALLATION SUPPLIED AT
SINGLE PHASE WITH THE FOLLOWING LOADS.

- ✓ 24 LIGHTING POINTS
- ✓ 10m LIGHTING TRACK
- ✓ 9 - 10A SINGLE SOCKET OUTLET
- ✓ 8 - 10A DOUBLE SOCKET OUTLET
- ✓ 1 - 50W EXHAUST FAN
- ✓ 1 - 1000W STRIP HEATER
- ✓ 1 - 15A SOCKET OUTLET
- ✓ 1 - 10kW RANGE
- ✓ 1 - 4.8 kW WATER HEATER
- ✓ 1 - 3kW TENNIS COURT LIGHTING

24 LIGHT POINTS

TABLE C1, LOAD A
SINGLE DOMESTIC -

✓ FIRST 20 pt
FOR ADDITIONAL 4pt IS
WITHIN ADDITIONAL 20

✓ 10m LIGHTING TRACK
FOOT NOTE (d) -

9 - 10A SINGLE SOCKET
8 - 10A DOUBLE SOCKET
STRIP HEATER

CABLE

3 - PAGE 371

AND OF A SINGLE SUPPLIED AT LOADS.

24 LIGHT POINTS

TABLE C1, LOAD GROUP A(CI)
SINGLE DOMESTIC - COLUMN 2

FIRST 20 pt → 3A ✓

FOR ADDITIONAL 4pt IS → 2A
WITHIN ADDITIONAL 20 pt

10m LIGHTING TRACK

FOOT NOTE (d) - 2 pt/m × 10m = 20 pt ⇒ 3A

9 - 10A SINGLE SOCKET OUTLET = 9 pt

8 - 10A DOUBLE SOCKET OUTLET = 8 × 2 = 16 pt

STRIP HEATER

LIGHTING = 24 pt

LIGHTING TRACK = 20 pt

EXHAUST FAN = 1 pt

20pt → 3A
20pt → 2A
20pt → 2A

7A

LOAD GROUP B(CI)

26 pt

20 pt + 6 pt

10A + 5A = 15A

(2)

15A SOCKET OUTLET -

LOAD GROUP B(CI)

10 KW RANGE

LOAD GROUP (C)

$$\frac{10 \times 10^3}{240}$$

$$10.5 = 20.8$$

4.8 KW

WATER HEATER

LOAD GROUP (F)

$$\frac{4.8 \times 10^3}{240} = 20$$

TENNIS COURT

$$\frac{3 \times 10^3}{240}$$

LIGHTING = 24 pt
 LIGHTING TRACK = 20 pt
 EXHAUST FAN = 1 pt

20pt → 3A
 20pt → 2A
 20pt → 2A
 pt ⇒ 3A

9 pt
 6 pt
 1 pt

26 pt

pt + 6 pt
 ↓
 10A + 5A = 15A - (2)

15A SOCKET OUTLET -

LOAD GROUP B(ii) → 10A - (3)

10 kW RANGE

$$\frac{10 \times 10^3}{240}$$

LOAD GROUP (C) - 50% OF CONNECTED LOAD

$$10 \times 0.5 = 20.8 A - (4)$$

4.8 kW WATER HEATER - STORAGE HEATER

LOAD GROUP (F) FULL LOAD

$$\frac{4.8 \times 10^3}{240} = 20 A - (5)$$

TENNIS COURT LIGHTING - OUT DOOR LIGHTING A(ii)

$$\frac{3 \times 10^3 \times 0.75}{240} = 9.4 A - (6)$$

TOTAL MAXIMUM DEMAND = 1 + 2 + 3 + 4 + 5 + 6
 = 7 + 15 + 20 + 20.8 + 20 + 9.4
 = 82.2

POINT OF ATTACHMENT

ET-
up B (ii) → 10A — (3)

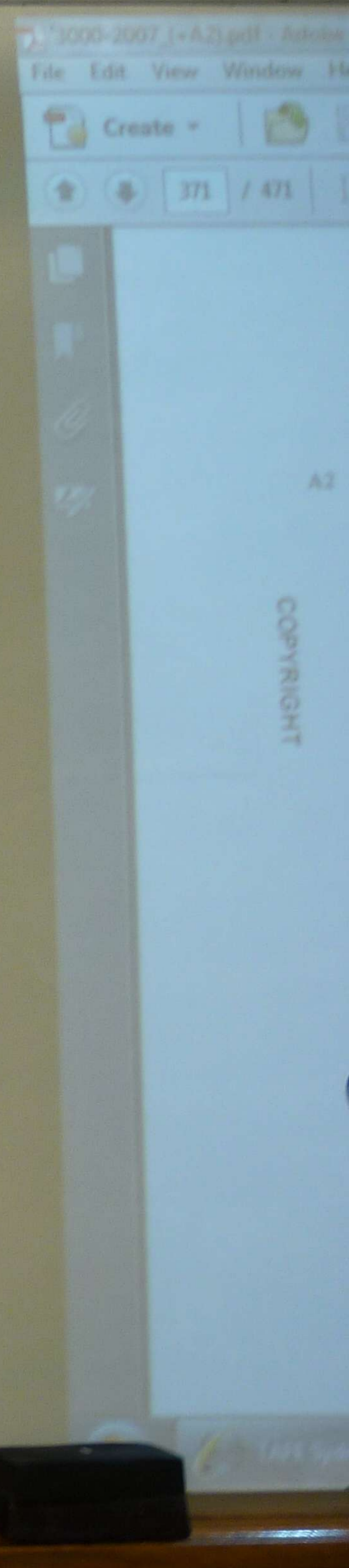
up (C) — 50% OF CONNECTED LOAD
20.8A — (4)

HEATER — STORAGE HEATER
up (F) FULL LOAD
20A — (5)

COURT LIGHTING — OUT DOOR LIGHTING A(ii)
75% CONNECTED LOAD
 $\frac{3 \times 10^3 \times 0.75}{240} = 9.4A$ — (6)

TOTAL MAXIMUM DEMAND = 1 + 2 + 3 + 4 + 5 + 6
= 7 + 15 + 10 + 20.8 + 20 + 9.4
= 82.2A

POINT OF ATTENDANCE //



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| Load group | Single domestic electrical installation or individual living unit per phase ^a | Blocks of living units ^{a,b,c} | | |
|--|--|--|---|-----------------------------------|
| | | 2 to 5 living units per phase | 6 to 20 living units per phase | 21 or more living units per phase |
| | | Loading associated with individual units | | |
| A2 A. Lighting (i) Except (ii) and load group H below ^{d,e} | 3 A for 1 to 20 points + 2 A for each additional 20 points or part thereof | 6 A | 5 A + 0.25 A per living unit | 0.5 A per living unit |
| | (ii) Outdoor lighting exceeding a total of 1000 W ^{f,g} | 75% connected load | No assessment for the purpose of maximum demand | |
| B. (i) Socket-outlets not exceeding 10A ^{e,h} . Permanently connected electrical equipment not exceeding 10 A and not included in other load groups ⁱ | 10 A for 1 to 20 points + 5 A for each additional 20 points or part thereof | 10 A + 5 A per living unit | 15 A + 3.75 A per living unit | 50 A + 1.9 A per living unit |
| | (ii) Where the electrical installation includes one or more 15 A socket-outlets, other than socket-outlets provided to supply electrical equipment set out in groups C,D, E, F, G, and L ^{h,j} | 10 A | | |
| | (iii) Where the electrical installation includes one or more 20 A socket-outlets other than socket-outlets provided to supply electrical equipment set out in groups C, D, E, F, G, and L ^{h,j} | 15 A | | |

(continued)

TABLE C1 (continued)

| 1 Load group | 2 Single domestic electrical installation or individual living unit per phase ^a | 3 | 4 | 5 |
|---|---|---|--------------------------------|-----------------------------------|
| | | Blocks of living units ^{a,b,c} | | |
| | | 2 to 5 living units per phase | 6 to 20 living units per phase | 21 or more living units per phase |
| C. Ranges, cooking appliances, laundry equipment or socket-outlets rated at more than 10 A for the connection thereof ^h | 50% connected load | 15 A | 2.8 A per living unit | |
| D. Fixed space heating or airconditioning equipment, saunas or socket-outlets rated at more than 10 A for the connection thereof ^{h,k} | 75% connected load | 75% connected load | 75% connected load | |
| E. Instantaneous water heaters ^l | 33.3% connected load | 6 A per living unit | | 100 A + 0.8 A per living unit |
| F. Storage water heaters ^m | Full-load current | 6 A per living unit | | 100 A + 0.8 A per living unit |
| G. Spa and swimming pool heaters | 75% of the largest spa, plus 75% of the largest swimming pool, plus 25% of the remainder | | | |

(continued)

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NOTES TO TABLE C1:

- ^a See Clause 2.2.2 for where the maximum demand for consumers mains, and submains, and final subcircuits, respectively, may be determined by assessment, measurement or limitation.
- ^b For multiphase connections, divide the number of living units by the number of supply phases, e.g. 16 units on a three-phase supply, $16/3 = 6$ units on the heaviest loaded phase (Column 4).
- ^c Where only a portion of the number of units in a multiple domestic electrical installation is equipped with permanently connected or fixed appliances, such as electric cooking ranges or space heating equipment, the number of appliances in each category is divided over the number of phases, and the maximum demand determined as shown in Example 3 of Paragraph C2.3.2.
- ^d Lighting track systems shall be regarded as two points per metre of track.
- ^e A socket-outlet installed more than 2.3 m above a floor for the connection of a luminaire may be included as a lighting point in load group A(i).
An appliance rated at not more than 150 W, which is permanently connected, or connected by means of a socket-outlet installed more than 2.3 m above a floor, may be included as a lighting point in load group A(i).
- ^f In the calculation of the connected load, the following ratings shall be assigned to lighting:
- (i) *Incandescent lamps* 60 W or the actual wattage of the lamp to be installed, whichever is the greater, except that if the design of the luminaire associated with the lampholder permits only lamps of less than 60 W to be inserted in any lampholder, the connected load of that lampholder shall be the wattage of the

Pb

DETERMINE THE MAXIMUM DEMAND OF THE HEAVIEST LOADED PHASE IN A DOMESTIC ELECTRICAL INSTALLATION COMPRISING

26 LIGHTING POINTS

24 x 10A SINGLE SOCKET OUTLET

1 x 15A SOCKET OUTLET

1 x 6.6 kW RANGE

1 x 4 kW AIR CONDITIONING UNIT

1 x 12.96 kW INSTANTANEOUS WATER HEATER

1 x 3.6 kW CLOTH DRYER

2 x 5 kW HOT PLATES
AND ARRANGED FOR CONNECTION ACROSS A 3 ϕ

SUPPLY AS FOLLOWS -

TABLE C1 (DOMESTIC) - PAGE 371 | AS 3000
(2 (NON DOMESTIC)) | : 2007

RED

5 kW ✓ HOT PLATE

~~4 kW~~ ✓ AIR CON

4.8 kW ✓
INSTANTANEOUS
WATER HEATER

12.96 kW

3 ϕ

AND OF THE HEAVIEST LOADED
 CAL INSTALLATION COMPRISING

LET

UNIT

WATER HEATER

IONS ACROSS A 3φ

(DOMESTIC) - PAGE 371 AS 3000
 : 2007

(NON DOMESTIC)

| RED | WHITE | BLUE | EQUIPMENT |
|---|---|---|--|
| 5 kW HOTPLATE | 15 x 10A SOCKET OUTLET | 26 LIGHTS | <u>LIGHTING</u> 26 LIGHTS |
| 4 kW AIR CON | 5 kW HOT PLATE | 9 x 10A SOCKET OUTLET | 1st 20pt → 3A } SA 2nd 20pt → 2A } |
| 4.8 kW INSTANTANEOUS WATER HEATER | 4.8 kW INSTANTANEOUS WATER HEATER | 6.6 kW RANGE | 10A SOCKET OUTLET 15 x 10A SOCKET OUTLET 9 x 10A SOCKET OUTLET |
| | 3.6 kW CLOTH DRYER | 4.8 kW INSTANTANEOUS WATER HEATER | <u>RANGE</u> 5 kW HOT PLATE ⇒ $\frac{5 \times 10^3 \times 0.5}{240} = 10.9A$ 5 kW HOT PLATE 6.6 kW RANGE ⇒ $\frac{6.6 \times 10^3 \times 0.5}{240} = 12.7A$ |

12.96 kW
 3φ = 4.8 kW / ph

$\frac{4 \times 10^3 \times 0.75}{240} = 12.5A$

$\frac{3.6 \times 10^3 \times 0.5}{240} = 7.5A$

INSTANTANEOUS WATER HEATER
 $\frac{4.8 \text{ kW} \times 10^3 \times 0.773}{240} = 7.5$

4 kW AIR CON
 3.6 kW CLOTH DRYER - LAUN

| BUS | EQUIPMENT | LOAD GROUP | COLUMN | RED | WHITE | BUS |
|-------------------------------------|--|------------|--------|-----|-------|------|
| 26 LIGHTS ✓ | LIGHTING 26 LIGHTS 1st 20pt → 3A 2nd 20pt → 2A } SA | A(i) | 2 | | | SA |
| 9x 10A SOCKET OUTLET ✓ | 10A SOCKET OUTLET | B(i) | 2 | | | |
| 6.6 kW RANGE ✓ | 15 x 10A SOCKET OUTLET | | | | 10A | |
| 4.8 kW INSTANTANEOUS WATER HEATER ✓ | 9 x 10A SOCKET OUTLET | | | | | 10A |
| | RANGE 5 kW HOT PLATE ⇒ $\frac{5 \times 10^3 \times 0.5}{240} = 10.9A$ | C | 2 | | | |
| | 5 kW HOT PLATE | | | | 10.9 | |
| | 6.6 kW RANGE = $\frac{6.6 \times 10^3 \times 0.5}{240} = 12.7A$ | | | | | 12.7 |
| S = 12.5A | INSTANTANEOUS WATER HEATER 4.8 kW ⇒ $\frac{4.8 \times 10^3 \times 0.333}{240} = 7.5A$ | E | 2 | | | |
| | 4 kW AIR COND. | D | 2 | | | |
| S = 7.5A | 3.6 kW CLOTH DRYER - LAUNDRY | C | 2 | | | |
| | | | | | 7.5 | |
| | | | | | 7.5 | |
| | | | | | | 7.5 |
| | | | | | 12.5 | |
| | | | | | | 7.5A |

| RED | WHITE | BLUE |
|-----------------------------------|-----------------------------------|-----------------------------------|
| 5 kW HOT PLATE | 15x 10A SOCKET OUTLET | 26 LIGHTS |
| 4 kW AIR CON | 5 kW HOT PLATE | 9x 10A SOCKET OUTLET |
| 4.8 kW INSTANTANEOUS WATER HEATER | 4.8 kW INSTANTANEOUS WATER HEATER | 6.6 kW RANGE |
| | 3.6 kW CLOTH DRYER | 4.8 kW INSTANTANEOUS WATER HEATER |

$12.96 \text{ kW} = 4.8 \text{ kW/ph}$
 3ϕ

$$\frac{4 \times 10^3 \times 0.75}{240} = 12.5 \text{ A}$$

$$\frac{3.6 \times 10^3 \times 0.5}{240} = 7.5 \text{ A}$$

| EQUIPMENT | LOAD GROUP | column | RED | WHITE |
|--|------------|--------|------|-------|
| <u>LIGHTING</u> 26 LIGHTS 1st 20 pt → 3A 2nd 20 pt → 2A } SA | A (I) | 2 | | |
| 10A SOCKET OUTLET 15 x 10A SOCKET OUTLET 9 x 10A SOCKET OUTLET | B (I) | 2 | | 10A |
| <u>RANGE</u> 5 kW HOT PLATE ⇒ $\frac{5 \times 10^3 \times 0.5}{240} = 10.9 \text{ A}$ 6.6 kW RANGE ⇒ $\frac{6.6 \times 10^3 \times 0.5}{240} = 12.7 \text{ A}$ | C | 2 | | 10.9 |
| INSTANTANEOUS WATER HEATER 4.8 kW ⇒ $\frac{4.8 \times 10^3 \times 0.75}{240} = 7.5 \text{ A}$ | E | 2 | 7.5 | 7.5 |
| 4 kW AIR CON | D | 2 | 12.5 | |
| 3.6 kW CLOTH DRYER - LAUNDRY | C | 2 | | 7.5A |

WHITE BLUE

→ 5A

→ 10A

→ 12.7

7.5 → 7.5

7.5A

| RED | WHITE | BLUE |
|---------------------|----------------------|-----------------------|
| $10.9 + 7.5 + 12.5$ | $10 + 10.4 + 7.5$ | $5 + 10 + 12.7 + 7.5$ |
| $= 38.9A$ | $+ 7.5$ $= 33.9A$ | $= 34.7A$ |

HEAVIEST LOAD (RED) = 38.9A



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TABLE C1 (continued)

| 1 | 2 | 3 | 4 | 5 |
|---|--|--|--------------------------------|-----------------------------------|
| Load group | Single domestic electrical installation or individual living unit per phase ^a | Blocks of living units ^{a,b,c} | | |
| | | 2 to 5 living units per phase | 6 to 20 living units per phase | 21 or more living units per phase |
| | | Loading associated with individual units | | |
| C. Ranges, cooking appliances, laundry equipment or socket-outlets rated at more than 10 A for the connection thereof ^h | 50% connected load | 15 A | 2.8 A per living unit | |
| D. Fixed space heating or airconditioning equipment, saunas or socket-outlets rated at more than 10 A for the connection thereof ^{h,k} | 75% connected load | 75% connected load | 75% connected load | |
| E. Instantaneous water heaters ^l | 33.3% connected load | 6 A per living unit | | 100 A + 0.8 A per living unit |
| F. Storage water heaters ^m | Full-load current | 6 A per living unit | | 100 A + 0.8 A per living unit |
| G. Spa and swimming pool heaters | 75% of the largest spa, plus 75% of the largest swimming pool, plus 25% of the remainder | | | |

(continued)

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| Load group | Single domestic electrical installation or individual living unit per phase ^a | Blocks of living units ^{a,b,c} | | |
|--|--|--|---|-----------------------------------|
| | | 2 to 5 living units per phase | 6 to 20 living units per phase | 21 or more living units per phase |
| | | Loading associated with individual units | | |
| A. Lighting (i) Except (ii) and load group H below ^{d,e} | 3 A for 1 to 20 points + 2 A for each additional 20 points or part thereof | 6 A | 5 A + 0.25 A per living unit | 0.5 A per living unit |
| | (ii) Outdoor lighting exceeding a total of 1000 W ^{f,g} | 75% connected load | No assessment for the purpose of maximum demand | |
| B. (i) Socket-outlets not exceeding 10A ^{e,h} . Permanently connected electrical equipment not exceeding 10 A and not included in other load groups ⁱ | 10 A for 1 to 20 points + 5 A for each additional 20 points or part thereof | 10 A + 5 A per living unit | 15 A + 3.75 A per living unit | 50 A + 1.9 A per living unit |
| | (ii) Where the electrical installation includes one or more 15 A socket-outlets, other than socket-outlets provided to supply electrical equipment set out in groups C,D, E, F, G, and L ^{h,j} | 10 A | | |
| | (iii) Where the electrical installation includes one or more 20 A socket-outlets other than socket-outlets provided to supply electrical equipment set out in groups C, D, E, F, G, and L ^{h,j} | 15 A | | |

(continued)

pb

DETERMINE THE MAXIMUM DEMAND OF THE HEAVIEST LOAD PHASE OF A BLOCK OF 80 UNITS COMPRISING THE FOLLOWING LOADS

- ✓ LIGHTING — 80 UNITS
- 10A SOCKET OUTLET = 80 UNIT
- ELECTRIC RANGE ⇒ 17 UNIT
- 2.5 kW (10.4 A) PERMANENT STRIP
- HEATER = 80 UNIT
- QUICK RECOVERY WATER HEATER = 80 UNIT

LOADING NOT ASSOCIATED

- ✓ 90 — 60W LIGHTING POINTS
- ✓ 21 — 100W LIGHTING POINTS
- 20 — 10A SINGLE SOCKET OUTLET
- 10 — 3.6 kW CLOTH DRYER
- 2 — 12 kW LIFT MOTOR X
- 1 — 5.5 kW 3φ PUMP MOTOR ✓

- ✓ 1 — 4 kW
- 3φ
- WATER SUPPLY
- MOTOR

INDI
ELECTR

①

L

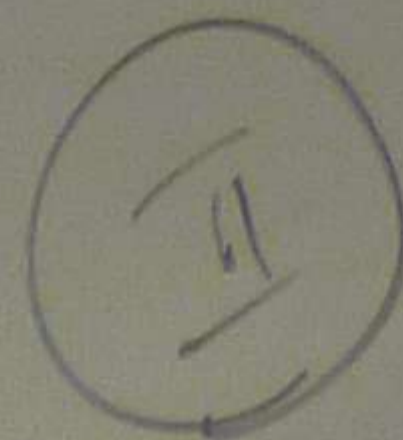
SO

E

ST

INDIVIDUAL UNIT / PH - $\frac{80}{3} \approx 27$

ELECTRIC RANGE / PH $\frac{17}{3} \approx 6$



Common Load

EQUIPMENT

① INDIVIDUAL UNIT

| EQUIPMENT | LOAD GROUP | COLUMN | CALCULATION | RESULT |
|------------------------------|-----------------------|--------|---|----------------|
| LIGHTING - 27 UNITS | A (i) | S | 0.5×27 | 13.5 A |
| SOCKET OUTLET | B (i) | S | $50 + 1.9 \times 27$ | 101.3 A |
| ELECTRIC RANGE 6 UNIT | C | 4+5 | 2.8×6 | 16.8 A |
| STRIP HEATER 27 UNIT / PH | SPACE HEATING D | 4+5 | $\frac{0.75 \times 2.5 \times 10^3 \times 27}{240}$ | 210.6 A |
| WATER HEATER | STORAGE (F) HEATER | 5 | $100 + 0.8 \times 27$ | 121.6 A |
| | | | | <u>468.2 A</u> |

COMMUNAL LIGHTING

10A SINGLE OUTLET

$\frac{20}{3PH} \approx 7$ UNIT

3.6 kW CLOTH DRYER

$10/3 \approx 4$

LIFT

MOTOR

✓
- 4 kW
3 φ
WATER SUPPLY
MOTOR

(II) COMMON LOADS

| CALCULATION | RESULT | EQUIPMENT | LOAD GROUP | COLUMN | CALCULATION | RESULT |
|---|----------------|---------------------------------|----------------|--------|--|-------------|
| 0.5×27 | 13.5 A | COMMUNAL LIGHTING | H | 3+4+5 | $\frac{90 \times 60 + 21 \times 100}{240 \times 3}$ | 10.4 A |
| $50 + 1.9 \times 27$ | 101.3 A | 10A SINGLE OUTLET | I | 3-4+5 | $2 \times 7 = 14A$ | 14 A |
| 2.8×6 | 16.8 A | $\frac{20}{3PH} \approx 7$ UNIT | J | 3-4+5 | $\frac{3.6 \times 10^3 \times 4 \times 0.5}{240}$ | 30 |
| $\frac{0.75 \times 2.5 \times 10^3 \times 27}{240}$ | 210.6 A | 3.6kW CLOTH DRYER | | | | |
| | | $10/3 \approx 4$ | | | | |
| | | LIFT | | | NIL | |
| $100 + 0.8 \times 27$ | 121.6 A | MOTOR | C2-COL2 | | $\frac{5.5 \times 10^3 + 0.5 \times 4 \times 10^3}{240}$ | 14.6 A |
| | | | LOAD GROUP (D) | | | |
| | <u>468.2 A</u> | | | | | <u>69 A</u> |

| CALCULATION | RESULT |
|--|--------|
| $\frac{90 \times 60 + 21 \times 100}{240 \times 3}$ | 10.4 A |
| $2 \times 7 = 14A$ | 14 A |
| $\frac{3.6 \times 10^3 \times 4 \times 0.5}{240}$ | 30 |
| NIL | |
| $\frac{5.5 \times 10^3 + 0.5 \times 4 \times 10^3}{240} =$ | 14.6 A |
| | 69 A |

$$\text{TOTAL LOAD} = \overline{I} + \overline{U}$$

$$= 468.8 + 69$$

$$= 532.8 \text{ Amp.}$$

| 1 | 2 | 3 |
|--|---|---|
| Load group | Residential institutions, hotels, boarding houses, hospitals, accommodation houses, motels^a | Factories, shops, stores, offices, business premises, schools and churches^a |
| A. Lighting other than in load group F^{b,c} | 75% connected load | Full connected load |
| B. | | |
| (i) Socket-outlets not exceeding 10 A other than those in B(ii) ^{c,e} | 1000 W for first outlet plus 400 W for each additional outlet | 1000 W for first outlet plus 750 W for each additional outlet |
| (ii) Socket-outlets not exceeding 10 A in buildings or portions of buildings provided with permanently installed heating or cooling equipment or both ^{c,d,e} | 1000 W for first socket-outlet, plus 100 W for each additional outlet | |
| (iii) Socket-outlets exceeding 10 A ^{c,e} | Full current rating of highest rated socket-outlet, plus 50% of full current rating of remainder | Full current rating of highest rated socket-outlet plus, 75% of full current rating of remainder |
| C. Appliances for cooking, heating and cooling, including instantaneous water heaters, but not appliances included in groups D and J below | Full connected load of <u>highest rated appliance</u> , plus 50% of full load of remainder | Full connected load of highest rated appliance, plus 75% of full load of remainder |
| D. Motors other than in E and F below | Full load of highest rated motor, plus 50% of full load of remainder | Full load of highest rated motor, plus 75% of full load of second highest rated motor, plus 50% of full load of remainder |

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TABLE C2
MAXIMUM DEMAND NON-DOMESTIC ELECTRICAL INSTALLATIONS

| 1 | 2 | 3 |
|--|---|--|
| Load group | Residential institutions, hotels, boarding houses, hospitals, accommodation houses, motels^a | Factories, shops, stores, offices, business premises, schools and churches^a |
| A. Lighting other than in load group F ^{b,c} | 75% connected load | Full connected load |
| B. | | |
| (i) Socket-outlets not exceeding 10 A other than those in B(ii) ^{c,e} | 1000 W for first outlet plus 400 W for each additional outlet | 1000 W for first outlet plus 750 W for each additional outlet |
| (ii) Socket-outlets not exceeding 10 A in buildings or portions of buildings provided with permanently installed heating or cooling equipment or both ^{c,d,e} | 1000 W for first socket-outlet, plus 100 W for each additional outlet | |
| (iii) Socket-outlets exceeding 10 A ^{c,e} | Full current rating of highest rated socket-outlet, plus 50% of full current rating of remainder | Full current rating of highest rated socket-outlet plus, 75% of full current rating of remainder |
| C. Appliances for cooking, heating and cooling, including instantaneous water heaters, but not appliances included in groups D and J below | Full connected load of highest rated appliance, plus 50% of full load of remainder | Full connected load of highest rated appliance, plus 75% of full load of remainder |
| D. Motors other than in E and F | Full load of highest rated | Full load of highest |

TABLE C1

MAXIMUM DEMAND—SINGLE AND MULTIPLE DOMESTIC ELECTRICAL INSTALLATIONS

| 1 Load group | 2 Single domestic electrical installation or individual living unit per phase ^a | 4 Blocks of living units ^{a,b,c} | | |
|--|---|---|-------------------------------------|--|
| | | 3 2 to 5 living units per phase | 4 6 to 20 living units per phase | 5 21 or more living units per phase |
| | | Loading associated with individual units | | |
| A. Lighting (i) Except (ii) and load group H below ^{d,e} | 3 A for 1 to 20 points + 2 A for each additional 20 points or part thereof | 6 A | 5 A + 0.25 A per living unit | 0.5 A per living unit |
| | | No assessment for the purpose of maximum demand | | |
| (ii) Outdoor lighting exceeding a total of 1000 W ^{f,g} | 75% connected load | No assessment for the purpose of maximum demand | | |
| B. (i) Socket-outlets not exceeding 10A ^{e,h} . Permanently connected electrical equipment not exceeding 10 A and not included in other load groups ⁱ | 10 A for 1 to 20 points + 5 A for each additional 20 points or part thereof | 10 A + 5 A per living unit | 15 A + 3.75 A per living unit | 50 A + 1.9 A per living unit |
| | | 10 A | | |
| | | 15 A | | |
| (ii) Where the electrical installation includes one or more 15 A socket-outlets, other than socket-outlets provided to supply electrical equipment set out in groups C, D, E, F, G, and L ^{h,j} | | 10 A | | |
| (iii) Where the electrical installation includes one or more 20 A socket-outlets other than socket-outlets provided to supply electrical equipment set out in groups C, D, E, F, G, and L ^{h,j} | | 15 A | | |

TABLE C1 (continued)

| 1 | 2 | 3 | 4 | 5 |
|---|--|--|--------------------------------|-----------------------------------|
| Load group | Single domestic electrical installation or individual living unit per phase ^a | Blocks of living units ^{a,b,c} | | |
| | | 2 to 5 living units per phase | 6 to 20 living units per phase | 21 or more living units per phase |
| | | Loading associated with individual units | | |
| C. Ranges, cooking appliances, laundry equipment or socket-outlets rated at more than 10 A for the connection thereof ^h | 50% connected load | 15 A | 2.8 A per living unit | |
| D. Fixed space heating or airconditioning equipment, saunas or socket-outlets rated at more than 10 A for the connection thereof ^{h,k} | 75% connected load | 75% connected load | 75% connected load | |
| E. Instantaneous water heaters ^l | 33.3% connected load | 6 A per living unit | | 100 A + 0.8 A per living unit |
| F. Storage water heaters ^m | Full-load current | 6 A per living unit | | 100 A + 0.8 A per living unit |
| G. Spa and swimming pool heaters | 75% of the largest spa, plus 75% of the largest swimming pool, plus 25% of the remainder | | | |

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| | 1 | 2 | 3 | 4 | 5 |
|----|--|---|---|---|---|
| A1 | Load group | Single domestic electrical installation or individual living unit, per phase ^a | Loading not associated with individual units—connected to each phase (communal lighting, laundry loadings, lifts, motors, etc.) | | |
| | H. Communal lighting ^{f,g} | Not applicable | Full connected load | | |
| | I. Socket-outlets not included in groups J and M below ^{h,j,n} . Permanently connected electrical equipment not exceeding 10 A | Not applicable | 2 A per point, up to a maximum of 15 A | | |
| | J. Appliances rated at more than 10 A and socket-outlets for the connection thereof— (i) Clothesdryers, water heaters, self-heating washing machines, wash boilers ⁿ | Not applicable | 50% connected load | | |
| | (ii) Fixed space heating, airconditioning equipment, saunas ^k | Not applicable | 75% connected load | | |
| | (iii) Spa and swimming pool heaters | Not applicable | 75% of the largest spa plus 75% of the largest swimming pool, plus 25% of the remainder | | |
| A2 | K. Lifts | In accordance with Paragraph C2.4.1 and Table C2 | In accordance with Paragraph C2.4.1 and Table C2 | | |
| | L. Motors | In accordance with Paragraph C2.4.1, and Table C2, Column 2 | In accordance with Paragraph C2.4.1 and Table C2, Column 2 | | |
| | M Appliances, including socket-outlets other than those set out in groups A to L above, e.g. pottery kilns, welding machines, radio transmitters, X-ray equipment and the like | Connected load 5 A or less: No assessment for purpose of maximum demand | Connected load 10 A or less: No assessment for purpose of maximum demand | | |
| | | Connected load over 5 A: By assessment | Connected load over 10 A: By assessment | | |