Powerline Technician Harmonized Level 3

ACRONYMS AND ABBREVIATIONS

TERM	MEANING
°	degree
A	ampere
ACSR	aluminum conductor steel reinforced
CT	current transformer
DC	direct current
EMF	electromagnetic force
ft.	foot
in.	inch
kg	kilogram
kN	kilonewton
kV	kilovolt
kVA	kilovolt-ampere
lb.	pound
m	metre
SF6	sulfur hexaflouride
VLF	very low frequency
WLL	working load limit

NOTE Do **not** bring this document to your exam.
These acronyms and abbreviations will be included in the exam reference materials.

FORMULAS

$B.T. = \frac{Conductor\ tension}{Measured\ distance} \times Bisect\ line \times 2$	$G.L. = \sqrt{Anchor\ distance^2 + Pole\ height^2}$
$B.T. = Conductor\ tension \times \frac{Line\ angle}{60}$	$G.T. = \frac{Bisect\ tension}{Anchor\ distance} \times Guy\ length$
$Working\ Load\ Limit\ (WLL)\ for\ ropes = \left(\frac{1}{8}\right)^2 \times Constant$	
$C.T. = \frac{Conductor\ weight\ per\ ft.\ or\ m\ \times (Span\ length)^2}{8 \times Sag}$	
$C.W. = \frac{Span\ A + Span\ B}{2} \times Weight\ of\ conductor\ per\ ft.\ or\ m$ When moving a conductor, apply design factors as follows: Long Span (250 ft. or 75 m & over): Design Factor 1.5 Short Span (Under 250 ft. or 75 m): Design Factor 2	
$P = \frac{Weight\ of\ object + (10\%\ Weight\ of\ object\ \times No.\ of\ sheaves\ rope\ passes)}{Mechanical\ advantage}$	
$Pythagorean\ theorem:\ a^2 + b^2 = c^2$	

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