

Question 4

This question may be answered using the Table 1 or Table 2. It is strongly recommended that you use **pencil** when completing the table to allow for recalculation of figures.

Determine, for every final circuit in the café/pool block, each of the following.

- a) Design current (I_b)
- b) Nominal rating and type of protective device (I_n)
- c) Method of installation reference
- d) Rating factors that apply
- e) Minimum cross-sectional area of live conductors for current capacity and voltage drop
- f) Actual voltage drop.
- g) Maximum permissible disconnection time for each circuit as given in BS 7671.
- h) Earth fault loop impedance
- i) Maximum earth fault loop impedance as stated in BS 7671.

Based on the circuits on your drawings for the POOL / CAFÉ block ONLY, populate with the information required above using the OSG and BS7671 as appropriate into the spreadsheet at the back of the project.

You should fill in the spreadsheet in pencil so that values can be changed if required.

Question 6

- a) Determine the maximum demand for the pool/café block electrical installation before the application of diversity.
- b) Determine the maximum demand for the pool/café block electrical installation following the application of diversity.

This question is part of the spreadsheet that you started in question 4

Whichever way of calculating "Demand following Diversity" , explain on the reverse of this page, your rationale for your application of diversity to the circuits.