

UoC: UEENEE107A- Use drawings, diagrams, schedules, standards, codes and specifications CIII-Core

Essential Performance Capabilities (from the 55 EPC's specified by ERAC for an Electrical license) that relate to UEENEE107A include:

10 Demonstrate an understanding of the fundamental safety principles of AS/NZS 3000: Part 1. Knowledge of the hierarchy of standards. Normative / informative text.

40 Demonstrate ability to read, sketch and interpret electrical diagrams and specifications.

Wiring Rules reference and regulations	Required skills and knowledge	McGraw Hill Text	Heading reference	Test Bank	Quizzes	Cases	Worksheets	PPTs	Interactives	Animations
	KS01-EE107A Drawings, diagrams and schedules									
	T1 Architectural drawings encompassing:									
Appendix J. Fig 3.17	site plans, floor plans detailed drawings and standard drawings	Pethebridge, Electrical Wiring Practice 8e	6.5 Working with specifications, schedules and drawings		Q11	Q1, Q3	Q1, Q2	Slide 2,3,4	Identify the architectural drawing symbols below:	
	architectural floor plan to determine the power and lighting or communications / audio/ video layouts required in a domestic installation	Pethebridge, Electrical Wiring Practice 8e	6.5 Working with specifications, schedules and drawings			Q1, Q3	Q1, Q2	Slide 2,3,4	Identify the architectural drawing symbols below:	
Clauses 1.4.92; to 1.4.95. 3.11.5 Table 3.7. Sections 2.10, 3.11 & 3.12	site plan to locate the service point, consumers mains, communication services, main switchboard, distribution boards and/or builders supplies	Pethebridge, Electrical Wiring Practice 8e	6.5 Working with specifications, schedules and drawings	Q9		Q1, Q3	Q1, Q2	Slide 2,3,4	Identify the architectural drawing symbols below:	
Fig 4.9	standard drawing scales to determine the actual lengths represented by dimensions on an architectural drawing	Pethebridge, Electrical Wiring Practice 8e	6.5 Working with specifications, schedules and drawings	Q20		Q1, Q3	Q1, Q2	Slide 2,3,4	Identify the architectural drawing symbols below:	
Clauses 1.4.92; to 1.4.95. 3.11.5 Table 3.7	reading and interpretation of floor plans to determine the location of the electrical/ communication/audio accessories and appliances	Pethebridge, Electrical Wiring Practice 8e	6.5 Working with specifications, schedules and drawings			Q1, Q3	Q1, Q2	Slide 2,3,4	Identify the architectural drawing symbols below:	
refer to AS1102 Electrical symbols.	Australian standard symbols used on floor plans to show the location of the accessories and appliances as detailed in an electrical schedule	Pethebridge, Electrical Wiring Practice 8e	6.5 Working with specifications, schedules and drawings		Q12	Q1, Q3	Q1, Q2	Slide 2,3,4	Identify the architectural drawing symbols below:	
	T2 Electrical drawings encompassing:									
List of figures gives many examples	types of electrical drawings: block, circuit, wiring and ladder diagrams	Pethebridge, Electrical Wiring Practice 8e	6.2 Electrical circuits and wiring diagrams		Q6	Q2	Q3	Slide 5,6,7,8,9,10		Figure 6.2a Comparison of a circuit diagram and a wiring diagram
List of figures gives many examples i.e. Fig 4.9	purpose and application of block, circuit, wiring diagrams and ladder diagrams	Pethebridge, Electrical Wiring Practice 8e	6.2 Electrical circuits and wiring diagrams		Q1, Q8, Q9	Q2	Q3	Slide 5,6,7,8,9,10		Figure 6.2b Two ways of representing the internal circuits of an off-peak mains-pressure water heater Figure 6.3j Comparison of Star and Delta connections
refer to AS1102 Electrical symbols.	Australian standard symbols used to represent components on electrical diagrams	Pethebridge, Electrical Wiring Practice 8e	6.2 Electrical circuits and wiring diagrams	Q32		Q2	Q3	Slide 5,6,7,8,9,10		
refer to AS1102 Electrical symbols.	conventions used in and the features of circuit diagrams	Pethebridge, Electrical Wiring Practice 8e	6.2 Electrical circuits and wiring diagrams			Q2	Q3	Slide 5,6,7,8,9,10		
	converting a circuit diagram to a wiring diagram	Pethebridge, Electrical Wiring Practice 8e	6.2 Electrical circuits and wiring diagrams			Q2	Q3	Slide 5,6,7,8,9,10		
	identification of cable type, origin and route from a cable schedule	Pethebridge, Electrical Wiring Practice 8e	6.2 Electrical circuits and wiring diagrams	Q18		Q2	Q3	Slide 5,6,7,8,9,10		
Section 2.10	developing a cable schedule for a given installation	Pethebridge, Electrical Wiring Practice 8e	6.2 Electrical circuits and wiring diagrams			Q2	Q3	Slide 5,6,7,8,9,10		
	T3 Circuit diagrams encompassing:									
See Figure 7.6 as example	purpose of circuit diagrams in the electrotechnology industry	Pethebridge, Electrical Wiring Practice 8e	6.3 Circuits in general wiring	Q5, Q11, Q12	Q2, Q5		Q4, Q5, Q6	Slide 11	Identify the circuit diagram symbols below:	
	conventions used in and the features of circuit diagrams	Pethebridge, Electrical Wiring Practice 8e	6.3 Circuits in general wiring				Q4, Q5, Q6	Slide 11	Identify the circuit diagram symbols below:	
	sketching basic circuit diagrams	Pethebridge, Electrical Wiring Practice 8e	6.3 Circuits in general wiring	Q1, Q2, Q3, Q4, Q10			Q4, Q5, Q6	Slide 11	Identify the circuit diagram symbols below:	
refer to AS/NZS1102 Electrical symbols.	common symbols used in circuit diagram (Australian Drawing Standard AS/NZS 1102)	Pethebridge, Electrical Wiring Practice 8e	6.3 Circuits in general wiring	Q31			Q4, Q5, Q6	Slide 11	Identify the circuit diagram symbols below:	
	developing switching charts to identify the terminals of various types of switches	Pethebridge, Electrical Wiring Practice 8e	6.3 Circuits in general wiring	Q14, Q15, Q17			Q4, Q5, Q6	Slide 11	Identify the circuit diagram symbols below:	

	connecting equipment using circuit diagrams	Pethebridge, Electrical Wiring Practice 8e	6.3 Circuits in general wiring	Q19, Q32			Q4, Q5, Q6	Slide 11	Identify the circuit diagram symbols below:	
	T4 Wiring diagrams encompassing:									
	purpose of wiring diagrams in the electrotechnology industry	Pethebridge, Electrical Wiring Practice 8e	6.2 Electrical circuits and wiring diagrams	Q6, Q16	Q4, Q13		Q7			
	conventions used in and the features of wiring diagrams	Pethebridge, Electrical Wiring Practice 8e	6.2 Electrical circuits and wiring diagrams				Q7			
figure 2.12	sketching basic wiring diagrams	Pethebridge, Electrical Wiring Practice 8e	6.2 Electrical circuits and wiring diagrams				Q7			
AS/NZS 1102	common symbols used in wiring diagram (Australian Drawing Standard AS/NZS 1102)	Pethebridge, Electrical Wiring Practice 8e	6.2 Electrical circuits and wiring diagrams				Q7			
	connecting equipment using wiring diagrams	Pethebridge, Electrical Wiring Practice 8e	6.2 Electrical circuits and wiring diagrams	Q13	Q13		Q7			
	T5 Building construction drawings and diagrams encompassing:									
Section 3.9.4 Protection against mechanical damage. Figures 3.3 to 3.7	building types: timber frame, brick veneer, double brick and metal frame	Pethebridge, Electrical Wiring Practice 8e	6.4 Undertaking electrical work		Q14, Q15	Q4	Q8, Q9, Q10	Slide 18,19,20,21,22,23,24,25,26		
	identification of different types of: footings, floors, external walls, roofs, interior walls	Pethebridge, Electrical Wiring Practice 8e	6.4 Undertaking electrical work		Q15	Q4	Q8, Q9, Q10	Slide 18,19,20,21,22,23,24,25,26		
see section 1.5 Fundamental Principles	typical cable routes through buildings, structures and premises	Pethebridge, Electrical Wiring Practice 8e	6.4 Undertaking electrical work		Q15	Q4	Q8, Q9, Q10	Slide 18,19,20,21,22,23,24,25,26		
	sequence of each constructional stage for brick, brick veneer and timber cottages	Pethebridge, Electrical Wiring Practice 8e	6.4 Undertaking electrical work			Q4	Q8, Q9, Q10	Slide 18,19,20,21,22,23,24,25,26		
	identification of the stages at which the electrical/communications - first and second fixing occurs in the constructional sequence	Pethebridge, Electrical Wiring Practice 8e	6.4 Undertaking electrical work			Q4	Q8, Q9, Q10	Slide 18,19,20,21,22,23,24,25,26		
Table 3.7 Separation of U/G services	areas of cooperation between electrical/communications and other building trades	Pethebridge, Electrical Wiring Practice 8e	6.4 Undertaking electrical work	Q22, Q23, Q24, Q25		Q4	Q8, Q9, Q10	Slide 18,19,20,21,22,23,24,25,26		
KS02-EE107A Introduction to regulations, compliance standards and codes										
	T1 Regulation for undertaking electrical work encompassing:									
Section 1 Scope	scope of work covered by licensing in the electrotechnology industry (Electrical licensing)	Pethebridge, Electrical Wiring Practice 8e	6.4 Undertaking electrical work		Q16, Q17	Q5		Slide part 2-2,3,4		
Part 1 & Part 2 of the wiring rules.	legislative requirements for ensuring electrical or electronic equipment is safe i.e. compliance requirements of electrical installations	Pethebridge, Electrical Wiring Practice 8e	6.4 Undertaking electrical work	Q7, Q30, Q40	Q17	Q5		Slide part 2-2,3,4		
Section 1.1 & 1.2	T2 Standards philosophy and format encompassing:	Pethebridge, Electrical Wiring Practice 8e								
	performance verses prescriptive requirements	Pethebridge, Electrical Wiring Practice 8e	6.4 Undertaking electrical work		Q3		Q11, Q12	Slide part 2-5,6,7,8,9		
Preface and Section 1	purpose of technical standards and their development	Pethebridge, Electrical Wiring Practice 8e	6.4 Undertaking electrical work				Q11, Q12	Slide part 2-5,6,7,8,9		
Preface	role of standards Australia/New Zealand, International Organisation for Standardisation (ISO) and the International Electrotechnical Commission (IEC)	Pethebridge, Electrical Wiring Practice 8e	6.4.2 Architectural electrical drawing plans	Q21			Q11, Q12	Slide part 2-5,6,7,8,9		
Section 8.3	how standards are used in compulsory and accreditation compliance schemes	Pethebridge, Electrical Wiring Practice 8e	6.5 Working with specifications, schedules and drawings				Q11, Q12	Slide part 2-5,6,7,8,9		
	arrangement and use of technical standards in relation to electrical and electronic work	Pethebridge, Electrical Wiring Practice 8e	6.6 Use of software and mobile devices in electrical work		Q18		Q11, Q12	Slide part 2-5,6,7,8,9		
Forward	how to read and apply a standard	Pethebridge, Electrical Wiring Practice 8e	6.4 Undertaking electrical work				Q11, Q12	Slide part 2-5,6,7,8,9		
Refer Part 2	standards and codes that apply to all types of electrical installations	Pethebridge, Electrical Wiring Practice 8e	6.4 Undertaking electrical work				Q11, Q12	Slide part 2-5,6,7,8,9		
Section 1	standards include Standards mandated under regulation (e.g. Wiring Rules) or by an authority, deemed-to-comply standard and local service requirements (e.g. Service rules)	Pethebridge, Electrical Wiring Practice 8e	6.2 Electrical circuits and wiring diagrams	Q28, Q29			Q11, Q12	Slide part 2-5,6,7,8,9		
Appendix E	Codes include those applicable to electrical safe working practices and some aspects of the Building Code of Australia	Pethebridge, Electrical Wiring Practice 8e	6.4 Undertaking electrical work				Q11, Q12	Slide part 2-5,6,7,8,9		
	T3 Purpose, format and content of typical job specifications encompassing:									
	NATSPEC specification system - provide the most common templates on which job specification are written	Pethebridge, Electrical Wiring Practice 8e	6.4.1 Specifications for electrical work	Q8, Q26, Q27	Q7, 10		Q13, Q14	Slide part 2-10,11,12		